

Conservation Assessment and Management Plan (C.A.M.P.) Workshops

REPORT

By Zoo Outreach Organisation / CBSG, India

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Freshwater fishes of India

Hosted by the National Bureau of Fish Genetic Resources

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Freshwater fishes of India

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Report of BCPP CAMP Workshop for Indian Fishes

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Report of BCPP Workshop for Indian Fishes

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**Conservation Assessment and Management Plan (C.A.M.P.) Workshops for
Freshwater Fishes of India**

Sponsors

This workshop was sponsored by

Sea World, Orlando, Florida, U.S.A.

and

Ministry of Environment and Forests, Government of India

This workshop was initiated by

Biodiversity Conservation Prioritisation Project

Conservation Assessment and Management Plan (C.A.M.P.) Workshops for Freshwater Fishes of India

Hosts, Coordinators, Organisers, Collaborators

Host

National Bureau of Fish Genetic Resources, Lucknow

Coordinators / Facilitators

Zoo Outreach Organisation/ Conservation Breeding Specialist Group, India

Collaborating institutions

Forest Department of Uttar Pradesh

Technical collaborators

Zoological Survey of India
Central Inland Capture Fisheries Research Institute
National Research Centre on Cold Water Fisheries

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Freshwater fishes of India

Executive Summary

Conservation Assessment and Management Plan (C.A.M.P.) Workshops

Freshwater fishes of India

Hosted by the National Bureau of Fish Genetic Resources, Lucknow

21 – 25 September, 1997

EXECUTIVE SUMMARY

Introduction

A Conservation Assessment and Management Plan (C.A.M.P.) Workshop was conducted for 329 taxa of freshwater fishes of India, to assess their status in the wild. The Workshop took place from 21st to 25th September, 1997 in Lucknow, hosted by the National Bureau of Fish Genetic Resources, Indian Council for Agricultural Research, Government of India. Another local collaborator was the Forest Department of Uttar Pradesh. Technical collaborators were Zoological Survey of India, Central Inland Capture Fisheries Research Institute and National Research Centre on Coldwater Fisheries. Forty-five participants from 30 institutions with expertise ranging across disciplines of field biology, forestry, water resource management, genetics and taxonomy attended the workshop.

The workshop was initiated under the Endangered Species Project of the Biodiversity Conservation Prioritisation Project (BCPP) which selected the Conservation Assessment and Management Plan Workshop Process and the IUCN Red List Criteria (Revised, 1994) for assessing conservation status of species at the planning meeting of the BCPP. The BCPP supported the preliminary work of contacting hosts, collaborators and participants only. The Workshop was conducted with the generous sponsorship of Sea World, Orlando, Florida and the Ministry of Environment and Forests, Government of India.

Approximately half of all Indian freshwater fishes were assessed at the workshop, 329 species. The workshop participants referred extensively to the checklist of Indian freshwater fishes prepared by the National Bureau of Fish Genetic Resources, which contained 650 species and subspecies. The checklist was scrutinized at the workshop and only those species or subspecies that were known to have occurred or are currently occurring in India were evaluated. There were some additions and deletions to the checklist based on the participants' views and the final number of freshwater fish taxa in India is tentative, still under debate with 600 as the lowest estimate of species number.

Participants worked in four to six working groups for five days entering information for every taxon on "Taxon Data Sheets" in which details of distribution, habitat structure, threats affecting the taxon and habitat, population decline and quality of data provided for the taxon are included. This information was used to assess the status of every taxon and assign a category of threat according to the IUCN Red List categories. Taxon-specific management recommendations were also made after categorisation for use in conservation action planning.

CAMP methodology

The Conservation Assessment and Management Plan process is a methodology for rapid assessment of taxa in the wild. It is a rational and objective methodology of assigning threat categories and deriving recommendations for conservation actions through participatory group inputs from a number of stakeholders. Ten to 40 experts from related fields such as field biologists, ecologists, habitat experts, wildlife managers, forest officials, captive managers, university researchers, academicians, non-governmental organisations, policy-makers and other relevant stakeholders are typical participants in a CAMP Workshop. A CAMP Workshop is conducted by objective facilitators who, while they may be interested and knowledgeable in the field of conservation, do not have a professional or personal stake in the outcome of the assessments. This Report, which reflects a consensus of all participants, is edited by the facilitators to insure objectivity and that all views are fairly reflected.

The species status assessment is also followed by research and conservation recommendations for every taxon. CAMP workshops provide a rational and comprehensive means of assessing priorities for intensive management within the context of the broader conservation needs of threatened taxa.

The Conservation Breeding Specialist Group, SSC, IUCN developed the CAMP process methodology first for identifying priorities in captive management planning for the global zoo community, to know the *in situ* conservation status of species in their care, and to establish priorities for threatened taxa not in captivity which required captive propagation programmes. However, the methodology has proved so effective for assessing status in the wild that it has been recognised by IUCN SSC Specialist Groups, governmental and non-governmental agencies, conservation action planners and policy makers all over the world. The CAMP

methodology is emerging as an effective means of conducting a biodiversity inventory, including identification and monitoring, thus satisfying Agenda item 7 in the Conservation on Biological Diversity.

CAMP is a flexible process that allows much need-based variation to be incorporated. Before the workshop, preliminary questionnaires or "Biological Information Sheets" were sent to all known freshwater fish researchers in India along with the CAMP Manual to help the respondents in understanding the concept and objective of the workshop as well as the IUCN categories. The Biological Information Sheet is a modified Taxon Data Sheet that is self-explanatory and does not require the help of an interpretive manual as it employs multiple choice questions. This exercise helped in gathering information about the taxa before the workshop. The sheets were also utilised extensively at the workshop and thereby provided a means of representation for participants who could not attend. This is the first time that a CAMP was conducted on freshwater fishes anywhere in the world. It is also the first time such a large group of fishes was assessed using the IUCN criteria.

Report

The assessment of Indian freshwater fishes was done based on their distribution in India. Six broad zones or "drainages" were considered, e.g.

1. Indus river system,
2. Upland cold water bodies,
3. Gangetic river system,
4. Brahmaputra river system,
5. East flowing river system and
6. West flowing river system.

The Western Ghats is the richest region in India with respect to endemic freshwater fishes. Eighty-five taxa are endemic to this biogeographic region with 15 more taxa sharing their distribution with adjacent areas. Northeastern India, which has a very high diversity among freshwater fish, does not have many endemic species within India because of its jagged political boundary. Though restricted in their distribution in this region, many fish species are also found outside India. The case is similar in northern and northwestern India with many species ranging across neighbouring countries such as Pakistan, Nepal, Afghanistan and Tibet.

According to the assessment of the workshop, a total of 227 Indian freshwater fishes are threatened based on the IUCN Red list Categories of 1994. The high percentage of restricted taxa being threatened is due to localised distribution of these taxa along with other man-induced threats to their well-being. Freshwater fishes are a poorly studied group since information regarding distribution, population dynamics and threats is incomplete, and most of the information available is from a few well-studied locations only. Threats to Indian freshwater fishes are physical in nature, such as habitat destruction, fragmentation, poisoning, pollution, pesticides, destructive fishing, and other kinds of human interference. Trade is an important contributing factor in threatening some freshwater fish taxa in India. This is mainly because of unsustainable harvest, poor scientific practices in fishing and an ever-growing demand.

According to the IUCN Red List categories, 1994, any one of five criteria within the categories has to be satisfied for a taxon to be categorised as "threatened". The criteria that are used in categorisation of threat are

1. Population reduction,
2. Restricted distribution,
3. Population estimates,
4. Restricted population and
5. Probability of extinction.

The degree of threat depending on each or any of these five criteria determines the threat category or status.

The participants also formulated post-assessment research and management recommendations for every fish taxon based on their status and information contributed in the working groups. Participants identified subject areas that need prioritisation as indicated in the recommendation section. Survey and monitoring for understanding distribution and trends of fish populations were the most frequently recommended research and management actions. The workshop was also an ideal forum to discuss controversial issues such as taxonomy and nomenclature of Indian freshwater fishes. In recent years, a few taxonomists have suggested frequent changes in generic names of some fishes in India, which has led to confusion among field biologists. Special issue working groups discussed these issues. Although most of the biologists were happy to be able to discuss those issues within their working groups while assessing the status, the urgent need for a network to identify and bring together fish researchers in and around India to facilitate regular communication was also expressed.

The Special Issue Working Groups convened after completion of the assessments were

1. Endemism,
2. Legal issues including Wildlife Protection Act and its implementation with respect to freshwater fishes,
3. Taxonomy,
4. Education and awareness,
5. Introduced fishes,

6. Sanctuaries for fishes,
 7. Suggestions to IUCN categories as applicable to fishes and
 8. Research working group
- Working group reports are included at the end of the main report section.

Table 1. Status of assessed freshwater fishes in India

Extinct (EX)	1
Extinct in the Wild (EW)	1
Critically Endangered (CR)	47
Endangered (EN)	98
Vulnerable (VU)	82
Lower Risk – near threatened (LR-nt)	67
Lower Risk – least concern (LR-lc)	13
Lower Risk – conservation dependent (LR-cd)	0
Date Deficient (DD)	18
Total evaluated at this workshop	329
Not Evaluated at this workshop (NE)	300+

Table 2. List of Indian freshwater fishes assessed at the workshop

Species	Family	IUCN	Criteria
1. <i>Aborichthys elongatus</i> Hora	Balitoridae	EN	(B1, 2c)
2. <i>Aborichthys garoensis</i> Hora	Balitoridae	CR	(B1, 2c)
3. <i>Aborichthys kempi</i> Chaudhuri	Balitoridae	VU	(B1, 2c)
4. <i>Aborichthys tikaderi</i> Barman	Balitoridae	EN	(B1, 2abc)
5. <i>Acanthocobitis zonalternans</i> (Blyth)	Homalopteridae	DD	--
6. <i>Ailia colia</i> (Ham.-Buch.)	Schilbeidae	VU	(A1abcd, 2bcd)
7. <i>Ailia punctata</i> Day	Schilbeidae	VU	(A1acd)
8. <i>Amblyceps apangi</i> Nath & Dey	Amblycipitidae	VU	(D2)
9. <i>Amblyceps arunachalensis</i> Nath & Dey	Amblycipitidae	VU	(D2)
10. <i>Amblyceps mangois</i> (Ham.-Buch.)	Amblycipitidae	LRnt	--
11. <i>Amblypharyngodon chakaiensis</i> (Rao & Nair)	Cyprinidae	CR	(A1, 2c)
12. <i>Amblypharyngodon mola</i> (Ham.-Buch.)	Cyprinidae	LRlc	--
13. <i>Anabas cobojius</i> (Ham.-Buch.)	Anabantidae	VU	(A1acd)
14. <i>Anabas testudineus</i> (Bloch)	Anabantidae	VU	(A1acd)
15. <i>Anguilla bengalensis</i> Gray	Anguillidae	EN	(A1acd; B1, 2c)
16. <i>Aplocheilus rubroshigma</i> (Val.)	Aplocheilidae	DD	--
17. <i>Aplocheilus panchax</i> (Ham.-Buch.)	Aplocheilidae	DD	--
18. <i>Aspidoparia jaya</i> (Ham.-Buch.)	Cyprinidae	VU	(A1acd)
19. <i>Aspidoparia morar</i> (Ham.-Buch.)	Cyprinidae	LRnt	--
20. <i>Bagarius bagarius</i> (Ham.-Buch.)	Sisoridae	VU	(A1acd)
21. <i>Balitora Brucei</i> (Gray)	Balitoridae	LRnt	--
22. <i>Barbus carletoni</i> (Ham.-Buch.)	Cyprinidae	EN	(B1, 2c)
23. <i>Barilius bakeri</i> Day	Cyprinidae	VU	(A1acd)
24. <i>Barilius barila</i> (Ham.-Buch.)	Cyprinidae	VU	(B1, 2c)
25. <i>Barilius barna</i> (Ham.-Buch.)	Cyprinidae	LRnt	--
26. <i>Barilius bendelisis</i> (Ham.-Buch.)	Cyprinidae	LRnt	--
27. <i>Barilius canarensis</i> (Jerdon)	Cyprinidae	DD	--
28. <i>Barilius corbetti</i> Tilak & Husain	Cyprinidae	CR	(B1, 2c)
29. <i>Barilius dimorphicus</i> Tilak & Husain	Cyprinidae	CR	(B1, 2c)
30. <i>Barilius dogarsinghi</i> Hora	Cyprinidae	EN	(B1, 2abd)
31. <i>Barilius evezardi</i> (Day)	Cyprinidae	LRnt	--
32. <i>Barilius shacra</i> (Ham.-Buch.)	Cyprinidae	LRnt	--
33. <i>Barilius tileo</i> (Ham.-Buch.)	Cyprinidae	LRnt	--
34. <i>Barilius vagra</i> (Ham.-Buch.)	Cyprinidae	VU	(A1a, 1c)
35. <i>Batasio travancoria</i> Hora & Law	Bagridae	EN	(A1b; B1, 2b)
36. <i>Bhavana australis</i> (Jerdon)	Balitoridae	EN	(B1, 2c)
37. <i>Botia almorhae</i> Gray	Cobitidae	EN	(B1, 2c)
38. <i>Botia berdmorei</i> (Blyth)	Cobitidae	EN	(A1acd)
39. <i>Botia birdi</i> Chanduri	Cobitidae	LRnt	--

Species	Family	IUCN	Criteria
40. <i>Botia geto</i> (Ham.-Buch.)	Cobitidae	LRnt	--
41. <i>Botia histrionica</i> Blyth	Cobitidae	VU	(B1, 2c)
42. <i>Botia lohachata</i> Chandhuri	Cobitidae	EN	(B1, 2c)
43. <i>Botia striata</i> Rao	Cobitidae	EN	(B1, 2c)
44. <i>Brachydanio acuticophala</i> (Hora)	Cyprinidae	VU	(A1c; B1, 2c)
45. <i>Brachydanio rerio</i> (Ham.-Buch.)	Cyprinidae	LRnt	--
46. <i>Catla catla</i> (Ham.-Buch.)	Cyprinidae	VU	(A1acde)
47. <i>Channa baculis</i> (Ham.-Buch.)	Channidae	LRlc	--
48. <i>Channa marulius</i> (Ham.-Buch.)	Channidae	LRnt	--
49. <i>Channa micropeltes</i> (Cuvier)	Channidae	CR	(A1abcd; B1, 2c)
50. <i>Channa orientalis</i> Bloch & Schneider	Channidae	VU	(A1acd)
51. <i>Channa punctatus</i> (Bloch)	Channidae	LRnt	--
52. <i>Channa striatus</i> (Bloch)	Channidae	LRlc	--
53. <i>Chaudhuri indica</i> (Talwar, Yazdani & Kundu)	Chaudhuriidae	VU	(B1, 2cd; D2)
54. <i>Chaudhuri khajurii</i> (Yazdani)	Chaudhuriidae	EN	(B1, 2bc)
55. <i>Chela dadyburjori</i> (Menon)	Cyprinidae	DD	--
56. <i>Chela laubuca</i> (Ham.-Buch.)	Cyprinidae	LRlc	--
57. <i>Chelonodon fluviatilis</i> (Ham.-Buch.)	Tetradontidae	LRnt	--
58. <i>Cirrhinus cirrhosus</i> (Bloch)	Cyprinidae	VU	(B1, 2c)
59. <i>Cirrhinus fulungee</i> (Sykes)	Cyprinidae	LRnt	--
60. <i>Cirrhinus macrops</i> Steindachner	Cyprinidae	DD	--
61. <i>Cirrhinus mrigala</i> Ham.-Buch.	Cyprinidae	LRnt	--
62. <i>Cirrhinus reba</i> (Ham.-Buch.)	Cyprinidae	VU	(A1abcd, 2cd)
63. <i>Clarias batrachus</i> (Linnaeus)	Clariidae	VU	(A1acd)
64. <i>Clarias dayi</i> Hora	Clariidae	EN	(B1, 2c)
65. <i>Clarias dussumieri</i> (Valenciennes)	Clariidae	VU	(A1abcd)
66. <i>Clupisoma bastari</i> Datta & Karmakar	Schilbeidae	EN	(B1, 2c)
67. <i>Clupisoma garua</i> (Ham.-Buch.)	Schilbeidae	VU	(A1acd, 2cd)
68. <i>Colisa fasciatus</i> (Bloch & Schneider)	Anabantidae	LRnt	--
69. <i>Crossocheilus burmanicus</i> Hora	Cyprinidae	VU	(B1, 2c)
70. <i>Crossocheilus latius latius</i> (Ham.-Buch.)	Cyprinidae	DD	--
71. <i>Crossocheilus periyarensis</i> Menon & Jacob	Cyprinidae	VU	(D2)
72. <i>Danio aequipinnatus</i> (McClelland)	Cyprinidae	LRnt	--
73. <i>Danio devario</i> (Ham.-Buch.)	Cyprinidae	LRnt	--
74. <i>Danio naganensis</i> Chandhuri	Cyprinidae	VU	(A1ac)
75. <i>Dayella malabarica</i> (Day)	Clupeidae	CR	(A1acd, 2cd)
76. <i>Erethistoides montana pipri</i> Hora	Sisoridae	CR	(B1, 2abcd)
77. <i>Esomus danricus</i> (Ham.-Buch.)	Cyprinidae	LRlc	--
78. <i>Etroplus canarensis</i> Day	Cichlidae	DD	--
79. <i>Euchiloglanis hodgarti</i> Hora	Sisoridae	VU	(A1c)
80. <i>Euchiloglanis kamengensis</i> (Hora)	Sisoridae	EN	(B1, 2cd)
81. <i>Eutropichthys murius</i> (Ham.-Buch.)	Schilbeidae	LRnt	--
82. <i>Eutropichthys vacha</i> (Ham.-Buch.)	Schilbeidae	EN	(A1abcd, 2bcd)
83. <i>Gagata sexualis</i> Tilak	Sisoridae	LRnt	--
84. <i>Garra gotyla gotyla</i> (Gray)	Cyprinidae	VU	(A1ac)
85. <i>Garra gotyla stenorrhynchus</i> Jerdon	Cyprinidae	EN	(B1, 2c)
86. <i>Garra hughi</i> Silas	Cyprinidae	EN	(A1ac)
87. <i>Garra kempfi</i> Hora	Cyprinidae	VU	(A1ac; B1, 2c)
88. <i>Garra lissorhynchus</i> (McClelland)	Cyprinidae	VU	(A1ac)
89. <i>Garra litanensis</i> Vishwanath	Cyprinidae	CR	(B1, 2c)
90. <i>Garra manipurensis</i> Vishwanath & Sarojnalini	Cyprinidae	CR	(B1, 2c)
91. <i>Garra menoni</i> Devi & Indra	Cyprinidae	VU	(D2)
92. <i>Garra naganensis</i> Hora	Cyprinidae	VU	(B1, 2c)
93. <i>Garra rupecula</i> (McClelland)	Cyprinidae	VU	(A1a; B1, 2b)
94. <i>Garra surendranathanii</i> (Shaji, Arun & Easa)	Cyprinidae	EN	(B1, 2c)
95. <i>Glossogobius giuris</i> (Ham.-Buch.)	Gobiidae	LRnt	--
96. <i>Glyphis gangeticus</i> (Muller & Henle)	Carcharhinidae	VU	(D2)
97. <i>Glyptosternum reticulatum</i> McClelland	Sisoridae	EN	(B1, 2c)
98. <i>Glyptothorax alaknandi</i> Tilak	Sisoridae	CR	(B1, 2c)
99. <i>Glyptothorax anamalaiensis</i> Silas	Sisoridae	CR	(B1, 2c)
100. <i>Glyptothorax bervipinnis</i> Hora	Sisoridae	VU	(A1acd, 2cd; B1, 2c)

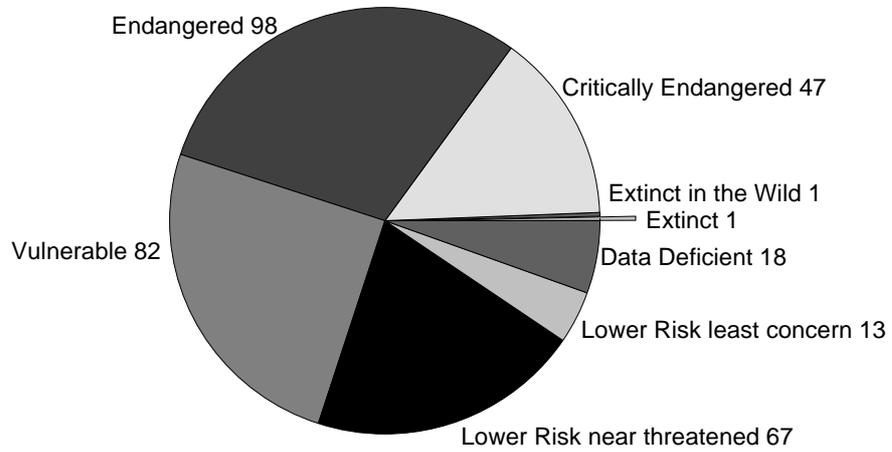
Species	Family	IUCN	Criteria
101. <i>Glyptothorax cavia</i> Ham.-Buch.	Sisoridae	EN	(A1acd)
102. <i>Glyptothorax dakpathari</i> Tilak & Husain	Sisoridae	CR	(B1, 2c)
103. <i>Glyptothorax davissinghi</i> Manimekalan & Das	Sisoridae	CR	(B1, 2c)
104. <i>Glyptothorax garhwali</i> Tilak	Sisoridae	CR	(B1, 2c)
105. <i>Glyptothorax housei</i> Herra	Sisoridae	DD	--
106. <i>Glyptothorax indicus</i> Talwar	Sisoridae	VU	(A1acd)
107. <i>Glyptothorax kashmirensis</i> (Hora)	Sisoridae	EN	(B1, 2c)
108. <i>Glyptothorax lonah</i> (Sykes)	Sisoridae	LRnt	--
109. <i>Glyptothorax madraspatanum</i> (Day)	Sisoridae	VU	(D2)
110. <i>Glyptothorax nelsoni</i> Ganguly, Dutta & Sen	Sisoridae	EN	(B1, 2c)
111. <i>Glyptothorax pectinopterus</i> (McClelland)	Sisoridae	LRnt	--
112. <i>Glyptothorax saisii</i> (Jenkins)	Sisoridae	EN	(B1, 2c)
113. <i>Glyptothorax stoliczkae</i> (Steindachner)	Sisoridae	CR	(B1, 2c)
114. <i>Glyptothorax striatus</i> (McClelland; Hora)	Sisoridae	VU	(B1, 2c; D2)
115. <i>Glyptothorax telchitta</i> (Ham.-Buch.)	Sisoridae	LRnt	--
116. <i>Gonialosa manmina</i> Ham.-Buch.	Clupeidae	VU	(A1acd)
117. <i>Gudusia chapra</i> (Ham.-Buch.)	Clupeidae	LRlc	--
118. <i>Gymnocypris biswasi</i> Talwar	Cyprinidae	EX	--
119. <i>Hara horai</i> Mishra	Sisoridae	EN	(A1acd; B1, 2c)
120. <i>Heteropneustes fossilis</i> (Bloch)	Heteropneustidae	VU	(A1acd)
121. <i>Hilsa ilisha</i> (Ham.-Buch.)	Clupeidae	VU	(A1acd)
122. <i>Homaloptera montana</i> Herre	Baletoridae	CR	(B1, 2c)
123. <i>Homaloptera pillaii</i> Rema Devi & Indira	Baletoridae	VU	(D2)
124. <i>Horabagrus brachysoma</i> (Gunther)	Bagridae	EN	(A1acd)
125. <i>Horabagrus nigricollaris</i> (Pethiyagoda & Kottelat)	Bagridae	CR	(B1, 2c)
126. <i>Horadandia atukorali brittani</i> Menon	Cyprinidae	EN	(B1, 2c)
127. <i>Horaglanis krishnai</i> Menon	Claridae	CR	(D2; B1, 2ac)
128. <i>Hyporhamphus xanthopterus</i> (Valenciennes)	Herniramphidae	CR	(A1abcd; B1, 2c)
129. <i>Hypselobarbus curmuca</i> (Day)	Cyprinidae	EN	(A1acde)
130. <i>Hypselobarbus dubius</i> (Day)	Cyprinidae	EN	(B1, 2cd)
131. <i>Hypselobarbus jerdoni</i> (Day)	Cyprinidae	EN	(B1, 2c)
132. <i>Hypselobarbus kolus</i> (Sykes)	Cyprinidae	EN	(A1a; B1, 2c)
133. <i>Hypselobarbus lithopides</i> (Day)	Cyprinidae	EN	(A1acd; B1, 2c)
134. <i>Hypselobarbus micropogon periyarensis</i> Raj	Cyprinidae	EN	(B1, 2abc)
135. <i>Hypselobarbus thomassi</i> (Day)	Cyprinidae	EN	(B1, 2c)
136. <i>Hypselobarbus kurali</i> Menon & Rema Devi	Cyprinidae	EN	(B1, 2c)
137. <i>Johnius gangeticus</i> Talwar	Sciaenidae	EN	(B1, 2c)
138. <i>Kryptopterus indicus</i> Datta, Barman & Jayaram	Siluridae	CR	(B1, 2c)
139. <i>Labeo ariza</i> (Ham.-Buch.)	Cyprinidae	CR	(B1, 2c)
140. <i>Labeo angra</i> (Ham.-Buch.)	Cyprinidae	LRnt	--
141. <i>Labeo bata</i> (Ham.-Buch.)	Cyprinidae	LRnt	--
142. <i>Labeo boga</i> (Ham.-Buch.)	Cyprinidae	LRnt	--
143. <i>Labeo calbasu</i> (Ham.-Buch.)	Cyprinidae	LRnt	--
144. <i>Labeo dero</i> (Ham.-Buch.)	Cyprinidae	VU	(A1acd)
145. <i>Labeo dussumieri</i> (Valenciennes)	Cyprinidae	EN	(A1acde, 2cde)
146. <i>Labeo dyocheilus</i> (McClelland)	Cyprinidae	VU	(A1acd)
147. <i>Labeo fimbriatus</i> (Bloch)	Cyprinidae	LRnt	--
148. <i>Labeo gonius</i> (Ham.-Buch.)	Cyprinidae	LRnt	--
149. <i>Labeo kontius</i> (Jerdon)	Cyprinidae	EN	(B1, 2c)
150. <i>Labeo pangusia</i> (Ham.-Buch.)	Cyprinidae	LRnt	-
151. <i>Labeo rajasthanicus</i> (Datta & Majumdar)	Cyprinidae	CR	(B1, 2c)
152. <i>Labeo rohita</i> (Ham.-Buch.)	Cyprinidae	LRnt	-
153. <i>Laguvia kapuri</i> (Tilak & Hussain)	Sisoridae	CR	(B1, 2acd)
154. <i>Laguvia ribeiroi</i> Hora	Sisoridae	LRnt	--
155. <i>Laguvia shawi</i> Hora	Sisoridae	EN	(B1, 2c)
156. <i>Lepidocephalus annandalei</i> (Chaudhuri)	Cobitidae	LRnt	--
157. <i>Lepidocephalus berdmorei</i> (Blyth)	Cobitidae	EN	(A1c; B1, 2c)
158. <i>Lepidocephalus caudofurcatus</i> Tilak & Hussain	Cobitidae	VU	(B1, 2c)
159. <i>Lepidocephalus goalparensis</i> (Pillai & Yazdani)	Cobitidae	CR	(B1, 2c)
160. <i>Lepidocephalus irrorata</i> (Hora)	Cobitidae	VU	(B1, 2c)
161. <i>Lepidopygopsis typus</i> Raj	Schizothoracinae	CR	(B1, 2c)

Species	Family	IUCN	Criteria
162. <i>Macrognathus aral</i> (Bloch & Schneider)	Mastacembelidae	LRnt	--
163. <i>Macrognathus guentheri</i> (Day)	Mastacembelidae	VU	(A1ac, 2cd; B1, 2c)
164. <i>Macrognathus pancalus</i> (Ham.-Buch.)	Mastacembelidae	LRnt	--
165. <i>Mesonoemacheilus reticulofasciatus</i> Singh, Sen & Banarescu	Homalopteridae	EN	(B1, 2c)
166. <i>Mesonoemacheilus sijuensis</i> (Menon)	Homalopteridae	VU	(D2)
167. <i>Monopterus cuchia</i> (Ham.-Buch.)	Symbranchidae	LRnt	--
168. <i>Monopterus eapeni</i> Talwar	Symbranchidae	CR	(B1, 2c)
169. <i>Monopterus fossorius</i> (Nair)	Symbranchidae	EN	(B1, 2c)
170. <i>Moringua hodgarti</i> Chaudhuri	Moringuidae	CR	(B1, 2bcde)
171. <i>Mystus bleekeri</i> (Day)	Bagridae	VU	(A1acd)
172. <i>Mystus cavasius</i> (Ham.-Buch.)	Bagridae	LRnt	--
173. <i>Mystus malabaricus</i> (Jerdon)	Bagridae	EN	(A1abcd)
174. <i>Mystus microphthalmus</i> (Day)	Bagridae	EN	(B1, 2c; A1ac)
175. <i>Mystus montanus</i> (Jerdon)	Bagridae	VU	(A1abcd, 2cd)
176. <i>Mystus punctatus</i> (Jerdon)	Bagridae	EN	(B1, 2c)
177. <i>Mystus vittatus</i> (Bloch)	Bagridae	VU	(A1acd)
178. <i>Nandus nandus</i> (Ham.-Buch.)	Nandidae	LRnt	--
179. <i>Nangra nangra</i> (Ham.-Buch.)	Sisoridae	VU	(A1acd)
180. <i>Nangra viridescens</i> (Ham.-Buch.)	Sisoridae	LRnt	--
181. <i>Nemacheilus botia</i> (Ham.-Buch.)	Balitoridae	LRnt	--
182. <i>Nemacheilus carletonii</i> Fowler	Balitoridae	EN	(B1, 2c)
183. <i>Nemacheilus chindwinicus</i> Tilak & Hussain	Balitoridae	EN	(B1, 2c)
184. <i>Nemacheilus corica</i> (Ham.-Buch.)	Balitoridae	LRnt	--
185. <i>Nemacheilus doonensis</i> (Tilak & Hussain)	Balitoridae	EN	(B1, 2c)
186. <i>Nemacheilus guentheri</i> Day	Balitoridae	LRlc	--
187. <i>Nemacheilus himachalensis</i> (Menon)	Balitoridae	EN	(B1, 2c)
188. <i>Nemacheilus horai</i> Menon	Balitoridae	VU	(B1, 2c)
189. <i>Nemacheilus kangrae</i> (Menon)	Balitoridae	EN	(B1, 2c)
190. <i>Nemacheilus keralensis</i> Rita, Banarescu & Nalbant	Balitoridae	EN	(B1, 2cd)
191. <i>Nemacheilus labeosus</i> (Kottelat)	Balitoridae	VU	(B1, 2c)
192. <i>Nemacheilus monilis</i> Hora	Balitoridae	EN	(B1, 2c)
193. <i>Nemacheilus montanus</i> (McClelland)	Balitoridae	EN	(B1, 2c)
194. <i>Nemacheilus multifasciatus</i> Day	Balitoridae	EN	(B1, 2c)
195. <i>Nemacheilus nilgiriensis</i> (Menon)	Balitoridae	EN	(B1, 2c)
196. <i>Nemacheilus petrubanarescui</i> (Menon)	Balitoridae	DD	--
197. <i>Nemacheilus pulchellus</i> Day	Balitoridae	DD	--
198. <i>Nemacheilus rupecola</i> (McClelland)	Balitoridae	LRnt	--
199. <i>Nemacheilus scaturigina</i> (McClelland)	Balitoridae	VU	(A1acd)
200. <i>Nemacheilus semiarmatus</i> Day	Balitoridae	VU	(D2)
201. <i>Nemacheilus striatus</i> Day	Balitoridae	DD	--
202. <i>Nemacheilus triangularis</i> Day	Balitoridae	LRlc	--
203. <i>Neoeucirrhichthys maydelli</i> Banarescu & Nalbant	Cobitidae	VU	(B1, 2c)
204. <i>Neolissocheilus spinulosus</i> (McClelland)	Cyprinidae	EN	(B1, 2c)
205. <i>Neolissochilus wynaadensis</i> (Day)	Cyprinidae	CR	(B1, 2c)
206. <i>Neotropius khavalchor</i> Kulkarni	Schilbeidae	DD	--
207. <i>Notopterus chilata</i> (Ham.-Buch.)	Notopteridae	EN	(A1abcd, 2cd)
208. <i>Notopterus notopterus</i> (Pallas)	Notopteridae	LRnt	--
209. <i>Ompok bimaculatus</i> (Bloch)	Siluridae	EN	(A1acd, 2cd)
210. <i>Ompok malabaricus</i> (Valenciennes)	Siluridae	CR	(B1, 2c)
211. <i>Ompok pabda</i> (Ham.-Buch.)	Siluridae	EN	(A1acd, 2cd)
212. <i>Ophiocephalus channa gachua</i> Bloch & Schneider	Channidae	VU	(B1, 2c)
213. <i>Osteobrama belangeri</i> (Valenciennes)	Cyprinidae	EW	--
214. <i>Osteobrama brevipectoralis</i> (Tilak & Hussain)	Cyprinidae	EN	(B1, 2c)
215. <i>Osteobrama cotio cotio</i> (Ham.-Buch.)	Cyprinidae	LRnt	--
216. <i>Osteobrama cotio cunma</i> Day	Cyprinidae	VU	(A1ac, 2c)
217. <i>Osteochilus brevidorsalis</i> (Day)	Cyprinidae	EN	(B1, 2c)
218. <i>Osteochilichthys longidorsalis</i> Pethiyagoda & Kottelat	Cyprinidae	CR	(B1, 2c)

Species	Family	IUCN	Criteria
219. <i>Osteochilus godavariensis</i> (Babu Rao)	Cyprinidae	DD	--
220. <i>Osteobrama bakeri</i> (Day)	Cyprinidae	EN	(B1, 2c)
221. <i>Pangasius pangasius</i> (Ham.-Buch.)	Pangasiidae	CR	(A1abcd)
222. <i>Pangio pangia</i> (Ham.-Buch.)	Cobitidae	VU	(B1, 2c)
223. <i>Parambassis dayi</i> (Bleeker)	Chandidae	EN	(B1, 2c)
224. <i>Parambassis thomassi</i> (Day)	Chandidae	VU	(A1abcd, 2cd)
225. <i>Paruciosoma daniconius</i> (Ham.-Buch.)	Cyprinidae	LRnt	--
226. <i>Periophthalmus weberi</i> Eggert	Gobiidae	CR	(B1, 2c)
227. <i>Pinniwallago kanpurensis</i> Gupta, Jayaram & Hajela	Siluridae	CR	(B1, 2c)
228. <i>Pristolepis marginata</i> Jerdon	Nandidae	VU	(A1abcde, 2cd)
229. <i>Proeutropiichthys taakree</i> (Sykest)	Schilbeidae	CR	(A1ad, 2d)
230. <i>Proeutropiichthys taakree taakree</i> (Sykes)	Schilbeidae	VU	(D2)
231. <i>Pseudecheneis sulcatus</i> (McClelland)	Sisoridae	VU	(B1, 2c)
232. <i>Pseudeutropius atherinoides</i> (Bloch)	Schilbeidae	EN	(A1acd)
233. <i>Pseudeutropius mitchelli</i> Gunther	Schilbeidae	DD	--
234. <i>Psilorhynchus homalophera</i> Hora & Mukherji	Psilorhynchidae	VU	(A1ac, 2c)
235. <i>Psilorhynchus microphthalmus</i> Vishwanath & Manoj	Psilorhynchidae	CR	(B1, 2c)
236. <i>Psilorhynchus sucatio nudithoracicus</i> Tilak & Husain	Psilorhynchidae	EN	(A1a; B1, 2c)
237. <i>Puntius arulius</i> (Jerdon)	Cyprinidae	EN	(A1acd, 2cd; B1, 2c)
238. <i>Puntius arulius tambraparniei</i> (Silas)	Cyprinidae	CR	(B1, 2c)
239. <i>Puntius bovanicus</i> (Day)	Cyprinidae	CR	(B1, 2c)
240. <i>Puntius carnaticus</i> (Jerdon)	Cyprinidae	LRnt	--
241. <i>Puntius cauveriensis</i> (Hora)	Cyprinidae	DD	--
242. <i>Puntius chilinoides</i> (McClelland)	Cyprinidae	EN	(A1acd)
243. <i>Puntius chola</i> (Ham.-Buch.)	Cyprinidae	VU	(A1acd)
244. <i>Puntius chrysopterus</i> (McClelland)	Cyprinidae	LRlc	--
245. <i>Puntius clavatus</i> (McClelland)	Cyprinidae	EN	(B1, 2c)
246. <i>Puntius clavatus clavatus</i> (McClelland)	Cyprinidae	EN	(A1ac; B1, 2c)
247. <i>Puntius conchoniensis</i> (Ham.-Buch.)	Cyprinidae	VU	(B1, 2c)
248. <i>Puntius deccanensis</i> Yazdani & Babu Rao	Cyprinidae	CR	(B1, 2c)
249. <i>Puntius denisonii</i> (Day)	Cyprinidae	EN	(B1, 2c)
250. <i>Puntius dorsalis</i> (Jerdon)	Cyprinidae	EN	(B1, 2c)
251. <i>Puntius fasciatus</i> (Jerdon)	Cyprinidae	EN	(B1, 2c)
252. <i>Puntius guganio</i> (Ham.-Buch.)	Cyprinidae	LRnt	--
253. <i>Puntius hexastichus</i> (McClelland)	Cyprinidae	VU	(B1, 2c)
254. <i>Puntius jayarami</i> Vishwanath & Tombi	Cyprinidae	EN	(A1ac; B1, 2c)
255. <i>Puntius melanampyx</i> Day	Cyprinidae	LRlc	--
256. <i>Puntius melanostigma</i> (Day)	Cyprinidae	EN	(B1, 2c)
257. <i>Puntius mudumalaiensis</i> Menon	Cyprinidae	CR	(B1, 2bc; D2)
258. <i>Puntius narayani</i> (Hora)	Cyprinidae	CR	(B1, 2c)
259. <i>Puntius ophicephalus</i> Raj	Cyprinidae	EN	(B1, 2cd)
260. <i>Puntius parrah</i> (Day)	Cyprinidae	EN	(B1, 2c)
261. <i>Puntius phutunio</i> (Ham.-Buch.)	Cyprinidae	LRlc	--
262. <i>Puntius sarana sarana</i> (Ham.-Buch.)	Cyprinidae	VU	(A1acd)
263. <i>Puntius shalynius</i> Yazdani & Talukdar	Cyprinidae	VU	(B1, 2c)
264. <i>Puntius sophore</i> (Ham.-Buch.)	Cyprinidae	LRnt	--
265. <i>Puntius terio</i> (Ham.-Buch.)	Cyprinidae	LRnt	--
266. <i>Puntius ticto</i> (Ham.-Buch.)	Cyprinidae	LRnt	--
267. <i>Puntius ticto punctatus</i> (Day)	Cyprinidae	CR	(B1, 2c)
268. <i>Puntius vittatus</i> (Day)	Cyprinidae	VU	(A1acd)
269. <i>Raiamas bola</i> (Ham.-Buch.)	Cyprinidae	VU	(A1ac)
270. <i>Raiamas guttatus</i> (Day)	Cyprinidae	EN	(B1, 2c)
271. <i>Rhinomugil corsula</i> (Ham.-Buch.)	Mugilidae	VU	(A1acd)
272. <i>Rita chrysea</i> (Day)	Bagridae	EN	(B1, 2c)
273. <i>Rita kuturnee</i> (Sykes)	Bagridae	LRnt	--
274. <i>Rita pavimentatus</i> (Valencienns)	Bagridae	EN	(B1, 2c)
275. <i>Rita rita</i> (Ham.-Buch.)	Bagridae	LRnt	--
276. <i>Rohtee ogilbii</i> Sykes	Cyprinidae	LRnt	--

Species	Family	IUCN	Criteria
277. <i>Salmostoma bacaila</i> (Ham.-Buch.)	Cyprinidae	LRlc	--
278. <i>Salmostoma clupeoides</i> (Bloch)	Cyprinidae	LRlc	--
279. <i>Salmostoma novacula</i> (Valenciennes)	Cyprinidae	LRnt	--
280. <i>Salmostoma orissaensis</i> Banarescur	Cyprinidae	EN	(B1, 2c)
281. <i>Schistura arunachalensis</i> (Menon)	Homalopteridae	EN	(B1, 2c)
282. <i>Schistura devdevi</i> (Hora)	Homalopteridae	EN	(B1, 2c)
283. <i>Schistura elongatus</i> (Sen & Nalbant)	Homalopteridae	EN	(B1, 2c)
284. <i>Schistura kangjupkhulensis</i> (Hora)	Homalopteridae	VU	(A1c; B1, 2c)
285. <i>Schistura manipurensis</i> (Chaudhuri)	Homalopteridae	VU	(A1ac)
286. <i>Schistura multifasciatus</i> (Day)	Homalopteridae	VU	(D2)
287. <i>Schistura nagaensis</i> (Menon)	Homalopteridae	EN	(B1, 2ac)
288. <i>Schistura pavonaceus</i> (McClelland)	Homalopteridae	EN	(B1, 2c)
289. <i>Schistura peguensis</i> (Hora)	Homalopteridae	EN	(B1, 2ab)
290. <i>Schistura prashari</i> (Hora)	Homalopteridae	VU	(A1acd)
291. <i>Schistura sikmaiensis</i> Hora	Homalopteridae	EN	(B1, 2c)
292. <i>Schistura singhi</i> (Menon)	Homalopteridae	CR	(B1, 2ac)
293. <i>Schistura vinciguerrae</i> (Hora)	Homalopteridae	EN	(B1, 2c)
294. <i>Schizothorax nasus</i> (Heckell)	Cyprinidae	LRnt	--
295. <i>Schizothorachthys hugelii</i> (Heckel)	Cyprinidae	LRnt	--
296. <i>Schizothorax curvifrons</i> Heckel	Cyprinidae	VU	(B1, 2c)
297. <i>Schizothorax esocinus</i> (Heckel)	Cyprinidae	LRnt	--
298. <i>Schizothorax kumanosis</i> (Menon)	Cyprinidae	LRnt	--
299. <i>Schizothorax labiatus</i> (McClelland)	Cyprinidae	EN	(B1, 2c)
300. <i>Schizothorax niger</i> (Heckel)	Cyprinidae	VU	(B1, 2c)
301. <i>Schizothorax progastus</i> (McClelland)	Cyprinidae	LRnt	--
302. <i>Schizothorax richardsonii</i> (Gray)	Cyprinidae	VU	(A1c, 2cd)
303. <i>Schizothorax sinuatus</i> Heckel	Cyprinidae	LRnt	--
304. <i>Semiplotus modestus</i> Day	Cyprinidae	EN	(B1, 2bcd)
305. <i>Semiplotus semiplotus</i> (McClelland)	Cyprinidae	VU	(A1c; B1, 2ab)
306. <i>Sicamugil cascasia</i> (Ham.-Buch.)	Mugilidae	VU	(A1acd)
307. <i>Silonia childreni</i> (Sykes)	Siliniidae	EN	(B1, 2c)
308. <i>Silonia silondia</i> (Ham.-Buch.)	Siliniidae	LRnt	--
309. <i>Silurus afghana</i> Gunther	Siluridae	EN	(B1, 2c)
310. <i>Silurus wynaadensis</i> Day	Siluridae	CR	(B1, 2c)
311. <i>Sisor rhabdophorus</i> Ham.-Buch.	Sisoridae	EN	(B1, 2c)
312. <i>Somileptes gongota</i> Ham.-Buch.	Cobitidae	LRnt	--
313. <i>Stenogobius malabaricus</i> (Day)	Gobiidae	CR	(B1, 2c)
314. <i>Tetraodon cutcutia</i> Ham.-Buch.	Tetrodontidae	LRnt	--
315. <i>Tetraodon travancoricus</i> Hora & Nair	Tetrodontidae	EN	(B1, 2ab)
316. <i>Tor khudree</i> (Sykes)	Cyprinidae	VU	(A1abcd)
317. <i>Tor khudree malabaricus</i> (Jerdon)	Cyprinidae	CR	(A1ac; B1, 2c)
318. <i>Tor kulkarni</i> Menon	Cyprinidae	DD	--
319. <i>Tor mosal</i> (Ham.-Buch.)	Cyprinidae	EN	(A1acd; B1, 2c)
320. <i>Tor mussullah</i> (Sykes)	Cyprinidae	CR	(A1acd)
321. <i>Tor progeneius</i> (McClelland)	Cyprinidae	DD	--
322. <i>Tor putitora</i> (Ham.-Buch.)	Cyprinidae	EN	(A1acd)
323. <i>Tor tor</i> (Ham.-Buch.)	Cyprinidae	EN	(A1acd)
324. <i>Travancoria elongata</i> Pethiyagoda & Kottelat	Balitoridae	CR	(B1, 2c)
325. <i>Travancoria jonesi</i> Hora	Balitoridae	EN	(B1, 2c)
326. <i>Wallago attu</i> (Schneider)	Siluridae	LRnt	--
327. <i>Xenentodon cancila</i> (Ham.-Buch.)	Belontiidae	LRnt	--

Status of Indian freshwater fishes



Total number of Indian freshwater fish taxa = +650
Number of freshwater fishes assessed = 329
Number of threatened freshwater fishes = 227

IUCN Red List Categories and Criteria explained in brief below

* IUCN Red List *Categories* :

CR – Critically endangered -- a taxon is Critically endangered when it is facing an extremely high risk of extinction in the wild in the immediate future as defined by the criteria.

EN – Endangered -- a taxon is Endangered when it is not Critically endangered but is facing a very high risk of extinction in the wild in the near future as defined by the criteria.

VU – Vulnerable -- a taxon is Vulnerable when it is not Critically endangered or Endangered but is facing a high risk of extinction in the wild in the medium term future as defined by the criteria.

LR – Lower risk – a taxon is Low Risk when it has been evaluated and does not qualify for any of the threatened categories, Critically endangered, Endangered, Vulnerable, or Data Deficient. (LR-nt – near threatened, LR-lc – least concern, LR-cd – conservation dependent.

DD – Data deficient – A taxon is Data Deficient when there is inadequate information to make a direct or indirect assessment of its risk of extinction based on its distribution and/or population status.

NE – Not evaluated – A taxon is Not Evaluated when it has not yet been assessed against the criteria.

** IUCN Red List *Criteria*

A – Population reduction – (1) observed, inferred, suspected or estimated reduction, or (2) projected or predicted reduction of at least 20% (VU), or 50% (EN), or 80% (CR) in 10 years or 3 generations whichever is longer based on (a) Direct observation; (b) index of abundance appropriate for the taxon; (c) decline in areas of occupancy, extent of occurrence and/or quality of habitat; (d) actual or potential levels of exploitation; (e) effects of introduced taxa, hybridisation, pathogens, pollutants, competitors, or parasites.

B – Restricted distribution -- Extent of occurrence estimated to be less than 20,000 sq km. (VU), or 5,000 sq km (EN) or 100 sq km (CR) and/or area of occupancy estimated to be less than 2000 sq.km. (VU), or 500 sq km (EN), or 10 sq km (CR), and qualifying for any two of the following : (1) severely fragmented, or known to exist in not more than 10 locations (VU), or 5 locations (EN), or single location (CR); (2) continuing decline, observed, inferred, projected in any (a) extent of occurrence, (b) area of occupancy; (c) area, extent and/or quality of habitat; (d) number of locations or subpopulations; (e) number of mature individuals; (3) extreme fluctuation in either (a) extent of occurrence, (b) area of occupancy, (c) number of populations or subpopulations, (d) number of mature individuals.

C – Population estimates – population estimated to number less than 10,000 (VU), or 2,500 (EN), or 250 (CR) mature individuals and either (1) estimated, continuing decline of at least 10% in 10 years or 3 generations or whichever is longer (VU), or 20% in 5 years or 2 generations, whichever is longer (EN), or 25% in 3 years or 1 generation whichever is longer (CR) OR in (2) continuing decline, observed, projected, inferred, number of mature individuals and population structure in the form of either (a) severely fragmented [no subpopulation estimated to contain more than 1000 (VU), or 250 (EN), or 50 (CR) mature individuals]; (b) all individuals are in a single subpopulation.

D – Restricted populations – (1) Population estimated to number less than 1000 (VU), or 250 (EN), or 50 (CR) mature individuals; (2) Population restricted in area of occupancy of less than 100 sq km or less than 5 locations (VU).

E – Probability of extinction – quantitative analysis showing the probability of extinction in the wild is at least 10% in 100 years (VU), or 20% in 20 years or 5 generations, whichever is longer (EN), or 50% in 10 years or 3 generations, whichever is longer (CR).

Summary Data Tables for Selected Species of Northern, Northeastern and Central Indian Medicinal Plants are on the following pages. Below is a Key to the symbols used in the tables :

No. of Location : F = Fragmented

Range: A = < 100 sq.km.; B = < 5,000 sq.km.; C = < 20,000 sq.km.; D = > 20,000 sq.km.;

Area: A = < 10 sq.km.; B = < 500 sq.km.; C = < 2,000 sq.km.; D = > 2,000 sq.km.;

Data Quality: 1 = Reliable census or population monitoring; 2 = General field studies; 3 = Informal field sightings; 4 = Indirect information; 5 = Museum/ herbarium/ collection/ records; 6 = Hearsay/ popular belief

Threat: Al = Artificial lighting; L = Loss of habitat; Lf = Loss of habitat due to fragmentation; D = Diseases; E = Edaphic factors (changes in); H = Harvest; Hf = Harvest for food; I = Human interference; P = Predation; Ps = Pesticides; Pu = Pollution; R = Road kills; Sf = Fire as catastrophic event; Sn = Siltation; T = Trade; Tp = Trade of parts

Research Recommendations: G = Genetic management; H = Husbandry research; Hm = Habitat management; Lh = Life history studies; Lm = Limiting factor management; Lr = Limiting factor research; M = Monitoring; O = Other (specific to the species); P = PHVA; PP = PHVA pending further work; S = Survey search and find; T = Taxonomic and morphological genetic studies; TI = Translocations

Cultivation Recommendations : 1 = Captive breeding for conservation either only *in situ* or both *in situ* and *ex situ* with the population maintaining 90% genetic diversity for 100 years; 2 = same as 1 but periodic reinforcement of captive stock with genetic materials from the wild; 3 = Captive breeding only for research, education or husbandry but not for conservation; 4 = Captive breeding for sustainable utilisation; 5 = restricted breeding; P = pending

Level of difficulty: 1 = Least difficult; 2 = Moderately difficult; 3 = Very difficult; Unk = Unknown

IUCN Red List Categories and Criteria explained in brief below

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A – Population reduction – (1) observed, inferred, suspected or estimated reduction, or (2) projected or predicted reduction of at least 20% (VU), or 50% (EN), or 80% (CR) in 10 years or 3 generations whichever is longer based on (a) Direct observation; (b) index of abundance appropriate for the taxon; (c) decline in areas of occupancy, extent of occurrence and/or quality of habitat; (d) actual or potential levels of exploitation; (e) effects of introduced taxa, hybridisation, pathogens, pollutants, competitors, or parasites.

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C – Population estimates – population estimated to number less than 10,000 (VU), or 2,500 (EN), or 250 (CR) mature individuals and either (1) estimated, continuing decline of at least 10% in 10 years or 3 generations or whichever is longer (VU), or 20% in 5 years or 2 generations, whichever is longer (EN), or 25% in 3 years or 1 generation whichever is longer (CR) OR in (2) continuing decline, observed, projected, inferred, number of mature individuals and population structure in the form of either (a) severely fragmented [no subpopulation estimated to contain more than 1000 (VU), or 250 (EN), or 50 (CR) mature individuals]; (b) all individuals are in a single subpopulation.

D – Restricted populations – (1) Population estimated to number less than 1000 (VU), or 250 (EN), or 50 (CR) mature individuals; (2) Population restricted in area of occupancy of less than 100 sq km or less than 5 locations (VU).

E – Probability of extinction – quantitative analysis showing the probability of extinction in the wild is at least 10% in 100 years (VU), or 20% in 20 years or 5 generations, whichever is longer (EN), or 50% in 10 years or 3 generations, whichever is longer (CR).

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Threat: Al = Artificial lighting; L = Loss of habitat; Lf = Loss of habitat due to fragmentation; D = Diseases; E = Edaphic factors (changes in); H = Harvest; Hf = Harvest for food; I = Human interference; P = Predation; Ps = Pesticides; Pu = Pollution; R = Road kills; Sf = Fire as catastrophic event; Sn = Siltation; T = Trade; Tp = Trade of parts

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Cultivation Recommendations : 1 = Captive breeding for conservation either only in *in situ* or both *in situ* and *ex situ* with the population maintaining 90% genetic diversity for 100 years; 2 = same as 1 but periodic reinforcement of captive stock with genetic materials from the wild; 3 = Captive breeding only for research, education or husbandry but not for conservation; 4 = Captive breeding for commerce; 5 = Restrictive breeding; P = Pending

Level of difficulty: 1 = Least difficult; 2 = Moderately difficult; 3 = Very difficult; Unk = Unknown

Freshwater fishes of India

Summary Data Table

Summary Data Table of Freshwater Fish

Species	Rng.	Area	No. Loc	% Dec	Yr/ Gen	Pop. No.	Data Qual.	Threats	IUCN	Crit. used	Research Recommend.	Cap rec.	Lev. Diff.
<i>Aborichthys elongatus</i>	B	B	1	Unk	Unk	Unk	2, 5	I	EN	RD	T, S, M, Lh, PP	No	Unk
<i>Aborichthys garoensis</i>	A	B	1	Unk	Unk	Unk	2	I	CR	RD	S, M, Lh, PP	No	Unk
<i>Aborichthys kempi</i>	D	C	Many, F	Unk	Unk	Unk	2, 5	Fd, Po	VU	RD	S, M	No	Unk
<i>Aborichthys tikaderi</i>	B	B	1	Unk	Unk	Unk	2, 5	Ov, Po	EN	RD	S, M, Lh, PP	No	Unk
<i>Acanthocobitis zonalternans</i>	B	B	Unk	Unk	Unk	Unk	2	Fd, Po	DD	--	S, M	No	Unk
<i>Ailia colia</i>	D	D	Many	20	10 yrs	Unk	2, 5	I, H, Ov, Pu, T (C)	VU	PR	G, S, M, Lr, Lm, Hm	1	3
<i>Ailia punctata</i>	D	D	Many	20	10 yrs	Unk	2, 5	I, L, Ov, Pu, T (C)	VU	PR	M, Hm	No	Unk
<i>Amblyceps apangi</i>	B	B	1	Unk	Unk	Unk	2, 5	-	VU	NM	S, M	No	Unk
<i>Amblyceps arunachalensis</i>	B	B	1	Unk	Unk	Unk	2	-	VU	NM	S, M	No	Unk
<i>Amblyceps mangois</i>	D	D	Many, F	30	20 yrs	Unk	2	I, L, Ov, T (D)	LRnt	--	Lm, Lr, P	P	2
<i>Amblypharyngodon chakaiensis</i>	A	A	1	Unk	Unk	Unk	2	Dm, F, L, Ov, Sn, T (L)	CR	PR	S, M	Unk	Unk
<i>Amblypharyngodon mola</i>	D	D	Many	Stable	Unk	Unk	4, 5	F, T (D)	LRlc	--	H	No	2
<i>Anabas cobojius</i>	D	C	Many	40	10 yrs	Unk	2	F, L, Ov, T (D)	VU	PR	Hm, M, P	3	2
<i>Anabas testudineus</i>	D	D	Many	40	10 yrs	abundant	2, 4, 5	Dm, F, I, Ov, T (L, D, C)	VU	PR	H, Hm, S, M, Lm, Lr, P	1, 2, 3, 4	1
<i>Anguilla bengalensis</i>	D	B	Many, F	50	10 yrs	Unk	2, 4, 5	Dm, F, L, Ov, T (D)	EN	PR, RD	S, M, H, Hm, P	2	3
<i>Aplocheilus rubroshigma</i>	Nk	Nk	Unk	Unk	Unk	Unk	5	Unk	DD	--	S, T	Unk	Unk
<i>Aplocheilus panchax</i>	D	Nk	1	Unk	Unk	Unk	5	Unk	DD	--	S, M, Hm, Lh	No	Unk
<i>Aspidoparia jaya</i>	B	B	Many	30	10 yrs	Unk	2, 3, 5	Pu, T (L, D)	VU	PR	S, M, Lm, P	1	1
<i>Aspidoparia morar</i>	D	D	Many	Unk	Unk	Unk	5	I, L, Ov, Pu, T (L, C)	LRnt	--	S, M, Lh, T, G	No	Unk
<i>Bagarius bagarius</i>	D	D	Many	40	20 yrs	Unk	2, 5	F, L, T (C, L)	VU	PR	Hm, Lr, P, T	3	3
<i>Balitora brucei</i>	D	D	Many, F	Unk	Unk	Unk	5	Fd, I	LRnt	--	S, M	No	Unk
<i>Barbus carletoni</i>	D	B	Few, F	30	10 yrs	Unk	2, 5	I	EN	RD	S, M, Lr, P	1	1
<i>Barilius bakeri</i>	C	D	Many, F	30	10 yrs	Unk	1, 2	F, L, Ps, Po, Sn, T (L)	VU	PR	M, Lh	No	1
<i>Barilius barila</i>	D	C	Many, F	20	25 yrs	Unk	2	Fd, I, Ov, Ps, Sn, T (L, D)	VU	RD	M, Hm, Lr, P	P	2
<i>Barilius barna</i>	D	D	Many	Unk	Unk	Unk	2	Fd, E, F, I, L, Ov, Po, Sn, T (L)	LRnt	--	M, Lh, Hm	P	Unk
<i>Barilius bendelisis</i>	D	D	Many, F	Decl.	Unk	Unk	2	Fd, F, I, L, Ov, Po, Sn, T (L, C)	LRnt	--	M, Lh, Hm, P	No	Unk
<i>Barilius canarensis</i>	B	B	Unk	Unk	Unk	Unk	5	-	DD	--	S, Lh	3	3
<i>Barilius corbeti</i>	A	A	1	Unk	17 yrs	Unk	2, 5	P	CR	RD	S, M, Hm, Lr, P	1	1
<i>Barilius dimorphicus</i>	A	A	2	Decl	7 yrs	Unk	2, 5	Dm, F, I, L, Po, T (L)	CR	RD	S, M, G, Hm, Lr, P	1, 2, 4	1
<i>Barilius dogarsinghi</i>	A	B	3, F	50	10 yrs	Unk	1, 2, 5	Fd, I, Po, T (L)	EN	RD	S, M, Lh, Lr, PP	No	Unk
<i>Barilius evezardi</i>	C	B	Few	Unk	Unk	Unk	4, 5	F, T (L)	LRnt	--	S, M	No	Unk
<i>Barilius shacra</i>	B	C	Many	10	15 yrs	Unk	2	I, L, Pu, Sn, T (L)	LRnt	--	M, O, P	P	2
<i>Barilius tileo</i>	B	B	Many	10	15 yrs	Unk	2, 4	I, L, Sn, T (L)	LRnt	--	M, Hm, PP	No	2

Species	Rng.	Area	No. Loc	% Dec	Yr/ Gen	Pop. No.	Data Qual.	Threats	IUCN	Crit. used	Research Recommend.	Cap rec.	Lev. Diff.
<i>Barilius vagra</i>	D	C	Many	20	10 yrs	Unk	2, 3	I, L, T (L)	VU	PR	S, M, Hm, P	P	1
<i>Batasio travancoria</i>	B	B	6, F	Decl.	5 yrs	Unk	2	Dm, F, I, Pu, Po, Ps, Sn	EN	PR, RD	T, S, M, Hm, Lh P	3	3
<i>Bhavana australis</i>	B	B	> 20, F	Unk	Unk	Unk	2	L, Sn	EN	RD	S, P	3	3
<i>Botia almorhae</i>	B	C	Few, F	Unk	Unk	Unk	2	Fd, E, I, L, Ov, Po, Sn, T (L)	EN	RD	Lh, Hm, M, P	P	Unk
<i>Botia berdmorei</i>	B	B	Many	50	10 yrs	Unk	2	Dm, Fd, L, Po, T (L)	EN	PR	S, M, P	1	2
<i>Botia birdi</i>	D	C	Many	10	20 yrs	Unk	2	I, L, Pu, Sn, F, T (L)	LRnt	--	Hm, Lh, O, P	P	2
<i>Botia geto</i>	B	C	Many	10	20 yrs	Unk	2	I, Po, Sn, T (L)	LRnt	--	S, O, P	P	2
<i>Botia histrionica</i>	D	C	Many, F	Unk	Unk	Unk	2	I, L	VU	RD	S, M	No	Unk
<i>Botia lohachata</i>	B	C	Few, F	Decl.	Unk	Unk	2	Fd, E, I, L, Ov, Po, Sn, T (L)	EN	RD	Lh, Hm, M, P	1	3
<i>Botia striata</i>	D	B	Many, F	10	10 yrs	Unk	2, 5	L, Pu, T (l)	EN	RD	S, M, H, Lh, P	1	1
<i>Brachydanio acuticophala</i>	C	C	Many, F	20	10 yrs	Unk	1, 2, 5	Fd, I, Po	VU	PR, RD	S, M, Lh, Lr, PP	No	Unk
<i>Brachydanio rerio</i>	D	D	Many	10	20 yrs	Unk	4, 5	Fd, I, L, Pu, Sn, T(L)	LRnt	--	S, Hm	No	Unk
<i>Catla catla</i>	D	D	Many	40	20 yrs.	Unk	2	I, L, La, Ov, Pu, T (C)	VU	PR	G, M, Hm	1, 4	Unk
<i>Channa baculis</i>	D	D	Many, F	<20	20 yrs.	Unk	3, 4, 5	I, Pu, T (L, l)	LRlc	--	S, M	No	Unk
<i>Channa marulius</i>	D	D	Many	30	20 yrs.	Abundant	1, 2, 4, 5	F, L, Ov, T (D, C)	LRnt	--	M, H	No	1
<i>Channa micropeltes</i>	A	A	1	99	55 yrs.	Unk	2	D, Fd, F, L, Po, Pu, Sn	CR	PR, RD	T, TI, S, M, G, Hm, O, P	1	3
<i>Channa orientalis</i>	D	D	Many	40	20 yrs	Unk	1, 2, 4, 5	F, L, T (D)	VU	PR	Hm, S, M, PP	No	1
<i>Channa punctatus</i>	D	D	Many	30	20 yrs.	Unk	1, 2, 4, 5	F, L, Ov, T (C)	LRnt	--	H, Hm	No	1
<i>Channa striatus</i>	D	D	Many	Unk	Unk	Unk	1, 2, 4, 5	F, T (C)	LRlc	--	H	No	1
<i>Chaudhurai indica</i>	C	C	4, F	Unk	Unk	Unk	2, 5	I, L	VU	RD, NM	S, M, Lr	No	No
<i>Chaudhuria khajurjai</i>	C	B	2, F	Unk	Unk	Unk	2, 5	I, L, Ov	EN	RD	S, M, Lh	No	No
<i>Chela dadyburjori</i>	A	B	3, F	Unk	Unk	Unk	5	-	DD	--	S, M	No	Unk
<i>Chela laubuca</i>	D	D	Many, F	Unk	Unk	Unk	Unk	T (L)	LRlc	--	S, M	No	Unk
<i>Chelonodon fluviatilis</i>	D	D	Many, F	Unk	Unk	Unk	5	I, L, Pu, T (L)	LRnt	--	S, M, Lh	3	3
<i>Cirrhinus cirrhosus</i>	D	C	8-10, F	Unk	Unk	Unk	4, 5	I, L, Ov, Pu, T (L)	VU	RD	H, G, M, PP	3	1
<i>Cirrhinus fulungee</i>	D	D	Many	Unk	Unk	Unk	4, 5	F, L, Pu, T (D)	LRnt	--	Hm, H	No	Unk
<i>Cirrhinus macrops</i>	B	B	Unk	Unk	Unk	Unk	4, 5	F, T (L)	DD	--	S, M	No	No
<i>Cirrhinus mrigala</i>	D	D	Many	20	40 yrs	Unk	2	L, Ov, Sn, T (C)	LRnt	--	G	No	1
<i>Cirrhinus reba</i>	D	D	Many, Cont.	20	10 yrs.	Unk	2, 4, 5	Dm, F, I, L, Ov, Pu, Sn, T (D, C)	VU	PR	S, M	P	1
<i>Clarias batrachus</i>	D	D	Many	<50	20 yrs	Unk	2, 5	T (L, D, C)	VU	PR	S, M, Hm, Lm, Lr, G, P	1, 2, 4	1
<i>Clarias dayi</i>	B	B	2	Unk	Unk	Unk	1, 2	F, Po, Pu	EN	RD	T, S, Lh, P	1	Unk
<i>Clarias dussumieri</i>	D	C	Many, F	70-80	30 yrs.	Unk	2	D, Fd, F, L, Ov, Ps, Po, Pu, Sn, T(L,D)	VU	PR	T, TI, S, M, Hm, P, O	1	3

Species	Rng.	Area	No. Loc	% Dec	Yr/ Gen	Pop. No.	Data Qual.	Threats	IUCN	Crit. used	Research Recommend.	Cap rec.	Lev. Diff.
<i>Clupisoma bastari</i>	C	B	2, F	Unk	Unk	Unk	2, 4, 5	Dm, Fd	EN	RD	Hm	No	No
<i>Clupisoma garua</i>	D	D	Many	40	20 yrs.	Unk	2, 5	I, L, Ov, Pu, Sn, T (C)	VU	PR	M, S, Hm, Lm, Lr	No	3
<i>Colisa fasciatus</i>	D	D	Many, Cont	20	40 yrs.	Unk	2, 4, 5	F, I, H, Pu, T (D, C)	LRnt	--	M, S, Hm	No	1
<i>Crossocheilus burmanicus</i>	B	B	Many	+ 30	10 yrs	Unk	2	Dm, Fd Po, I, T(L,D)	VU	RD	S, M, Hm	No	Unk
<i>Crossocheilus latius latius</i>	B	D	Many	Unk	Unk	Unk	2, 4	L, Fd	DD	--	Lh	No	Unk
<i>Crossocheilus periyarensis</i>	A	A	1	Unk	Unk	Unk	1, 2	-	VU	NM	Lh, S, P	3	3
<i>Danio aequipinnatus</i>	D	C	Many	10	15 yrs.	Unk	2, 4, 5	I, L, Pu, T (L)	LRnt	--	S, O, M	P	2
<i>Danio devario</i>	D	D	Many	30	20 yrs	Unk	2, 5	I, Ov, Po, Pu, T (L, D)	LRnt	--	S, M, Lr, Hm, Lh, P	1	2
<i>Danio naganensis</i>	C	C	Many, F	>20	10 yrs	Unk	2, 5	Fd, I, L Po, T (L)	VU	PR	S, M, Hm, PP	3	3
<i>Dayella malabarica</i>	A	A	2	Unk	Unk	Unk	2	Dm, F, Po, Pu, P, T (L)	CR	PR	T, TI, S, M, Lm, P	3	3
<i>Erethistoides montana pipri</i>	A	A	1	50	40 yrs.	Unk	3, 4	Dm, I, L, Pu	CR	RD	T, S, TI, M, G, Lh, Lr	3	Unk
<i>Esomus danricus</i>	D	D	Many	Stable	Unk	Unk	2, 4, 5	F, T (L, D)	LRlc	--	M	No	1
<i>Etrophus canarensis</i>	B	B	Unk	Unk	Unk	Unk	5	-	DD	--	P, S, M	3	3
<i>Euchiloglanis hodgarti</i>	C	C	Many, F	15	20 yrs.	Unk	2, 4	Dm, I, L, Po, Pu, T (L)	VU	PR	S, M, P	P	2
<i>Euchiloglanis kamengensis</i>	B	B	2	Unk	Unk	Unk	2, 3	S, SI, L	EN	RD	S, M, Lh	No	No
<i>Eutropiichthys murius</i>	D	D	Many	Decl.	Unk	Unk	3, 4	I, H, Ov Pu, T (L)	LRnt	--	Hm, Lm, Lr, G, S, M	No	No
<i>Eutropiichthys vacha</i>	D	C	Many, F	>50	10 yrs.	Unk	2, 5	I, L, Ov, Pu	EN	PR	T, S, M, Hm, G, P	1	3
<i>Gagata sexualis</i>	C	D	3	20	30 yrs.	Unk	2, 3	I, L, Pu	LRnt	--	T, S, M, Hm, Lr, Lh	No	Unk
<i>Garra gotyla gotyla</i>	D	D	Many & F	20	10 yrs.	Unk	2	Fd, E, I, L, Ov, Ps, Po, Sn, T (L)	VU	PR	M, Lh, Hm, P	No	Unk
<i>Garra gotyla stenorhynchus</i>	B	B	5, F	10	15 yrs	Unk	1, 2	Fd, Ps, Po	EN	RD	M, S, P	3	3
<i>Garra hughi</i>	B	B	15	10	3 yrs.	Unk	1, 2	L, Ps	EN	PR	T, S	No	No
<i>Garra kempfi</i>	C	C	Many, F	20	10 yrs.	Unk	2	I, Po, T (L)	VU	PR, RD	M, Lh	No	No
<i>Garra lissorhynchus</i>	C	C	Many, F	20	10 yrs.	Unk	2, 5	I, Po, T (L)	VU	PR	Hm, S	No	No
<i>Garra litanensis</i>	A	A	1	Unk	Unk	Unk	2	I, Po, T (L)	CR	RD	S, Lh	No	Unk
<i>Garra manipurensis</i>	B	A	2, F	Unk	Unk	Unk	2	Fd, Po	CR	RD	S, Lh	No	No
<i>Garra menoni</i>	B	B	1	Unk	Unk	Unk	1, 2	-	VU	NM	Unk	Unk	Unk
<i>Garra naganensis</i>	C	C	Many,	Decl.	Unk	Unk	2	Fd, Po, T (L)	VU	RD	Hm, Lh	No	No
<i>Garra rupecula</i>	C	C	Many, F	30	10 yrs.	Unk	2	Fd, Po, T (L)	VU	PR, RD	M, Lh	No	Unk
<i>Garra surendranathanii</i>	B	B	3,	Unk	Unk	Unk	1, 2	Fd, Ps, Po, T (L)	EN	RD	S, M, Hm, P	Unk	Unk
<i>Glossogobius giurus</i>	D	D	Many	10	20 yrs	Unk	2, 5	H	LRnt	--	M, S	1	1
<i>Glyphis gangeticus</i>	D	C	2	90	100yrs	Unk	2, 3, 5	Dm, F, I, H, Ov, Pu	VU	NM	S, M, Hm, Lr	No	3
<i>Glyptosternum reticulatum</i>	B	C	Many, F	15	25 yrs.	Unk	2, 3	Fd, L, Sn, T (L)	EN	RD	S, Lm, P	P	3

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<i>Glyptothorax alaknandi</i>	A	A	1	>20	28 yrs	Unk	2, 5	Dm, Fd, Po, T (L)	CR	RD	S, M, G, Lm, Hm, P	1	1
<i>Glyptothorax anamalaiensis</i>	A	A	2, F	Unk	Unk	Unk	1, 2	Fd, Ps, Po	CR	RD	S, M, Hm, P	3	3
<i>Glyptothorax bervipinnis</i>	B	B	1	<20	10 yrs.	Unk	5	Fd, L, Sn, T (L)	VU	PR, RD	T, S, M, Lm, Lr	1	3
<i>Glyptothorax cavia</i>	D	D	Many	>50	10 yrs.	Unk	2, 5	Dm, F, I, L, Pu, T (L)	EN	PR	S, M, G, Hm, Lm, Lr, P	1, 4	1
<i>Glyptothorax dakpathari</i>	A	A	1	>50	20 yrs	Unk	2, 5	Dm, Fd, Po	CR	RD	S, M, G, Lm, Hm, Lr, P	1	1
<i>Glyptothorax davissinghi</i>	A	A	2, F	5	4 yrs.	Unk	1, 2	Po	CR	RD	T, M, Lh, P	No	No
<i>Glyptothorax garhwali</i>	A	A	1	Unk	Unk	Unk	2, 5	Dm, Fd, Po	CR	RD	S, M, G, Lm, Hm, Lr, P	1	1
<i>Glyptothorax housei</i>	A	A	1	Unk	Unk	Unk	1, 2	-	DD	--	M, P	1	Unk
<i>Glyptothorax indicus</i>	B	B	Many	40	10yrs	Unk	2, 5	Fd, F, I, L	VU	PR	S, M, G, Lm, Lr, P	1	1
<i>Glyptothorax kashmirensis</i>	B	B	< 5	5	15 yrs	Unk	2	I, L, Ps, T (L)	EN	RD	Hm, P, O	P	Unk
<i>Glyptothorax lonah</i>	D	B	Many, F	20	20 yrs.	Unk	2, 4, 5	Dm, L, T (L)	LRnt	--	Hm, S	No	2
<i>Glyptothorax madraspatanum</i>	B	B	3	Unk	Unk	Unk	1, 2	-	VU	NM	S, M	No	Unk
<i>Glyptothorax nelsoni</i>	B	B	2	30	25 yrs.	Unk	2, 5	Dm, La, T (L)	EN	RD	S, M, Lr, P	1	1
<i>Glyptothorax pectinopterus</i>	D	C	Many, F	Unk	Unk	Unk	2, 4	Fd, Po	LRnt	--	S, Lh, M	No	Unk
<i>Glyptothorax saisii</i>	D	B	3	50	80 yrs.	Unk	2, 5	Dm, Fd, Po	EN	RD	S, M, G, Lm, Hm, Lr, P	1	1
<i>Glyptothorax stoliczkae</i>	A	A	1	20	30 yrs.	Unk	2, 5	Fd, E, Lf	CR	RD	S, M, G, Hm, Lm, Lr, P	1	1
<i>Glyptothorax striatus</i>	D	C	3, F	Unk	Unk	Unk	2, 5	Dm, I	VU	RD; NM	S, M	No	No
<i>Glyptothorax telchitta</i>	D	D	Many	20	20 yrs	Unk	2, 5	Dm, I, Pu	LRnt	--	S, M, Lr, P	1	1
<i>Gonialosa manmina</i>	C	C	Many	40-50	17 yrs	Unk	2, 5	Dm, F, L, Ov, Pu	VU	PR	T, S, M, Hm	1, 2	1
<i>Gudusia chapra</i>	D	D	Many	Stable	Unk	Unk	2, 5	F, T (D)	LRlc	--	M	No	2
<i>Gymnocypris biswasi</i>	Nk	Nk	Unk	100	Unk	Unk	5	-	EX	--	S	Unk	Unk
<i>Hara horai</i>	B	B	2	80	20 yrs	Unk	2, 4, 5	Dm, Fd, Po, T (L)	EN	PR, RD	S, M, Lm, P	1	1
<i>Heteropneustes fossilis</i>	D	D	Many	>20	10 yrs.	Unk	2, 5	F, I, L, T (L, D, C)	VU	PR	S, M, H, Hm, P	1	1
<i>Hilsa ilisha</i>	D	D	Many	80	30 yrs.	Unk	1, 2, 3, 4, 5	Dm, F, L, Ov, Pu, T (C)	VU	PR	S, M, H, Hm, Lm, P	1	2
<i>Homaloptera montana</i>	B	B	1	Unk	Unk	Unk	1, 2	Ps	CR	RD	S, M	1	Unk
<i>Homaloptera pillaii</i>	B	B	1	Unk	Unk	Unk	1, 2	-	VU	NM	M	No	Unk
<i>Horabagrus brachysoma</i>	B	B	3	60-70	10 yrs.	< 50	2	Fd, F, I, L, Ov, Ps, Po, Pu, Sn, T (L, C, I)	EN	PR	T, Tc, S, M, G, Hm, Lh, O, P	1	3
<i>Horabagrus nigricollaris</i>	A	A	1	Unk	Unk	Unk	1	L	CR	RD	S, M, Hm, Lm, G, P	P	3
<i>Horadandia atukorali brittani</i>	B	B	1	Unk	Unk	Unk	1, 2, 6	I	EN	RD	S, M	1	Unk
<i>Horaglanis krishnai</i>	A	A	5, F	Unk	Unk	< 50	2	I, L	CR	NM, RD	S, M, G, Hm, P, O	3	3
<i>Hyporhamphus xanthopterus</i>	A	A	1	60-70	15 yrs.	Unk	2	F, I, L, Ov, Ps, Po, T (L, D)	CR	PR, RD	T, S, M, Lr, Hm, P	3	3
<i>Hypselobarbus curmuca</i>	B	C	15, F	60-70	40 yrs	Unk	2, 4, 6	D, Fd, F, L, La, Ov, P, Pe, T (L, D)	EN	PR	T, S, M, G, Hm, Lh, P	1	1

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<i>Hypselobarbus dubius</i>	B	B	3, F	70-80	10-20 yrs.	Unk	1, 2	Dm, F, Ic, L, T (L)	EN	RD	T, TI, S, G, H, Lh, P	1	2
<i>Hypselobarbus jerdoni</i>	B	B	5, F	>40	10 yrs	Unk	1, 2	Dm, Fd, L, T (L)	EN	RD	T, TI, S, G, Lh, H, P	1	3
<i>Hypselobarbus kolus</i>	B	B	Many, F	20	10 yrs.	Unk	1, 2	Dm, Fd, F, H, L, Po, T (L)	EN	PR, RD	S, M, G, Hm, Lh, P	1	3
<i>Hypselobarbus lithopides</i>	D	B	Few, F	50	5 yrs.	Unk	1, 2	F, I, Po, T (L)	EN	PR; RD	T, S, M, G, P	1	3
<i>Hypselobarbus micropogon periyarensis</i>	A	A	1	Unk	Unk	Unk	1, 2	F, L, Ov, T (L)	EN	RD	Hm, Ln, S, M, G, P	1	1
<i>Hypselobarbus thomassi</i>	D	B	Few, F	Unk	Unk	Unk	1, 2	Po, Pu, T (L)	EN	RD	S, Lh, P	3	3
<i>Hypseloparbus kurali</i>	B	B	10, F	Unk	Unk	Unk	1, 2	Dm, D, Fd, F, G, L, Ps	EN	RD	T, TI, S, M, G, Hm, Lh, P	1	3
<i>Johnius gangaticus</i>	B	B	2	20	20 yrs.	Unk	2, 5	F, I, Pu, T (L, C, D)	EN	RD	Ti, S, M, G, Hm, P	4	1
<i>Kryptopterus indicus</i>	A	A	1	Unk	Unk	Unk	2	L	CR	RD	S, M, Hm	No	No
<i>Labeo ariza</i>	A	A	< 10, F	70	10 yrs.	< 100	1, 2	Dm, Fd, F, L, Pu, T (L)	CR	RD	TI, S, M, Lm, Lh, P	1	3
<i>Labeo angra</i>	D	D	Many	Unk	Unk	Unk	2, 3	I, H, T (L)	LRnt	--	M, G	No	Unk
<i>Labeo bata</i>	D	D	Many	Unk	Unk	Unk	2	L, Ov, Sn, T (C)	LRnt	--	M	No	Unk
<i>Labeo boga</i>	D	D	Many	20	20 yrs.	Unk	2, 5	I, H, Ov, Pu, T (L)	LRnt	--	M	No	3
<i>Labeo calbasu</i>	D	D	Many	30	20 yrs.	Unk	2, 5	I, H, Ov, Pu, T (C)	LRnt	--	G, M	No	No
<i>Labeo dero</i>	D	D	Many	50	20 yrs.	20	2, 3, 5	Dm, Dr, Fd, F, L, H, I, Lp, Ov, Sn, T(L,D)	VU	PR	S, M, Hm, Lm	1	1
<i>Labeo dussumieri</i>	B	C	Many, F	50	10 yrs.	Unk	1, 2	Dm, Fd, F, Ov, Po, Pu, Sn, T (L, C)	EN	PR	T, TI, M, G, Hm, P, O	1	2
<i>Labeo dyocheilus</i>	B	D	Many	50	20 yrs.	Unk	2, 3, 5	Dm, Dr, Fd, F, I, H, L, Ov, T (L, D)	VU	PR	S, M, Hm, Lm, Pp	1	2
<i>Labeo fimbriatus</i>	C	C	Many	20	20 yrs.	Unk	2, 3, 4, 5	Dm, F, T (D)	LRnt	--	M, H	No	1
<i>Labeo gonius</i>	D	D	Many	30-	20 yrs.	Unk	2, 5	I, H, Ov, Pu, T (C)	LRnt	--	G, M, S	3	2
<i>Labeo kontius</i>	B	B	5, F	30	10 yrs.	Unk	1, 2	Dm, Fd, F, L, Po, T (L, D)	EN	RD	S, M, P	1	3
<i>Labeo pangusia</i>	D	D	Many	Unk	Unk	Unk	2	I, H, Ov, Pu, T (D)	LRnt	-	S, M, Lh, Hm	3	3
<i>Labeo rajasthanicus</i>	A	A	1	80	27 yrs	Unk	2, 5	F, I, P, T (L)	CR	RD	S, M, G, Hm, Lm, Lr, P	1, 2, 4	1
<i>Labeo rohita</i>	D	D	Many	20	40 yrs.	Unk	2	L, Ov, Sn, T (C)	LRnt	-	G	No	1
<i>Laguvia kapuri</i>	A	A	1	<20	20 yrs	Unk	2, 5	Po	CR	RD	M, G, Hm, P	1	1
<i>Laguvia ribeiroi</i>	D	C	Many	20	20 yrs.	Unk	2, 4, 5	Dm, F, L, Po, T (L)	LRnt	--	S, M	No	1
<i>Laguvia shawi</i>	B	B	1	<20	20 yrs	Unk	2, 5	Dm, I	EN	RD	S, M, Lr	1	1
<i>Lepidocephalus annandalei</i>	D	D	Many, F	Unk	Unk	Unk	2	Fd, I, Po	LRnt	--	S, M	No	Unk
<i>Lepidocephalus berdmorei</i>	B	B	2	20	10 yrs.	Unk	-	Dm, F, I, Po	EN	PR, RD	S, M	No	Unk
<i>Lepidocephalus caudofurcatus</i>	D	C	4	<20	20 yrs	Unk	2, 5	Pu	VU	RD	S, M, G, Hm	2	1
<i>Lepidocephalus goalparensis</i>	A	B	1	Unk	Unk	Unk	2	I, L	CR	RD	S, M	No	Unk
<i>Lepidocephalus irrorata</i>	C	C	Few, F	N	Unk	Many	2	I, Lf, T (L)	VU	RD	S, M	No	Unk

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<i>Lepidopygopsis typus</i>	A	A	1	Decli	Unk	Unk	2	Sn	CR	RD	S, M, Lh, T, P	3	3
<i>Macrognathus aral</i>	D	D	Many	30	20 yrs	Unk	2, 4, 5	F, L, Pu, T (D)	LRnt	--	Hm, H	No	2
<i>Macrognathus guentheri</i>	C	C	Many, F	30-40	10 yrs	Unk	2	S, Fd, F, L, Ov, Ps, Po, Pu, T (L)	VU	PR, RD	S, M, Hm, O, P	3	3
<i>Macrognathus pancalus</i>	D	D	Many	30	20 yrs	Unk	2, 4, 5	F, L, Pu, T (D)	LRnt	--	Hm, H	No	2
<i>Mesonoemacheilus reticulofasciatus</i>	B	B	1	Unk	Unk	Unk	2	I	EN	RD	S, M, Lh	No	Unk
<i>Mesonoemacheilus sijuensis</i>	A	A	1	Unk	Unk	Unk	2	-	VU	NM	S, M, Lh	No	Unk
<i>Monopterusuchia</i>	D	D	Many	10	20 yrs	Unk	2, 3, 5	F, I, Pu, T (L)	LRnt	--	M	Y	1
<i>Monopterus eapeni</i>	A	A	1	Unk	Unk	Unk	1	L	CR	RD	Hm, S, P	3	3
<i>Monopterus fossorius</i>	B	B	2	Unk	Unk	Unk	1, 2	Ps, Po	EN	RD	S, M, P	3	3
<i>Moringua hodgarti</i>	B	A	1	Unk	Unk	Unk	5	Ov, Po	CR	RD	S, Lr, Lh, PP	No	Unk
<i>Mystus bleekeri</i>	D	D	Many	30	10 yrs	Unk	2, 5	F, Pu, T (L, D)	VU	PR	S, M, Lr, P	1	1
<i>Mystus cavasius</i>	D	D	Many	30	20 yrs	Unk	2, 4, 5	F, L, Pu, T (C)	LRnt	--	Hm, S, P	3	2
<i>Mystus malabaricus</i>	D	B	Many, F	Unk	Unk	Unk	2	Fd, I, L, Ov, Po, Pu, Sn, T (L)	EN	PR	S, M, Hm, Lh	3	3
<i>Mystus microphthalmus</i>	B	B	2	>50	10 yrs.	Unk	2	Dm, Fd, T (L, D)	EN	RD, PR	S, M	No	Unk
<i>Mystus montanus</i>	C	C	Many, F	Unk	Unk	Unk	2	Fd, F, I, L, Ov, T (L)	VU	PR	S, M, Lm, P	3	3
<i>Mystus punctatus</i>	B	B	Few, F	Unk	Unk	Unk	1, 2	Dm, F, L, P, T (L)	EN	RD	S, Lh, P	3	3
<i>Mystus vittatus</i>	D	D	Many	60	20 yrs	Unk	2, 5	Ps, T (L)	VU	PR	P	1	Unk
<i>Nandus nandus</i>	D	D	Many, F	Unk	Unk	Unk	2	I, L, Po, Pu, Sn, T(L)	LRnt	--	S, M, G, P	3	1
<i>Nangra nangra</i>	B	B	Many	30	10 yrs	Unk	2, 5	I, L, Pu, T (L)	VU	PR	S, M, P	1	1
<i>Nangra viridescens</i>	D	D	Many	30	20 yrs	Unk	2, 5	I, Pu, T (L, D)	LRnt	--	S, M, G, Lr, P	1	1
<i>Nemacheilus botia</i>	D	D	Many, F	Decl.	Unk	Unk	2	Fd, E, F, I, L, Ov, Po, Sn, T (L)	LRnt	--	M, Lh, Hm, PP	P	Unk
<i>Nemacheilus carletonii</i>	C	B	Few, F	50	20 yrs	Unk	3, 2, , 5	Dm, Fd, I, L, Po, T (L)	EN	RD	S, M, Hm, Lm, Lr, Pp	No	1
<i>Nemacheilus chindwinicus</i>	B	B	1	Unk	7 yrs	Unk	2, 5	Dm, I, Po, T (L)	EN	RD	S, M, Lr, P	1	1
<i>Nemacheilus corica</i>	D	D	Many	10	20 yrs	Unk	2	Dm, Fd, F, I, L, T (L)	LRnt	--	M, Lh, O, P	P	2
<i>Nemacheilus doonensis</i>	B	B	> 1	10	20 yrs	Unk	2, 5	Dm, Fd, I, L	EN	RD	S, M	No	No
<i>Nemacheilus guentheri</i>	D	C	4	N	5 yrs	Unk	1, 2	-	LRlc	--	M	3	3
<i>Nemacheilus himachalensis</i>	C	B	Few	5	20 yrs	Unk	2, 3	Dm, I, L, Po, Sn, T (D)	EN	RD	Hm, Lh, P	P	2
<i>Nemacheilus horai</i>	C	C	Many, F	15	20 yrs.	Unk	2	Dm, I, L, Ps, Pu, T (L)	VU	RD	S, Hm, P, O	P	2
<i>Nemacheilus kangrae</i>	C	B	Few	20	20 yrs	Unk	2, 3	I, L, T (L)	EN	RD	Hm, Lh, P	P	Unk
<i>Nemacheilus keralensis</i>	B	B	1	Unk	3 yrs	Unk	1, 2	Fd, I, Ice, L, Ps	EN	RD	Unk	Unk	No
<i>Nemacheilus labeosus</i>	D	C	Many, F	Unk	Unk	Unk	2	Fd, I, Po	VU	RD	S, M	Unk	Unk
<i>Nemacheilus monilis</i>	B	B	2	Unk	Unk	Unk	1, 2	Fd, I, L	EN	RD	Unk	Unk	No
<i>Nemacheilus montanus</i>	C	B	Few, F	7	Unk	Unk	2, 3	Dm, I, L, Po, Sn, T (D)	EN	RD	Hm, Lm, P	P	2
<i>Nemacheilus multifasciatus</i>	B	B	Many, F	10	20 yrs	Unk	2, 4	I, L, Sn, T (L)	EN	RD	Hm, Lm, P	P	1
<i>Nemacheilus nilgiriensis</i>	A	A	1	Unk	Unk	Unk	1, 2	L, Po	EN	RD	T, S, P	No	1
<i>Nemacheilus petrubanarescui</i>	D	B	3	Unk	Unk	Unk	1, 2	Unk	DD	--	Unk	Unk	Unk

Species	Rng.	Area	No. Loc	% Dec	Yr/ Gen	Pop. No.	Data Qual.	Threats	IUCN	Crit. used	Research Recommend.	Cap rec.	Lev. Diff.
<i>Nemacheilus pulchellus</i>	Unk	Unk	Unk	Unk	Unk	Unk	1, 2	Dm, F, I, L, Ov, Po, Pu, T (L)	DD	--	Unk	Unk	Unk
<i>Nemacheilus rupecola</i>	D	C	Many	20	20 yrs	Unk	2, 5	F, Fd, Dm, I, L, T (L)	LRnt	--	S, M, P	1	2
<i>Nemacheilus scaturigina</i>	C	C	Many, F	>20	10 yrs	Unk	2	Fd, I, Po	VU	PR	S, M	No	Unk
<i>Nemacheilus semiarmatus</i>	C	B	3, F	N	5 yrs	Unk	1, 2	Unk	VU	NM	Unk	Unk	Unk
<i>Nemacheilus striatus</i>	Unk	Unk	1	Unk	Unk	Unk	2	Dm, F, I, L, Po, Pu, T (L)	DD	--	Unk	Unk	Unk
<i>Nemacheilus triangularis</i>	B	C	7	N	15 yrs	Unk	1, 2	N	LRlc	--	Unk	No	Unk
<i>Neoeucirrhichthys maydelli</i>	C	C	2	Unk	Unk	Unk	2	I, Sn	VU	RD	S, M, Lh	No	Unk
<i>Neolissocheilus spinulosus</i>	B	B	1	Unk	Unk	Unk	5	I	EN	RD	S, M	No	No
<i>Neolissochilus wynaadensis</i>	A	B	2, F	Unk	Unk	Unk	2	Dm, Fd	CR	RD	S, M, Lh, P	3	3
<i>Neotropius khavalchor</i>	C	B	Few	Unk	Unk	Unk	4, 5	T (L)	DD	--	S, M	No	Unk
<i>Notopterus chilata</i>	D	D	Many	>50	10 yrs	Unk	2, 3, , 5	Fd, F, I, L, Ov, Pu, T (C)	EN	PR	S, M, Hm, Gm, Lm, O	1	3
<i>Notopterus notopterus</i>	D	D	Many	<20	20 yrs	Unk	2, 3, 4, 5	I, Ov, Pu, T (C)	LRnt	--	M	No	Unk
<i>Ompok bimaculatus</i>	D	D	Many	>50	10 yrs.	Unk	2, 5	D, Fd, F, L, Ov, Ps, Po, Pu, Sn, T(L,C,D)	EN	PR	S, M, G, Hm, Lm, P	1, 2, 3, 4	1
<i>Ompok malabaricus</i>	A	A	1	Unk	Unk	Unk	1, 2	E, I, L, Pu	CR	RD	TI, S, M, G, Hm, P	1	3
<i>Ompok pabda</i>	D	D	Many	50	10 yrs	Unk	2, 5	F, I, Pu, T (L, D, C)	EN	PR	S, M, G, Hm, Lm, Lr, P	1, 2, 4	1
<i>Ophiocephalus channa gachua</i>	C	C	Many, F	20	30 yrs.	Unk	2, 3	I, L, Ov, T (L)	VU	RD	Lm, Lr, P	P	1
<i>Osteobrama baker</i>	B	B	2	Unk	Unk	30	2	Dm, Fd, F, I, Po, Pu,	EN	RD	S, M, G, Hm, Lh, P	3	3
<i>Osteobrama belaqneri</i>	Unkl	Unk	None	100	20 yrs	Unk	2	Dm, T(D, C)	EW	--	H, Hm, P	1,2,3	1
<i>Osteobrama brevipectoralis</i>	B	B	> 1	Unk	17 yrs	Unk	2, 5	F, Pu, T (L, D)	EN	RD	S, M, Hm, Lr, P	1, 2, 4	1
<i>Osteobrama cotio cotio</i>	D	C	Many	Unk	Unk	Unk	4, 5	L, Pu, T (L)	LRnt	--	S, M, Hm	No	Unk
<i>Osteobrama cotio cunma</i>	B	B	Many	20	10 yrs.	Unk	2	Dm, Fd, I, T (L, D)	VU	PR	S, M, Pp	No	Unk
<i>Osteochilu brevidorsalis</i>	B	B	3, F	20	10 yrs.	Unk	1, 2	Fd, F, Po, T (L)	EN	RD	T, S, Hm, P	2	2
<i>Osteochilichthys longidorsalis</i>	A	A	1	Unk	Unk	Unk	1, 2	I, T (L)	CR	RD	Unk	Unk	Unk
<i>Osteochilus godavariensis</i>	D	D	6-10	Unk	Unk	Unk	4, 5	T (D)	DD	--	S, M	No	Unk
<i>Pangasius pangasius</i>	D	C	Few	80	10 yrs.	Unk	3, 5	F, I, L, Ov, T (C)	CR	PR	S, M, G	No	3
<i>Pangio pangia</i>	C	C	Many, F	Unk	Unk	Unk	2	I, L, T (L)	VU	RD	S, M	No	Unk
<i>Parambassis dayi</i>	B	B	1	20	10 yrs	Unk	1, 2	Fd, I, Ps, Po, T (L, D, C)	EN	RD	S, M, Hm, P	3	3
<i>Parambassis thomassi</i>	C	C	Many, F	40-50	20 yrs	400	2	Fd, F, I, L, Ov, Po, Pu	VU	PR	T, TI, S, M, Hm, Lh, P	3	3
<i>Parluciosoma daniconius</i>	D	D	Many	20	30 yrs	Unk	2, 4, 5	F, Pu, T (L, D)	LRnt	--	S, M, G, Hm	No	1
<i>Periophthalmus weberi</i>	A	A	1	50	20 yrs	Unk	2, 5	F, I, Po, Pu, T (L)	CR	RD	Unk	Unk	Unk
<i>Pinniwallago kanpurensis</i>	A	A	1	80	16 yrs	Unk	2, 5	I, Pu, T (L)	CR	RD	T, S, M, G, Lr, P	1	1
<i>Pristolepis marginata</i>	C	C	Many, F	Unk	Unk	Unk	Unk	Fd, F, L, Ov, Po, Pu, T (L)	VU	PR	T, TI, M, S, P	1	3
<i>Proeutropiichthys taakree</i>	A	B	4	80	10 yrs	Unk	2, 4, 5	F, T (L)	CR	PR	S, P	3	3

Species	Rng.	Area	No. Loc	% Dec	Yr/ Gen	Pop. No.	Data Qual.	Threats	IUCN	Crit. used	Research Recommend.	Cap rec.	Lev. Diff.
<i>Proeutropiichthys taakree taakree</i>	C	D	2	Unk	Unk	Unk	1, 2	Unk	VU	NM	S	No	1
<i>Pseudecheneis sulcatus</i>	D	C	Many, F	10	20 yrs.	10	2, 3	F, I, L, T (L)	VU	RD	S, M, P	P	2
<i>Pseudeutropius atherinoides</i>	D	D	Many	50	10 yrs	Unk	2, 5	F, L, Pu, T (L, D)	EN	PR	S, M, Lr, Lm, P	1	1
<i>Pseudeutropius mitchelli</i>	Unk	Unk	Unk	Unk	Unk	Unk	-	-	DD	--	Unk	Unk	Unk
<i>Psilorhynchus homalophera</i>	D	C	Many, F	>20	5 yrs.	Unk	2	Fd, Po	VU	PR	S, M, PP	No	Unk
<i>Psilorhynchus microphthalmus</i>	A	A	1	10	10 yrs.	Unk	2	Fd, Po	CR	RD	No	No	Unk
<i>Psilorhynchus sucatio nudithoracicus</i>	B	B	3	Unk	Unk	Unk	2, 5	L, Pu	EN	PR, RD	S, M, Hm, Lr, P	1	1
<i>Puntius arulius</i>	B	B	Many, F	50	10 yrs	Unk	1, 2	Dm, F, Pu, P, T (L,C)	EN	PR, RD	T, S, M, P	3	2
<i>Puntius arulius tambraparniei</i>	A	A	15, F	Decli	Unk	100	1, 2	Fd, F, G, L, T (L)	CR	RD	T, G, Lh, P	2	2
<i>Puntius bovanicus</i>	A	A	1	60-70	5 yrs.	Unk	2, 5	Dm, Fd, F, I, L, Ps, Pu, Sn, T (L)	CR	RD	S, Lh, G, H, M, P	1, 3	3
<i>Puntius carnaticus</i>	D	C	Many, F	5	10 yrs	1000	1, 2	Fd, F, L, Po, T (L)	LRnt	--	S, G, PP	No	Unk
<i>Puntius cauveriensis</i>	B	B	Few	Unk	Unk	Unk	4, 5	T (L)	DD	--	S, M	No	Unk
<i>Puntius chilinoides</i>	D	D	< 10	50	10 yrs	Unk	2	Fd, I, L, Pu, Sn, T (L)	EN	PR	T, S, M, Hm, Lm, Lr, Lh	1	3
<i>Puntius chola</i>	D	D	Many	20	10 yrs	Unk	2, 5	I, Pu, T (L)	VU	PR	S, M	1	1
<i>Puntius chrysopterus</i>	D	D	Many	Stable	Unk	Unk	2, 3, 5	T (C)	LRlc	--	M, S	No	Unk
<i>Puntius clavatus</i>	B	B	Few, F	10	20 yrs.	Unk	2	Dm, I, L, Sn, T (L)	EN	RD	Hm, Lr, S, P	P	2
<i>Puntius clavatus clavatus</i>	C	B	3	>50	15 yrs.	Unk	2	Fd, F, I, Po, T (L, D)	EN	PR, RD	S, M	No	Unk
<i>Puntius conchonius</i>	D	C	Many, F	Decli	Unk	Unk	2	E, L, Po, Sn, T (L)	VU	RD	Lh, Hm, M	P	Unk
<i>Puntius deccanensis</i>	B	A	4	Unk	Unk	Unk	4, 5	T (L)	CR	RD	S, M	No	Unk
<i>Puntius denisonii</i>	B	B	4,	Unk	Unk	Unk	1, 2	L, Po, Pu, T (L)	EN	RD	S, M, Pp	No	Unk
<i>Puntius dorsalis</i>	C	B	Unk	Unk	Unk	Unk	4, 5	F, Po, T (L, C)	EN	RD	S, M	No	Unk
<i>Puntius fasciatus</i>	B	B	Many, F	Unk	Unk	Unk	1, 2	I, L, Pu	EN	RD	T	No	1
<i>Puntius guganio</i>	D	D	Many, F	Unk	Unk	Unk	2, 5	Dm, F, I, L, Ov, Po, Pu, T (L)	LRnt	--	P	P	2
<i>Puntius hexastichus</i>	D	C	Many, F	10	20 yrs.	Unk	2, 4	Fd, L, Po, Sn, T (L)	VU	RD	Hm, Lh, P	1	2
<i>Puntius jayarami</i>	B	B	3	>20	10 yrs.	Unk	2	Fd, I, Po, T (L, D)	EN	PR, RD	M, S	No	Unk
<i>Puntius melanampyx</i>	B	C	16, F	N	15 yrs	Unk	1, 2	-	LRlc	--	Unk	Unk	Unk
<i>Puntius melanostigma</i>	C	B	< 10, F	Unk	Unk	Unk	1, 2	L, Po	EN	RD	S, Hm, M, P	3	3
<i>Puntius mudumalaiensis</i>	A	A	1	10	2 yrs	20	1, 2	Fd, F, L, Po	CR	RD, NM	S, Hm, PP	No	Unk
<i>Puntius narayani</i>	A	A	10, F	Unk	Unk	Unk	1, 2	Fd, L, Pu	CR	RD	T, S, G, P	2	2
<i>Puntius ophicephalus</i>	B	B	2	20	5 yrs	Unk	1, 2, 4	L, Sn	EN	RD	TI, H, M, S, P	3	3
<i>Puntius parrah</i>	B	B	3	Unk	Unk	Unk	4	Fd, Po, Pu, T (L)	EN	RD	S, M,	No	Unk
<i>Puntius phutunio</i>	D	D	Many	Stable	Unk	Many	3, 5	T (C)	LRlc	--	M, S	No	Unk
<i>Puntius sarana sarana</i>	D	D	Many, F	30	10 yrs	Unk	2, 5	F, I, L, T (L, D)	VU	PR	S, M, Lr, P	1, 2	1
<i>Puntius shalynius</i>	C	C	Many, F	Unk	Unk	Unk	2	Fd, I, Po, T (L)	VU	RD	S, M	No	Unk
<i>Puntius sophore</i>	D	D	Many	20	20 yrs.	Many	2, 3, 5	F, Pu, T (L, D, C)	LRnt	--	M, S, Hm	No	No
<i>Puntius terio</i>	B	B	Many	Unk	15 yrs	Unk	2, 5	F, I, L, Pu, T (L)	LRnt	--	S, M, P	1	1
<i>Puntius ticto</i>	D	C	Many	20	20 yrs.	Unk	2, 3, 5	F, L, T (L)	LRnt	--	Hm	No	1
<i>Puntius ticto punctatus</i>	A	A	10, F	Unk	Unk	Unk	1, 2	F, G, Ov, T (L)	CR	RD	T, S, M, Hm, P	2	3
<i>Puntius vittatus</i>	D	D	Many, F	20	10 yrs.	Unk	3, 4, 5	F, I, L, Ov, Pu, T (C)	VU	PR	S, M, T	No	1

Species	Rng.	Area	No. Loc	% Dec	Yr/ Gen	Pop. No.	Data Qual.	Threats	IUCN	Crit. used	Research Recommend.	Cap rec.	Lev. Diff.
<i>Raiamas bola</i>	D	C	Many	60	30 yrs	Unk	2, 5	Ov, T (L)	VU	PR	H, P	3	2
<i>Raiamas guttatus</i>	B	B	Many, F	+ 30	10 yrs	Unk	2	Dm, Fd, I, Po, T(L,D)	EN	RD	S, M	No	Unk
<i>Rhinomugil corsula</i>	D	D	Many	40	20 yrs	Unk	2, 4, 5	F, L, Ov, T (D)	VU	PR	H, M, Lr, PP	3	3
<i>Rita chryseo</i>	B	B	4 to 5	20	20 yrs	Unk	2, 4, 6	F, Ov, T (L)	EN	RD	S, M, Lr, PP	P	2
<i>Rita kuturnee</i>	D	B	Many	30	20 yrs.	Unk	4, 5	F, L, T (L)	LRnt	--	S, M, Lh, PP	P	Unk
<i>Rita pavimentatus</i>	D	B	Many, F	30	10 yrs	50	1, 2, 4, 5	Ov, T (D)	EN	RD	S, M, P	3	2
<i>Rita rita</i>	D	D	Many	40	30 yrs	Unk	2, 5	F, L, Ov, T (D)	LRnt	--	Hm, M, Lm, P	3	2
<i>Rohtee ogilbii</i>	D	D	Many	Unk	Unk	Unk	4, 5	L, Pu, T (L)	LRnt	--	G, H, Hm	No	Unk
<i>Salmostoma bacaila</i>	D	C	Many	Stable	Unk	Unk	2, 4, 5	T (L)	LRlc	--	Lh, M, S	No	Unk
<i>Salmostoma clupeioides</i>	D	D	Many	Stable	Unk	Unk	4, 5	T (L)	LRlc	--	S, M	No	Unk
<i>Salmostoma novacula</i>	C	B	Many	Unk	Unk	Unk	1, 2	E, Po, P, T (L)	LRnt	--	S, PP	3	2
<i>Salmostoma orissaensis</i>	C	B	4	Unk	Unk	Unk	5	T (L)	EN	RD	S, M	No	Unk
<i>Schistura arunachalensis</i>	B	B	1	Unk	Unk	Unk	2	Fd, Pu	EN	RD	S, M	No	No
<i>Schistura devdevi</i>	B	B	2	Unk	Unk	Unk	2, 5	Fd, I	EN	RD	S, M	No	Unk
<i>Schistura elongatus</i>	B	B	1	Unk	Unk	Unk	2, 5	I	EN	RD	S, M	No	Unk
<i>Schistura kangjupkhulensis</i>	C	C	Many, F	30	10 yrs	Unk	2	Fd, I, Po	VU	PR, RD	S, M	No	Unk
<i>Schistura manipurensis</i>	B	B	Many, F	20	10 yrs	Unk	2	Fd, I, Po	VU	PR	S, M, Hm	No	Unk
<i>Schistura multifasciatus</i>	C	B	3, F	Unk	Unk	Unk	2	-	VU	NM	S, M	No	Unk
<i>Schistura nagaensis</i>	B	B	Many, F	20	10 yrs	Unk	2	Fd, I, Po	EN	RD	S, M	No	Unk
<i>Schistura pavonaceus</i>	D	B	1	Unk	Unk	Unk	2	Fd, I, L	EN	RD	S, Hm	No	Unk
<i>Schistura peguensis</i>	B	B	2	Unk	Unk	Unk	2	Fd, I, Po	EN	RD	S, M	No	Unk
<i>Schistura prashari</i>	B	B	Many	20	10 yrs.	Unk	2, 4	Fd, I, L, Po	VU	PR	Lh, M,	No	Unk
<i>Schistura sikmaiensis</i>	B	B	2, F	>30	10 yrs	Unk	2	Fd, I, Po	EN	RD	S, M	No	Unk
<i>Schistura singhi</i>	A	A	1	Unk	Unk	Unk	2	Fd, I, Po	CR	RD	S, M, Lh, PP	No	Unk
<i>Schistura vinciguerrae</i>	B	B	1	Unk	Unk	Unk	2	Fd, I, L, Ov, Po	EN	RD	S, M	No	Unk
<i>Schizothoracichthys hugelii</i>	B	B	Few	15	20 yrs	Unk	2	Dm, I, L, Po, T (L)	LRnt	--	S, Hm, P	P	2
<i>Schizothorax curvifrons</i>	C	C	Few, F	20	20 yrs	Unk	2	Dm, Fd, I, L, Ov, Ps, Sn, T (D)	VU	RD	S, M, G, Hm, P	P	2
<i>Schizothorax esocinus</i>	B	C	Many	20	25 yrs	Unk	2, 4	F, I, La, Ov, T (L)	LRnt	--	S, M, Hm, P	P	1
<i>Schizothorax kumanosis</i>	B	B	Few	Unk	Unk	Unk	2	I, L, Ov, Sn, T (L)	LRnt	--	T, S, P	P	Unk
<i>Schizothorax labiatus</i>	B	B	Few, F	15	10 yrs	Unk	2, 3	I, L, Ov, Sn, T (L)	EN	RD	S, Hm, PP	P	2
<i>Schizothorax nasus</i>	B	A	Few, F	15	20 yrs	Unk	2	I, L, Po, T (L)	LRnt	--	S, Hm, P	P	2
<i>Schizothorax niger</i>	C	C	Few	25	20 yrs	Unk	2	Dm, Fd, I, L, Ov, Ps, Sn, T (D)	VU	RD	S, M, G, Hm, Lr, P	P	2
<i>Schizothorax progastus</i>	D	C	Many	Unk	Unk	15 -20	2, 5	Dm, Sd, Fd, F, I, L, Ov, Sn	LRnt	--	S, M, Hm, Lm, P	1	2
<i>Schizothorax richardsonii</i>	D	C	Many	30	10 yrs	Unk	2, 3, 5	Dm, Dr, Fd, F, I, H, L, Ov, Pl, Sn, T(D,L)	VU	PR	S, M, Hm, Lm, P	1	2
<i>Schizothorax sinuatus</i>	C	C	Many	10	20 yrs	Unk	-	L, T (L)	LRnt	--	S, Hm, Lh, P	P	2
<i>Semiplotus modestus</i>	B	B	1	Unk	Unk	Unk	2, 5	Fd, Ov, T (L, D)	EN	RD	S, M, Lh, Lr, PP	No	Unk
<i>Semiplotus semiplotus</i>	C	C	Many F	50	20 yrs	Unk	2, 5	I, Ov, T (L, D, C)	VU	PR, RD	S, M, Lh, Lr, PP	No	Unk

Species	Rng.	Area	No. Loc	% Dec	Yr/ Gen	Pop. No.	Data Qual.	Threats	IUCN	Crit. used	Research Recommend.	Cap rec.	Lev. Diff.
<i>Sicamugil cascasia</i>	D	C	Many	30	10 yrs.	Unk	3, 5	Dm, H, L, T (D)	VU	PR	Lh, S, M, G,	3	3
<i>Silonia childreni</i>	D	B	8 to 10	20	20 yrs	Unk	2, 5	Dm, L, T (L)	EN	RD	S, Hm, P	3	2
<i>Silonia silondia</i>	D	C	Many	20	20 yrs.	Unk	2, 4, 5	F, Pu, T (D)	LRnt	--	S, M, Hm	3	2
<i>Silurus afghana</i>	B	B	3	>20	10 yrs	Unk	2	Fd, L, Po	EN	RD	S, M	3	2
<i>Silurus wynaadensis</i>	A	B	2, F	Unk	Unk	Unk	1, 6	Dm, D, Fd, Ps, Po	CR	RD	S, M, P	3	3
<i>Sisor rhabdophorus</i>	D	B	Few, F	>20	10 yrs	Unk	2	Fd	EN	RD	S, M	No	Unk
<i>Somileptes gongota</i>	C	C	Many	Unk	Unk	Unk	2	L	LRnt	--	S, M	No	Unk
<i>Stenogobius malabaricus</i>	A	A	1	Unk	Unk	Few	2	Fd, F, L, Ov, Sn, T(L)	CR	RD	T, S, M, HM, P	3	3
<i>Tetraodon cutcutia</i>	D	D	Many	Unk	Unk	Unk	5	I, L, Pu	LRnt	--	S, M, Lh	3	3
<i>Tetraodon travancoricus</i>	B	B	4, F	Unk	Unk	Unk	1, 2	I, L, Ps, Po	EN	RD	S, Hm, M, P	3	3
<i>Tor khudree</i>	D	D	Many	60-70	20 yrs	Unk	1, 2, 4, 5	Dm, Fd, I, H, Ov, Po, Sn, T (L, D)	VU	PR	T, TI, S, M, G, Hm, Lh, P	1	3
<i>Tor khudree malabaricus</i>	A	A	7, F	70-80	10 yrs	Unk	1, 2	Dm, Fd, E, F, G, L, Pu, T (D)	CR	PR, RD	T, TI, S, G, M, Hm, Lh, P	1	3
<i>Tor kulkarni</i>	B	B	20	Unk	Unk	Unk	-	Unk	DD	--	T, G,	1	3
<i>Tor mosal</i>	C	B	2-3	80	20 yrs	Unk	2, 5, 4	F, I, Ov, Pu, T (L)	EN	PR, RD	S, M, H, Hm, Lm, Lc, P	1	2
<i>Tor mussullah</i>	D	B	Many, F	>80	10 yrs	Unk	2	Dm, Fd, F, Po, Pu, Sn	CR	PE, PR	T, TI, M, G, Hm, Lm, Lr, Lh, P	3	3
<i>Tor progeneius</i>	D	C	Unk	Unk	Unk	Unk	5	I, L, T (L, D)	DD	--	T	No	No
<i>Tor putitora</i>	D	D	Many	50	10 yrs	Unk	2, 3, 5	Dm, Dr, Fd, F, I, H, L, Ov, Pl, Sn, T(L,D)	EN	PR	S, M, Hm, Lm, P	1	2
<i>Tor tor</i>	D	D	Many	60	10 yrs	Unk	2	Dm, Fd, F, I, L, Po, Pu, T (L, D, C)	EN	PR	S, M, G, Hm, Lm, Lr, P	4	1
<i>Travancoria elongata</i>	A	A	1	Unk	Unk	Unk	5	Fd, Ps, Pu	CR	RD	S	No	Unk
<i>Travancoria jonesi</i>	B	B	2	Unk	Unk	Unk	2	Sn	EN	RD	S, M, Lh, P	3	3
<i>Wallago attu</i>	D	D	Unk	<20	20 yrs	Unk	2, 5	Dp, Hf, Po, Sn, T (L, D, C)	LRnt	--	S, H, Hm, P	4	1
<i>Xenentodon cancila</i>	D	D	Many	30	20 yrs	Unk	2, 4, 5	F, Pu, T (D)	LRnt	--	S, M, Lr, P	3	3

Freshwater fishes of India

Report

Conservation Assessment and Management Plan (C.A.M.P.) Workshops

Freshwater fishes of India

Hosted by National Bureau of Fish Genetic Resources
22 – 26 September, 1997

REPORT

Convention on Biological Diversity

The Convention on Biological Diversity adopted in Nairobi in May 1992 and signed by more than 150 states in June 1992 at Rio de Janeiro, came into force officially in December 1993. The Convention is a "framework agreement" in that its provisions are expressed as goals and policies (as opposed to "obligations"), leaving the implementation of its provisions up to individual parties (the states) at the national level. In the Convention, the importance of non-governmental organisations in implementing the provisions was specifically mentioned.

Articles in the Convention cover objectives, terminology, principles, legislation, cooperation and strategy as applied to various issues and methodology. One of the very basic methods of organising conservation action is prioritisation. Article 7 of the Convention deals with Identification and Monitoring, calling on parties to identify components of biological diversity important for its conservation and sustainable use. Components of an "indicative list" include:

- * Ecosystems and habitats
- * Species and communities, and
- * Described genomes and genes of social, scientific and economic value.

Knowledge of species and communities can reveal crucial facts necessary to the management of ecosystems and habitats as well as to the identification of important genomes and genes. Identification, listing and prioritisation of species are one of the important tasks in conservation. In India, it is well known by biologists across many taxon groups that species information has many gaps. In many instances, the species has not been surveyed or studied since its description, perhaps in the 18th or 19th century. Even species, which have been studied more recently in the 20th century, require constant attention due to the fact that the very fabric of the earth is changing so rapidly. It is common knowledge today that the ecosystems and habitats which sustain species are deteriorating exponentially as a result of population expansion, industrialisation, and the build-up of habits resulting from decades and centuries of thinking the Earth and its resources were unlimited. Awareness of this fact is, of course, the *raison d'être* for the Convention on Biological Diversity itself.

This workshop was initiated under the auspices of the Biodiversity Conservation Prioritisation Project (BCPP) funded by USAID and conducted through The Nature Conservancy, World Resources Institute and World Wide Fund for Nature. An Endangered Species Subgroup at the BCPP planning meeting decided to use the IUCN criteria to assess the conservation status of a large part of Indian species diversity. A workshop "process" called the Conservation Assessment and Management Plan (CAMP) developed by the Conservation Breeding Specialist Group, SSC, IUCN was selected by the subgroup as the methodology to use for conducting the assessments. CBSG, India, a Regional Network of the Conservation Breeding Specialist Group was asked to conduct the "CAMP" workshops on the basis of their experience and expertise. However, this workshop was sponsored by Sea World, Orlando, Florida and the Ministry of Environment and Forest, Government of India

IUCN Red List

Earlier efforts to monitor the earth's resources and activate conservation measures include the Red Data Books of IUCN, now called the World Conservation Union. The IUCN Red Data Books have provided a guide for species conservation status for the last three decades. A few years ago, it was felt that both the categories and methodology used by individuals compiling the Red Data Books needed review. Over a seven-year period, the IUCN Criteria for Endangerment used in compiling Red Data Books, were examined, revised, reviewed and improved over six different iterations. The present system, the IUCN Red List Categories, 1994, is more objective, numerate, and consistent for all groups. The revised IUCN Red List Categories provide a methodology for assessment and categorisation, which can be applied, to any group of organisms (except microorganisms). The revised IUCN Red List criteria is being used now by conservation actioners and scientists all over the world and is considered the best possible method available today for assessing the conservation status of species.

Conservation Assessment and Management Plan

One of the great difficulties of carrying out basic tasks such as identification and monitoring, creation of management and action plans and recovery programmes for species, is coordinating the great mass and variety of specialist knowledge and agency authority. Much time and energy is wasted in duplication of effort, territorial and ownership disputes, and inability to find and adhere to a common ground. The business community, realising the importance of effective communication and teamwork, has developed a broad spectrum of management strategies and tools which are used daily to manage time and human interaction. More and more, the conservation community is recognising the importance of using some of these tools to achieve their goals, rapidly and effectively. The Conservation Breeding Specialist Group (CBSG) of the Species Survival Commission of IUCN has pioneered the use of some of these tools in well-planned strategic problem-solving and task-performance exercises. CBSG calls these exercises "processes" because — in the contemporary conservation scenario — nothing is static except the fact of change itself.

The Conservation Action and Management Plan Workshop was developed by CBSG for the purpose of prioritising species for conservation action including *ex situ* component. Over the last decade, CBSG has conducted dozens of CAMP workshops for literally hundreds of species, using (and thereby testing) the then current iteration of the IUCN Red List Categories as their basic methodology to glean a status ranking. The IUCN Red List guidelines and criteria are used in all CAMP workshops to assess and assign a category to each species.

For the CAMP Workshop CBSG has developed a Taxon Data Sheet and a Spreadsheet format which includes parameters necessary to assess the IUCN status as well as provide other useful information necessary for creating management and action plans. The spreadsheet organises the information in a concise manner so that it is accessible at a glance. The information in this Report is organised on spreadsheets in the Report section, followed by the individual Taxon Data Sheets. A CAMP Workshop also utilises principles of management psychology to guide human interaction. A set of Guidelines for Group Interaction is presented to the workshop participants who agree as a group to work accordingly in order to complete the task. Objective Facilitators (persons trained in management skills and the workshop process) are used to lead and guide the workshop so that individual and professional bias does not affect group decisions and to assist in maintaining the integrity and focus of the workshop.

CAMP Workshops bring together a variety of specialists and enthusiasts from academic, government, managerial, and even the commercial sector to evaluate taxa for setting priorities for conservation action. The fear of loss and hope of recovery of species drives CAMP Workshops. Individuals part with unpublished information in order to contribute to a body of information which will provide strategic guidance for application of intensive management and information gathering. CAMP Workshops results, are, or should be, dynamic, leading to specific conservation activities in forest, market, classroom, courtroom — locally and nationally as well as on the international stage.

Conservation of Indian freshwater fishes

Freshwater fishes are the most speciose of India's vertebrates with a minimum of 600 and as many as 750 species, according to some sources. Interest in fishes in India and abroad has been more as a source of protein or for commercial trade or for aquariums than for their conservation value. Freshwater and marine fish studies number perhaps the least among any wildlife studies even up to the present time and have only recently increased due to economic reasons. Fishes attract less attention as part of "wildlife" and therefore conservation, much like amphibians or invertebrates. However, the Species Survival Commission of the World Conservation Union has among its various specialist groups a Freshwater Fish Specialist Group.

Freshwater fishes in India are under threat for several reasons, but primarily due to unsustainable and unethical fishing practices. Though there are only a few species of fishes that are in trade, the state of all freshwater fishes in India is in danger because of wrongful methods of fishing. Apart from random fishing, methods such as dynamiting, poisoning and other large scale catching techniques take their toll of other species of fish, which, although they may not be useful economically, have a profound effect on the ecology of fresh water bodies. Other common threats that affect freshwater fish populations are habitat loss due to dredging of lakes and rivers, filling, altering river courses, dams, irrigation canals, and other reasons.

The 1996 Red Data Book lists 734 species of the world's fishes (both freshwater and marine) as having been assessed for their conservation status. Despite the fact that there are 650 listed species of freshwater fishes occurring in India, only 3 species are listed as threatened in India in the IUCN Red List.

The Indian Red Data Book of 1994 by the Zoological Survey of India does not list any fish taxa as being threatened in India. This is not indicative of population stability for fish in India; on the contrary, fresh water ecosystems are the most affected, and there are a multiplicity of pressures on the fauna in freshwater ecosystems. There is a lack of information about the threats and problems of freshwater ecosystems. This may

be more a problem of communication and integration of information between agencies and organisations studying Indian fishes, however, than paucity of data.

Several checklists of Indian freshwater fishes have been compiled. Talwar and Jhingran's list seems to be the one most referred. There is still confusion with regard to identification and taxonomy, however, especially of the lesser-known fishes, a fact which became very clear in the Freshwater Fish CAMP Workshop. One of the difficulties in addressing conservation problems of freshwater fish in India is that no organised network exists by which fish specialists – researchers and biologists – can communicate. Some of the common misunderstandings in taxonomy, identification, field techniques, etc. can be resolved through regular communication which a network could bring about.

The CAMP workshop was conducted with a view to bring together as many as possible of the country's current and retired fish field biologists, so that the full depth of knowledge regarding population trends and status of all India freshwater fishes could be fully utilised. This exercise may be the first time that a systematic effort has made to assess the status of a country's entire freshwater fish fauna. Workshops on amphibians, reptiles and mammals previous to this one provided a model example in conducting a countrywide assessment for any single group of organisms.

Goals of the workshop on freshwater fishes of India

The Workshop participants agreed upon the following objectives of the CAMP Workshop:

1. To assess the conservation status and assign an IUCN Red List category to the freshwater fish fauna of India using current population, habitat and threat information from participants.
2. To provide information about the species which would be useful in drawing up Action Plans and Management Plans, including recommendations for *in situ* and *ex situ* management; research, survey and monitoring; cultivation; investigation of limiting factors; taxonomic and other specific research, education and husbandry.
3. To produce a Conservation Assessment and Management Plan Draft for evaluated species, which after review and comment by workshop participants, would be distributed as a Report to all agencies, organisations and individuals relevant to conservation of freshwater fishes.
4. To create awareness about the threats facing freshwater fishes in India and encourage appropriate legislation where required.

Results and Discussion

Since 1991 the IUCN Red List Categories have undergone a series of revisions to enhance their applicability to organisms other than mammals and to reflect the development of the new conservation sciences, population dynamics and conservation biology of the last two decades. The current version of the IUCN Red List Criteria is the version that was ratified in December 1994 by the IUCN General Assembly. This version has more objective criteria for assessment as well as detailed guidelines on how to use the criteria in deriving the category of threat status. The categories can be divided into 5 divisions as illustrated in the list and figure below

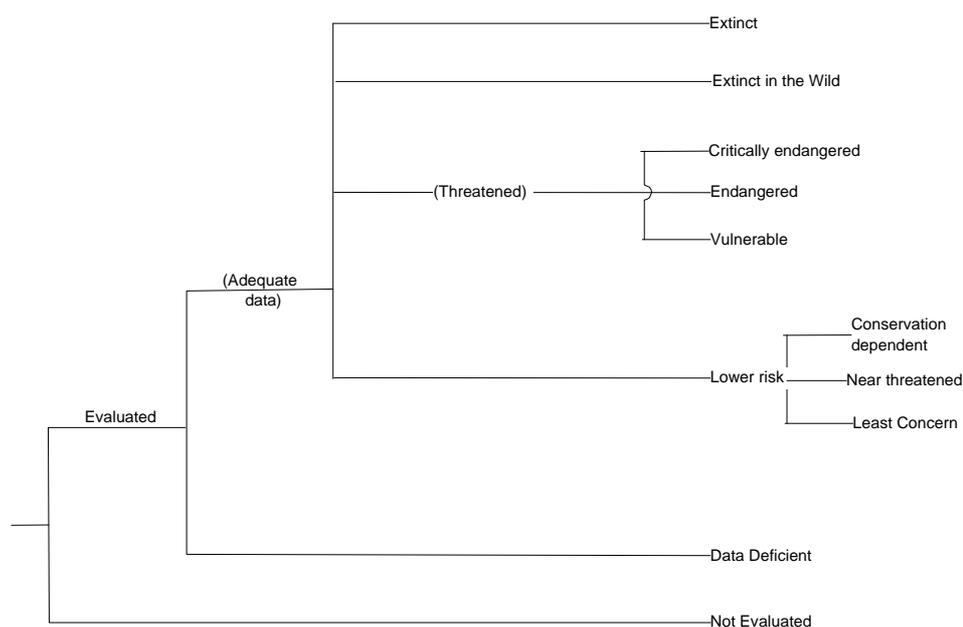
1. Extinct (Extinct and Extinct in the Wild),
2. Threatened (Critically Endangered, Endangered and Vulnerable),
3. Non-threatened (Lower Risk -- near threatened, conservation dependent and least concern),
4. Data Deficient and
5. Not Evaluated

Methodology

Red Data Books in the past have been a compilation of information by one person or a group of persons, usually from temperate countries, who have access to all available literature on distribution and ecological information with reference to a particular species. The status according to old IUCN categories was derived based on the individual's perception of the status as understood from literature. Later, this exercise was broadened to include some range country representatives from different continental regions if the exercise was global in scope, such as the IUCN Red Data Books.

In India national exercises such as the Indian Red Data Books relied on some specialists from different regions of the country. In both cases specialists were asked to participate in providing more information on a taxon, which was gathered by post and evaluated by the coordinator at a central office. There are many different methods in deriving status categories by different groups both internationally (such as those done by BirdLife

Structure of the Categories



International, World Conservation Monitoring Centre and the different Specialist Groups of the IUCN) and nationally (such as – for India – Botanical Survey of India or Zoological Survey of India). However these different exercises were coordinated, all the above methods of deriving status for a Red Data Book or other species review follow the IUCN Red List categories.

The methodology for assessment of threat adopted in India at the Conservation Assessment and Management Plan workshops is different in that it depends upon “on the spot” interaction between specialists. The objective of compiling data is the same but in a CAMP Workshop every attempt is made to assemble a representative group of field biologists with direct field experience of the species and their habitat. Information is collected from several sources on the target taxa. This information and the personal field experience of participants is discussed extensively in small working groups until consensus is reached on every fact. A questionnaire called a Taxon Data Sheet, based on IUCN guidelines for deriving status as well as some additional questions, is used to record this consensually processed information. The advantages of being able to conduct discussions on the information provided by a variety of field biologists as opposed to one person compiling data is, or should be, self-evident. Among the advantages of accruing better quality and quantity of information, the payoff resulting from participant “buy in” of the process is most worthwhile. In a national assessment this can have very positive effects on future research.

The Conservation Assessment and Management Plan for Indian fishes aimed to cover all freshwater fish taxa of India which number about 650. At the beginning of the workshop a discussion was held involving all participants in which a workshop strategy for the exercise was agreed and four working groups selected to assess Indian freshwater fishes according to their distribution. Groups were formed to assess species according to the different drainage systems: Upland cold water bodies, Indus river system, Gangetic river system, Brahmaputra river system, East flowing river system and West flowing river system.

Since this was the first All India exercise in freshwater fish status evaluation, it also provided researchers an opportunity to discuss checklists and taxonomy with other fish field biologists and taxonomists in India. More than 50% of the 600 species of Indian freshwater fishes could be assessed during the five-day workshop providing an excellent start to the process of evaluating the freshwater fish biodiversity of India. Moreover, special issue working groups met as the assessments were completed to discuss some of the questions that came up while assessing status, and other issues pertaining to management recommendations.

Assessment

The checklists of Indian freshwater fishes extant before the Workshop were those by Talwar and Jhingran, Nelson, and by the International Centre for the Living Aquatic Resources Management, Philippines. Also, before the workshop, the National Bureau of Fish Genetic Resources compiled a checklist based on Talwar and Jhingran and Nelson’s classification.

The IUCN categories are stated to work best at the global level. Guidelines for regional or national assessments are being discussed but have not been developed fully. Nonetheless, the current Red List Criteria were used for this workshop which was a national assessment. Certain of the criteria are not straightforward when applied to a national or regional population, however, it was found in all national workshops conducted in India so far that any anomaly was “conservative” in favour of the species. In other words, some of the non-endemic taxa may have been given a higher category than their population status actually warrants. The alternative, however, was to leave off assessing non-endemic taxa until specific national/ regional guidelines are developed, a process which could take years. Further, in India, “wildlife” definition and legislation applies to all wildlife occurring naturally in India with no prejudice towards endemic species. While endemism enhances the conservation value of a species, other considerations – legislative, ecosystemic, etc - are also valid. A biodiversity inventory should include all species.

Results

A total of 327 freshwater fish taxa were assessed at the workshop. The complete checklist of Indian freshwater fishes still lacks a definite number because some taxa considered were found not to occur in India or their occurrence in India was regarded as doubtful due to erroneous identification. Taxonomic confusion added to the difficulty in compiling a complete checklist. However, as stated before, a tentative checklist of Indian freshwater fishes includes 600 taxa. The assessments were restricted to previously described taxa only. Taxa being described at the time of the workshop or in press were not considered.

Of the assessed taxa, a total of 34 families are represented among Indian freshwater fishes of which family Cyprinidae is the most represented followed by Balitoridae and Sisoridae. Ten families have been represented by single taxon.

Table 1. List of Indian freshwater fishes assessed at the workshop

Taxa	IUCN	Taxa	IUCN
Amblycipitidae		27. <i>Aborichthys tikaderi</i> Barman	EN
1. <i>Amblyceps apangi</i> Nath & Dey	VU	28. <i>Balitora brucei</i> (Gray)	LRnt
2. <i>Amblyceps arunachalensis</i> Nath & Dey	VU	29. <i>Bhavana australis</i> (Jerdon)	EN
3. <i>Amblyceps mangois</i> (Ham.-Buch.)	LRnt	30. <i>Homaloptera montana</i> Herre	CR
Anabantidae		31. <i>Homaloptera pillaii</i> Rema Devi & Indira	VU
4. <i>Anabas cobojius</i> (Ham.-Buch.)	VU	32. <i>Nemacheilus botia</i> (Ham.-Buch.)	LRnt
5. <i>Anabas testudineus</i> (Bloch)	VU	33. <i>Nemacheilus carletonii</i> Fowler	EN
6. <i>Colisa fasciatus</i> (Bloch & Schneider)	LRnt	34. <i>Nemacheilus chindwinicus</i> Tilak & Hussain	EN
Anguillidae		35. <i>Nemacheilus corica</i> (Ham.-Buch.)	LRnt
7. <i>Anguilla bengalensis</i> Gray	EN	36. <i>Nemacheilus doonensis</i> (Tilak & Hussain)	EN
Aplocheilidae		37. <i>Nemacheilus guentheri</i> Day	LRlc
8. <i>Aplocheilus rubrostigma</i> (Val.)	DD	38. <i>Nemacheilus himachalensis</i> (Menon)	EN
9. <i>Aplocheilus panchax</i> (Ham.-Buch.)	DD	39. <i>Nemacheilus horai</i> Menon	VU
Bagridae		40. <i>Nemacheilus kangrae</i> (Menon)	EN
10. <i>Batasio travancoria</i> Hora & Law	EN	41. <i>Nemacheilus keralensis</i> Rita, Banarescu & Nalbant	EN
11. <i>Horabagrus brachysoma</i> (Gunther)	EN	42. <i>Nemacheilus labeosus</i> (Kottelat)	VU
12. <i>Horabagrus nigricollaris</i> (Pethiyagoda & Kottelat)	CR	43. <i>Nemacheilus monilis</i> Hora	EN
13. <i>Mystus bleekeri</i> (Day)	VU	44. <i>Nemacheilus montanus</i> (McClelland)	EN
14. <i>Mystus cavasius</i> (Ham.-Buch.)	LRnt	45. <i>Nemacheilus multifasciatus</i> Day	EN
15. <i>Mystus malabaricus</i> (Jerdon)	EN	46. <i>Nemacheilus nilgiriensis</i> (Menon)	EN
16. <i>Mystus microphthalmus</i> (Day)	EN	47. <i>Nemacheilus petrubanarescui</i> (Menon)	DD
17. <i>Mystus montanus</i> (Jerdon)	VU	48. <i>Nemacheilus pulchellus</i> Day	DD
18. <i>Mystus punctatus</i> (Jerdon)	EN	49. <i>Nemacheilus rupecola</i> (McClelland)	LRnt
19. <i>Mystus vittatus</i> (Bloch)	VU	50. <i>Nemacheilus scaturigina</i> (McClelland)	VU
20. <i>Rita chrysea</i> (Day)	EN	51. <i>Nemacheilus semiarmatus</i> Day	VU
21. <i>Rita kuturnee</i> (Sykes)	LRnt	52. <i>Nemacheilus striatus</i> Day	DD
22. <i>Rita pavementatus</i> (Valencienns)	EN	53. <i>Nemacheilus triangularis</i> Day	LRlc
23. <i>Rita rita</i> (Ham.-Buch.)	LRnt	54. <i>Travancoria elongata</i> Pethiyagoda & Kottelat	CR
Balitoridae			
24. <i>Aborichthys elongatus</i> Hora	EN		
25. <i>Aborichthys garoensis</i> Hora	CR		
26. <i>Aborichthys kempii</i> Chaudhuri	VU		

Taxa	IUCN
55. <i>Travancoria jonesi</i> Hora	EN
Belontiidae	
56. <i>Xenentodon cancila</i> (Ham.-Buch.)	LRnt
Carcharhinidae	
57. <i>Glyphis gangeticus</i> (Muller & Henle)	VU
Channidae	
58. <i>Parambassis dayi</i> (Bleeker)	EN
59. <i>Parambassis thomassi</i> (Day)	VU
60. <i>Channa baculis</i> (Ham.-Buch.)	LRlc
61. <i>Channa marulius</i> (Ham.-Buch.)	LRnt
62. <i>Channa micropeltes</i> (Cuvier)	CR
63. <i>Channa orientalis</i> Bloch & Schneider	VU
64. <i>Channa punctatus</i> (Bloch)	LRnt
65. <i>Channa striatus</i> (Bloch)	LRlc
66. <i>Ophiocephalus channa gachua</i> Bloch & Schneider	VU
Chaudhuriidae	
67. <i>Chaudhuri indica</i> (Talwar, Yazdani & Kundu)	VU
68. <i>Chaudhuri khajuriai</i> (Yazdani)	EN
Cichilidae	
69. <i>Etoplus canarensis</i> Day	DD
Clariidae	
70. <i>Clarias batrachus</i> (Linnaeus)	VU
71. <i>Clarias dayi</i> Hora	EN
72. <i>Clarias dussumieri</i> (Valenciennes)	VU
73. <i>Horaglanis krishnai</i> Menon	CR
Clupeidae	
74. <i>Dayella malabarica</i> (Day)	CR
75. <i>Gonialosa manmina</i> Ham.-Buch.	VU
76. <i>Gudusia chapra</i> (Ham.-Buch.)	LRlc
77. <i>Hilsa ilisha</i> (Ham.-Buch.)	VU
Cobitidae	
78. <i>Botia almorhae</i> Gray	EN
79. <i>Botia berdmorei</i> (Blyth)	EN
80. <i>Botia birdi</i> Chaudhuri	LRnt
81. <i>Botia geto</i> (Ham.-Buch.)	LRnt
82. <i>Botia histrionica</i> Blyth	VU
83. <i>Botia lohachata</i> Chaudhuri	EN
84. <i>Botia striata</i> Rao	EN
85. <i>Lepidocephalus annandalei</i> (Chaudhuri)	LRnt
86. <i>Lepidocephalus berdmorei</i> (Blyth)	EN
87. <i>Lepidocephalus caudofurcatus</i> Tilak & Hussain	VU
88. <i>Lepidocephalus goalparensis</i> (Pillai & Yazdani)	CR
89. <i>Lepidocephalus irrorata</i> (Hora)	VU
90. <i>Neoeucirrhichthys maydelli</i> Banarescu & Nalbant	VU
91. <i>Pangio pangia</i> (Ham.-Buch.)	VU
92. <i>Somileptes gongota</i> Ham.-Buch.	LRnt
Cyprinidae	
93. <i>Puntius hexastichus</i> (McClelland)	VU
94. <i>Amblypharyngodon chakaiensis</i> (Babu Rao & Nair)	CR
95. <i>Amblypharyngodon mola</i> (Ham.-Buch.)	LRlc
96. <i>Aspidoparia jaya</i> (Ham.-Buch.)	VU
97. <i>Aspidoparia morar</i> (Ham.-Buch.)	LRnt
98. <i>Barbus carletoni</i> (Ham.-Buch.)	EN
99. <i>Barilius bakeri</i> Day	VU

Taxa	IUCN
100. <i>Barilius barila</i> (Ham.-Buch.)	VU
101. <i>Barilius barna</i> (Ham.-Buch.)	LRnt
102. <i>Barilius bendelisis</i> (Ham.-Buch.)	LRnt
103. <i>Barilius canarensis</i> (Jerdon)	DD
104. <i>Barilius corbetti</i> Tilak & Husain	CR
105. <i>Barilius dimorphicus</i> Tilak & Husain	CR
106. <i>Barilius dogarsinghi</i> Hora	EN
107. <i>Barilius evezardi</i> (Day)	LRnt
108. <i>Barilius shacra</i> (Ham.-Buch.)	LRnt
109. <i>Barilius tileo</i> (Ham.-Buch.)	LRnt
110. <i>Barilius vagra</i> (Ham.-Buch.)	VU
111. <i>Brachydanio acuticophala</i> (Hora)	VU
112. <i>Brachydanio rerio</i> (Ham.-Buch.)	LRnt
113. <i>Catla catla</i> (Ham.-Buch.)	VU
114. <i>Chela dadyburjori</i> (Menon)	DD
115. <i>Chela laubuca</i> (Ham.-Buch.)	LRlc
116. <i>Cirrhinus cirrhosus</i> (Bloch)	VU
117. <i>Cirrhinus fulungee</i> (Sykes)	LRnt
118. <i>Cirrhinus macrops</i> Steindachner	DD
119. <i>Cirrhinus mrigala</i> Ham.-Buch.	LRnt
120. <i>Cirrhinus reba</i> (Ham.-Buch.)	VU
121. <i>Crossocheilus burmanicus</i> Hora	VU
122. <i>Crossocheilus latius latius</i> (Ham.-Buch.)	DD
123. <i>Crossocheilus periyarensis</i> Menon & Jacob	VU
124. <i>Danio aequipinnatus</i> (McClelland)	LRnt
125. <i>Danio devario</i> (Ham.-Buch.)	LRnt
126. <i>Danio naganensis</i> Chaudhuri	VU
127. <i>Esomus danricus</i> (Ham.-Buch.)	LRlc
128. <i>Garra gotyla gotyla</i> (Gray)	VU
129. <i>Garra gotyla stenorhynchus</i> Jerdon	EN
130. <i>Garra hughi</i> Silas	EN
131. <i>Garra kempfi</i> Hora	VU
132. <i>Garra lissorhynchus</i> (McClelland)	VU
133. <i>Garra litanensis</i> Vishwanath	CR
134. <i>Garra manipurensis</i> Vishwanath & Sarojnalini	CR
135. <i>Garra menoni</i> Devi & Indra	VU
136. <i>Garra naganensis</i> Hora	VU
137. <i>Garra rupecula</i> (McClelland)	VU
138. <i>Garra surendranathanii</i> (Shaji, Arun & Easa)	EN
139. <i>Gymnocypris biswasi</i> Talwar	EX
140. <i>Horadandia atukorali brittani</i> Menon	EN
141. <i>Hypselobarbus curmuca</i> (Day)	EN
142. <i>Hypselobarbus dubius</i> (Day)	EN
143. <i>Hypselobarbus jerdoni</i> (Day)	EN
144. <i>Hypselobarbus kolus</i> (Sykes)	EN
145. <i>Hypselobarbus lithopides</i> (Day)	EN
146. <i>Hypselobarbus micropogon periyarensis</i> Raj	EN
147. <i>Hypselobarbus thomassi</i> (Day)	EN
148. <i>Hypselobarbus kurali</i> Menon & Rema Devi	EN
149. <i>Labeo ariza</i> (Ham.-Buch.)	CR
150. <i>Labeo angra</i> (Ham.-Buch.)	LRnt
151. <i>Labeo bata</i> (Ham.-Buch.)	LRnt
152. <i>Labeo boga</i> (Ham.-Buch.)	LRnt
153. <i>Labeo calbasu</i> (Ham.-Buch.)	LRnt
154. <i>Labeo dero</i> (Ham.-Buch.)	VU
155. <i>Labeo dussumieri</i> (Valenciennes)	EN

Taxa	IUCN
156. <i>Labeo dyocheilus</i> (McClelland)	VU
157. <i>Labeo fimbriatus</i> (Bloch)	LRnt
158. <i>Labeo gonius</i> (Ham.-Buch.)	LRnt
159. <i>Labeo kontius</i> (Jerdon)	EN
160. <i>Labeo pangusia</i> (Ham.-Buch.)	LRnt
161. <i>Labeo rajasthanicus</i> (Datta & Majumdar)	CR
162. <i>Labeo rohita</i> (Ham.-Buch.)	LRnt
163. <i>Neolissocheilus spinulosus</i> (McClelland)	EN
164. <i>Neolissochilus wynaadensis</i> (Day)	CR
165. <i>Osteobrama belangeri</i> (Valenciennes)	EW
166. <i>Osteobrama brevipectoralis</i> (Tilak & Hussain)	EN
167. <i>Osteobrama cotio cotio</i> (Ham.-Buch.)	LRnt
168. <i>Osteobrama cotio cunma</i> Day	VU
169. <i>Osteochilu brevidorsalis</i> (Day)	EN
170. <i>Osteochilichthys longidorsalis</i> Pethiyagoda & Kottelat	CR
171. <i>Osteochilus godavariensis</i> (Babu Rao)	DD
172. <i>Osteobrama bakeri</i> (Day)	EN
173. <i>Parluciosoma daniconius</i> (Ham.-Buch.)	LRnt
174. <i>Puntius arulius</i> (Jerdon)	EN
175. <i>Puntius arulius tambraparniei</i> (Silas)	CR
176. <i>Puntius bovanicus</i> (Day)	CR
177. <i>Puntius carnaticus</i> (Jerdon)	LRnt
178. <i>Puntius cauveriensis</i> (Hora)	DD
179. <i>Puntius chilinooides</i> (McClelland)	EN
180. <i>Puntius chola</i> (Ham.-Buch.)	VU
181. <i>Puntius chrysopterus</i> (McClelland)	LRlc
182. <i>Puntius clavatus</i> (McClelland)	EN
183. <i>Puntius clavatus clavatus</i> (McClelland)	EN
184. <i>Puntius conchoniensis</i> (Ham.-Buch.)	VU
185. <i>Puntius deccanensis</i> Yazdani & Babu Rao	CR
186. <i>Puntius denisonii</i> (Day)	EN
187. <i>Puntius dorsalis</i> (Jerdon)	EN
188. <i>Puntius fasciatus</i> (Jerdon)	EN
189. <i>Puntius guganio</i> (Ham.-Buch.)	LRnt
190. <i>Puntius jayarami</i> Vishwanath & Tombi	EN
191. <i>Puntius melanampyx</i> Day	LRlc
192. <i>Puntius melanostigma</i> (Day)	EN
193. <i>Puntius mudumalaiensis</i> Menon	CR
194. <i>Puntius narayani</i> (Hora)	CR
195. <i>Puntius ophicephalus</i> Raj	EN
196. <i>Puntius parrah</i> (Day)	EN
197. <i>Puntius phutunio</i> (Ham.-Buch.)	LRlc
198. <i>Puntius sarana sarana</i> (Ham.-Buch.)	VU
199. <i>Puntius shalynius</i> Yazdani & Talukdar	VU
200. <i>Puntius sophore</i> (Ham.-Buch.)	LRnt
201. <i>Puntius terio</i> (Ham.-Buch.)	LRnt
202. <i>Puntius ticto</i> (Ham.-Buch.)	LRnt
203. <i>Puntius ticto punctatus</i> (Day)	CR
204. <i>Puntius vittatus</i> (Day)	VU
205. <i>Raiamas bola</i> (Ham.-Buch.)	VU
206. <i>Raiamas guttatus</i> (Day)	EN

Taxa	IUCN
207. <i>Rohtee ogilbii</i> Sykes	LRnt
208. <i>Salmostoma bacaila</i> (Ham.-Buch.)	LRlc
209. <i>Salmostoma clupeoides</i> (Bloch)	LRlc
210. <i>Salmostoma novacula</i> (Valenciennes)	LRnt
211. <i>Salmostoma orissaensis</i> Banarescur	EN
212. <i>Schizothorax nasus</i> (Heckell)	LRnt
213. <i>Schizothoraichthys hugelii</i> (Heckell)	LRnt
214. <i>Schizothorax curvifrons</i> Heckell	VU
215. <i>Schizothorax esocinus</i> (Heckell)	LRnt
216. <i>Schizothorax kumanosis</i> (Menon)	LRnt
217. <i>Schizothorax labiatus</i> (McClelland)	EN
218. <i>Schizothorax niger</i> (Heckell)	VU
219. <i>Schizothorax progastus</i> (McClelland)	LRnt
220. <i>Schizothorax richardsonii</i> (Gray)	VU
221. <i>Schizothorax sinuatus</i> Heckell	LRnt
222. <i>Semiplotus modestus</i> Day	EN
223. <i>Semiplotus semiplotus</i> (McClelland)	VU
224. <i>Tor khudree</i> (Sykes)	VU
225. <i>Tor khudree malabaricus</i> (Jerdon)	CR
226. <i>Tor kulkarni</i> Menon	DD
227. <i>Tor mosal</i> (Ham.-Buch.)	EN
228. <i>Tor mussullah</i> (Sykes)	CR
229. <i>Tor progeneius</i> (McClelland)	DD
230. <i>Tor putitora</i> (Ham.-Buch.)	EN
231. <i>Tor tor</i> (Ham.-Buch.)	EN
Gobiidae	
232. <i>Glossogobius giuris</i> (Ham.-Buch.)	LRnt
233. <i>Stenogobius malabaricus</i> (Day)	CR
234. <i>Periophthalmus weberi</i> Eggert	CR
Hernirampidae	
235. <i>Hyporhamphus xanthopterus</i> (Valenciennes)	CR
Heteropneustidae	
236. <i>Heteropneustes fossilis</i> (Bloch)	VU
Homalopteridae	
237. <i>Acanthocobitis zonalternans</i> (Blyth)	DD
238. <i>Mesonoemacheilus reticulofasciatus</i> Singh, Sen & Banarescu	EN
239. <i>Mesonoemacheilus sijuensis</i> (Menon)	VU
240. <i>Schistura arunachalensis</i> (Menon)	EN
241. <i>Schistura devdevi</i> (Hora)	EN
242. <i>Schistura elongatus</i> (Sen & Nalbant)	EN
243. <i>Schistura kangjupkhulensis</i> (Hora)	VU
244. <i>Schistura manipurensis</i> (Chaudhuri)	VU
245. <i>Schistura multifasciatus</i> (Day)	VU
246. <i>Schistura nagaensis</i> (Menon)	EN
247. <i>Schistura pavonaceus</i> (McClelland)	EN
248. <i>Schistura peguensis</i> (Hora)	EN
249. <i>Schistura prashari</i> (Hora)	VU
250. <i>Schistura sikmaiensis</i> Hora	EN
251. <i>Schistura singhi</i> (Menon)	CR
252. <i>Schistura vinciguerrae</i> (Hora)	EN
Mastacembelidae	
253. <i>Macrognathus aral</i> (Bloch & Schneider)	LRnt
254. <i>Macrognathus guentheri</i> (Day)	VU
255. <i>Macrognathus pancalus</i> (Ham.-Buch.)	LRnt
Moringuidae	
256. <i>Moringua hodgarti</i> Chaudhuri	CR

Taxa	IUCN
Mugilidae	
257. <i>Rhinomugil corsula</i> (Ham.-Buch.)	VU
258. <i>Sicamugil cascasia</i> (Ham.-Buch.)	VU
Nandidae	
259. <i>Nandus nandus</i> (Ham.-Buch.)	LRnt
260. <i>Pristolepis marginata</i> Jerdon	VU
Notopteridae	
261. <i>Notopterus chilata</i> (Ham.-Buch.)	EN
262. <i>Notopterus notopterus</i> (Pallas)	LRnt
Pangasiidae	
263. <i>Pangasius pangasius</i> (Ham.-Buch.)	CR
Psilorhynchidae	
264. <i>Psilorhynchus homalophera</i> Hora & Mukherji	VU
265. <i>Psilorhynchus microphthalmus</i> Vishwanath & Manoj	CR
266. <i>Psilorhynchus sucatio nudithoracicus</i> Tilak & Husain	EN
Schilbeidae	
267. <i>Ailia colia</i> (Ham.-Buch.)	VU
268. <i>Ailia punctata</i> Day	VU
269. <i>Clupisoma bastari</i> Datta & Karmakar	EN
270. <i>Clupisoma garua</i> (Ham.-Buch.)	VU
271. <i>Eutropiichthys murius</i> (Ham.-Buch.)	LRnt
272. <i>Eutropiichthys vacha</i> (Ham.-Buch.)	EN
273. <i>Neotropius khavalchor</i> Kulkarni	DD
274. <i>Proeutropiichthys taakree</i> (Sykes)	CR
275. <i>Proeutropiichthys taakree taakree</i> (Sykes)	VU
276. <i>Pseudeutropius atherinoides</i> (Bloch)	EN
277. <i>Pseudeutropius mitchelli</i> Gunther	DD
Schizothracinae	
278. <i>Lepidopygopsis typus</i> Raj	CR
Sciaenidae	
279. <i>Johnius gangaticus</i> Talwar	EN
Siliniidae	
280. <i>Silonia childreni</i> (Sykes)	EN
281. <i>Silonia silondia</i> (Ham.-Buch.)	LRnt
Siluridae	
282. <i>Kryptopterus indicus</i> Datta, Barman & Jayaram	CR
283. <i>Ompok bimaculatus</i> (Bloch)	EN
284. <i>Ompok malabaricus</i> (Valenciennes)	CR
285. <i>Ompok pabda</i> (Ham.-Buch.)	EN
286. <i>Pinniwallago kanpurensis</i> Gupta, Jayaram & Hajela	CR
287. <i>Silurus afghana</i> Gunther	EN
288. <i>Silurus wynaadensis</i> Day	CR
289. <i>Wallago attu</i> (Schneider)	LRnt
Sisoridae	
290. <i>Bagarius bagarius</i> (Ham.-Buch.)	VU

Taxa	IUCN
291. <i>Erethistoides montana pipri</i> Hora	CR
292. <i>Euchiloglanis hodgarti</i> Hora	VU
293. <i>Euchiloglanis kamengensis</i> (Hora)	EN
294. <i>Gagata sexualis</i> Tilak	LRnt
295. <i>Glyptosternum reticulatum</i> McClelland	EN
296. <i>Glyptothorax alaknandi</i> Tilak	CR
297. <i>Glyptothorax anamalaiensis</i> Silas	CR
298. <i>Glyptothorax bervipinnis</i> Hora	VU
299. <i>Glyptothorax cavia</i> Ham.-Buch.	EN
300. <i>Glyptothorax dakpathari</i> Tilak & Husain	CR
301. <i>Glyptothorax davissinghi</i> Manimekalan & Das	CR
302. <i>Glyptothorax garhwali</i> Tilak	CR
303. <i>Glyptothorax housei</i> Herra	DD
304. <i>Glyptothorax indicus</i> Talwar	VU
305. <i>Glyptothorax kashmirensis</i> (Hora)	EN
306. <i>Glyptothorax lonah</i> (Sykes)	LRnt
307. <i>Glyptothorax madraspatanum</i> (Day)	VU
308. <i>Glyptothorax nelsoni</i> Ganguly, Dutta & Sen	EN
309. <i>Glyptothorax pectinopterus</i> (McClelland)	LRnt
310. <i>Glyptothorax saisii</i> (Jenkins)	EN
311. <i>Glyptothorax stoliczkae</i> (Steindachner)	CR
312. <i>Glyptothorax striatus</i> (McClelland; Hora)	VU
313. <i>Glyptothorax telchitta</i> (Ham.-Buch.)	LRnt
314. <i>Hara horai</i> Mishra	EN
315. <i>Laguvia kapuri</i> (Tilak & Hussain)	CR
316. <i>Laguvia ribeiroi</i> Hora	LRnt
317. <i>Laguvia shawi</i> Hora	EN
318. <i>Nangra nangra</i> (Ham.-Buch.)	VU
319. <i>Nangra viridescens</i> (Ham.-Buch.)	LRnt
320. <i>Pseudecheneis sulcatus</i> (McClelland)	VU
321. <i>Sisor rhabdophorus</i> Ham.-Buch.	EN
Symbranchidae	
322. <i>Monopterus cuchia</i> (Ham.-Buch.)	LRnt
323. <i>Monopterus eapeni</i> Talwar	CR
324. <i>Monopterus fossorius</i> (Nair)	EN
Tetraodontidae	
325. <i>Chelonodon fluvialilis</i> (Ham.-Buch.)	LRnt
326. <i>Tetraodon cutcutia</i> Ham.-Buch.	LRnt
327. <i>Tetraodon travancoricus</i> Hora & Nair	EN

Species	IUCN	Assessed for	Threatened due to	Criteria
19. <i>Aspidoparia morar</i>	LRnt	Bramhaputra and east flowing river system	--	--
20. <i>Bagarius bagarius</i>	VU	Gangetic river system	Population reduction	A1a, 1c, 1d
21. <i>Balitora brucei</i>	LRnt	Bramhaputra and gangetic river system	--	--
22. <i>Barbus carletoni</i>	EN	Gangetic and west flowing river system	Restricted distribution	B1, 2c
23. <i>Barilius bakeri</i>	VU	West flowing river system	Population reduction	A1a, 1c, 1d
24. <i>Barilius barila</i>	VU	Bramhaputra, Gangetic & east flowing river systems	Restricted distribution	B1, 2c
25. <i>Barilius barna</i>	LRnt	Gangetic, Bramhaputra & east flowing river system	--	--
26. <i>Barilius bendelisis</i>	LRnt	Upland cold water bodies	--	-
27. <i>Barilius canarensis</i>	DD	Streams of southern Western Ghats	--	--
28. <i>Barilius corbetti</i>	CR	East flowing river system	Restricted distribution	B1, 2c
29. <i>Barilius dimorphicus</i>	CR	Gangetic river system	Restricted distribution	B1, 2c
30. <i>Barilius dogarsinghi</i>	EN	Bramhaputra river system	Restricted distribution	B1, 2a, 2b, 2d
31. <i>Barilius evezardi</i>	LRnt	East and west flowing river system	--	--
32. <i>Barilius shacra</i>	LRnt	Gangetic and Bramhaputra river system	--	--
33. <i>Barilius tileo</i>	LRnt	Northeastern and eastern India	--	--
34. <i>Barilius vagra</i>	VU	Upland cold water bodies	Population reduction	A1a, 1c
35. <i>Batasio travancoria</i>	EN	West flowing river system	Population reduction Restricted distribution Population restriction	A1b; B1, 2b
36. <i>Bhavana australis</i>	EN	West flowing river system	Restricted distribution	B1, 2c
37. <i>Botia almorhae</i>	EN	Upland cold water bodies	Restricted distribution	B1, 2c
38. <i>Botia berdmorei</i>	EN	Bramhaputra river system	Population reduction	A1a, 1c, 1d
39. <i>Botia birdi</i>	LRnt	Upland cold water bodies	--	--
40. <i>Botia geto</i>	LRnt	Gangetic and Bramhaputra river system	--	--
41. <i>Botia histrionica</i>	VU	Bramhaputra and Gangetic river system	Restricted distribution	B1, 2c
42. <i>Botia lohachata</i>	EN	Upland cold water bodies	Restricted distribution	B1, 2c
43. <i>Botia striata</i>	EN	West flowing river system	Restricted distribution	B1, 2c
44. <i>Brachydanio acuticophala</i>	VU	Bramhaputra river system	Population reduction; Restricted distribution	A1c; B1, 2c
45. <i>Brachydanio rerio</i>	LRnt	East flowing, Indo-gangetic, Bramhaputra river system	--	--
46. <i>Catla catla</i>	VU	India	Population reduction	A1a, 1c, 1d, 1e
47. <i>Channa baculis</i>	LRlc	Upland cold water bodies, Gangetic river system	--	--
48. <i>Channa marulius</i>	LRnt	India	--	--
49. <i>Channa micropeltes</i>	CR	West flowing river system	Population reduction Restricted distribution	A1a, 1b, 1c, 1d; B1, 2c
50. <i>Channa orientalis</i>	VU	India	Population reduction	A1a, 1c, 1d
51. <i>Channa punctatus</i>	LRnt	India	--	--
52. <i>Channa striatus</i>	LRlc	India	--	--
53. <i>Chaudhurai indica</i>	VU	Bramhaputra river system	Restricted distribution Population restriction	B1, 2c, 2d; D2
54. <i>Chaudhuria khajuriai</i>	EN	Bramhaputra river system	Restricted distribution	B1, 2b, 2c
55. <i>Chela dadyburjori</i>	DD	West flowing river system	--	--
56. <i>Chela laubuca</i>	LRlc	India	--	--
57. <i>Chelonodon fluviatilis</i>	LRnt	Gangetic river system	--	--
58. <i>Cirrhinus cirrhosus</i>	VU	East, west flowing & Gangetic river system	Restricted distribution	B1, 2c
59. <i>Cirrhinus fulungee</i>	LRnt	West flowing river system	--	--
60. <i>Cirrhinus macrops</i>	DD	East flowing river system	--	--

Species	IUCN	Assessed for	Threatened due to	Criteria
61. <i>Cirrhinus mrigala</i>	LRnt	India	--	--
62. <i>Cirrhinus reba</i>	VU	India	Population reduction	A1, 1b, 1c, 1d, 2c, 2d
63. <i>Clarias batrachus</i>	VU	Throughout India	Population reduction	A1a, 1c, 1d
64. <i>Clarias dayi</i>	EN	East and west flowing river system	Restricted distribution	B1, 2c
65. <i>Clarias dussumieri</i>	VU	East flowing river system	Population reduction	A1a, 1b, 1c, 1d
66. <i>Clupisoma bastari</i>	EN	West flowing river system	Restricted distribution	B1, 2c
67. <i>Clupisoma garua</i>	VU	Bramhaputra and Gangetic river system	Population reduction	A1a, 1c, 1d, 2c, 2d
68. <i>Colisa fasciatus</i>	LRnt	Gangetic, Bramhaputra & west flowing river system	--	--
69. <i>Crossocheilus burmanicus</i>	VU	Bramhaputra river system	Restricted distribution	B1, 2c
70. <i>Crossocheilus latius latius</i>	DD	Unknown	--	--
71. <i>Crossocheilus periyarensis</i>	VU	West flowing river system	Population restriction	D2
72. <i>Danio aequipinnatus</i>	LRnt	Upland cold water bodies	--	--
73. <i>Danio devario</i>	LRnt	Bramhaputra, Gangetic & west flowing river system	--	--
74. <i>Danio naganensis</i>	VU	Bramhaputra river system	Population reduction	A1a, 1c
75. <i>Dayella malabarica</i>	CR	West flowing river system	Population reduction	A1a, 1c, 1d, 2c, 2d
76. <i>Erethistoides montana pipri</i>	CR	Gangetic river system	Restricted distribution	B1, 2a, 2b, 2c, 2d
77. <i>Esomus danricus</i>	LRlc	India	--	--
78. <i>Etroplus canarensis</i>	DD	Karnataka	--	--
79. <i>Euchiloglanis hodgarti</i>	VU	Gangetic river system	Population reduction	A1c
80. <i>Euchiloglanis kamengensis</i>	EN	Bramhaputra river system	Restricted distribution	B1, 2c, 2d
81. <i>Eutropiichthys murius</i>	LRnt	East flowing, Gangetic, Bramhaputra river system	--	--
82. <i>Eutropiichthys vacha</i>	EN	Gangetic river system	Population reduction	A1a, 1b, 1c, 1d, 2b, 2c, 2d
83. <i>Gagata sexualis</i>	LRnt	Gangetic river system	--	--
84. <i>Garra gotyla gotyla</i>	VU	Upland cold water bodies	Population reduction	A1a, 1c
85. <i>Garra gotyla stenorhynchus</i>	EN	East flowing river system	Restricted distribution	B1, 2c
86. <i>Garra hughi</i>	EN	East flowing river system	Population reduction	A1a, 1c
87. <i>Garra kempfi</i>	VU	Bramhaputra river system	Population reduction Restricted distribution	A1a, 1c; B1, 2c
88. <i>Garra lissorhynchus</i>	VU	Bramhaputra river system	Population reduction	A1a, 1c
89. <i>Garra litanensis</i>	CR	Bramhaputra river system	Restricted distribution	B1, 2c
90. <i>Garra manipurensis</i>	CR	Bramhaputra river system	Restricted distribution	B1, 2c
91. <i>Garra menoni</i>	VU	West flowing river system	Population restriction	D2
92. <i>Garra naganensis</i>	VU	Bramhaputra river system	Restricted distribution	B1, 2c
93. <i>Garra rupecula</i>	VU	Bramhaputra river system	Population reduction, Restricted distribution	A1a; B1, 2b
94. <i>Garra surendranathanii</i>	EN	West flowing river system	Restricted distribution	B1, 2c
95. <i>Glossogobius giuris</i>	LRnt	Gangetic, Bramhaputra & west flowing river system	--	--
96. <i>Glyphis gangeticus</i>	VU	Gangetic and east flowing river system	Population restriction	D2
97. <i>Glyptosternum reticulatum</i>	EN	Unknown	Restricted distribution	B1, 2c
98. <i>Glyptothorax alaknandi</i>	CR	Gangetic river system	Restricted distribution	B1, 2c
99. <i>Glyptothorax anamalaiensis</i>	CR	East flowing river system	Restricted distribution	B1, 2c
100. <i>Glyptothorax bervipinnis</i>	VU	Gangetic river system	Population reduction, Restricted distribution	A1a, 1c, 1d, 2c, 2d; B1, 2c

Species	IUCN	Assessed for	Threatened due to	Criteria
101. <i>Glyptothorax cavia</i>	EN	Bramhaputra and Gangetic river system	Population reduction	A1a, 1c, 1d
102. <i>Glyptothorax dakpathari</i>	CR	Gangetic river system	Restricted distribution	B1, 2c
103. <i>Glyptothorax davissinghi</i>	CR	West flowing river system	Restricted distribution	B1, 2c
104. <i>Glyptothorax garhwali</i>	CR	Gangetic river system	Restricted distribution	B1, 2c
105. <i>Glyptothorax housei</i>	DD	East flowing river system	--	--
106. <i>Glyptothorax indicus</i>	VU	Upland cold water bodies, Gangetic river system	Population reduction	A1a, 1c, 1d
107. <i>Glyptothorax kashmirensis</i>	EN	Upland cold water bodies	Restricted distribution	B1, 2c
108. <i>Glyptothorax lonah</i>	LRnt	East flowing river system	--	--
109. <i>Glyptothorax madraspatanum</i>	VU	West flowing river system	Population restriction	D2
110. <i>Glyptothorax nelsoni</i>	EN	Gangetic river system	--	--
111. <i>Glyptothorax pectinopterus</i>	LRnt	Upland cold waters, Gangetic & Bramhaputra river systems	--	--
112. <i>Glyptothorax saisii</i>	EN	Gangetic and west flowing river system	Restricted distribution	B1, 2c
113. <i>Glyptothorax stoliczkae</i>	CR	Upland cold water bodies	Restricted distribution	B1, 2c
114. <i>Glyptothorax striatus</i>	VU	Bramhaputra river system	Restricted distribution Population restriction	B1, 2c; D2
115. <i>Glyptothorax telchitta</i>	LRnt	Gangetic and Bramhaputra river system	--	--
116. <i>Gonialosa manmina</i>	VU	Gangetic and Bramhaputra river system	Population reduction	A1a, 1c, 1d
117. <i>Gudusia chapra</i>	LRlc	Gangetic, Bramhaputra & east flowing river systems	--	--
118. <i>Gymnocypris biswasi</i>	EX	Upland cold water bodies	--	--
119. <i>Hara horai</i>	EN	Gangetic river systems	Population reduction, Restricted distribution	A1a, 1c, 1d; B1, 2c
120. <i>Heteropneustes fossilis</i>	VU	Unknown	Population reduction	A1a, 1c, 1d
121. <i>Hilsa ilisha</i>	VU	East and west flowing river system	Population reduction	A1a, 1c, 1d
122. <i>Homaloptera montana</i>	CR	East flowing river system	Restricted distribution	B1, 2c
123. <i>Homaloptera pillaii</i>	VU	West flowing river system	Population restriction	D2
124. <i>Horabagrus brachysoma</i>	EN	West flowing river system	Population reduction	A1a, 1c, 1d
125. <i>Horabagrus nigricollaris</i>	CR	West flowing river system	Restricted distribution	B1, 2c
126. <i>Horadandia atukorali brittani</i>	EN	West flowing river system	Restricted distribution	B1, 2c
127. <i>Horaglanis krishnai</i>	CR	West flowing river system	Population restriction, Restricted distribution	D2; B1, 2a, 2c
128. <i>Hyporhamphus xanthopterus</i>	CR	West flowing river system	Population reduction, Restricted distribution	A1a, 1b, 1c, 1d; B1, 2c
129. <i>Hypselobarbus curmuca</i>	EN	West and east flowing river system	Population reduction	A1d, 1c, 1d, 1e
130. <i>Hypselobarbus dubius</i>	EN	East flowing river system	Restricted distribution	B1, 2c, 2d
131. <i>Hypselobarbus jerdoni</i>	EN	East flowing river system	Restricted distribution	B1, 2c
132. <i>Hypselobarbus kolus</i>	EN	West flowing river system	Population reduction, Restricted distribution	A1a; B1, 2c
133. <i>Hypselobarbus lithopides</i>	EN	West and east flowing river system	Population reduction; Restricted distribution	A1a, 1c, 1d; B1, 2c
134. <i>Hypselobarbus micropogon periyarensis</i>	EN	West flowing river system	Restricted distribution	B1, 2a, 2b, 2c
135. <i>Hypselobarbus thomassi</i>	EN	East flowing river system	Restricted distribution	B1, 2c

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136. <i>Hypseloparbus kurali</i>	EN	West and east flowing river system	Restricted distribution	B1, 2c
137. <i>Johnius gangeticus</i>	EN	Gangetic river system	Restricted distribution	B1, 2c
138. <i>Kryptopterus indicus</i>	CR	Bramhaputra river system	Restricted distribution	B1, 2c
139. <i>Labeo ariza</i>	CR	East flowing river system	Restricted distribution	B1, 2c
140. <i>Labeo angra</i>	LRnt	Gangetic, Bramhaputra, Indus river system	--	--
141. <i>Labeo bata</i>	LRnt	India	--	--
142. <i>Labeo boga</i>	LRnt	East flowing, Gangetic, Bramhaputra and Indus river system	--	--
143. <i>Labeo calbasu</i>	LRnt	Gangetic, Bramhaputra, east flowing, west flowing & Indus river system	--	--
144. <i>Labeo dero</i>	VU	Upland cold water bodies	Population reduction	A1a, 1c, 1d
145. <i>Labeo dussumieri</i>	EN	West flowing river system	Population reduction	A1a, 1c, 1d, 1e, 2c, 2d, 2e
146. <i>Labeo dyocheilus</i>	VU	Upland cold water bodies	Population reduction	A1a, 1c, 1d
147. <i>Labeo fimbriatus</i>	LRnt	West flowing, Indus and east flowing river system	--	--
148. <i>Labeo gonius</i>	LRnt	Gangetic, west flowing, Bramhaputra and east flowing river system	--	--
149. <i>Labeo kontius</i>	EN	East flowing river system	Restricted distribution	B1, 2c
150. <i>Labeo pangusia</i>	LRnt	Gangetic and Bramhaputra river system	-	-
151. <i>Labeo rajasthanicus</i>	CR	Rajasthan	Restricted distribution	B1, 2c
152. <i>Labeo rohita</i>	LRnt	India	-	-
153. <i>Laguvia kapuri</i>	CR	Gangetic river system	Restricted distribution	B1, 2a, 2c, 2d
154. <i>Laguvia ribeiroi</i>	LRnt	West flowing river system	--	--
155. <i>Laguvia shawi</i>	EN	Gangetic river system	Restricted distribution	B1, 2c
156. <i>Lepidocephalus annandalei</i>	LRnt	Bramhaputra and Gangetic river system	--	--
157. <i>Lepidocephalus berdmorei</i>	EN	Bramhaputra river system	Population reduction, Restricted distribution	A1c; B1, 2c
158. <i>Lepidocephalus caudofurcatus</i>	VU	Gangetic and Bramhaputra river system	Restricted distribution	B1, 2c
159. <i>Lepidocephalus goalparensis</i>	CR	Bramhaputra river system	Restricted distribution	B1, 2c
160. <i>Lepidocephalus irrorata</i>	VU	Bramhaputra river system	Restricted distribution	B1, 2c
161. <i>Lepidopygopsis typus</i>	CR	West flowing river system	Restricted distribution	B1, 2c
162. <i>Macrognaathus aral</i>	LRnt	Gangetic, Bramhaputra, east and west flowing river system	--	--
163. <i>Macrognaathus guentheri</i>	VU	West flowing river system	Population reduction, Restricted distribution	A1a, 1c, 2c, 2d; B1, 2c
164. <i>Macrognaathus pancalus</i>	LRnt	Bramhaputra, Gangetic & east flowing river system	--	--
165. <i>Mesonoemacheilus reticulofasciatus</i>	EN	Bramhaputra river system	Restricted distribution	B1, 2c
166. <i>Mesonoemacheilus sijuensis</i>	VU	Bramhaputra river system	Population restriction	D2
167. <i>Monopterus cuchia</i>	LRnt	Upland cold water, Gangetic & Bramhaputra river system	--	--
168. <i>Monopterus eapeni</i>	CR	West flowing river system	Restricted distribution	B1, 2c
169. <i>Monopterus fossorius</i>	EN	West flowing river system	Restricted distribution	B1, 2c
170. <i>Moringua hodgarti</i>	CR	Bramhaputra river system	Restricted distribution	B1, 2b, 2c, 2d, 2e
171. <i>Mystus bleekeri</i>	VU	Gangetic, east and west flowing river system	Population reduction	A1a, 1c, 1d
172. <i>Mystus cavasius</i>	LRnt	Gangetic, east and west flowing river system	--	--

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173. <i>Mystus malabaricus</i>	EN	Kerala & Karnataka	Population reduction	A1a, 2b, 2c, 2d
174. <i>Mystus microphthalmus</i>	EN	Bramhaputra river system	Restricted distribution, Population reduction	B1, 2c; A1a, 1c
175. <i>Mystus montanus</i>	VU	Peninsular, Central and north India	Population reduction	A1a, 1b, 1c, 1d, 2c, 2d
176. <i>Mystus punctatus</i>	EN	East and west flowing river system	Restricted distribution	B1, 2c
177. <i>Mystus vittatus</i>	VU	Unknown	Population reduction	A1a, 1c, 1d
178. <i>Nandus nandus</i>	LRnt	Gangetic, east and west flowing river system	--	--
179. <i>Nangra nangra</i>	VU	Gangetic river system	Population reduction	A1a, 1c, 1d
180. <i>Nangra viridescens</i>	LRnt	Gangetic, Indus, Bramhaputra river system	--	--
181. <i>Nemacheilus botia</i>	LRnt	Upland cold water, Gangetic & Bramhaputra river system	--	--
182. <i>Nemacheilus carletonii</i>	EN	Gangetic river system	Restricted distribution	B1, 2c
183. <i>Nemacheilus chindwinicus</i>	EN	Bramhaputra river system	Restricted distribution	B1, 2c
184. <i>Nemacheilus corica</i>	LRnt	Upland cold water bodies	--	--
185. <i>Nemacheilus doonensis</i>	EN	Gangetic river system	Restricted distribution	B1, 2c
186. <i>Nemacheilus guentheri</i>	LRlc	West flowing river system	--	--
187. <i>Nemacheilus himachalensis</i>	EN	Gangetic river system	Restricted distribution	B1, 2c
188. <i>Nemacheilus horai</i>	VU	Gangetic, Indus river system and upland cold water bodies	Restricted distribution	B1, 2c
189. <i>Nemacheilus kangrae</i>	EN	Gangetic river system	Restricted distribution	B1, 2c
190. <i>Nemacheilus keralensis</i>	EN	West flowing river system	Restricted distribution	B1, 2c, 2d
191. <i>Nemacheilus labeosus</i>	VU	Bramhaputra and Chindwin drainage system	Restricted distribution	B1, 2c
192. <i>Nemacheilus monilis</i>	EN	East flowing river system	Restricted distribution	B1, 2c
193. <i>Nemacheilus montanus</i>	EN	Upland cold water bodies & Gangetic river system	Restricted distribution	B1, 2c
194. <i>Nemacheilus multifasciatus</i>	EN	Unknown	Restricted distribution	B1, 2c
195. <i>Nemacheilus nilgiriensis</i>	EN	East flowing river system	Restricted distribution	B1, 2c
196. <i>Nemacheilus petrubanarescui</i>	DD	West flowing river system	--	--
197. <i>Nemacheilus pulchellus</i>	DD	Unknown	--	--
198. <i>Nemacheilus rupecola</i>	LRnt	Upland cold water bodies and Gangetic river system	--	--
199. <i>Nemacheilus scaturigina</i>	VU	Gangetic and Bramhaputra river system	Population reduction	A1a, 1c, 1d
200. <i>Nemacheilus semiarmatus</i>	VU	East and west flowing water system	Population restriction	D2
201. <i>Nemacheilus striatus</i>	DD	West flowing river system	--	--
202. <i>Nemacheilus triangularis</i>	LRlc	West flowing rivers	--	--
203. <i>Neoeucirrhichthys maydelli</i>	VU	Bramhaputra river system	Restricted distribution	B1, 2c
204. <i>Neolissocheilus spinulosus</i>	EN	Teesta drainage	Restricted distribution	B1, 2c
205. <i>Neolissochilus wynaadensis</i>	CR	West flowing river system	Restricted distribution	B1, 2c
206. <i>Neotropius khavalchor</i>	DD	East and west flowing river system	--	--

Species	IUCN	Assessed for	Threatened due to	Criteria
207. <i>Notopterus chilata</i>	EN	Ganges, Brahmaputra, Narmada and east flowing river system	Population reduction	A1a, 1b, 1c, 1d, 2c, 2d
208. <i>Notopterus notopterus</i>	LRnt	Ganges, Brahmaputra and east flowing river system	--	--
209. <i>Ompok bimaculatus</i>	EN	India	Population reduction	A1a, 1c, 1d, 2c, 2d
210. <i>Ompok malabaricus</i>	CR	East flowing river system	Restricted distribution	B1, 2c
211. <i>Ompok pabda</i>	EN	Indus, Ganga, Brahmaputra river system	Population reduction	A1a, 1c, 1d, 2c, 2d
212. <i>Ophiocephalus channa gachua</i>	VU	India	Restricted distribution	B1, 2c
213. <i>Osteobrama baker</i>	EN	West flowing river system	Restricted distribution	B1, 2c
214. <i>Osteobrama belangeri</i>	EW	Brahmaputra river system	--	--
215. <i>Osteobrama brevipectoralis</i>	EN	Brahmaputra river system	Restricted distribution	B1, 2c
216. <i>Osteobrama cotio cotio</i>	LRnt	Upland cold water bodies, Gangetic and east flowing river system	--	--
217. <i>Osteobrama cotio cunma</i>	VU	Brahmaputra river system	Population reduction	A1a, 1c, 2c
218. <i>Osteochilus brevidorsalis</i>	EN	East flowing river system	Restricted distribution	B1, 2c
219. <i>Osteochilichthys longidorsalis</i>	CR	West flowing river system	Restricted distribution	B1, 2c
220. <i>Osteochilus godavariensis</i>	DD	West flowing river system	--	--
221. <i>Pangasius pangasius</i>	CR	East flowing river system	Population reduction	A1a, 1b, 1c, 1d
222. <i>Pangio pangia</i>	VU	Brahmaputra, & Gangetic river system	Restricted distribution	B1, 2c
223. <i>Parambassis dayi</i>	EN	West flowing river system	Restricted distribution	B1, 2c
224. <i>Parambassis thomassi</i>	VU	West flowing river system	Population reduction	A1a, 1b, 1c, 1d, 2c, 2d
225. <i>Parluciosoma daniconius</i>	LRnt	India	--	--
226. <i>Periophthalmus weberi</i>	CR	Gangetic river system	Restricted distribution	B1, 2c
227. <i>Pinnwallago kanpurensis</i>	CR	Gangetic river system	Restricted distribution	B1, 2c
228. <i>Pristolepis marginata</i>	VU	West flowing river system	Population reduction	A1a, 1b, 1c, 1d, 1e, 2c, 2d
229. <i>Proeutropiichthys taakree</i>	CR	West flowing river system	Population reduction	A1a, 1d, 2d
230. <i>Proeutropiichthys taakree taakree</i>	VU	West and east flowing river system	Population restriction	D2
231. <i>Pseudecheneis sulcatus</i>	VU	Brahmaputra river system	Restricted distribution	B1, 2c
232. <i>Pseudeutropius atherinoides</i>	EN	Gangetic, Brahmaputra, East and west flowing river system	Population reduction	A1a, 1c, 1d
233. <i>Pseudeutropius mitchelli</i>	DD	West flowing river system	--	--
234. <i>Psilorhynchus homalophera</i>	VU	Brahmaputra river system	Population reduction	A1a, 1c, 2c
235. <i>Psilorhynchus microphthalmus</i>	CR	Brahmaputra river system	Restricted distribution	B1, 2c
236. <i>Psilorhynchus sucatio nudithoracicus</i>	EN	Gangetic river system	Population reduction, Restricted distribution	A1a; B1, 2c
237. <i>Puntius arulius</i>	EN	West and east flowing river system	Population reduction; Restricted distribution	A1a, 1c, 1d, 2c, 2d; B1, 2c
238. <i>Puntius arulius tamberniewi</i>	CR	East flowing river system	Restricted distribution	B1, 2c
239. <i>Puntius bovanicus</i>	CR	East flowing river system	Restricted distribution	B1, 2c
240. <i>Puntius carnaticus</i>	LRnt	West flowing river system	--	--

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241. <i>Puntius cauveriensis</i>	DD	West flowing river system	--	--
242. <i>Puntius chinloides</i>	EN	Upland cold water bodies	Population reduction	A1a, 1c, 1d
243. <i>Puntius chola</i>	VU	Gangetic, East and west flowing river system	Population reduction	A1a, 1c, 1d
244. <i>Puntius chrysopterus</i>	LRlc	Indus, Gangetic and Bramhaputra river system	--	
245. <i>Puntius clavatus</i>	EN	Upland cold water bodies	Restricted distribution	B1, 2c
246. <i>Puntius clavatus clavatus</i>	EN	Bramhaputra river system	Population reduction, Restricted distribution	A1a, 1c; B1, 2c
247. <i>Puntius conchoniis</i>	VU	Gangetic, Bramhaputra and Indus river system	Restricted distribution	B1, 2c
248. <i>Puntius deccanensis</i>	CR	East and west flowing river system	Restricted distribution	B1, 2c
249. <i>Puntius denisonii</i>	EN	West flowing river system	Restricted distribution	B1, 2c
250. <i>Puntius dorsalis</i>	EN	East and west flowing river system	Restricted distribution	B1, 2c
251. <i>Puntius fasciatus</i>	EN	East and west flowing river system	Restricted distribution	B1, 2c
252. <i>Puntius guganio</i>	LRnt	Bramhaputra and Gangetic river system	--	--
253. <i>Puntius hexastichus</i>	VU	Bramhaputra river system and upland cold water bodies	Restricted distribution	B1, 2c
254. <i>Puntius jayarami</i>	EN	Bramhaputra river system	Population reduction, Restricted distribution	A1a, 1c; B1, 2c
255. <i>Puntius melanampyx</i>	LRlc	West and east flowing river system	--	--
256. <i>Puntius melanostigma</i>	EN	West flowing river system	Restricted distribution	B1, 2c
257. <i>Puntius mudumalaiensis</i>	CR	East flowing river system	Restricted distribution, Population restriction	B1, 2b, 2c; D2
258. <i>Puntius narayani</i>	CR	West flowing river system	Restricted distribution	B1, 2c
259. <i>Puntius ophicephalus</i>	EN	West flowing river system	Restricted distribution	B1, 2c, 2d
260. <i>Puntius parrah</i>	EN	West flowing river system	Restricted distribution	B1, 2c
261. <i>Puntius phutunio</i>	LRlc	Gangetic and Bramhaputra river system	--	--
262. <i>Puntius sarana sarana</i>	VU	India	Population reduction	A1a, 1c, 1d
263. <i>Puntius shalynius</i>	VU	Bramhaputra river system	Restricted distribution	B1, 2c
264. <i>Puntius sophore</i>	LRnt	Gangetic river system	--	--
265. <i>Puntius terio</i>	LRnt	Gangetic river system	--	--
266. <i>Puntius ticto</i>	LRnt	East and west flowing river system	--	--
267. <i>Puntius ticto punctatus</i>	CR	East flowing river system	Restricted distribution	B1, 2c
268. <i>Puntius vittatus</i>	VU	East, west and gangetic river system	Population reduction	A1a, 1c, 1d
269. <i>Raiamas bola</i>	VU	Bramhaputra river system	Population reduction	A1a, 1c
270. <i>Raiamas guttatus</i>	EN	Bramhaputra river system	Restricted distribution	B1, 2c
271. <i>Rhinomugil corsula</i>	VU	East and west flowing river system	Population reduction	A1a, 1c, 1d
272. <i>Rita chrysea</i>	EN	Gangetic and east flowing river system	Restricted distribution	B1, 2c
273. <i>Rita kuturnee</i>	LRnt	East and west flowing river system	--	--
274. <i>Rita pavimentatus</i>	EN	East and west flowing river system	Restricted distribution	B1, 2c
275. <i>Rita rita</i>	LRnt	Gangetic and Indus river system	--	--
276. <i>Rohtee ogilbii</i>	LRnt	East and west flowing river system	--	--
277. <i>Salmostoma bacaila</i>	LRlc	Indus, Gangetic, East and west flowing river system	--	--
278. <i>Salmostoma clupeoides</i>	LRlc	East and west flowing river system	--	--
279. <i>Salmostoma novacula</i>	LRnt	East and west flowing river system	Restricted distribution	B1, 2c

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280. <i>Salmostoma orissaensis</i>	EN	East flowing river system	Restricted distribution	B1, 2c
281. <i>Schistura arunachalensis</i>	EN	Bramhaputra river system	Restricted distribution	B1, 2c
282. <i>Schistura devdevi</i>	EN	Bramhaputra river system	Restricted distribution	B1, 2c
283. <i>Schistura elongatus</i>	EN	Bramhaputra river system	Restricted distribution	B1, 2c
284. <i>Schistura kangjupkhulensis</i>	VU	Bramhaputra river system	Population reduction, Restricted distribution	A1c; B1, 2c
285. <i>Schistura manipurensis</i>	VU	Bramhaputra river system	Population reduction	A1a, 1c
286. <i>Schistura multifasciatus</i>	VU	Upland cold water bodies, Bramhaputra river system	Population restriction	D2
287. <i>Schistura nagaensis</i>	EN	Bramhaputra river system	Restricted distribution	B1, 2a, 2c
288. <i>Schistura pavonaceus</i>	EN	Bramhaputra river system	Restricted distribution	B1, 2c
289. <i>Schistura peguensis</i>	EN	Bramhaputra river system	Restricted distribution	B1, 2a, 2b
290. <i>Schistura prashari</i>	VU	Bramhaputra river system	Population reduction	A1a, 1c, 1d,
291. <i>Schistura sikmaiensis</i>	EN	Bramhaputra river system	Restricted distribution	B1, 2c
292. <i>Schistura singhi</i>	CR	Bramhaputra river system	Restricted distribution	B1, 2a, 2c
293. <i>Schistura vinciguerrae</i>	EN	Bramhaputra river system	Restricted distribution	B1, 2c
294. <i>Schizothorachthys hugelii</i>	LRnt	Upland cold water bodies	--	--
295. <i>Schizothorax curvifrons</i>	VU	Upland cold water bodies	Restricted distribution	B1, 2c
296. <i>Schizothorax esocinus</i>	LRnt	Indus, East flowing river system	--	--
297. <i>Schizothorax kumanosis</i>	LRnt	Upland cold water bodies	--	--
298. <i>Schizothorax labiatus</i>	EN	Upland cold water bodies and Indus river system	Restricted distribution	B1, 2c
299. <i>Schizothorax nasus</i>	LRnt	Upland cold water bodies	--	--
300. <i>Schizothorax niger</i>	VU	Upland cold water bodies	Restricted distribution Population reduction	B1, 2c; A1a, 1c
301. <i>Schizothorax progastus</i>	LRnt	Ganga and Bramhaputra river systems	--	--
302. <i>Schizothorax richardsonii</i>	VU	Indus, Gangetic and Bramhaputra river system	Population reduction	A1c, 2c, 2d
303. <i>Schizothorax sinuatus</i>	LRnt	Upland cold water bodies	--	--
304. <i>Semiplotus modestus</i>	EN	Bramhaputra river system	Restricted distribution	B1, 2b, 2c, 2d
305. <i>Semiplotus semiplotus</i>	VU	Bramhaputra river system	Population reduction, Restricted distribution	A1c; B1, 2a, 2b
306. <i>Sicamugil cascasia</i>	VU	Gangetic river system	Population reduction	A1a, 1c, 1d
307. <i>Silonia childreni</i>	EN	East flowing river system	Restricted distribution	B1, 2c
308. <i>Silonia silondia</i>	LRnt	Indus and gangetic river system	--	--
309. <i>Silurus afghana</i>	EN	Bramhaputra river system	Restricted distribution	B1, 2c
310. <i>Silurus wynaadensis</i>	CR	West flowing river system	Restricted distribution	B1, 2c
311. <i>Sisor rhabdophorus</i>	EN	Upland cold water bodies, Bramhaputra and gangetic river systems	Restricted distribution	B1, 2c
312. <i>Somileptes gongota</i>	LRnt	Gangetic and Bramhaputra river system	--	--
313. <i>Stenogobius malabaricus</i>	CR	East and west flowing river system	Restricted distribution	B1, 2c
314. <i>Tetraodon cutcutia</i>	LRnt	Gangetic and East flowing river system	--	--
315. <i>Tetraodon travancoricus</i>	EN	West flowing river system	Restricted distribution	B1, 2a, 2b
316. <i>Tor khudree</i>	VU	West flowing river system	Population reduction	A1a, 1b, 1c, 1d
317. <i>Tor khudree malabaricus</i>	CR	East and west flowing river system	Population reduction, Restricted distribution	A1a, 1c; B1, 2c
318. <i>Tor kulkarni</i>	DD	West flowing river system	--	--
319. <i>Tor mosal</i>	EN	Upland cold water bodies & east flowing riversystem	Population reduction, Restricted distribution	A1a, 1c, 1d; B1, 2c

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320. <i>Tor mussullah</i>	CR	East flowing river system	Population reduction	A1a, 1c, 1d
321. <i>Tor progeneius</i>	DD	Bramhaputra river system	--	--
322. <i>Tor putitora</i>	EN	Indus, Gangetic & Brahmaputra river systems	Population reduction	A1a, 1c, 1d
323. <i>Tor tor</i>	EN	Indus, Ganges, east and west flowing river system	Population reduction	A1a, 1c, 1d,
324. <i>Travancoria elongata</i>	CR	East flowing river system	Restricted distribution	B1, 2c
325. <i>Travancoria jonesi</i>	EN	West flowing river system	Restricted distribution	B1, 2c
326. <i>Wallago attu</i>	LRnt	Unknown	--	--
327. <i>Xenentodon cancila</i>	LRnt	Ganges and Bramhaputra flowing river system	--	--

Criteria of threat

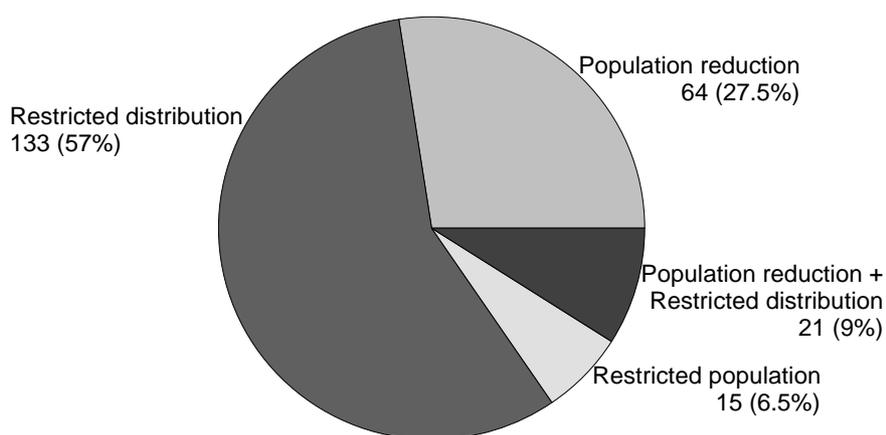
As mentioned in the Executive Summary, there are five criteria on which a category of threat can be based in the IUCN Red List Categories, A. Population reduction, B. Restricted distribution, C. Population estimation, D. Restricted population and E. Probability of extinction. Totally 227 taxa (69%) of the 327 freshwater fish taxa were assessed in the CAMP workshop as “threatened” in India. The following discussion illustrates how the threat categories were derived. In this workshop three of the five criteria were used to derive threat status.

Restricted distribution (B criterion): The distribution of many Indian fresh water fish is highly restricted, therefore the criterion for threat assessment is heavily skewed towards the “B” criterion, e.g. 57% or 133 taxa qualified under this criterion.

Population reduction (A criterion): Participants agreed on population reduction figures which placed 27.5% or 64 taxa of the freshwater fishes assessed in a threatened category. Twenty-one taxa or 9% qualified for both population reduction and restricted distribution criteria.

Population restriction (D criterion): Because of limited locations, 15 threatened taxa are so categorised due to population restriction or “Criterion D”. This criterion applies only to the category of Vulnerable where an assessed taxa is limited to either less than 5 locations or less than 100 square kilometres in area of occupancy.

Criteria used for threat assessment

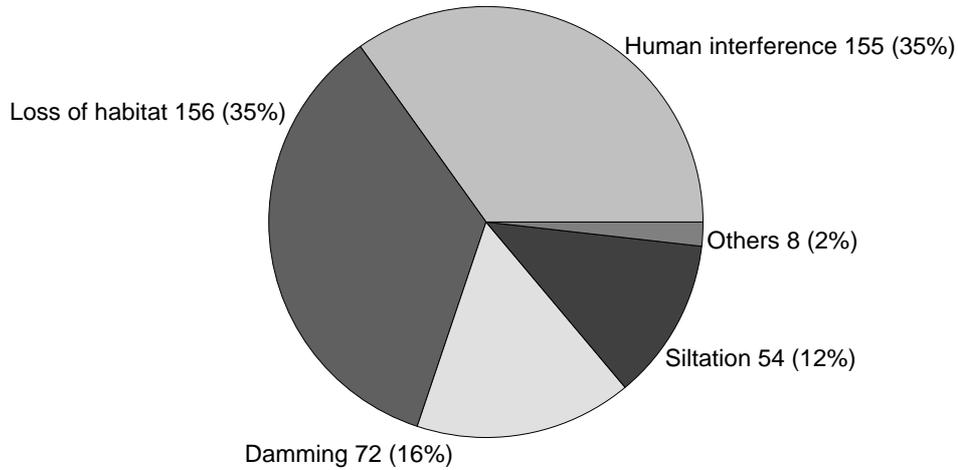


Number of threatened freshwater fishes = 227
Number of freshwater fishes assessed = 327

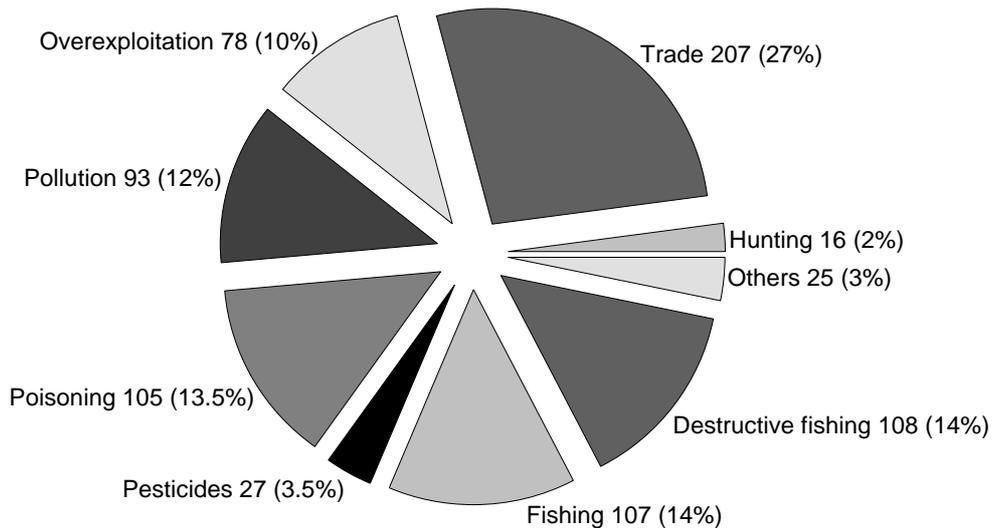
Threats

Loss of habitat, human interference and trade are the three most common threats facing freshwater fishes in India. Threats can be classified into those affecting habitat and those directly affecting the population. Of the threats directly affecting populations, destructive fishing, pesticide runoffs, pollution, poisoning, and fishing are

Threats to habitat



Threats to population



Number of freshwater fishes assessed = 327
 Number of threatened freshwater fishes = 227

significant apart from trade. Siltation and damming add to the destructive forces playing on the habitat along with habitat loss and human interference.

Lack of consistent studies on population dynamics for most of the species preclude confident statements or even inference of reduction in population. Therefore, population reduction criterion has been used to determine status only for 64 taxa. For the most part, assessments have been made on the state of the habitat currently and knowledge of the habitat over years with respect to species distribution. Reduction in the extent of occurrence, area of occupancy or quality of habitat has been easier to determine because of the threats to the taxa.

Many of the freshwater fish species are indirectly affected due to human interference such as fishing and trade. Only a handful of the freshwater fish taxa actually are harvested for food, while the rest suffer from irreversible loss due to faulty or wrong methods of fishing and unsustainable harvesting methods. One very significant threat to all fishes in general is the use of poison and dynamite and other destructive fishing practices.

Overexploitation because of the ever-growing demands by the growing human population has also led to the decline and, in some cases, near decimation of taxa.

Table 3. Threats to freshwater fishes of India

Species	Threats	Trade	IUCN
1. <i>Aborichthys elongatus</i>	Human interference		EN
2. <i>Aborichthys garoensis</i>	Human interference		CR
3. <i>Aborichthys kempi</i>	Dynamite and other destructive fishing, Poisoning		VU
4. <i>Aborichthys tikaderi</i>	Overexploitation, Poisoning		EN
5. <i>Acanthocobitis zonalternans</i>	Dynamite and other destructive fishing, Poisoning		DD
6. <i>Ailia colia</i>	Human interference, Hunting, Overexploitation, Pollution, Trade	Commercial	VU
7. <i>Ailia punctata</i>	Human interference, Loss of habitat, Overexploitation, Pollution, Trade	Commercial	VU
8. <i>Amblyceps apangi</i>	No	No	VU
9. <i>Amblyceps arunachalensis</i>	No	No	VU
10. <i>Amblyceps mangois</i>	Human interference, Loss of habitat, Overexploitation, Trade	Domestic	LRnt
11. <i>Amblypharyngodon chakaiensis</i>	Damming, Fishing, Loss of habitat, Overexploitation, Siltation, Trade	Local	CR
12. <i>Amblypharyngodon mola</i>	Fishing, Trade	Domestic	LRlc
13. <i>Anabas cobojius</i>	Fishing, Loss of habitat, Overexploitation, Trade	Domestic	VU
14. <i>Anabas testudineus</i>	Damming, Fishing, Human interference, Overexploitation, Trade	Local, Domestic, Commercial	VU
15. <i>Anguilla bengalensis</i>	Damming, Fishing, Loss of habitat, Overexploitation, Trade	Domestic	EN
16. <i>Aplocheilus rubroshigma</i>	Unknown	Unknown	DD
17. <i>Aplocheilus panchax</i>	Unknown	Unknown	DD
18. <i>Aspidoparia jaya</i>	Pollution, Trade	Local, Domestic	VU
19. <i>Aspidoparia morar</i>	Human interference, Loss of habitat, Overexploitation, Pollution, Trade	Local, Commercial	LRnt
20. <i>Bagarius bagarius</i>	Fishing, Loss of habitat, Trade	Commercial, Local	VU
21. <i>Balitora Brucei</i>	Dynamite and other destructive fishing, Human interference		LRnt
22. <i>Barbus carletoni</i>	Human interference		EN
23. <i>Barilius bakeri</i>	Fishing, Loss of habitat, Pesticides, Poisoning, Siltation, Trade	Local	VU
24. <i>Barilius barila</i>	Dynamite and other destructive fishing, Human interference, Overexploitation, Pesticides, Siltation, Trade	Local, Domestic	VU
25. <i>Barilius barna</i>	Dynamite and other destructive fishing, Edaphic factors, Fishing, Human interference, Loss of habitat, Over-exploitation, Poisoning, Siltation, Trade	Local	LRnt
26. <i>Barilius bendelisis</i>	Dynamite and other destructive fishing, Fishing, Human interference, Loss of habitat, Overexploitation, Poisoning, Siltation, Trade	Local, Commercial	LRnt
27. <i>Barilius canarensis</i>	No		DD
28. <i>Barilius corbetti</i>	Predation		CR
29. <i>Barilius dimorphicus</i>	Damming, Fishing, Human interference, Loss of habitat, Poisoning, Trade	Local	CR
30. <i>Barilius dogarsinghi</i>	Dynamite and other destructive fishing, Human interference, Poisoning, Trade	Local	EN
31. <i>Barilius evezardi</i>	Fishing, Trade	Local	LRnt
32. <i>Barilius shacra</i>	Human interference, Loss of habitat, Pollution, Siltation, Trade	Local	LRnt
33. <i>Barilius tileo</i>	Human interference, Loss of habitat, Siltation, Trade		LRnt

Species	Threats	Trade	IUCN
34. <i>Barilius vagra</i>	Human interference, Loss of habitat, Trade	Local	VU
35. <i>Batasio travancoria</i>	Damming, Fishing, Human interference, Pollution, Poisoning, Pesticides, Siltation		EN
36. <i>Bhavana australis</i>	Loss of habitat, Siltation		EN
37. <i>Botia almorhae</i>	Dynamite and other destructive fishing, Edaphic factors, Human interference, Loss of habitat, Overexploitation, Poisoning, Siltation, Trade	Local	EN
38. <i>Botia berdmorei</i>	Damming, Dynamite and other destructive fishing, Loss of habitat, Poisoning, Trade	Local, Domestic	EN
39. <i>Botia birdi</i>	Human interference, Loss of habitat, Pollution, Siltation, Fishing, Trade	Local	LRnt
40. <i>Botia geto</i>	Human interference, Poisoning, Siltation, Trade	Local	LRnt
41. <i>Botia histrionica</i>	Human interference, Loss of habitat		VU
42. <i>Botia lohachata</i>	Dynamite and other destructive fishing, Edaphic factors, Human interference, Loss of habitat, Overexploitation, Poisoning, Siltation, Trade	Local	EN
43. <i>Botia striata</i>	Loss of habitat, Pollution, Trade	International	EN
44. <i>Brachydanio acuticophala</i>	Dynamite and other destructive fishing, Human interference, Poisoning		VU
45. <i>Brachydanio rerio</i>	Dynamite and other destructive fishing, Human interference, Loss of habitat, Pollution, Siltation, Trade	Local	LRnt
46. <i>Catla catla</i>	Human interference, Loss of habitat, Loss of habitat due to exotic animals Overexploitation, Pollution, Trade	Commercial	VU
47. <i>Channa baculis</i>	Human interference, Pollution, Trade	Local, International	LRlc
48. <i>Channa marulius</i>	Fishing, Loss of habitat, Overexploitation, Trade	Domestic, Commercial	LRnt
49. <i>Channa micropeltes</i>	Disease, Dynamite and other destructive fishing, Fishing, Loss of habitat, Poisoning, Pollution, Siltation		CR
50. <i>Channa orientalis</i>	Fishing, Loss of habitat, Trad	Domestic	VU
51. <i>Channa punctatus</i>	Fishing, Loss of habitat, Overexploitation, Trade	Commercial	LRnt
52. <i>Channa striatus</i>	Fishing, Trade	Commercial	LRlc
53. <i>Chaudhurai indica</i>	Human interference, Loss of habitat		VU
54. <i>Chaudhuria khajuriai</i>	Human interference, Loss of habitat, Overexploitation		EN
55. <i>Chela dadyburjori</i>	No		DD
56. <i>Chela laubuca</i>	Trade	Local	LRlc
57. <i>Chelonodon fluviatilis</i>	Human interference, Loss of habitat, Pollution, Trade	Local	LRnt
58. <i>Cirrhinus cirrhosus</i>	Human interference, Loss of habitat, Overexploitation, Pollution, Trade	Local	VU
59. <i>Cirrhinus fulungee</i>	Fishing, Loss of habitat, Pollution, Trade	Domestic	LRnt
60. <i>Cirrhinus macrops</i>	Fishing, Trade	Local	DD
61. <i>Cirrhinus mrigala</i>	Loss of habitat, Overexploitation, Siltation, Trade	Commercial	LRnt
62. <i>Cirrhinus reba</i>	Damming, Fishing, Human interference, Loss of habitat, Overexploitation, Pollution, Siltation, Trade	Domestic, Commercial	VU
63. <i>Clarias batrachus</i>	Trade	Local, Domestic, Commercial	VU
64. <i>Clarias dayi</i>	Fishing, Poisoning, Pollution		EN
65. <i>Clarias dussumieri</i>	Disease, Dynamite and other destructive fishing, Fishing, Loss of habitat, Overexploitation, Pesticides, Poisoning, Pollution, Siltation, Trade	Local, Domestic	VU

Species	Threats	Trade	IUCN
66. <i>Clupisoma bastari</i>	Damming, Dynamite and other destructive fishing		EN
67. <i>Clupisoma garua</i>	Human interference, Loss of habitat, Overexploitation, Pollution, Siltation, Trade	Commercial	VU
68. <i>Colisa fasciatus</i>	Fishing, Human interference, Hunting, Pollution, Trade	Domestic, Commercial	LRnt
69. <i>Crossocheilus burmanicus</i>	Damming, Dynamite and other destructive fishing Poisoning, Human interference, Trade	Local, Domestic	VU
70. <i>Crossocheilus latius latius</i>	Loss of habitat, Dynamite and other destructive fishing		DD
71. <i>Crossocheilus periyarensis</i>	No	No	VU
72. <i>Danio aequipinnatus</i>	Human interference, Loss of habitat, Pollution, Trade	Local	LRnt
73. <i>Danio devario</i>	Human interference, Overexploitation, Poisoning, Pollution, Trade	Local, Domestic	LRnt
74. <i>Danio naganensis</i>	Dynamite and other destructive fishing, Human interference, Loss of habitat Poisoning, Trade	Local	VU
75. <i>Dayella malabarica</i>	Damming, Fishing, Poisoning, Pollution, Predation, Trade	Local	CR
76. <i>Erethistoides montana pipri</i>	Damming, Human interference, Loss of habitat, Pollution		CR
77. <i>Esomus danricus</i>	Fishing, Trade	Local, Domestic	LRlc
78. <i>Etroplus canarensis</i>			DD
79. <i>Euchiloglanis hodgarti</i>	Damming, Human interference, Loss of habitat, Poisoning, Pollution, Trade	Local	VU
80. <i>Euchiloglanis kamengensis</i>	Catastrophic events, Landslide, Loss of habitat		EN
81. <i>Eutropiichthys murius</i>	Human interference, Hunting, Overexploitation Pollution, Trade	Local	LRnt
82. <i>Eutropiichthys vacha</i>	Human interference, Loss of habitat, Overexploitation, Pollution		EN
83. <i>Gagata sexualis</i>	Human interference, Loss of habitat, Pollution		LRnt
84. <i>Garra gotyla gotyla</i>	Dynamite and other destructive fishing, Edaphic factors, Human interference, Loss of habitat, Overexploitation, Pesticides, Poisoning, Siltation, Trade	Local	VU
85. <i>Garra gotyla stenorhynchus</i>	Dynamite and other destructive fishing, Pesticides, Poisoning		EN
86. <i>Garra hughi</i>	Loss of habitat, Pesticides		EN
87. <i>Garra kempfi</i>	Human interference, Poisoning, Trade	Local	VU
88. <i>Garra lissorhynchus</i>	Human interference, Poisoning, Trade	Local	VU
89. <i>Garra litanensis</i>	Human interference, Poisoning, Trade	Local	CR
90. <i>Garra manipurensis</i>	Dynamite and other destructive fishing, Poisoning		CR
91. <i>Garra menoni</i>	No	No	VU
92. <i>Garra naganensis</i>	Dynamite and other destructive fishing, Poisoning, Trade	Local	VU
93. <i>Garra rupecula</i>	Dynamite and other destructive fishing, Poisoning, Trade	Local	VU
94. <i>Garra surendranathanii</i>	Dynamite and other destructive fishing, Pesticides, Poisoning, Trade	Local	EN
95. <i>Glossogobius giuris</i>	Hunting		LRnt
96. <i>Glyphis gangeticus</i>	Damming, Fishing, Human interference, Hunting, Overexploitation, Pollution		VU
97. <i>Glyptosternum reticulatum</i>	Dynamite and other destructive fishing, Loss of habitat, Siltation, Trade	Local	EN
98. <i>Glyptothenax alaknandi</i>	Damming, Dynamite and other destructive fishing, Poisoning, Trade	Local	CR

Species	Threats	Trade	IUCN
99. <i>Glyptothorax anamalaiensis</i>	Dynamite and other destructive fishing, Pesticides, Poisoning		CR
100. <i>Glyptothorax bervipinnis</i>	Dynamite and other destructive fishing, Loss of habitat, Siltation, Trade	Local	VU
101. <i>Glyptothorax cavia</i>	Damming, Fishing, Human interference, Loss of habitat, Pollution, Trade	Local	EN
102. <i>Glyptothorax dakpathari</i>	Damming, Dynamite and other destructive fishing, Poisoning		CR
103. <i>Glyptothorax davissinghi</i>	Poisoning		CR
104. <i>Glyptothorax garhwali</i>	Damming, Dynamite and other destructive fishing, Poisoning		CR
105. <i>Glyptothorax housei</i>	Unknown		DD
106. <i>Glyptothorax indicus</i>	Dynamite and other destructive fishing, Fishing, Human interference, Loss of habitat		VU
107. <i>Glyptothorax kashmirensis</i>	Human interference, Loss of habitat, Pesticides, Trade	Local	EN
108. <i>Glyptothorax lonah</i>	Damming, Loss of habitat, Trade	Local	LRnt
109. <i>Glyptothorax madraspatanum</i>	No	No	VU
110. <i>Glyptothorax nelsoni</i>	Damming, Loss of habitat due to exotic animals, Trade	Local	EN
111. <i>Glyptothorax pectinopterus</i>	Dynamite and other destructive fishing, Poisoning		LRnt
112. <i>Glyptothorax saisii</i>	Damming, Dynamite and other destructive fishing, Poisoning		EN
113. <i>Glyptothorax stoliczkae</i>	Dynamite and other destructive fishing, Edaphic factors, Fragmentation		CR
114. <i>Glyptothorax striatus</i>	Damming, Human interference		VU
115. <i>Glyptothorax telchitta</i>	Damming, Human interference, Pollution		LRnt
116. <i>Gonialosa manmina</i>	Damming, Fishing, Loss of habitat, Overexploitation, Pollution		VU
117. <i>Gudusia chapra</i>	Fishing		LRlc
118. <i>Gymnocypris biswasi</i>	No	No	EX
119. <i>Hara horai</i>	Damming, Dynamite and other destructive fishing, Poisoning, Trade	Local	EN
120. <i>Heteropneustes fossilis</i>	Fishing, Human interference, Loss of habitat, Trade	Local, Domestic, Commercial	VU
121. <i>Hilsa ilisha</i>	Damming, Fishing, Loss of habitat, Overexploitation, Poisoning, Pollution, Trade	Commercial	VU
122. <i>Homaloptera montana</i>	Pesticides		CR
123. <i>Homaloptera pillaii</i>	No	No	VU
124. <i>Horabagrus brachysoma</i>	Dynamite and other destructive fishing, Fishing, Human interference, Loss of habitat, Overexploitation, Pesticides, Poisoning, Pollution, Siltation, Trade	Local, Commercial, International	EN
125. <i>Horabagrus nigricollaris</i>	Loss of habitat		CR
126. <i>Horadandia atukorali brittani</i>	Human interference		EN
127. <i>Horaglanis krishnai</i>	Human interference, Loss of habitat		CR
128. <i>Hyporhamphus xanthopterus</i>	Fishing, Human interference, Loss of habitat, Overexploitation, Pesticides, Poisoning, Trade	Local, Domestic	CR
129. <i>Hypselobarbus curmuca</i>	Disease, Dynamite and other destructive fishing, Fishing, Loss of habitat, Loss of habitat due to exotic animals, Overexploitation, Predation, Predation by exotic animals, Trade	Local, Domestic	EN
130. <i>Hypselobarbus dubius</i>	Damming, Fishing, Interspecific competition, Loss of habitat, Trade	Local	EN
131. <i>Hypselobarbus jerdoni</i>	Damming, Dynamite and other destructive fishing, Loss of habitat, Trade	Local	EN

Species	Threats	Trade	IUCN
132. <i>Hypselobarbus kolus</i>	Damming, Dynamite and other destructive fishing, Fishing, Hunting, Loss of habitat, Poisoning, Trade	Local	EN
133. <i>Hypselobarbus lithopides</i>	Fishing, Human interference, Poisoning, Trade	Local	EN
134. <i>Hypselobarbus micropogon periyarensis</i>	Fishing, Loss of habitat, Overexploitation, Trade	Local	EN
135. <i>Hypselobarbus thomassi</i>	Poisoning, Pollution, Trade	Local	EN
136. <i>Hypseloparbus kurali</i>	Damming, Disease, Dynamite and other destructive fishing, Fishing, Genetic problems, Loss of habitat, Pesticides		EN
137. <i>Johnius gangaticus</i>	Fishing, Human interference, Pollution, Trade	Local, Commercial, Domestic	EN
138. <i>Kryptopterus indicus</i>	Loss of habitat		CR
139. <i>Labeo ariza</i>	Damming, Dynamite and other destructive fishing, Fishing, Loss of habitat, Pollution, Trade	Local	CR
140. <i>Labeo angra</i>	Human interference, Hunting, Trade	Local	LRnt
141. <i>Labeo bata</i>	Loss of habitat, Overexploitation, Siltation, Trade	Commercial	LRnt
142. <i>Labeo boga</i>	Human interference, Hunting, Overexploitation, Pollution, Trade	Local	LRnt
143. <i>Labeo calbasu</i>	Human interference, Hunting, Overexploitation, Pollution, Trade	Commercial	LRnt
144. <i>Labeo dero</i>	Damming, Drowning, Dynamite and other destructive fishing, Fishing, Human interference, Hunting, Loss of habitat, Loss of habitat due to exotic plants, Overexploitation, Siltation, Trade	Local, Domestic	VU
145. <i>Labeo dussumieri</i>	Damming, Dynamite and other destructive fishing, Fishing, Overexploitation, Poisoning, Pollution, Siltation, Trade	Local, Commercial	EN
146. <i>Labeo dyocheilus</i>	Damming, Drowning, Dynamite and other destructive fishing, Fishing, Human interference, Hunting, Loss of habitat, Overexploitation, Trade	Local, Domestic	VU
147. <i>Labeo fimbriatus</i>	Damming, Fishing, Trade	Domestic	LRnt
148. <i>Labeo gonius</i>	Human interference, Hunting, Overexploitation, Pollution, Trade	Commercial	LRnt
149. <i>Labeo kontius</i>	Damming, Dynamite and other destructive fishing, Fishing, Loss of habitat, Poisoning, Trade	Local, Domestic	EN
150. <i>Labeo pangusia</i>	Human interference, Hunting, Overexploitation, Pollution, Trade	Domestic	LRnt
151. <i>Labeo rajasthanicus</i>	Fishing, Human interference, Predation, Trade	Local	CR
152. <i>Labeo rohita</i>	Loss of habitat, Overexploitation, Siltation, Trade	Commercial	LRnt
153. <i>Laguvia kapuri</i>	Poisoning		CR
154. <i>Laguvia ribeiroi</i>	Damming, Fishing, Loss of habitat, Poisoning, Trade	Local	LRnt
155. <i>Laguvia shawi</i>	Damming, Human interference		EN
156. <i>Lepidocephalus annandalei</i>	Dynamite and other destructive fishing, Human interference, Poisoning		LRnt
157. <i>Lepidocephalus berdmorei</i>	Damming, Fishing, Human interference, Poisoning		EN
158. <i>Lepidocephalus caudofurcatus</i>	Pollution		VU
159. <i>Lepidocephalus goalparensis</i>	Human interference, Loss of habitat		CR
160. <i>Lepidocephalus irrorata</i>	Human interference, Fragmentation, Trade	Local	VU
161. <i>Lepidopygopsis typus</i>	Siltation		CR

Species	Threats	Trade	IUCN
162. <i>Macrognathus aral</i>	Fishing, Loss of habitat, Pollution, Trade	Domestic	LRnt
163. <i>Macrognathus guentheri</i>	Catastrophic events, Dynamite and other destructive fishing, Fishing, Loss of habitat, Overexploitation, Pesticides, Poisoning, Pollution, Trade	Local	VU
164. <i>Macrognathus pancalus</i>	Fishing, Loss of habitat, Pollution, Trade	Domestic	LRnt
165. <i>Mesonoemacheilus reticulofasciatus</i>	Human interference		EN
166. <i>Mesonoemacheilus sijuensis</i>	No	No	VU
167. <i>Monopterus cuchia</i>	Fishing, Human interference, Pollution, Trade	Local	LRnt
168. <i>Monopterus eapeni</i>	Loss of habitat		CR
169. <i>Monopterus fossorius</i>	Pesticides, Poisoning		EN
170. <i>Moringua hodgarti</i>	Overexploitation, Poisoning		CR
171. <i>Mystus bleekeri</i>	Fishing, Pollution, Trade	Local, Domestic	VU
172. <i>Mystus cavasius</i>	Fishing, Loss of habitat, Pollution, Trade	Commercial	LRnt
173. <i>Mystus malabaricus</i>	Dynamite and other destructive fishing, Human interference, Loss of habitat, Overexploitation, Poisoning, Pollution, Siltation, Trade	Local	EN
174. <i>Mystus microphthalmus</i>	Damming, Dynamite and other destructive fishing, Trade	Local, Domestic	EN
175. <i>Mystus montanus</i>	Dynamite and other destructive fishing, Fishing, Human interference, Loss of habitat, Overexploitation, Trade	Local	VU
176. <i>Mystus punctatus</i>	Damming, Fishing, Loss of habitat, Predation, Trade	Local	EN
177. <i>Mystus vittatus</i>	Pesticides, Trade	Local	VU
178. <i>Nandus nandus</i>	Human interference, Loss of habitat, Poisoning, Pollution, Siltation, Trade	Local	LRnt
179. <i>Nangra nangra</i>	Human interference, Loss of habitat, Pollution, Trade	Local	VU
180. <i>Nangra viridescens</i>	Human interference, Pollution, Trade	Local, Domestic	LRnt
181. <i>Nemacheilus botia</i>	Dynamite and other destructive fishing, Edaphic factors, Fishing, Human interference, Loss of habitat, Overexploitation, Poisoning, Siltation, Trade	Local	LRnt
182. <i>Nemacheilus carletonii</i>	Damming, Dynamite and other destructive fishing, Human interference, Loss of habitat, Poisoning, Trade	Local	EN
183. <i>Nemacheilus chindwinicus</i>	Damming, Human interference, Poisoning, Trade	Local	EN
184. <i>Nemacheilus corica</i>	Damming, Dynamite and other destructive fishing, Fishing, Human interference, Loss of habitat, Trade	Local	LRnt
185. <i>Nemacheilus doonensis</i>	Damming, Dynamite and other destructive fishing, Human interference, Loss of habitat		EN
186. <i>Nemacheilus guentheri</i>	No	No	LRlc
187. <i>Nemacheilus himachalensis</i>	Damming, Human interference, Loss of habitat, Poisoning, Siltation, Trade	Domestic	EN
188. <i>Nemacheilus horai</i>	Damming, Human interference, Loss of habitat, Pesticides, Pollution, Trade	Local	VU
189. <i>Nemacheilus kangrae</i>	Human interference, Loss of habitat, Trade	Local	EN
190. <i>Nemacheilus keralensis</i>	Dynamite and other destructive fishing, Human interference, Interspecific competition due to exotic plants, Loss of habitat, Pesticides		EN
191. <i>Nemacheilus labeosus</i>	Dynamite and other destructive fishing, Human interference, Poisoning		VU

Species	Threats	Trade	IUCN
192. <i>Nemacheilus monilis</i>	Dynamite and other destructive fishing, Human interference, Loss of habitat		EN
193. <i>Nemacheilus montanus</i>	Damming, Human interference, Loss of habitat, Poisoning, Siltation, Trade	Domestic	EN
194. <i>Nemacheilus multifasciatus</i>	Human interference, Loss of habitat, Siltation, Trade	Local	EN
195. <i>Nemacheilus nilgiriensis</i>	Loss of habitat, Poisoning		EN
196. <i>Nemacheilus petrubanarescui</i>	Unknown	Unknown	DD
197. <i>Nemacheilus pulchellus</i>	Damming, Fishing, Human interference, Loss of habitat, Overexploitation, Poisoning, Pollution, Trade	Local	DD
198. <i>Nemacheilus rupecola</i>	Fishing, Dynamite and other destructive fishing, Damming, Human interference, Loss of habitat, Trade	Local	LRnt
199. <i>Nemacheilus scaturigina</i>	Dynamite and other destructive fishing, Human interference, Poisoning		VU
200. <i>Nemacheilus semiarmatus</i>	No	No	VU
201. <i>Nemacheilus striatus</i>	Damming, Fishing, Human interference, Loss of habitat, Poisoning, Pollution, Trade	Local	DD
202. <i>Nemacheilus triangularis</i>	No	No	LRlc
203. <i>Neoeucirrhichthys maydelli</i>	Human interference, Siltation		VU
204. <i>Neolissocheilus spinulosus</i>	Human interference		EN
205. <i>Neolissochilus wynaadensis</i>	Damming, Dynamite and other destructive fishing		CR
206. <i>Neotropius khavalchor</i>	Trade	Local	DD
207. <i>Notopterus chilata</i>	Dynamite and other destructive fishing, Fishing, Human interference, Loss of habitat, Overexploitation, Pollution, Trade	Commercial	EN
208. <i>Notopterus notopterus</i>	Human interference, Overexploitation, Pollution, Trade	Commercial	LRnt
209. <i>Ompok bimaculatus</i>	Disease, Dynamite and other destructive fishing, Fishing, Loss of habitat, Overexploitation, Pesticides, Poisoning, Pollution, Siltation, Trade	Local, Commercial, Domestic	EN
210. <i>Ompok malabaricus</i>	Edaphic factors, Human interference, Loss of habitat, Pollution		CR
211. <i>Ompok pabda</i>	Fishing, Human interference, Pollution, Trade	Local, Domestic, Commercial	EN
212. <i>Ophiocephalus channa gachua</i>	Human interference, Loss of habitat, Overexploitation, Trade	Local	VU
213. <i>Osteobrama bakeri</i>	Damming, Dynamite and other destructive fishing, Fishing, Human interference, Poisoning, Pollution,		EN
214. <i>Osteobrama belangeri</i>	Damming, Trade	Domestic, Commercial	EW
215. <i>Osteobrama brevipectoralis</i>	Fishing, Pollution, Trade	Local, Domestic	EN
216. <i>Osteobrama cotio cotio</i>	Loss of habitat, Pollution, Trade	Local	LRnt
217. <i>Osteobrama cotio cunma</i>	Damming, Dynamite and other destructive fishing, Human interference, Trade	Local, Domestic	VU
218. <i>Osteochilus brevidorsalis</i>	Dynamite and other destructive fishing, Fishing, Poisoning, Trade	Local	EN
219. <i>Osteochilichthys longidorsalis</i>	Human interference, Trade	Local	CR
220. <i>Osteochilus godavariensis</i>	Trade	Domestic	DD

Species	Threats	Trade	IUCN
221. <i>Pangasius pangasius</i>	Fishing, Human interference, Loss of habitat, Overexploitation, Trade	Commercial	CR
222. <i>Pangio pangia</i>	Human interference, Loss of habitat, Trade	Local	VU
223. <i>Parambassis dayi</i>	Dynamite and other destructive fishing, Human interference, Pesticides, Poisoning, Trade	Local, Domestic, Commercial	EN
224. <i>Parambassis thomassi</i>	Dynamite and other destructive fishing, Fishing, Human interference, Loss of habitat, Overexploitation, Poisoning, Pollution		VU
225. <i>Parluciosoma daniconius</i>	Fishing, Pollution, Trade	Local, Domestic	LRnt
226. <i>Periophthalmus weberi</i>	Fishing, Human interference, Poisoning, Pollution, Trade	Local	CR
227. <i>Pinniwallago kanpurensis</i>	Human interference, Pollution, Trade	Local	CR
228. <i>Pristolepis marginata</i>	Dynamite and other destructive fishing, Fishing, Loss of habitat, Pollution, Overexploitation, Poisoning, Trade	Local	VU
229. <i>Proeutropiichthys taakree</i>	Fishing, Trade	Local	CR
230. <i>Proeutropiichthys taakree taakree</i>	Unknown	Unknown	VU
231. <i>Pseudecheneis sulcatus</i>	Fishing, Human interference, Loss of habitat, Trade	Local	VU
232. <i>Pseudeutropius atherinoides</i>	Fishing, Loss of habitat, Pollution, Trade	Local, Domestic	EN
233. <i>Pseudeutropius mitchelli</i>	No	No	DD
234. <i>Psilorhynchus homalophera</i>	Dynamite and other destructive fishing, Poisoning		VU
235. <i>Psilorhynchus microphthalmus</i>	Dynamite and other destructive fishing, Poisoning		CR
236. <i>Psilorhynchus sucatio nudithoracicus</i>	Loss of habitat, Pollution		EN
237. <i>Puntius arulius</i>	Damming, Fishing, Pollution, Predation, Trade	Local, Commercial	EN
238. <i>Puntius arulius tambraparniei</i>	Dynamite and other destructive fishing, Fishing, Genetic problems, Loss of habitat, Trade	Local	CR
239. <i>Puntius bovanicus</i>	Damming, Dynamite and other destructive fishing, Fishing, Human interference, Loss of habitat, Pesticides, Pollution, Siltation, Trade	Local	CR
240. <i>Puntius carnaticus</i>	Dynamite and other destructive fishing, Fishing, Loss of habitat, Poisoning, Trade	Local	LRnt
241. <i>Puntius cauveriensis</i>	Trade	Local	DD
242. <i>Puntius chilinooides</i>	Dynamite and other destructive fishing, Human interference, Loss of habitat, Pollution, Siltation, Trade	Local	EN
243. <i>Puntius chola</i>	Human interference, Pollution, Trade	Local	VU
244. <i>Puntius chrysopterus</i>	Trade	Commercial	LRlc
245. <i>Puntius clavatus</i>	Damming, Human interference, Loss of habitat, Siltation, Trade	Local	EN
246. <i>Puntius clavatus clavatus</i>	Dynamite and other destructive fishing, Fishing, Human interference, Poisoning, Trade	Local, Domestic	EN
247. <i>Puntius conchoniensis</i>	Edaphic factors, Loss of habitat, Poisoning, Siltation, Trade	Local	VU
248. <i>Puntius deccanensis</i>	Trade	Local	CR
249. <i>Puntius denisonii</i>	Loss of habitat, Poisoning, Pollution, Trade	Local	EN
250. <i>Puntius dorsalis</i>	Fishing, Poisoning, Trade	Local, Commercial	EN

Species	Threats	Trade	IUCN
251. <i>Puntius fasciatus</i>	Human interference, Loss of habitat, Pollution		EN
252. <i>Puntius guganio</i>	Damming, Fishing, Human interference, Loss of habitat, Overexploitation, Poisoning, Pollution, Trade	Local	LRnt
253. <i>Puntius hexastichus i</i>	Dynamite and other destructive fishing, Loss of habitat, Poisoning, Siltation, Trade	Local	VU
254. <i>Puntius jayaram</i>	Dynamite and other destructive fishing, Human interference, Poisoning, Trade	Local, Domestic	EN
255. <i>Puntius melanampyx</i>	No	No	LRlc
256. <i>Puntius melanostigma</i>	Loss of habitat, Poisoning		EN
257. <i>Puntius mudumalaiensis</i>	Dynamite and other destructive fishing, Fishing, Loss of habitat, Poisoning		CR
258. <i>Puntius narayani</i>	Dynamite and other destructive fishing, Loss of habitat, Pollution		CR
259. <i>Puntius ophicephalus</i>	Loss of habitat, Siltation		EN
260. <i>Puntius parrah</i>	Dynamite and other destructive fishing, Poisoning, Pollution, Trade	Local	EN
261. <i>Puntius phutunio</i>	Trade	Commercial	LRlc
262. <i>Puntius sarana sarana</i>	Fishing, Human interference, Loss of habitat, Trade	Local, Domestic	VU
263. <i>Puntius shalynius</i>	Dynamite and other destructive fishing, Human interference, Poisoning, Trade	Local	VU
264. <i>Puntius sophore</i>	Fishing, Pollution, Trade	Local, Domestic, Commercial	LRnt
265. <i>Puntius terio</i>	Fishing, Human interference, Loss of habitat, Pollution, Trade	Local	LRnt
266. <i>Puntius ticto</i>	Fishing, Loss of habitat, Trade	Local	LRnt
267. <i>Puntius ticto punctatus</i>	Fishing, Genetic problems, Overexploitation, Trade	Local	CR
268. <i>Puntius vittatus</i>	Fishing, Human interference, Loss of habitat, Overexploitation, Pollution, Trade	Commercial	VU
269. <i>Raiamas bola</i>	Overexploitation, Trade	Local	VU
270. <i>Raiamas guttatus</i>	Damming, Dynamite and other destructive fishing, Human interference, Poisoning, Trade	Local, Domestic	EN
271. <i>Rhinomugil corsula</i>	Fishing, Loss of habitat, Overexploitation, Trade	Domestic	VU
272. <i>Rita chrysea</i>	Fishing, Overexploitation, Trade	Local	EN
273. <i>Rita kuturnee</i>	Fishing, Loss of habitat, Trade	Local	LRnt
274. <i>Rita pavementatus</i>	Overexploitation, Trade	Domestic	EN
275. <i>Rita rita</i>	Fishing, Loss of habitat, Overexploitation, Trade	Domestic	LRnt
276. <i>Rohtee ogilbii</i>	Loss of habitat, Pollution, Trade	Local	LRnt
277. <i>Salmostoma bacaila</i>	Trade	Local	LRlc
278. <i>Salmostoma clupeioides</i>	Trade	Local	LRlc
279. <i>Salmostoma novacula</i>	Edaphic factors, Poisoning, Predation, Trade	Local	LRnt
280. <i>Salmostoma orissaensis</i>	Trade	Local	EN
281. <i>Schistura arunachalensis</i>	Dynamite and other destructive fishing, Pollution		EN
282. <i>Schistura devdevi</i>	Dynamite and other destructive fishing, Human interference		EN
283. <i>Schistura elongatus</i>	Human interference		EN
284. <i>Schistura kangjupkhulensis</i>	Dynamite and other destructive fishing, Human interference, Poisoning		VU
285. <i>Schistura manipurensis</i>	Dynamite and other destructive fishing, Human interference, Poisoning		VU
286. <i>Schistura multifasciatus</i>	No	No	VU
287. <i>Schistura nagaensis</i>	Dynamite and other destructive fishing, Human interference, Poisoning		EN

Species	Threats	Trade	IUCN
288. <i>Schistura pavonaceus</i>	Dynamite and other destructive fishing, Human interference, Loss of habitat		EN
289. <i>Schistura peguensis</i>	Dynamite and other destructive fishing, Human interference, Poisoning		EN
290. <i>Schistura prashari</i>	Dynamite and other destructive fishing, Human interference, Loss of habitat, Poisoning		VU
291. <i>Schistura sikmaiensis</i>	Dynamite and other destructive fishing, Human interference, Poisoning		EN
292. <i>Schistura singhi</i>	Dynamite and other destructive fishing, Human interference, Poisoning		CR
293. <i>Schistura vinciguerrae</i>	Dynamite and other destructive fishing, Human interference, Loss of habitat, Overexploitation, Poisoning		EN
294. <i>Schizothorax nasus</i>	Human interference, Loss of habitat, Poisoning, Trade	Local	LRnt
295. <i>Schizothoraichthys hugelii</i>	Damming, Human interference, Loss of habitat, Poisoning, Trade	Local	LRnt
296. <i>Schizothorax curvifrons</i>	Damming, Dynamite and other destructive fishing, Human interference, Loss of habitat, Overexploitation, Pesticides, Siltation, Trade	Domestic	VU
297. <i>Schizothorax esocinus</i>	Fishing, Human interference, Loss of habitat due to exotic animals, Overexploitation, Trade	Local	LRnt
298. <i>Schizothorax kumanosis</i>	Human interference, Loss of habitat, Overexploitation, Siltation, Trade	Local	LRnt
299. <i>Schizothorax labiatus</i>	Human interference, Loss of habitat, Overexploitation, Siltation, Trade	Local	EN
300. <i>Schizothorax niger</i>	Damming, Dynamite and other destructive fishing, Human interference, Loss of habitat, Overexploitation, Pesticides, Siltation, Trade	Domestic	VU
301. <i>Schizothorax progastus</i>	Damming, Drought, Dynamite and other destructive fishing, Fishing, Human interference, Loss of habitat, Overexploitation, Siltation		LRnt -
302. <i>Schizothorax richardsonii</i>	Damming, Drowning, Dynamite and other destructive fishing, Fishing, Human interference, Hunting, Loss of habitat, Overexploitation, Powerlines, Siltation, Trade	Domestic, Local	VU
303. <i>Schizothorax sinuatus</i>	Loss of habitat, Trade	Local	LRnt
304. <i>Semiplotus modestus</i>	Dynamite and other destructive fishing, Overexploitation, Trade	Local, Domestic	EN
305. <i>Semiplotus semiplotus</i>	Human interference, Overexploitation, Trade	Local, Domestic, Commercial	VU
306. <i>Sicamugil cascasia</i>	Damming, Hunting, Loss of habitat, Trade	Domestic	VU
307. <i>Silonia childreni</i>	Damming, Loss of habitat, Trade	Local	EN
308. <i>Silonia silondia</i>	Fishing, Pollution, Trade	Domestic	LRnt
309. <i>Silurus afghana</i>	Dynamite and other destructive fishing, Loss of habitat, Poisoning		EN
310. <i>Silurus wynaadensis</i>	Damming, Disease, Dynamite and other destructive fishing, Pesticides, Poisoning		CR
311. <i>Sisor rhabdophorus</i>	Dynamite and other destructive fishing		EN
312. <i>Somileptes gongota</i>	Loss of habitat		LRnt
313. <i>Stenogobius malabaricus</i>	Dynamite and other destructive fishing, Fishing, Loss of habitat, Overexploitation, Siltation, Trade	Local	CR
314. <i>Tetraodon cutcutia</i>	Human interference, Loss of habitat, Pollution		LRnt
315. <i>Tetraodon travancoricus</i>	Human interference, Loss of habitat, Pesticides, Poisoning		EN

Species	Threats	Trade	IUCN
316. <i>Tor khudree</i>	Damming, Dynamite and other destructive fishing, Human interference, Hunting, Overexploitation, Poisoning, Siltation, Trade	Local, Domestic	VU
317. <i>Tor khudree malabaricus</i>	Damming, Dynamite and other destructive fishing, Edaphic factors, Fishing, Genetic problems, Loss of habitat, Pollution, Trade	Domestic	CR
318. <i>Tor kulkarni</i>	Unknown	Unknown	DD
319. <i>Tor mosal</i>	Fishing, Human interference, Overexploitation, Pollution, Trade	Local	EN
320. <i>Tor mussullah</i>	Damming, Dynamite and other destructive fishing, Fishing, Poisoning, Pollution, Siltation		CR
321. <i>Tor progeneius</i>	Human interference, Loss of habitat, Trade	Local, Domestic	DD
322. <i>Tor putitora</i>	Damming, Drowning, Dynamite and other destructive fishing, Fishing, Human interference, Hunting, Loss of habitat, Overexploitation, Powerlines, Siltation, Trade	Local, Domestic	EN
323. <i>Tor tor</i>	Damming, Dynamite and other destructive fishing, Fishing, Human interference, Loss of habitat, Poisoning, Pollution, Trade	Local, Domestic, Commercial	EN
324. <i>Travancoria elongata</i>	Dynamite and other destructive fishing, Pesticides, Pollution		CR
325. <i>Travancoria jonesi</i>	Siltation		EN
326. <i>Wallago attu</i>	Decline in prey species, Hunting for food, Poisoning, Siltation, Trade	Local, Domestic, Commercial	LRnt
327. <i>Xenentodon cancila</i>	Fishing, Pollution, Trade	Domestic	LRnt

Trade

A large number of species of freshwater fishes are in trade: they are hunted for food, medicine or for parts. Of the taxa assessed in the workshop, 207 are in trade of some form. One hundred and thirty-three threatened freshwater fishes are in trade while 70 Lower Risk and 4 Data Deficient taxa are in trade. A significant number of threatened freshwater fishes (91%) are in danger because of non-scientific and unsustainable fishing due to trade.

Trade is carried out at different levels, namely, local (community, village or localised area), domestic (between communities, villages or close by areas), commercial (wider regional or national) and international (between countries). Much of this trade is illegal. The Indian Wildlife Protection Act of 1972 (amended 1991) does not list a single species of fish. Ministry officials in the Environment Ministry cite various reasons for this including lack of specialists in their department (forest and wildlife), and the importance of fishing as a livelihood and important high protein food resource of the people.

Nonetheless, the high degree of threat to freshwater fishes due to unethical collecting techniques, indirect destruction, and overexploitation either for food or for aquarium trade, as revealed in the workshop suggests that some of the threatened fishes require legal protection, as recommended by one of the Special Issue Working Groups. While it is not desirable to deprive a populace of a major source of nutrition, if measures are not taken by government to curb excess and unethical harvest, what the government does not do, the collector and trader will. Instead of being limited or regulated in their consumption by legislative measures, the people will be deprived forever through extinction. Therefore, an aggressive education and awareness programme as well as efficient preventive enforcement should be in place to stop offenders.

Data quality

Scientists tend to be very conservative in their approach unless a systematic study has been done and the results published. Initially, it was feared that it would not be possible to assess many of the Indian freshwater fishes as a result. It was feared that information on Indian fishes would not be sufficient to make an assessment because of lack of extensive monitoring or field studies. Fortunately, enough information was

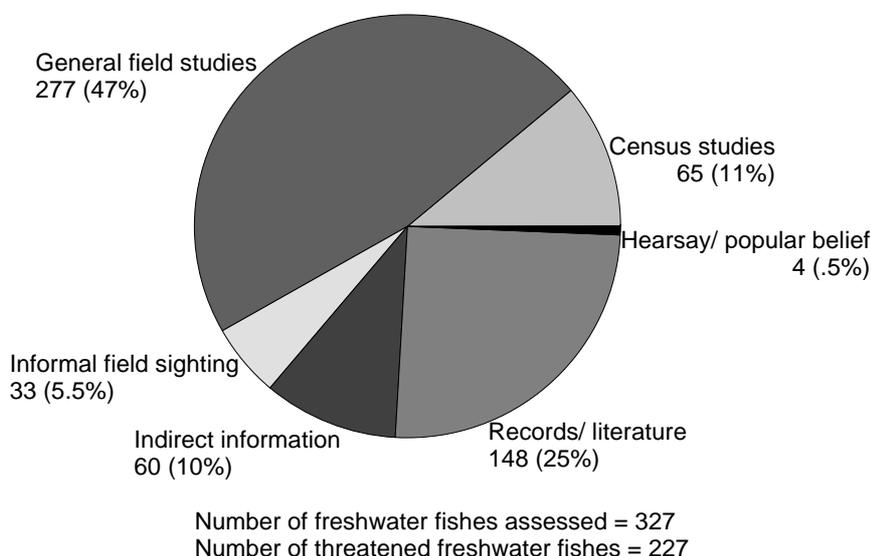
available on habitat on which most assessments were based. Therefore, participants based 47% of assessments on General field studies. Direct census and monitoring studies contributed to 11% of the taxa assessed. Informal field sightings and indirect information (from trade) contributed to the assessments in 5.5% and 25% respectively. In 25% of the assessments, particularly where no records of the species were available after its first description or was last sighted many years back, information was obtained only from records and literature.

The IUCN guidelines for assessment clearly suggest a “conservative” approach in favour of the taxa, e.g. “. . . the absence of high quality data should not deter attempts at applying the criteria, as methods involving estimation, inference and projection are emphasized to be acceptable throughout. Inference and projection may be based on extrapolation of current or potential threats into the future (including dependence on other taxa), so factors related to population abundance or distribution (including dependence on other taxa), so long as these can reasonably be supported. Suspected or inferred patterns in either the recent past, present or near future can be based on any of a series of related factors, and these factors should be specified. Taxa at risk from threats posed by future events of low probability but with severe consequences (catastrophes) should be identified by the criteria (e.g. small distribution, few locations). Some threats need to be identified particularly early, and appropriate actions taken, because their effects may be irreversible, or nearly so (pathogens, invasive organisms, hybridization).”

An exercise to determine the status of any taxon, particularly in the first instant, should not be hindered by lack of hard information. Thorough, all-encompassing hard data is almost impossible to gather for even a single taxon. The time required to gather such detailed information could in fact delay conservation measures for threatened taxa for years, thus leading to further decline and possibly extinction. For many groups of organisms there is not even a complete checklist, so any effort to put together what is known by ALL people studying these groups is a valid starting point from which other, more complete and accurate, exercises can be planned.

The combination of elements which make up a CAMP workshop such as group effort of researchers and associated specialists, a neutral environment, objective facilitation, good faith and good intentions can provide informed advice for conservation action planning. The results of this workshop are the outcomes of such an exercise.

Data Quality



Conservation action and recommendations

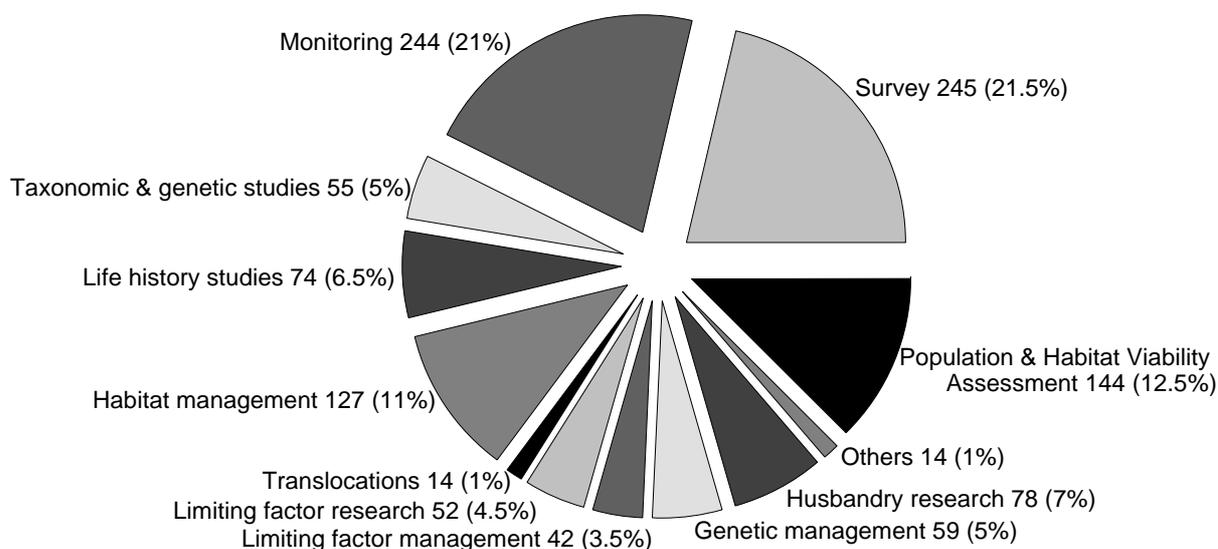
The previous section dealt with the different values for assessing the IUCN categories for the taxa. This section concerns conservation action to insure the survival of the taxa in the long term, and their habitat. Conservation action can take many forms, of which keeping the habitat inviolate may be the best way of insuring survival of taxa. However, for some species habitat protection alone may not be sufficient. Constant pressure on habitat and individual taxa has forced many taxa into small, isolated or fragmented populations, which can result in a steady decline in numbers, genetic viability and general fitness, or what is called an "extinction vortex". To overcome these complications and avoid extinction, corrective actions need to be taken up intensively and aggressively.

Table 4 summarises the various conservation actions recommended for the taxa. Since knowledge of species distribution is not nearly adequate, participants recommended Survey more than any other action, for more than 21% of the freshwater fishes assessed. For taxa whose extent of occurrence far exceeded the area of occupancy, the recommendation was for more surveys within the range as to identify other areas of distribution. Since population studies are lacking and trends in freshwater fish populations need detailed studies, Monitoring also was recommended for many taxa (21%). Taxonomic and genetic studies were recommended for many taxa because of the confusion in taxonomy and identification and the inconsistency prevailing amongst biologists. Further, many taxa have not been recorded after their initial discovery (which can be decades or even a century or more), whereby there are no proper types available for comparative studies. Other conservation actions recommended were habitat management, limited factor research, life history studies, genetic management and population and habitat viability assessment studies.

Table 4. Research recommendations as suggested for the assessed taxa

	T	TI	S	M	G	H	Hm	Lm	Lr	Lh	P	O
CR	20	4	40	36	19	22	20	9	11	14	30	2
EN	17	7	86	75	17	6	41	15	17	26	57	4
VU	12	3	61	70	10	40	34	13	17	16	31	3
LR-nt	3	0	41	45	12	8	30	4	7	14	23	5
LR-lc	0	0	6	9	0	2	0	0	0	1	0	0
DD	3	0	10	9	1	0	1	0	0	3	2	0
EX	0	0	1	0	0	0	0	0	0	0	0	0
EW	0	0	0	0	0	0	1	1	0	0	1	0

Research and management recommendations



Number of freshwater fishes assessed = 327

Captive breeding and the level of difficulty

Captive breeding recommendations are at 4 levels, Level 1, 2, 3 and 4 (see definition end of this report). Level 1 is for taxa to be interactively managed *in situ* and *ex situ* so as to retain 90% genetic diversity for 100 years. Level 2 is for *ex situ* populations to be infused with fresh genetic material from the wild so as to retain sufficient diversity. Level 3 is not for conservation but only for education, husbandry and research. Level 4 is for commercial and sustainable utilisation.

Of the threatened taxa, 127 taxa were recommended for captive breeding. Within the recommendations, however, captive breeding was encouraged more for conservation than for education, research and husbandry.

Eleven of the threatened taxa were recommended for captive breeding for commercial purposes and sustainable harvest.

Of the Lower Risk and Data Deficient taxa, many were recommended for captive breeding for educational purposes and a few for conservation.

Captive breeding techniques are not known for all taxa. Participants could identify only 69 taxa for which captive breeding technology was well known. Not much importance is given to breeding and maintaining fishes in captivity in India. Aquariums are very few and of those present, not a single aquarium in India has done any commendable work in keeping and breeding freshwater fishes in captivity, let alone managing them genetically and demographically for conservation. There are not many zoos in India that maintain fishes in captivity; those that have have either defunct facilities or the section is the poorest funded and looked after. Fish keeping has just not been encouraged in recognised captive facilities in India. The total number of freshwater fishes in India is so vast that this knowledge is still in its infancy, even though maintaining the smaller fishes is more feasible. Scattered efforts have been made in the past mostly in laboratories, aquaria and in private holdings where common species have been kept or bred.

It is unfortunate that captive breeding is so poorly known and misunderstood. Most fishes are small and harmless to man. They are relatively easy to maintain and breed in captivity and are not expensive. They are a group of organisms for which reintroduction could be a real possibility without any of the problems which confront large vertebrates. Considering the rapidity and scope of fish decline and the percentage of threatened fishes, captive breeding could provide a degree of security with minimal cost and danger, either to animal or man.

Special Issue working groups

As part of the workshop, Special Issue Working Groups were convened on the last day to discuss various subjects that were raised as being either important or controversial or both with respect to freshwater fish conservation in India. The Reports of the working groups which were discussed and revised in a plenary session with all participants follows:

Legal Issues Working Group

Members: Arvind Apte, Dhruvarjyoti Basu, K.W. Dhamge, Arvind Mishra, A.C. Pandey, A.G. Ponniah, S.K. Srivastava, N.K. Srivastava.

Background:

Freshwater fishes constitute a vital part of the natural heritage of India. They are found across the length and breadth of the country, in every conceivable major and minor aquatic ecosystem, where they comprise a significant portion of the zoological biomass and include a highly diverse assemblage of species, both in form and habits. Fishes are a natural resource of the country, which is being rapidly impoverished in genetic diversity, biomass and distribution due to local alteration, degradation, and destruction of habitat, ecological disruption on national scale as well as indiscriminate exploitation by both acceptable and condemnable methods.

Fishes are a natural resource not only of latent value in terms of biodiversity but have historically been and contemporarily remain a source of animal protein for both poor and well endowed people of this country alike and will remain so. In fact, in many regions of this country fishes are a part of the staple diet of the people and all but a few of the species found in the country, and fishes of all sizes, are consumed by some section of the society or other.

Also fishes represent immense economic value for both the consumer and supplier. Capture fisheries provide livelihood to great numbers of people and have the potential to provide increasing employment opportunities in the future if rationally managed.

Legislation:

Existing fisheries regulations were framed nearly a century ago when the status of fishes and capture fisheries were radically different. These regulations have not been amended adequately in time or scope to cater to changes in the status of fishes and capture fisheries.

Furthermore, fisheries are a state subject and fishes have not been placed on the concurrent list of protected species. Nationally these regulations are also not uniform throughout the country. Therefore, enforcement of the existing regulation have been lax and infrequent, which has led to the decline of fishes in the country. Powers vested with administrative personnel responsible for enforcing the existing regulation are inadequate and penalties prescribed for infringement of laws are not sufficiently severe to be a deterrent for infringement.

It is felt that the present regulations are not comprehensive for conserving the fish fauna of this country or for preventing the rapid decimation of either biomass or genetic diversity.

Therefore, the Working Group has made recommendations regarding legal status of fishes in India:

1. In order to ensure the conservation of fish diversity, a regime of rational exploitation of capture fishery resources on a sustainable basis needs to be established.
2. The proposed model, Indian Fisheries Act, reported to be currently under preparation should be made available for wide review by representatives of all interested sections of society before adoption of the act in its final form.
3. The preparation of the draft act should be expedited so that it is made available as recommended above in the shortest possible time.
4. The Draft Act should include provisions for creation and management of sanctuaries for viable conservation of threatened species of fish and maintenance of genetic reserves and biomass for all fishes.
5. The Draft Act should include schedules of protected fishes classified as per their endangerment status assessed objectively through processes such as CAMP workshops.
6. The Draft Act should provide for adequate magisterial powers for enforcement of the act to all personnel responsible for ensuring conservation of fish fauna in the country.
7. The Draft Act should include sufficiently severe penalties for offences involving the threatened fish species or those that are committed within sanctuaries or reserves created for the conservation of fish fauna.
8. Regulation of capture fisheries and conservation of threatened species of fish will affect human communities economically dependent on artisanal subsistence fishing. These communities should be given adequate consideration and compensation for terminating their means to a livelihood. The state should be made obligatorily responsible for rehabilitating such communities displaced by fish conservation measures and providing alternative sources of employment commensurate with their past fishery earnings.
9. The model act including the above broad recommendations, after being made available for public scrutiny and appropriately revised so as to be compatible as far as possible, with national aspirations on one hand and the cause of conservation of genetic diversity and biomass of capture fishery resources on the other, be enacted uniformly by all states of the country within a pre-determined time frame.
10. Some species of endangered freshwater fishes need to be included under the Wildlife (Protection) Act so that greater protection can be given to them. Far more than other Wildlife, however, many people are dependent on fish for their livelihood and even for their day-to-day survival. Also, fishing gear is not selective, so any fishes including endangered fishes might be caught inadvertently in fishing gear. Therefore, there is need to exercise due caution with regard to adding endangered species of fish to any Schedule of the Wildlife Protection Act so that people dependent on fishing for their livelihood are not adversely affected when fishes categorised under the IUCN criteria are inadvertently caught up with non-prohibited fish in their gear or are otherwise disturbed by legal fishing *

1. Strict regulation must be imposed for quarantine before allowing the import of exotic species of ornamental fish or any exotic fish.

2. Commercial varieties of exotic fish species should be permitted for import only after screening by a regulatory body at national level after a through study of its biology as well as its impact on indigenous species and environment.

As the introduction of exotic species has been recorded as a major cause of extinction of indigenous species, these regulations may be included in the Model Act.

* This point was raised in Plenary by A.G. Ponniah who also contributed a signed statement.

Additional Recommendations with regard to Conservation of Fish in Wildlife (Protection) Act 1972 (Amended 1991):

Proposed by K.W. Dhamge, Maharashtra Forest Dept., and supported by Dr. Nandkishore More and enlarged by S. Walker and S. Molur, Workshop Facilitators

In the Wildlife (Protection) Act, 1972 (Amended 1991) under section 2 of definition of 'Wild animal' and 'Wildlife' have been given, separately. It defines wild animal as any animal which is included in Schedule I to V if found anywhere and any unscheduled animal if found wild in nature. Wildlife is defined as plants, butterflies, moths, mollusc, fish which form part of wildlife habitat. Therefore it becomes difficult to put fish in the category of wild animals when it has already been categorised as wildlife. On the other hand, interpretation of the definition of wild animals restricts fish with the meaning of wild animal only when it is wild and it loses its identity as wild animal as soon as it comes out of wild area.

The lack of identity of fish as wild animal renders it quite insignificant under WL (P) Act, 1972 because all the relevant sections pertaining to illegal activities of poaching etc. applicable to wild animals, the part or trophy derived from it, are not wildlife.

1. Section dealing destruction of habitat
2. If an animal or its part or trophy is found in illegal possession of somebody or being transported that wild animal, its part or trophies and that vehicle, tool, boats etc. becomes govt. property.
3. The wild animal, its part, or trophy if found being illegally transported, that vehicle, tool, boat etc. is liable to be seized.

These limitations put secure constraints in the protection measures being taken by wildlife managers in the whole jurisdiction that the illegal fishery may be going on.

Recommendations

1. The word "fishes" should be deleted from the definition of "wildlife" which would automatically include it in the definition of "wild animal". The relevant sections can be made applicable in the interest of conservation of fish fauna and wildlife fauna, as a whole.

2. Those fishes which have been categorised as "threatened" (Critically endangered, Endangered and Vulnerable) according to the IUCN categories may be included in an appropriate schedule of Wildlife (Protection) Act, 1972 amended 1991) now pending further amendment.

The information provided by participants in the CAMP workshop indicate a thriving international trade in freshwater fish. The IUCN Red List criteria defines any threatened species (CR, EN, VU) as being in danger of extinction in the immediate to medium range future. Therefore, the export of such fishes unless they can be proved to have been cultivated is further jeopardising their continued survival. The inclusion of fish in the Wildlife Protection Act would provide a legal platform for the stoppage of unrestricted export of threatened species.

Working Group on Exotic species

Members: J.K. Jena, C.B. Joshi, A.K. Pandey, S.K. Paul, Ajay Kr. Singh, A.K. Singh, S.M. Srivastava, R.K. Tyagi.

Over 300 hundred species of exotic species of fish have been introduced into India till date, most of them are ornamental varieties. The major species of commercial importance that are introduced in the country are:

1. Silver carp (*Hypophthalmichthys molitrix*)
2. Grass carp (*Ctenopharyngodon idella*)
3. Common carp (*Cyprinus carpio* var. *communis*)
C. carpio var. *nudus*
C. carpio var. *specularis*
4. *Oreochromis mossambicus*
5. *Oreochromis niloticus*
6. *Tilapia zilli*
7. *Osphronemus gorami*
8. *Gambusia affinis*
9. *Carassius carassius*

Cold water species

10. *Salmo trutta fario*
11. *Oncorhynchus mykiss*
12. *Tinca tinca*
13. *Salvelinus fontinalis*

The introduction of cold water species introduced in the country has not only resulted in improving the sport fishery of the country but has also has created the possibility of culturing the species on a commercial scale. Further, they were not found to pose any sort of problems over the indigenous cold water species. However, species like *Cyprinus carpio* var. *specularis* was found to be a threat to the indigenous *Schizothorax* species, as observed in Dal lake. It was also found to affect the species like *Osteobrama belangeri* in Loktak lake, Manipur.

Commercial species like silver carp no doubt has resulted in appreciable increase in pond productivity, but has created concern in certain open water systems. For example in Govind Sagar Reservoir the population of native catla has come down to a remarkably low level after introduction of silver carp. Similar reduction in mahseer fisheries has also been reported after the introduction of silver carp.

The result of introduction of *Tilapia* in early fifties, affected the fishery of not only freshwater systems but also the brackish water systems. Introduction of *Tilapia zilli* into the Indira Gandhi Canal of Rajasthan is questionable and the introduction of *Tilapia zilli* must be discouraged.

Species like big head (*Aristichthys nobilis*) and *Clarias gariepinus* have made an entry into Indian waters. *Clarias gariepinus* is not only carnivorous but also cannibalistic. Though it is found in many parts of the country, its entry into natural water bodies may pose serious threat to the indigenous species of the country. Thus proper legislation must be brought to ban/ discourage such species.

It may be mentioned that M/s Hindustan Lever had imported channel catfish, *Ictalurus punctatus* from USA for intensive culture. But after two years of their introduction it was found to be a failure. When the country is possessing catfish species like *Pangasius pangasius*, *Aorichthys seenghala*, *A. aor*, *Wallago attu*, etc., the introduction of such exotic species must be brought under regulation.

Recently there was a proposal to introduce the exotic species, *Dicentrarchus labrax* and *Sparus aurata* into the Lakshadweep and Andaman waters for cage culture in marine water. Both species are not only carnivorous but also breed in open waters which may pose serious threat to the indigenous species.

The Working Group has noted that no effective regulation exists in the country for introduction of any exotic species. Though the import of ornamental varieties for hobbyists may not be a threat at present, proper quarantine is a must for import of any exotic species. It was felt by the working group that strict regulation must be imposed for quarantine before allowing the import of any species.

The group recommends that introduction of exotic commercial varieties must be discouraged. Even if it is thought to be "necessary" to introduce a particular species, some constraints and controls should be in place. There should be a screening mechanism through a regulatory body appointed at National level after thorough study on its biology, habit and habitat, as well as its potential impact on indigenous species and the environment.

Working Group on Fish Sanctuaries

Members: Arvind Apte, K.W. Dhamge, Arvind Mishra, A.C. Pandey, M.K. Srivastava, N.V. Srivastava, S.K. Srivastava

Areas of natural habitat of fish are eroding very fast due to heavy silting of rivers. River beds are getting affected to such an extent that the mighty rivers like Ganga, Yamuna, Mahanadi, Narmada etc. can now be crossed on foot during the summer months. Even bullock carts can cross those rivers with full load in certain locations. Considering this condition it is essential to provide living space and shelter to the valuable species of Indian fish, including carps and especially the major carps.

In order to conserve the fish population and provide adequate living space, shelter and habitat for valuable major carp and major cat fish, the following recommendations are made:

Surveying and marking out deep pools in the entire river system should be done. Ten to twenty deep pools in each river should be identified and declared as a fish sanctuary in a circumstance of 1 to 2 km water body in that deep-pool area.

Declaring such little areas as sanctuary will not affect the livelihood of the fisherman community. Even now commercial fishing is not common in those areas.

Major carps, like tor and large sized commercially important fishes be allowed to come in those sanctuaries. Whenever any endangered fish species are encountered they should be brought to a nearby deep-pool sanctuary area and cultured them in a specialized manner to encourage their breeding, rear the young ones to fingerling size, and release them in that sanctuary to grow.

In next phase the deep pools be dredged out and made into perennial deep pools

Working Group on Taxonomy of Freshwater Fishes

Members: Rehana Abidi, M. Arunachalam, S.P. Biswas, A. Hussain, A.K. Karmkar, D. Kapoor, S. Manimekalan Manonmaniam, U.K. Sarkar, S.K. Sharma, W. Vishwanath.

Classification:

The classification of Nelson (1994) will be followed up to generic level. Those genera which have not been incorporated in Nelson (1994) may be classified by consulting Talwar and Jhingran (1991).

Change in nomenclature of genera:

When there are changes in the nomenclature of a taxon, the recent valid name along with the old one be mentioned for clarity giving reasons for doing so. If experts synonymise a taxon they should clearly state the reasons for doing so, giving characters for identification.

The Working Group resolved that any one organisation be requested to take the responsibility for bringing out a list of valid names annually incorporating changes, if any. The National Bureau of Fish Genetic Resources would be an ideal institution for this task.

Indication of new genus in case of confusion regarding its taxonomic position:

Genera which were described from India before 1994 but not included in Nelson's (1994), may be fixed in the respective place (family) as per classification proposed by Talwar and Jhingran (1991). These changes may be indicated by putting an asterisk at the appropriate place.

Deposition of type material at Zoological Survey of India:

In view of the difficulty expressed by members regarding the examination the paratypes/ syntypes of the new species, the Working Group resolved that new species should be deposited at Zoological Survey of India for examination at a later date.

Reference:

1. Nelson, J. H. (1994). The Fishes of the World (Edn.III). John Willey and Sons, New York.
2. Talwar, P. K. and Jhingran, A. G. (1991). Inland Fishes of India and Adjacent Countries (Vol.I&II), Oxford. IBH, New Delhi.

Recommendations for Conservation through Mass Awareness Programmes

Members: R. Dayal, C.B. Joshi, D. Kapoor, P.C. Mahanta, R.S. Patiyal, A.K. Singh, C.S. Singh, Sanjeev Kr. Srivastava, S.M. Srivastava

1. Specific areas of natural habitat to assess past and present conditions for conservation programmes should be selected.
2. A strong database of fishes declining in the various water bodies should be constructed.
3. A methodology should be developed to use local people as a pool of information.
4. Students, social workers, fishermen and women and local people should be educated about the importance of conservation of fish fauna in their area. This may be done using audio-visual aids.
5. Non-Government Organisations like Angler's association, Gramsabha and Navuvak Mandal should be encouraged to participate in conservation. Training Camps may be organised for training of the members.
6. Fishery institutes should take the lead for the formation of mass awareness groups in their respective areas including the Government and NGO's.
7. A National Volunteer Force should be formed for the conservation of fish biodiversity.
8. Prior to the declaration of any Fish Sanctuary, consent and opinion of local people should be taken in order to protect their interest and insure successful running of the sanctuary.
9. An apex body should be formed which will formulate the guidelines for coordinating and evaluating the performance of various committees for mass awareness at regional level.

Working Group on Endemism

Members: Ouseph Alphonse, M. Arunachalam, P. Das, G.P. Dubey, A. Gopalakrishnan, B. Madhusoodana Kurup, T.V. Anna Mercy, Arvind Mishra, A.C. Pandey, D.N. Saksena, C.P. Shaji, C.S. Singh, P. Subramanian, Y.R. Tripathi

The fish being an aquatic organism is distributed along a given basin or area extent of drainage area. The question of Endemism was discussed at length with regards to fish in India. The issue discussed by the group was whether the range of endemic species should be restricted to political boundaries of the nation.

The following opinions were put forth by the various members of the working group.

"The origin of species, fish description in the literature along with drainage be considered at time of defining endemism of fish species".

In the case of fish, endemism be referred in terms of drainage system/ systems.

While assigning endemism, country be mentioned first and the river drainage, state etc. later.

The question of Indian major carps was also raised and it was suggested that these fishes be referred as endemic to India before submitting the list to IUCN or any other organization.

The final definition for endemic fish be adopted as "The fish species is endemic to a country or a drainage system where it is native and described. Its distribution may also be given in brackets".

Facilitators' comments: Considering the issue and current legislation regarding patenting of species, the definition of endemism has taken on a new importance with serious implications for the country where a species originated and which may like to claim the species. Political boundaries change, sometimes very quickly and drastically. These changes can affect the defined distribution of species and therefore the endemism (as normally defined) of that species to a particular country or state. IUCN or some other recognised international body should take up this issue and its implications so that a scientific definition of endemism which takes into consideration problems of ownership of a species by a country and other problematical issues can be drafted.

Modifications to IUCN Criteria Working Group

Members: V.S. Basheer, Dr. A. Hussain, Dr. A.G. Ponniah

1. For using any of these criteria while assessing conservation status of fish, first assessment should be made whether sufficient information is available and if available the data quality should be assessed and indicated separately for each criteria since the data may vary for each parameter.
2. Two main criteria that have been used to assess the Indian freshwater species are population reduction and extent of occurrence. Before taking up, one should compute the earlier occurrence to find out whether any change in occurrence has taken place. Historical distribution must be clearly marked on a map and against this present distribution should be marked. From this extent of occurrence can be found out.
3. The values given in the present IUCN criteria for extent of occurrence is based on higher animals and it can not be as a whole, applicable to fish and slow moving animals (like snails). Unlike higher animals, fish is highly mobile and the same specimen may travel hundreds of kilometers. Altitude, longitude and longitude also should be taken into consideration when one documents the extent of occurrence. As also the values given in km may not be applicable to riverine freshwater fishes. Only length of river should be given. Hence the unit should be in km. not sq. km. For fish found in lakes, ponds, reservoirs, sq. km. can be applicable, but for a uniform pattern only km. can be used.
4. Land masses are barriers in between water bodies that area should not be covered in extent of occurrence. For riverine species only water area should be taken into consideration.
5. The intended (codes A, B, C, D) values may be appropriate for mammals but not for fishes and slow moving animals. It is better to make distribution maps and then record the percent change in distribution. Reduction in percentage change in distribution can be a better criteria for all organisms.
6. Area of occupancy should be taken only if we have sufficient amount of data, in terms of present status. Again the unit sq. km. cannot be regarded, rather km. should be used and percentage reduction in the area of occupancy should be the criteria.
7. Location should be well defined in case of fishes and if it is collected from different places of the river it should not be taken as fragmented population rather as a continuous population. If the population is present in different streams/ rivers of same drainage system not connected it can be considered as different separated. Many sampling is done in one or two places. Therefore true picture of fragmentation does not emerge. In such case a vigorous sampling should be done to find out exact locations. Finally, number of fragmented population should be taken as criteria instead number of locations.
8. Initially it should be assessed that minimum of 10 years records/estimates observations is available for considering population trends. To consider the population trends, the estimate should cover large area of the species range than a limited part of its distribution. Care must be taken when averaging from different estimates. For rare species, especially. the data quality should be stringent before any decision can be made.
9. The category 'number of mature individuals' can not be applicable to the present Indian scenario since the estimate is mostly done on available catches which may contain immature individuals. Identification of sexes also depend on season. Hence this can not be assessed presently.
10. In assessing fish, 'least concern' under 'lower risk' category may be placed as a separate main category and not under 'lower risk'.
11. The Conservation categories like EX, CR, EN, VU, LR should contain the quality of data in bracket

Research Working Group

Members: S.V. Sharma, M. Arunachalam, S. Manimekalan Manonmanian, W. Viswanath, B.M. Kurup, T.V. Anna Mercy

The working group on Research Recommendations on Freshwater resources felt that in India certain areas like Western Ghats, Eastern Ghats, northeastern region. Himalayan Region has not been sufficiently covered for survey, monitoring and assessment of freshwater fish resources. This has resulted in a lacuna in knowledge of the fish fauna of these high biodiversity areas.

Recommendations:

Stock assessments and monitoring studies should be conducted for the Indian River systems with reference to endangered and vulnerable species on priority basis. Regional Network study groups be formed for the following regions.

- a. North Eastern Region
- b. Eastern Ghats
- c. Western Ghats
- d. Western Himalayan Region

Objectives of Regional Network study groups:

1. Develop a standardised methodology for such studies of rivers and streams for adoption by all Regional Networks.
2. Organise periodic Training Programmes in Fish taxonomy
3. Survey the species in the specified areas.
4. Assess stocks of important species
5. Assess fish habitats for man-made activities and natural causes
6. Make conservation and management recommendations for fish stock regarding:
 - a) habitat management
 - b) impact of the introduction of exotic/alien species into these habitats
 - c) Adoption of quarantine measures in transplantation of fish to new habitats.
7. Investigate possibility of brood stock management and captive breeding programmes for Critically Endangered and Endangered species.
8. Investigate possibilities of replenishment and rehabilitation of Critically Endangered and Endangered species.
9. Generate precise information on migration, breeding behaviour and spawning habitats with a view to establish Fish Sanctuaries
10. Investigate possibilities of information of ornamental and peninsular carps in Aquaculture.
11. Taxonomic precision of fish species with disputed identity can validated by cytogenetic and biochemical genetic studies.
12. To develop a database of individuals and organisations carrying out activities relating to fish germ plasm and to have a mechanism for sharing this database with all interested individuals/ organisations.

Conclusion

The BCPP Conservation Assessment and Management Plan Workshop for all Indian freshwater fishes was a pioneering effort in several ways. For the first time in India, and perhaps anywhere in the world, a systematic conservation workshop was held for freshwater fishes utilising a greater part of the scientific expertise in the country. This exercise demonstrated that Indian freshwater fishes as a group is in grave danger with more than two-thirds of the 327 assessed taxa under threat. Since nearly half of the total checklist of Indian freshwater fishes remains to be evaluated, a second workshop is planned for the latter half of 1998, when an attempt to complete the entire freshwater fish assessments will be made.

The workshop was also a good exercise in the application of the IUCN Categories, which are meant for all living organisms except microorganisms. Problems participants had using the categories were communicated to the Review Working Group of the Species Survival Commission which met in March 1998 and benefited by the Workshop testing the categories on freshwater fishes. Perhaps more important with regard to the IUCN categories, the workshop participants reported that they learned a great deal about conservation biology and population dynamics which would be reflected in the kinds and quality of information they aspired to collect in future field studies. Several problems of freshwater fish systematics and research methodology were discussed during the assessments. These discussions proved very useful in bringing together and lending focus to the participants to discuss the difficulties in subjects such as taxonomy, field methodology and conservation breeding.

Perhaps the most useful achievement of the workshop was that it provided a forum and occasion for many freshwater fish field biologists and taxonomists to get together and discuss status of freshwater fish taxa in India; some of the researchers being referred for their knowledge for the first time.

The Conservation Assessment workshop for Indian freshwater fishes has helped in understanding the urgent need to protect threatened taxa from extinction and manage them in the near future. Some of these taxa may not survive if timely action is not taken, that is if they are not man-managed. Some of them, because of their small population size and restricted distribution, require intensive care and habitat management and may survive only with human support.

The IUCN categories and definitions to the Taxon Data Sheet

The Final version of the IUCN Red List Categories (December 1994) has evolved from inputs from specialists in different groups of taxa all over the world. Red List Categories were first introduced in the early 70s and only in 1991 a reevaluation of the categories was done by Georgina Mace and Russell Lande which was called Version 1. For the first time a quantitative approach was introduced in assessing mammalian taxa. Version 2 and later versions attempted the approach of quantification for assessment for all groups of taxa except microorganisms. Non-threatened categories were also introduced during that iteration of the IUCN categories. The present version has been distinctly classified into threatened categories and non-threatened categories and a set of guidelines and criteria help in assessing the threat status of any taxa. The structure of the categories is given in Figure 1 of the Report.

The IUCN categories also give the option of assigning a taxon that is not endangered to a non-threatened category. The non-threatened categories are termed Lower Risk -near threatened, Lower Risk -least concern and Lower Risk -conservation dependent (see definitions of IUCN categories).

Definitions of the categories :

(These definitions are taken from the IUCN Guidelines for the Revised IUCN Red List Criteria but the examples have been added for this Report.)

EXTINCT (EX)

A taxon is Extinct when there is no reasonable doubt that its last individual has died. E.g. *Gymnocypris biswasi*

EXTINCT IN THE WILD (EW)

A taxon is Extinct in the Wild when it is known only to survive in cultivation, in captivity, or as a naturalized population (or population) well outside the past range. E.g. *Osteobrama belangeri*

CRITICALLY ENDANGERED (CR)

A taxon is Critically Endangered when it is facing an extremely high risk of extinction in the wild in the immediate future as defined by the criteria listed in Table 1. An example of a Critically Endangered freshwater fish from the present Report is *Lepidopygopsis typus*, which has been classified as such because it is restricted in its distribution in the Western Ghats, fragmented and declining due to change in its quality of habitat, area and extent of occurrence.

ENDANGERED (EN)

A taxon is Endangered when it is not Critically Endangered but is facing a very high risk of extinction in the wild in the near future, as defined in the criteria listed in Table 1. The species *Glyptothorax nelsoni* is Endangered and has been categorised as such because of its restricted distribution in the Gangetic river system, fragmented and declining due to change in its quality of habitat, area and extent of occurrence.

VULNERABLE (VU)

A taxon is Vulnerable when it is not Critical or Endangered but is facing a high risk of extinction in the wild in the medium term future, as defined by the criteria listed in Table 1. An example of a species that is Vulnerable is *Garra gotyla gotyla* because of population reduction in the Upland cold water bodies of India.

LOWER RISK (LR) A taxon is Lower Risk when it has been evaluated and does not qualify for any of the above categories -- Critically Endangered, Endangered, Vulnerable -- and is not Data Deficient. There are two sub-categories for Lower Risk which will be explained below

LOWER RISK -conservation dependent (LRcd)

Taxa which do not currently qualify under any of the categories above may be classified as conservation dependent. To be considered conservation dependent, a taxon must be the focus of a continuing taxon-specific or habitat-specific conservation program which directly affects the taxon in question. The cessation of this program would result in the taxon qualifying for one of the threatened categories above. There was no species assessed as LRcd in this workshop.

LOWER RISK -near threatened (LRnt)

A taxon is near threatened when it is not Critically Endangered, Endangered, or Vulnerable but is, none-the-less, felt to be facing a risk of being threatened. Species example: *Glossogobius giurus*

LOWER RISK -least concern (LRlc)

A taxon is considered of least concern when it is not threatened, conservation dependent or near threatened. An example of a freshwater fish classified as least concern is *Nemacheilus triangularis*

DATA DEFICIENT (DD)

A taxon is Data Deficient when there is inadequate information for making a direct, or indirect, assessment of its risk of extinction based on its distribution and/ or population status. Example: *Puntius cauveriensis*

NOT EVALUATED (NE) A taxon is Not Evaluated when it has not yet been assessed against the criteria for some reason. Nearly 300+ taxa of freshwater fishes were Not Evaluated at this workshop.

Application of the IUCN categories

The IUCN categories can be applied at three levels, viz. Global, Regional and National.

Global assessment: This term is used when applying the IUCN categories to a taxon in its entire distributional range. In this sense, "global" does not mean that the assessment is being made to a taxon with a "world-wide" or global distribution. For example, *Barilius canarensis* has a very limited distribution, found only in the southern Western Ghats, which is the "global distribution" of the species. Therefore, it has been assessed at the Global level in this workshop.

The IUCN categories work best at the Global level. This is tantamount to saying that the IUCN categories can be applied best to political endemics. Political endemics are endemics that do not have a distribution across political boundaries, that is, between nations.

National assessment: The term National Assessment means applying the IUCN categories to a taxon with respect to its distributional range throughout India. The present categories cannot be applied to taxa at the National level without undertaking many complex exercises. Factors such as distributional range in the neighbouring countries also needs to be known since the guidelines for categorisation at the National level takes into consideration migration of the taxon across political boundaries. Also, it is required to understand the life history of the taxa to be able to qualify for any of the criteria of Restricted Distribution, Population Estimates and Population Restriction. The exercise of a National Assessment can be undertaken only in the presence of experts with species knowledge from all the countries throughout which the taxon is distributed.

In this workshop, all non-endemics (251 taxa) have been assigned IUCN categories based on National Assessment. This is because the taxa have been assessed for their complete distributional range in India and for a comprehensive National Action Plan, the assessment has been classified so.

Regional assessment: The term Regional Assessment means applying the IUCN categories to a taxon in part of its distributional range. A regional assessment, by deriving the status of the taxon for a region, which may differ from other regions in which it is found, thereby facilitates conservation activities, which can be implemented more appropriately over a smaller area. In this workshop, no reptilian taxon was assessed at the regional level.

Criteria

The threatened categories of the IUCN Red List — Critically Endangered, Endangered and Vulnerable are derived based on 5 criteria (See Guidelines for Criteria for threat categories end of this report), viz:

- A. Population reduction (PR)
- B. Restricted distribution (either extent of occurrence or area of occupancy) (RD)
- C. Population number, restricted distribution and fluctuation (PE)
- D. Adult population numbers (Mature individuals) or restricted population (RP)
- E. Probability of extinction (PX)

The subcriteria within each of the above criteria vary to determine if a taxon is Critically Endangered, Endangered or Vulnerable. While assigning a threat category to a taxon, the criteria that the threat is based on is also given.

Population Reduction

Population reduction is not easy to estimate since it involves also estimation of loss of habitat and various threats affecting the population. Information from direct observation is the best source but in many cases there are no population monitoring studies and precise figures are difficult to derive. Therefore educated estimates with good reasoning is also encouraged to derive this information (See IUCN Guidelines under section Data Quality). For threatened categories, the minimum percent decline in population is 20% over 3 generations or 10 years whichever is longer. Depending on the rate of decline, the taxon is assigned a threat category (see IUCN categories chart before the Summary Data Table in the Executive Summary section).

Restricted Distribution

As per IUCN guidelines for Restricted Distribution (see definitions for Taxon Data Sheets) a taxon is assessed as threatened if it has a restricted distribution. To meet this criterion the taxa also has to qualify two of the three subcriteria (see IUCN categories chart end of this report). Restricted distribution as per IUCN is less than 20,000 sq.km. for the Extent of Occurrence and/ or less than 2,000 sq.km. for the Area of Occupancy of the taxa.

Number of locations

This subcriteria is important to know if the taxon is assessed according to the "Extent of occurrence" criteria. Any taxon distributed in less than 10 locations would qualify for a limited location distribution which would qualify it for the threatened subcriteria. Depending on the number of locations below 10, the taxon would qualify for one subcriteria under Vulnerable, Endangered or Critically Endangered categories (see IUCN guidelines end of report)

If for any taxon, the number of locations is more than ten, then the question of whether the locations are fragmented or not becomes important. According to the guidelines, a population is fragmented from the other if there is no movement of genetic material between the populations. In most cases for plants it is difficult to assess what would be the critical distance for fragmentation. Information of number of locations is purely on the participants' judgement and their view of the soil invertebrate biology and migration capability. In certain cases the concept of fragmentation is very clear while not so in others.

Number of Mature Individuals

As per IUCN guidelines for the Number of Mature Individuals (see definitions for Taxon Data Sheets) a taxon is assessed as threatened if it has less than 1,000 mature individuals. Depending on the number, the degree of threat will be assigned.

It is always very difficult to estimate the number of mature individuals especially if the taxon is small and has a short generation time. In this CAMP no invertebrate was assessed based on the number of mature individuals

Data Quality

Assessments cannot be relied upon if there is no proper methodology or facts. It is therefore important to provide an authenticated account with the results. Data Quality is of six types, viz.

- a) Reliable census or monitoring
- b) General field study
- c) Informal field sighting
- d) Indirect information (from trade, local experts, practitioners, etc)
- e) Herbarium/ museum/ literature/ collection records
- f) Hearsay/ popular beliefs

Research recommendations

Research recommendations for most of the taxa are made based on the amount of information available and the need for understanding and managing the taxa in the wild. This is part of the conservation action plan that the group derives after the assessment of every taxon. The recommendations are:

- a) Survey (S)
- b) Monitoring (M)
- c) Taxonomic and morphological genetic studies (T)
- d) Genetic management (G)
- e) Husbandry research (H)
- f) Habitat management (Hm)
- g) Limiting factor research (Lr)
- h) Limiting factor management (Lm)
- i) Life history studies (Lh) and
- j) Other taxon specific recommendations (O)
- k) Population and Habitat Viability Assessment

Captive breeding recommendations

Recommendations also include *ex situ* management and action plan along with *in situ* conservation. This includes different levels such as:

- a) Level 1: Captive breeding for metapopulation management by maintaining 90% heterozygosity for 100 years by supplementing individuals or genetic material from captivity into the wild.
- b) Level 2: For maintaining healthy genetic material in captivity by required input from the wild.
- c) Level 3: Captive breeding not for conservation but either for research, education or husbandry.
- d) Level 4: Captive breeding for either of the above and for sustainable utilisation.
- e) Pending: Captive breeding pending further input from research or scientists.
- f) No: Captive breeding not recommended.

Level of difficulty

This is an indicator of whether captive breeding is known, partly known or unknown for any taxon that is recommended for captive breeding

- a) Level 1 -- Least difficult: Captive breeding techniques completely known for either the taxon or similar taxon.
- b) Level 2 -- Moderately difficult: Captive breeding techniques only partially in place for the taxon or similar taxon.
- c) Level 3 -- Very difficult: Captive breeding techniques not known for the taxon or similar taxa.
- d) Not known: Information about the level of difficulty of captive breeding not known by the assessors.

Freshwater fishes of India

Taxon Data Sheets

TAXON DATA SHEETS

1. *Aborichthys elongatus* Hora, 1921 — EN (B1, 2c). (*Noemacheilus elongatus* Menon, 1987). **Family:** Balitoridae. **Taxonomic status:** Species. **Habit:** Bottom feeder, Carnivorous. **Habitat:** Torrential stream. **Global Distribution:** ENDEMIC to India. **Current Regional Distribution:** Darjeeling, Himalaya, Sikkim Himalayas. - **Elevation:** < 2000 m. - **Range (Sq. km):** < 5000. - **Area Occupied (Sq. km):** < 500. - **Number of location:** 1 (Reang river). **Population Trends - % change - % Decline:** Not known. - **Time / Rate (Yrs or gens):** Not known. - **No of Mature Individuals:** Not known. **Global Population:** Single population and restricted distribution. **Data Quality:** General field study (Hora, 1921 in Reang river); Museum/collection/ records. **Recent Field Studies:** None. **Threats:** Human interference. **Trade:** Not known. **Other Comments:** No report of the fish has been made after the original description. **Status - IUCN: ENDANGERED.** - **Criteria based on: B1, 2c** (Restricted distribution, single location, continuing decline observed in extent of occurrence, area of occupancy and/or quality of habitat). - **CITES:** No. - **IWPA (1972;91):** No. - **RDB, National (1994):** No. - **RDB, International (1996):** No. **Recommendations - Research management:** Taxonomic and morphological genetic studies; Survey; Monitoring; Life history studies. - **PHVA:** Pending. **Captive breeding Recommendations - Captive breeding:** No. - **Level of difficulty:** Not known. **Existing Captive Programs:** None. - **Names of facilities:** —. **Sources (Refer Appendix):** 202. **Compilers:** A.K. Karmakar, W. Viswanath, S.P. Biswas, P.C. Mahanta, B.A. Daniel.

2. *Aborichthys garoensis* Hora, 1925 — CR (B1, 2c). (*Noemacheilus garoensis* Menon 1987). **Family:** Balitoridae. **Taxonomic status:** Species. **Habit:** Bottom dweller, Carnivorous. **Habitat:** Torrential stream. **Global Distribution:** ENDEMIC to India. **Current Regional Distribution:** Meghalaya. - **Elevation:** < 500 m. - **Range (Sq. km):** < 100. - **Area Occupied (Sq. km):** < 500. - **Number of location:** 1 (Garo hills - Brahmaputra). **Population Trends - % change - % Decline:** Not known. - **Time / Rate (Yrs or gens):** Not known. - **No of Mature Individuals:** Not known. **Global Population:** Single location and restricted distribution. **Data Quality:** General field study (Hora, 1925 in Garo hills). **Recent Field Studies:** None. **Threats:** Human interference. **Trade:** No. **Other Comments:** —. **Status - IUCN: CRITICALLY ENDANGERED.** - **Criteria based on: B1, 2c** (Restricted distribution, single location, continuing decline observed in extent of occurrence, area of occupancy and/or quality of habitat). - **CITES:** No. - **IWPA (1972;91):** No. - **RDB, National (1994):** No. - **RDB, International (1996):** No. **Recommendations - Research management:** Survey; Monitoring; Life history studies. - **PHVA:** Pending. **Captive breeding Recommendations - Captive breeding:** No. - **Level of difficulty:** Not known. **Existing Captive Programs:** None. - **Names of facilities:** —. **Sources (Refer Appendix):** 71, 189 (i), 202. **Compilers:** A.K. Karmakar, W. Vishwanath, S.P. Biswas, P.C. Mahanta, B.A. Daniel.

3. *Aborichthys kempfi* Chaudhuri, 1912 — VU (B1, 2c). (*Noemacheilus kempfi*, Menon 1987). **Family:** Balitoridae. **Taxonomic status:** Species. **Habit:** Omnivorous. **Habitat:** Riverine fish (clear - stream). **Global Distribution:** India, Myanmar. **Current Regional Distribution:** Abor in Arunachal Pradesh, Brahmaputra basin, Garo hills in Meghalaya, Putao plains in Upper Myanmar - Chindwin basin. - **Elevation:** 500 - 1000 m. - **Range (Sq. km):** > 20,000. - **Area Occupied (Sq. km):** < 2,000. - **Number of location:** Many; Fragmented. **Population Trends - % change - % Decline:** Not known. - **Time / Rate (Yrs or gens):** Not known. - **No of Mature Individuals:** Not known. **Global Population:** Not known. **Regional Population:** Not known. **Data Quality:** General field study (B.L. Chaudhuri, 1913 in Abor hills in Arunachal Pradesh); Museum/collections/ records (A.G.K. Menon, 1987 in Museum study). **Recent Field Studies:** None. **Threats:** Dynamite and other destructive fishing; Poisoning. **Trade:** No. **Other Comments:** Restricted to northeastern India and Upper Myanmar. **Status - IUCN: VULNERABLE.** - **Criteria based on: B1, 2c** (Restricted distribution, single location, continuing decline observed in extent of occurrence, area of occupancy and/or quality of habitat). - **CITES:** No. - **IWPA (1972;91):** No. - **RDB, National (1994):** No. - **RDB, International (1996):** No. **Recommendations - Research management:** Survey; Monitoring. - **PHVA:** No. **Captive breeding Recommendations - Captive breeding:** No. - **Level of difficulty:** Not known. **Existing Captive Programs:** None. - **Names of facilities:** —. **Sources (Refer Appendix):** 131. **Compilers:** W. Vishwanath, A.K. Karmakar, S.P. Biswas, P.C. Mahanta, R. Dayal, B.A. Daniel.

4. *Aborichthys tikaderi* Barman, 1984 — EN (B1, 2a, 2b, 2c). **Family:** Balitoridae. **Taxonomic status:** Species. **Habit:** Bottom feeder, Carnivorous. **Habitat:** Torrential stream. **Global Distribution:** ENDEMIC to India. **Current Regional Distribution:** Arunachal Pradesh. - **Elevation:** 500 m. - **Range (Sq. km):** < 5,000. - **Area Occupied (Sq. km):** < 500. - **Number of location:** 1 (Brahmaputra drainage system in Namdapha Wildlife Sanctuary). **Population Trends - % change - % Decline:** Not known. - **Time / Rate (Yrs or gens):** Not known. - **No of Mature Individuals:** Not known. **Global Population:** Single location and restricted distribution. **Data Quality:** General field study (R. P. Barman, 1984 in Namdapha Wildlife Sanctuary); Museum/collections/ records. **Recent Field Studies:** None. **Threats:** Overexploitation; Poisoning. **Trade:** No. **Other Comments:** Recent survey conducted by State fisheries of Arunachal Pradesh in 1997. did not record this species. **Status - IUCN: ENDANGERED.** - **Criteria based on: B1, 2a, 2b, 2c** (Restricted distribution, single location, continuing decline observed in extent of occurrence, area of occupancy and/or quality of habitat). - **CITES:** No. - **IWPA (1972;91):** No. - **RDB, National (1994):** No. - **RDB, International (1996):** No. **Recommendations - Research management:** Survey; Monitoring; Life history studies. - **PHVA:** Pending. **Captive breeding Recommendations - Captive breeding:** No. - **Level of difficulty:** Not known. **Existing Captive Programs:** None. - **Names of facilities:** —. **Sources (Refer Appendix):** 16, 202. **Compilers:** A.K. Karmakar, W. Viswanath, S.P. Biswas, P.C. Mahanta, B.A. Daniel.

5. *Acanthocobitis zonalternans* (Blyth, 1861) — DD/N. (*Nemacheilus zonalternans*, Talw. Wh. 1991). **Family:** Homalopteridae. **Taxonomic status:** Species. **Habit:** Bottom dwelling, Omnivorous. **Habitat:** Hill Stream. **Global Distribution:** India, Myanmar. **Current Regional Distribution:** Manipur Valley. - **Elevation:** 800 - 1000 m. - **Range (Sq. km):** < 5,000. - **Area Occupied (Sq. km):** < 500. - **Number of location:** Not known (Chindwin drainage). **Population Trends - % change - % Decline:** Not known. - **Time / Rate (Yrs or gens):** Not known. - **No of Mature Individuals:** Not known. **Global Population:** Not known. **Regional Population:** Not known. **Data Quality:** General field study. **Recent Field Studies:** None. **Threats:** Dynamite and other destructive fishing; Poisoning. **Trade:** No. **Other Comments:** No more report of the species after Hora's report (1921). **Status - IUCN: DATA DEFICIENT (Nationally).** **DATA DEFICIENT (Globally).** -

Criteria based on: —. - CITES: No. - IWPA (1972;91): No. - RDB, National (1994): No. - RDB, International (1996): No. Recommendations - Research management: Survey; Monitoring. - PHVA: No. Captive breeding Recommendations - Captive breeding: No. - Level of difficulty: Not known. Existing Captive Programs: None. - Names of facilities: —. Sources (Refer Appendix): 68. Compilers: A.K. Karmakar, W. Vishwanath, S.P. Biswas, P.C. Mahanta, R. Dayal, B.A. Daniel.

6. *Ailia coila* (Hamilton - Buchanan) — VU/N (A1a, 1b, 1c, 1d, 2b, 2c, 2d). Family: Schilbeidae. Taxonomic status: Species. Habit: Carnivorous, surface to mid water. Habitat: River, reservoirs and connected waters. Global Distribution: India, Pakistan, Bangladesh, Nepal. Current Regional Distribution: Jammu, Ganga, Mahanadi river system. - Elevation: < 500. - Range (Sq. km): > 20,000. - Area Occupied (Sq. km): > 2,000. - Number of location: Many; Contiguous. Population Trends - % change - % Decline: 20% . - Time / Rate (Yrs or gens): 10 yrs. - No of Mature Individuals: Not known. Global Population: Not known. Regional Population: Continuing decline observed. Data Quality: General field study; Museum/collections/records. Recent Field Studies: A.C. Pandey, 1996 in Varanasi, East Uttar Pradesh, Ganga, Ghagra. Threats: Human interference; Hunting; Overexploitation; Pollution; Trade. Trade: Commercial. Other Comments: Sought after food fish. Status - IUCN: VULNERABLE (Nationally). DATA DEFICIENT (Globally). - Criteria based on: A1a, 1b, 1c, 1d, 2b, 2c, 2d (Observed population reduction due to decline in extent of occurrence, area of occupancy, quality of habitat and potential or actual levels of exploitation and predicted decline due to reduction in extent of occurrence, area of occupancy, quality of habitat and potential levels of exploitation). - CITES: No. - IWPA (1972;91): No. - RDB, National (1994): No. - RDB, International (1996): No. Recommendations - Research management: Genetic management; Survey; Monitoring; Limiting factor research; Limiting factor management; Habitat management. - PHVA: No. Captive breeding Recommendations - Captive breeding: Level 1. - Level of difficulty: Very difficult. Existing Captive Programs: None. - Names of facilities: —. Sources (Refer Appendix): 63, 104, 200, 203 . Compilers: D. N. Saxena, D. Basu, A. K. Mishra, P. Das, A.C. Pandey, R. Abidi.

7. *Ailia punctata* (Day, 1872) — VU/N (A1a, 1c, 1d). Family: Schilbeidae. Taxonomic status: Species. Habit: Carnivore. Habitat: Riverine. Global Distribution: India, Pakistan. Current Regional Distribution: Yamuna and Ganga drainage. - Elevation: < 500 m. - Range (Sq. km): > 20,000. - Area Occupied (Sq. km): > 2,000. - Number of location: Many; Contiguous. Population Trends - % change - % Decline: 20% . - Time / Rate (Yrs or gens): 10 yrs. - No of Mature Individuals: Not known. Global Population: Not known. Regional Population: Continuing decline observed. Data Quality: General field study; Museum/collections/records. Recent Field Studies: N.K. Srivastava, 1986 - 1996 in Allahabad and middle ganges. Threats: Human interference; Loss of habitat; Overexploitation; Pollution; Trade. Trade: Commercial. Other Comments: Highly regarded food fish, caught in 1/2 inch mesh draughts. Status - IUCN: VULNERABLE (Nationally). DATA DEFICIENT (Globally). - Criteria based on: A1a, 1c, 1d (Observed population reduction due to decline in extent of occurrence, area of occupancy and/or quality of habitat and actual or potential levels of exploitation). - CITES: No. - IWPA (1972;91): No. - RDB, National (1994): No. - RDB, International (1996): No. Recommendations - Research management: Monitoring; Habitat management. - PHVA: No. Captive breeding Recommendations - Captive breeding: No. - Level of difficulty: Not known. Existing Captive Programs: None. - Names of facilities: —. Sources (Refer Appendix): 202 . Compilers: N.K. Srivastava, D.N. Saksena, R. Abidi, P. Das, A. Mishra, D. Basu.

8. *Amblyceps apangi* Nath and Dey, 1989 — VU (D2). Family: Amblycipitidae. Taxonomic status: Species. Habit: Carnivorous. Habitat: Upland stream. Global Distribution: ENDEMIC to India. Current Regional Distribution: Dikrong river, Arunachal Pradesh, Brahmaputra system. - Elevation: 200 - 1000 m. - Range (Sq. km): < 5,000. - Area Occupied (Sq. km): < 500. - Number of location: 1 (Dikrong river). Population Trends - % change - % Decline: Not known . - Time / Rate (Yrs or gens): Not known. - No of Mature Individuals: Not known. Global Population: Single location and restricted distribution. Data Quality: General field study (P. Nath, 1985 in Dikrong river); Museum/collections/records (P. Nath and S.C. Dey, 1989). Recent Field Studies: None. Threats: No. Trade: Not known. Other Comments: This is a new species reported by Nath & Dey (1989). No collection has been done since its first report from Arunachal Pradesh. Status - IUCN: VULNERABLE. - Criteria based on: D2 (Restricted population in single location). - CITES: No. - IWPA (1972;91): No. - RDB, National (1994): No. - RDB, International (1996): No. Recommendations - Research management: Survey; Monitoring. - PHVA: No. Captive breeding Recommendations - Captive breeding: No. - Level of difficulty: Not known. Existing Captive Programs: None. - Names of facilities: —. Sources (Refer Appendix): 144 . Compilers: S.P. Biswas, W. Vishwanath, P.C. Mahanta, A.K. Karmakar, B.A. Daniel.

9. *Amblyceps arunachalensis*, Nath and Dey, 1989 — VU (D2). Family: Amblycipitidae. Taxonomic status: Species. Habit: Carnivores. Habitat: Upland streams. Global Distribution: ENDEMIC to India. Current Regional Distribution: Dikrong River (Brahmaputra system), Arunachal Pradesh. - Elevation: 200 - 1000 m. - Range (Sq. km): < 5,000. - Area Occupied (Sq. km): < 500. - Number of location: 1 (Dikrong river). Population Trends - % change - % Decline: Not known . - Time / Rate (Yrs or gens): Not known. - No of Mature Individuals: Not known. Global Population: Restricted distribution in single location. Data Quality: General field study (P. Nath, 1985 from Dikrong river); Museum/Collections/ records (P. Nath and S.C. Dey, 1989. Arunachal Pradesh) . Recent Field Studies: None. Threats: No. Trade: Not known. Other Comments: This is a new species reported by Nath and Dey, 1989. Since its first report from Arunachal Pradesh no record has so far been available to assess its status. Status - IUCN: VULNERABLE. - Criteria based on: D2 (Restricted population to single location). - CITES: No. - IWPA (1972;91): No. - RDB, National (1994): No. - RDB, International (1996): No. Recommendations - Research management: Survey; Monitoring. - PHVA: No. Captive breeding Recommendations - Captive breeding: No. - Level of difficulty: Not known. Existing Captive Programs: None. - Names of facilities: —. Sources (Refer Appendix): 144. Compilers: S.P. Biswas, A.K. Karmakar, W. Vishwanath, P.C. Mahanta, B.A. Daniel.

10. *Amblyceps mangois* (Hamilton - Buchanan, 1822) — LRnt/ N . (*Pimelodus mangain* Hamilton - Buchanan, 1822). Family: Amblycipitidae. Taxonomic status: Species. Habit: Carnivorous. Habitat: Hill Streams. Global

Distribution: Pakistan, India, Bangladesh, Myanmar, Thailand, Krishna river. **Current Regional Distribution:** Foril hills of Himalaya, Kangra Valley, Assam. - **Elevation:** 1000 m. - **Range (Sq. km):** > 20,000. - **Area Occupied (Sq. km):** > 2,000. - **Number of location:** Many; Fragmented. **Population Trends - % change - % Decline:** 30% . - **Time / Rate (Yrs or gens):** 20 yrs. - **No of Mature Individuals:** Not known. **Global Population:** Continuing decline observed. **Data Quality:** General field study. **Recent Field Studies:** C.B. Joshi, 1992 Kumaon Himalaya. **Threats:** Human interference; Loss of habitat; Overexploitation; Trade. **Trade:** Domestic. **Other Comments:** —. **Status - IUCN: LOWER RISK - NEAR THREATENED (Nationally). DATA DEFICIENT (Globally).** - **Criteria based on:** —. - **CITES:** No. - **IWPA (1972;91):** No. - **RDB, National (1994):** No. - **RDB, International (1996):** No. **Recommendations - Research management:** Limiting factor management; Limiting factor research. - **PHVA:** Yes. **Captive breeding Recommendations - Captive breeding:** Pending. - **Level of difficulty:** Moderate difficulty. **Existing Captive Programs:** None. - **Names of facilities:** —. **Sources (Refer Appendix):** 27 (i). **Compilers:** C.B. Joshi, C.S. Singh, R.S. Patiyl, S.M. Srivastava, S.K. Pal, A.K. Singh, S.K. Srivastava.

11. *Amblypharyngodon chakaiensis* (Babu Rao & Nair, 1978) - - CR (A1, 2c). Family: Cyprinidae. **Taxonomic status:** Species. **Habit:** Fresh water. **Habitat:** Drainage canals, lakes. **Global Distribution:** ENDEMIC to India. **Current Regional Distribution:** Kerala. - **Elevation:** 20 m. - **Range (Sq. km):** < 100. - **Area Occupied (Sq. km):** < 10. - **Number of location:** 1 (Chaka in Thiruvananthapuram - First description). **Population Trends - % change - % Decline:** Not known . - **Time / Rate (Yrs or gens):** Not known. - **No of Mature Individuals:** Not known. **Global Population:** Single location and highly restricted. **Data Quality:** General field study. **Recent Field Studies:** None. **Threats:** Damming; Fishing; Loss of habitat; Overexploitation; Siltation; Trade. **Trade:** Local. **Other Comments:** —. **Status - IUCN: CRITICALLY ENDANGERED.** - **Criteria based on: A1, 2c** (Population reduction due to decline in extent of occurrence, area of occupancy and/or quality of habitat). - **CITES:** No. - **IWPA (1972;91):** No. - **RDB, National (1994):** No. - **RDB, International (1996):** No. **Recommendations - Research management:** Survey; Monitoring. - **PHVA:** Not known. **Captive breeding Recommendations - Captive breeding:** Not known. - **Level of difficulty:** Not known. **Existing Captive Programs:** None. - **Names of facilities:** —. **Sources (Refer Appendix):** 202 (336). **Compilers:** T.V. Annamercy, M. Arunachalam, A. Gopalakrishnan, B.M. Kurup, A. Manimekalan, O. Alphonse, P. Subramanian, C.P. Shaji.

12. *Amblypharyngodon mola* (Hamilton - Buchanan, 1822) — LRlc/N . (*Cyprinus mola*; *Amblypharyngodon sirensis*). Family: Cyprinidae. **Taxonomic status:** Species. **Habit:** Omnivorous, Multiple breeder. **Habitat:** Ponds, Lakes, River, Reservoirs. **Global Distribution:** India, Pakistan, Bangladesh, Nepal. **Current Regional Distribution:** Throughout India (except Kerala). - **Elevation:** Up to 500 m. - **Range (Sq. km):** > 20,000. - **Area Occupied (Sq. km):** > 2,000. - **Number of location:** Many . **Population Trends - % change - % Decline:** Stable . - **Time / Rate (Yrs or gens):** Not known. - **No of Mature Individuals:** Not known. **Global Population:** Not known. **Regional Population:** No decline observed. **Data Quality:** Indirect information; Museum/ collections/records. **Recent Field Studies:** Rao & Chatterjee, 1991 in Narmada, Madhya Pradesh; A.C. Pandey, 1996 in Varanasi, Uttar Pradesh; Sarkar U.K. and A.K. Dutta, 1995 - 96 CIFA Annual Report at CIFA Centre. **Threats:** Fishing; Trade. **Trade:** Domestic. **Other Comments:** —. **Status - IUCN: LOWER RISK - LEAST CONCERN (Nationally). DATA DEFICIENT (Globally).** - **Criteria based on:** —. - **CITES:** No. - **IWPA (1972;91):** No. - **RDB, National (1994):** No. - **RDB, International (1996):** No. **Recommendations - Research management:** Husbandry research. - **PHVA:** No. **Captive breeding Recommendations - Captive breeding:** No. - **Level of difficulty:** Moderate difficulty. **Existing Captive Programs:** None. - **Names of facilities:** —. **Sources (Refer Appendix):** 202, 27 (iii) . **Compilers:** G.P. Dubey, S.V. Sharma, N. More, V.S. Basheer, J.K. Jena, A. Apte., K.W. Dhamge.

13. *Anabas cobojus* (Hamilton - Buchanan, 1822) — VU/N (A1a, 1c, 1d) . (*Corius cobojus* Hamilton - Buchanan; *Anabas oligolepis* Bleeker; *Anabas seandens*). Family: Anabantidae. **Taxonomic status:** Species. **Habit:** Omnivore, Annual Breeder, Air Breathing. **Habitat:** Pond, swamps, ditches. **Global Distribution:** India, Bangladesh, Borneo. **Current Regional Distribution:** Andhra Pradesh (Lake Kolleru) Kerala, Orissa, West Bengal. - **Elevation:** Up to 300 m. - **Range (Sq. km):** > 20,000. - **Area Occupied (Sq. km):** < 2,000. - **Number of location:** Many. **Population Trends - % change - % Decline:** 40% . - **Time / Rate (Yrs or gens):** 10 yrs. - **No of Mature Individuals:** Not known. **Global Population:** Not known. **Regional Population:** Continuing decline observed . **Data Quality:** General field studies (Rao, 1986 in Kolleru lake, Andhra Pradesh). **Recent Field Studies:** Jayaraj & Sharma, 1995 in Kolleru lake, Andhra Pradesh. **Threats:** Fishing; Loss of habitat; Overexploitation; Trade. **Trade:** Domestic. **Other Comments:** —. **Status - IUCN: VULNERABLE (Nationally). DATA DEFICIENT (Globally).** - **Criteria based on: A1a, 1c, 1d** (Observed population reduction due to decline in extent of occurrence, area of occupancy and/or quality of habitat and actual or potential levels of exploitation). - **CITES:** No. - **IWPA (1972;91):** No. - **RDB, National (1994):** No. - **RDB, International (1996):** No. **Recommendations - Research management:** Habitat management; Monitoring. - **PHVA:** Yes. **Captive breeding Recommendations - Captive breeding:** Level 3. - **Level of difficulty:** Moderate difficulty. **Existing Captive Programs:** None. - **Names of facilities:** —. **Sources (Refer Appendix):** —. **Compilers:** G.P. Dubey, S.V. Sharma, N. More, V.S. Basheer, J.K. Jena, A. Apte., K.W. Dhamge.

14. *Anabas testudineus* (Bloch, 1792) — VU/N (A1a, 1c, 1d) . Family: Anabantidae. **Taxonomic status:** Species. **Habit:** Omnivorous, Annual breeder, Air breathing. **Habitat:** Ponds, Swamps. **Global Distribution:** India, Pakistan, Bangladesh, Sri Lanka, Myanmar, Singapore, Phillipines, Malaysia. **Current Regional Distribution:** Andhra Pradesh, West Bengal, Orissa, Tamil Nadu, Madhya Pradesh, Kerala, Bihar etc.,. - **Elevation:** Up to 500 m. - **Range (Sq. km):** > 20,000. - **Area Occupied (Sq. km):** > 2,000. - **Number of location:** Many. **Population Trends - % change - % Decline:** 40% . - **Time / Rate (Yrs or gens):** 10 yrs. - **No of Mature Individuals:** abundant. **Global Population:** Not known. **Regional Population:** Not known. **Data Quality:** General field study (G.P. Dubey, 1965); Indirect information; Museum/herbarium/ collection/records . **Recent Field Studies:** A.C. Pandey, 1993 - 97 Varanasi, Farizabad (Uttar Pradesh). **Threats:** Damming; Fishing; Human interference; Overexploitation; Trade. **Trade:** Local; Domestic; Commercial. **Other Comments:** Hardy fish of considerable fisheries interest. Can crawl on land with the help of fin spines. **Status - IUCN: VULNERABLE (Nationally). DATA DEFICIENT (Globally).** - **Criteria based on: A1a, 1c, 1d** (Observed population reduction observed due to decline in extent of occurrence, area of occupancy and/or quality of habitat and actual or potential levels of exploitation). - **CITES:** No. - **IWPA (1972;91):** No. - **RDB, National (1994):** No. - **RDB, International (1996):** No. **Recommendations - Research**

management: Husbandry research; Habitat management; Survey; Monitoring; Limiting factor management; Limiting factor research. - **PHVA:** Yes. **Captive breeding Recommendations - Captive breeding:** Level 1; Level 2; Level 3; Level 4. - **Level of difficulty:** Least difficult. **Existing Captive Programs:** None. - **Names of facilities:** —. **Sources (Refer Appendix):** 50, 103, 171, 182, 200, 202. **Compilers:** G.P. Dubey, S.V. Sharma, N. More, V.S. Basheer, J.K. Jena, A. Apte., K.W. Dhamge, A. Husain, U.K. Sarkar, A.K. Singh, A.C. Pandey, A.K. Pandey.

15. *Anguilla bengalensis* (Gray, 1831) — EN (A1a, 1c, 1d; B1, 2c) . (*Muraena bengalensis*). **Family:** Anguillidae. **Taxonomic status:** Species. **Habit:** Omnivore, Catadromous. **Habitat:** Rivers and estuaries. **Global Distribution:** Pakistan, India, Sri Lanka, Myanmar, East Indies. **Current Regional Distribution:** East coast of India, Narmada. - **Elevation:** Up to 100 m. - **Range (Sq. km):** > 20,000. - **Area Occupied (Sq. km):** < 500. - **Number of location:** Many; Fragmented (Ganga, Mahanadi, Narmada). **Population Trends - % change - % Decline:** 50 %. - **Time / Rate (Yrs or gens):** 10 yrs. - **No of Mature Individuals:** Not known. **Global Population:** Not known. **Regional Population:** Rapid continuing decline observed. **Data Quality:** General field study; Indirect information; Museum/collection/records. **Recent Field Studies:** Dubey, 1994 in Narmada. **Threats:** Damming; Fishing; Loss of habitat; Overexploitation; Trade. **Trade:** Domestic. **Other Comments:** —. **Status - IUCN:** ENDANGERED (Nationally). **DATA DEFICIENT (Globally)**. - **Criteria based on:** A1a, 1c, 1d (Observed population reduction observed due to decline in extent of occurrence, area of occupancy and/or quality of habitat and actual or potential levels of exploitation); B1, 2c (Restricted distribution, severely fragmented, single location, continuing decline observed in extent of occurrence, area of occupancy and/or quality of habitat). - **CITES:** No. - **IWPA (1972;91):** No. - **RDB, National (1994):** No. - **RDB, International (1996):** No. **Recommendations - Research management:** Survey; Monitoring; Husbandry research; Habitat management. - **PHVA:** Yes. **Captive breeding Recommendations - Captive breeding:** Level 2. - **Level of difficulty:** Very difficult. **Existing Captive Programs:** None. - **Names of facilities:** —. **Sources (Refer Appendix):** 52. **Compilers:** G.P. Dubey, S.V. Sharma, N. More, V.S. Basheer, V. K. Jena, A. Apte., K.W. Dhamge.

16. *Aplocheilus panchax* (Hamilton - Buchanan, 1822) — DD/N. **Family:** Aplocheilidae. **Taxonomic status:** Species. **Habit:** Planktonophagous, larvivorous. **Habitat:** Clear shallow and brackish waters at low altitudes. **Global Distribution:** India, Pakistan, Bangladesh to Malayan Archipelago. **Current Regional Distribution:** Gandak river. - **Elevation:** < 500 m. - **Range (Sq. km):** > 20,000. - **Area Occupied (Sq. km):** Not known. - **Number of location:** 1 (Mosihari on gandak river). **Population Trends - % change - % Decline:** Not known. - **Time / Rate (Yrs or gens):** Not known. - **No of Mature Individuals:** Not known. **Global Population:** Not known. **Regional Population:** Not known. **Data Quality:** Records. **Recent Field Studies:** None. **Threats:** Not known. **Trade:** Not known. **Other Comments:** Rarely observed in middle ganges N.K. Srivastava of CICFRI Allahabad, except for 1 location as stated above. **Status - IUCN:** DATA DEFICIENT (Nationally). **DATA DEFICIENT (Globally)**. - **Criteria based on:** —. - **CITES:** No. - **IWPA (1972;91):** No. - **RDB, National (1994):** No. - **RDB, International (1996):** No. **Recommendations - Research management:** Survey; Monitoring; Habitat management; Life history studies. - **PHVA:** No. **Captive breeding Recommendations - Captive breeding:** No. - **Level of difficulty:** Not known. **Existing Captive Programs:** None. - **Names of facilities:** —. **Sources (Refer Appendix):** 202. **Compilers:** N.K. Srivastava, D.N. Saksena, P. Das, A. Mishra, R. Abidi.

17. *Aplocheilus rubrostigma* (Jerdon) — DD. (*Aplocheilus lineatus* (Valenciennes)). **Family:** Aplocheilidae. **Taxonomic status:** Species. **Habit:** Omnivorous. **Habitat:** Riverine brackish water. **Global Distribution:** ENDEMIC to India. **Current Regional Distribution:** Kerala and Coromandal coast. - **Elevation:** Not known. - **Range (Sq. km):** Not known. - **Area Occupied (Sq. km):** Not known. - **Number of location:** Not known. **Population Trends - % change - % Decline:** Not known. - **Time / Rate (Yrs or gens):** Not known. - **No of Mature Individuals:** Not known. **Global Population:** Not known. **Data Quality:** Records. **Recent Field Studies:** None. **Threats:** Not known. **Trade:** Not known. **Other Comments:** This species is very close to *Aplocheilus lineatus*. Some taxonomic uncertainty exists between these two species. **Status - IUCN:** DATA DEFICIENT. - **Criteria based on:** —. - **CITES:** No. - **IWPA (1972;91):** No. - **RDB, National (1994):** No. - **RDB, International (1996):** No. **Recommendations - Research management:** Survey; Taxonomic and morphological genetic study. - **PHVA:** Not known. **Captive breeding Recommendations - Captive breeding:** Not known. - **Level of difficulty:** Not known. **Existing Captive Programs:** None. - **Names of facilities:** —. **Sources (Refer Appendix):** 85, 202, 27 (viii). **Compilers:** T.V. Annameray, M. Arunachalam, A. Gopalakrishnan, B.M. Kurup, A. Manimekalan, O. Alphonse, P. Subramanian, C.P. Shaji.

18. *Aspidoparia jaya* (Hamilton - Buchanan, 1822) — VU/N (A1a, 1c, 1d). **Family:** Cyprinidae. **Taxonomic status:** Species. **Habit:** Omnivore, Column feeder. **Habitat:** Rivers. **Global Distribution:** India, Nepal, Bangladesh. **Current Regional Distribution:** . - **Elevation:** 250 m. - **Range (Sq. km):** > 20,000. - **Area Occupied (Sq. km):** < 500. - **Number of location:** Many. **Population Trends - % change - % Decline:** 30%. - **Time / Rate (Yrs or gens):** 10 yrs. - **No of Mature Individuals:** Not known. **Global Population:** Not known. **Regional Population:** Continuing decline observed. **Data Quality:** General field study; Museum/records/collections; Informal field sightings. **Recent Field Studies:** Talwar & Jhingran, 1991 in Brahmaputra. **Threats:** Pollution; Trade. **Trade:** Local; Domestic. **Other Comments:** Aquarium fish, larvivorous fish of no fishing value. This is a common species in the Brahmaputra drainage system, S.P. Biswas at Dibrugarh University. **Status - IUCN:** VULNERABLE (Nationally). **DATA DEFICIENT (Globally)**. - **Criteria based on:** A1a, 1c, 1d (Observed population reduction observed due to decline in extent of occurrence, area of occupancy and/or quality of habitat and actual or potential levels of exploitation). - **CITES:** No. - **IWPA (1972;91):** No. - **RDB, National (1994):** No. - **RDB, International (1996):** No. **Recommendations - Research management:** Survey; Monitoring; Limiting factor management. - **PHVA:** Yes. **Captive breeding Recommendations - Captive breeding:** Level 1. - **Level of difficulty:** Least difficult. **Existing Captive Programs:** None. - **Names of facilities:** —. **Sources (Refer Appendix):** 197, 202. **Compilers:** U.K. Sarkar, A. Husain, A.K. Singh, A.C. Pandey, A.K. Pandey.

19. *Aspidoparia morar* (Hamilton - Buchanan, 1822) — LRnt/N. (*Cyprinus morar* Hamilton - Buchanan). **Family:** Cyprinidae. **Taxonomic status:** Species. **Habit:** Planktonophagous, Herbivorous, Column feeder. **Habitat:** Riverine.

Global Distribution: India, Pakistan, Iran, Nepal, Bangladesh, Myanmar. **Current Regional Distribution:** Punjab, Uttar Pradesh, Bihar, West Bengal, Assam, Orissa. - **Elevation:** < 500 m. - **Range (Sq. km):** > 20,000. - **Area Occupied (Sq. km):** > 2,000. - **Number of location:** Many. **Population Trends - % change - % Decline:** Not known. - **Time / Rate (Yrs or gens):** Not known. - **No of Mature Individuals:** Not known. **Global Population:** Not known. **Regional Population:** Not known. **Data Quality:** Museums/Records/collections. **Recent Field Studies:** None. **Threats:** Human interference; Loss of habitat; Overexploitation; Pollution; Trade. **Trade:** Local; Commercial. **Other Comments:** —. **Status - IUCN:** LOWER RISK - NEAR THREATENED (Nationally). **DATA DEFICIENT (Globally).** - **Criteria based on:** —. - **CITES:** No. - **IWPA (1972;91):** No. - **RDB, National (1994):** No. - **RDB, International (1996):** No. **Recommendations - Research management:** Survey; Monitoring; Life history studies; Taxonomic and morphological genetic studies; Genetic management. - **PHVA:** No. **Captive breeding Recommendations - Captive breeding:** No. - **Level of difficulty:** Not known. **Existing Captive Programs:** None. - **Names of facilities:** —. **Sources (Refer Appendix):** 202, 27 (ix). **Compilers:** D. N. Sakesna, A. Mishra, R. Abidi, P. Das, D. Basu.

20. *Bagarius bagarius* (Hamilton - Buchanan, 1822) — VU (A1a, 1c, 1d). (*Pimelodus bagarius* Hamilton - Buchanan). **Family:** Sisoridae. **Taxonomic status:** Species. **Habit:** Carnivore, Annual riverine breeders. **Habitat:** Riverine. **Global Distribution:** ENDEMIC to India. **Current Regional Distribution:** Gangetic plains and peninsular India up to Cauvery. - **Elevation:** Up to 500 m. - **Range (Sq. km):** > 20,000. - **Area Occupied (Sq. km):** > 2,000. - **Number of location:** Many (Ganges, Mahanadi, Chambal, Narmada, Capti, Cauvery, Krishna. **Population Trends - % change - % Decline:** 40% . - **Time / Rate (Yrs or gens):** 20 yrs. - **No of Mature Individuals:** Not known. **Global Population:** Continuing decline observed. **Data Quality:** General field study (G.P. Dubey, 1965 in Chambal); Museum/collections/records. **Recent Field Studies:** Sughan & Yadav, 1992 in Mahanadi; S. C. Pandey, 1996 - 97 in Ganga, Gomti, Ghaghra. **Threats:** Fishing; Loss of habitat; Trade. **Trade:** Commercial. **Other Comments:** Overexploitation of large sized fishes. **Status - IUCN:** VULNERABLE. - **Criteria based on:** A1a, 1c, 1d (Observed population reduction observed due to decline in extent of occurrence, area of occupancy and/or quality of habitat and actual or potential levels of exploitation). - **CITES:** No. - **IWPA (1972;91):** No. - **RDB, National (1994):** No. - **RDB, International (1996):** No. **Recommendations - Research management:** Habitat management; Limiting factor research. - **PHVA:** Yes. **Captive breeding Recommendations - Captive breeding:** Level 3. - **Level of difficulty:** Very difficult. **Existing Captive Programs:** None. - **Names of facilities:** —. **Sources (Refer Appendix):** 52, 163 (i), 200, 221 (i). **Compilers:** G.P. Dubey, S.V. Sharma, N. More, V.S. Basheer, J.K. Jena, A. Apte., K. Dhamge.

21. *Balitora brucei* (Gray, 1830) — LRnt/N. (*Balitora maculata* Gray, 1930). **Family:** Balitoridae. **Taxonomic status:** Species. **Habit:** Bottom dwelling, Omnivorous. **Habitat:** Hill stream. **Global Distribution:** India, Bhutan, Bangladesh, Myanmar, Thailand. **Current Regional Distribution:** Assam (Brahmaputra region), Teesta basin in Darjeeling (West Bengal), Manipur (Chindwin basin). - **Elevation:** 500 - 1500 m. - **Range (Sq. km):** > 20,000. - **Area Occupied (Sq. km):** > 2,000. - **Number of location:** Many; Fragmented. **Population Trends - % change - % Decline:** Not known. - **Time / Rate (Yrs or gens):** Not known. - **No of Mature Individuals:** Not known. **Global Population:** Not known. **Regional Population:** Not known. **Data Quality:** Collections. **Recent Field Studies:** N. Sen, 1992 from Garo hills, Meghalaya; W. Vishwanath, 1995 from Lockchao river, Manipur. **Threats:** Dynamite and other destructive fishing; Human interference. **Trade:** No. **Other Comments:** —. **Status - IUCN:** LOWER RISK - NEAR THREATENED (Nationally). **DATA DEFICIENT (Globally).** - **Criteria based on:** —. - **CITES:** No. - **IWPA (1972;91):** No. - **RDB, National (1994):** No. - **RDB, International (1996):** No. **Recommendations - Research management:** Survey; Monitoring. - **PHVA:** No. **Captive breeding Recommendations - Captive breeding:** No. - **Level of difficulty:** Not known. **Existing Captive Programs:** None. - **Names of facilities:** —. **Sources (Refer Appendix):** 189 (ii), 202. **Compilers:** W. Vishwanath Singh, A.K. Karmakar, S.P. Biswas, P.C. Mahanta, R. Dayal., B.A. Daniel.

22. *Barbus carletoni* (Fowler, 1924) — EN (B1, 2c). (*Puntius sopher* ?? (Hamilton - Buchanan)). **Family:** Cyprinidae. **Taxonomic status:** Species. **Habit:** Omnivorous, Column feeder. **Habitat:** Stream at base of Himalayas. **Global Distribution:** ENDEMIC to India. **Current Regional Distribution:** Dehradun (Uttar Pradesh), Hosargabad (Madhya Pradesh). - **Range (Sq. km):** > 20,000. - **Area Occupied (Sq. km):** < 500. - **Number of location:** Few (Narmada river); Fragmented (Dehradun). **Population Trends - % change - % Decline:** 30 % . - **Time / Rate (Yrs or gens):** 10 Yrs. - **No of Mature Individuals:** Not known. **Global Population:** Not known. **Data Quality:** General field studies (Tilak, 1970; Fowler, 1924); Museum/collection/records. **Recent Field Studies:** Not known. **Threats:** Human interference. **Trade:** No. **Other Comments:** Little known fish of no fishery importance; can be used in aquaria. Valid species mistakenly merge with *Puntius sopher* in Talwar & Jhingran (1991) - as per Dr. Husain. **Status - IUCN:** ENDANGERED. - **Criteria based on:** B1, 2c (Restricted distribution, limited locations, severely fragmented, continuing decline observed in extent of occurrence, area of occupancy and/or quality of habitat). - **CITES:** No. - **IWPA (1972;91):** No. - **RDB, National (1994):** No. - **RDB, International (1996):** No. **Recommendations - Research management:** Survey; Monitoring; Limiting factor research. - **PHVA:** Yes. **Captive breeding Recommendations - Captive breeding:** Level 1. - **Level of difficulty:** Least difficult. **Existing Captive Programs:** None. - **Names of facilities:** —. **Sources (Refer Appendix):** 55, 204. **Compilers:** U.K. Sarkar, A. Husain, A.C. Pandey, A.K. Pandey, A.K. Singh.

23. *Barilius bakeri* Day, 1865 — VU (A1a, 1c, 1d). **Family:** Cyprinidae. **Taxonomic status:** Species. **Habit:** Fresh water. **Habitat:** Streams and river. **Global Distribution:** ENDEMIC to India. **Current Regional Distribution:** Upper reaches of Almost all rivers of Western Ghats of Kerala. - **Elevation:** 100 - 200 m. - **Range (Sq. km):** < 20,000. - **Area Occupied (Sq. km):** > 2,000. - **Number of location:** Many; Fragmented. **Population Trends - % change - % Decline:** 30% . - **Time / Rate (Yrs or gens):** 10 yrs. - **No of Mature Individuals:** Not known. **Global Population:** Continuing decline observed. **Data Quality:** Reliable Census; General field study. **Recent Field Studies:** M. Arunachalam & A. Manimekalan, 1996 in South Indian Streams. **Threats:** Fishing; Loss of habitat; Pesticides; Poisoning; Siltation; Trade. **Trade:** Local. **Other Comments:** Common only this areas, there may be a chance of getting it rare. **Status - IUCN:** VULNERABLE. - **Criteria based on:** A1a, 1c, 1d (Observed population reduction due to decline in extent of occurrence, area of occupancy and/or

quality of habitat and actual or potential levels of exploitation). - **CITES:** No. - **IWPA (1972;91):** No. - **RDB, National (1994):** No. - **RDB, International (1996):** No. **Recommendations - Research management:** Monitoring; Life history studies. - **PHVA:** No. **Captive breeding Recommendations - Captive breeding:** No. - **Level of difficulty:** Least difficult. **Existing Captive Programs:** None. - **Names of facilities:** —. **Sources (Refer Appendix):** 11 (iii), 12, 27 (xii). **Compilers:** M. Arunachalam, A. Manimekalan, T.V. Annamercy, A. Gopalakrishnan, . B.M. Kurup, O. Alphonse, P. Subramanian, C.P. Shaji

24. *Barilius barila* (Hamilton - Buchanan, 1822) — VU/N (B1, 2c) . (*Cyprinus barila* Hamilton - Buchanan). **Family:** Cyprinidae. **Taxonomic status:** Species. **Habit:** Omnivorous. **Habitat:** Hilly rivers. **Global Distribution:** India, Nepal. **Current Regional Distribution:** Northern India, Orissa, Brahmaputra, West Bengal. - **Elevation:** Up to 1500 m. - **Range (Sq. km):** > 20,000. - **Area Occupied (Sq. km):** < 2,000. - **Number of location:** Many; Fragmented. **Population Trends - % change - % Decline:** 20% . - **Time / Rate (Yrs or gens):** 25 yrs. - **No of Mature Individuals:** Not known. **Global Population:** Not known. **Regional Population:** Continuing decline observed. **Data Quality:** General field study. **Recent Field Studies:** Singh *et al.*, 1992. **Threats:** Dynamite and other destructive fishing; Trade; Human interference; Overexploitation; Pesticides; Siltation. **Trade:** Local; Domestic. **Other Comments:** —. **Status - IUCN:** **VULNERABLE (Nationally).** **DATA DEFICIENT (Globally).** - **Criteria based on:** B1, 2c (Restricted distribution, single location, severely fragmented, continuing decline observed in extent of occurrence, area of occupancy and/or quality of habitat). - **CITES:** No. - **IWPA (1972;91):** No. - **RDB, National (1994):** No. - **RDB, International (1996):** No. **Recommendations - Research management:** Monitoring; Habitat management; Limiting factor research. - **PHVA:** Yes. **Captive breeding Recommendations - Captive breeding:** Pending. - **Level of difficulty:** Moderate difficulty. **Existing Captive Programs:** None. - **Names of facilities:** —. **Sources (Refer Appendix):** 48, 187, 211. **Compilers:** C. Singh, C. B. Singh, R.S. Patiyal, D. Kapoor, S.M. Srivastava, A.K. Singh,. S.K. Paul.

25. *Barilius barna* (Hamilton - Buchanan, 1822) — LRnt/N . (*Cyprinus barna* Hamilton - Buchanan, 1822). **Family:** Cyprinidae. **Taxonomic status:** Species. **Habit:** Bottom feeder. **Habitat:** All hill stream. **Global Distribution:** India, Nepal, Myanmar and Bangladesh. **Current Regional Distribution:** Ganga, Brahmaputra, Mahanadi, Orissa. - **Elevation:** Up to 2000 m. - **Range (Sq. km):** > 20,000. - **Area Occupied (Sq. km):** > 2,000. - **Number of location:** Many. **Population Trends - % change - % Decline:** Not known . - **Time / Rate (Yrs or gens):** Not known. - **No of Mature Individuals:** Not known. **Global Population:** Not known. **Regional Population:** Not known. **Data Quality:** General field study. **Recent Field Studies:** S. S. Pathani, 1994; C.B. Joshi, 1996 in Kumoun hills; C.B. Joshi & S. Sundar, 1996 in Kumaon hills. **Threats:** Dynamite and other destructive fishing; Edaphic factors; Fishing; Human interference; Loss of habitat; Overexploitation; Poisoning; Siltation; Trade. **Trade:** Local. **Other Comments:** —. **Status - IUCN:** **LOWER RISK - NEAR THREATENED (Nationally).** **DATA DEFICIENT (Globally).** - **Criteria based on:** —. - **CITES:** No. - **IWPA (1972;91):** No. - **RDB, National (1994):** No. - **RDB, International (1996):** No. **Recommendations - Research management:** Monitoring; Life history studies; Habitat management. - **PHVA:** Not known. **Captive breeding Recommendations - Captive breeding:** Pending. - **Level of difficulty:** Not known. **Existing Captive Programs:** None. - **Names of facilities:** —. **Sources (Refer Appendix):** 11 (iv), 202. **Compilers:** C.S. Singh, C.B. Joshi, S. Srivastava, S.M. Srivastava, R.S. Patiyal, S.K. Paul. A.K. Singh.

26. *Barilius bendelisis* (Hamilton - Buchanan, 1807) — LRnt/N . (*Cyprinus bendelisis* Hamilton - Buchanan). **Family:** Cyprinidae. **Taxonomic status:** Species. **Habit:** Bottom feeder. **Habitat:** All hill stream. **Global Distribution:** India, Pakistan, Nepal, Bangladesh, Sri Lanka. **Current Regional Distribution:** All along the Himalaya, Streams etc. - **Elevation:** Up to 2000 m. - **Range (Sq. km):** > 20,000. - **Area Occupied (Sq. km):** > 2,000. - **Number of location:** Many; Fragmented. **Population Trends - % change - % Decline:** Declining . - **Time / Rate (Yrs or gens):** Not known. - **No of Mature Individuals:** Not known. **Global Population:** Not known. **Regional Population:** Continuing decline observed. **Data Quality:** General field study. **Recent Field Studies:** S. S. Pathani, 1994; C.B. Joshi, 1996 in Kumoun hills; C.B. Joshi & S. Sundar, 1996 in Kumaon hills; P.C. Mohanta & R.S. Patiyal, 1996 in Ladhiya stream (Uttar Pradesh); U.K. Sarkar and S.K. Srivastava in Ladhiya stream, Uttar Pradesh. **Threats:** Dynamite and other destructive fishing; Fishing; Human interference; Loss of habitat; Overexploitation; Poisoning; Siltation; Trade. **Trade:** Local; Commercial. **Other Comments:** —. **Status - IUCN:** **LOWER RISK - NEAR THREATENED (Nationally).** **DATA DEFICIENT (Globally).** - **Criteria based on:** —. - **CITES:** No. - **IWPA (1972;91):** No. - **RDB, National (1994):** No. - **RDB, International (1996):** No. **Recommendations - Research management:** Monitoring; Life history studies; Habitat management. - **PHVA:** Yes. **Captive breeding Recommendations - Captive breeding:** No. - **Level of difficulty:** Not known. **Existing Captive Programs:** None. - **Names of facilities:** —. **Sources (Refer Appendix):** 27 (xiv), 184, 202, 231 (i). **Compilers:** C.S. Singh, C.B. Joshi, S.M. Srivastava, R.S. Patiyal, S.K. Srivastava, A.K. Singh.

27. *Barilius canarensis* (Jerdon, 1849) — DD . (*Opsarius canarensis* Jerdon). **Family:** Cyprinidae. **Taxonomic status:** Species. **Habit:** Column feeder. **Habitat:** Fast flowing streams, cold waters. **Global Distribution:** ENDEMIC to India. **Current Regional Distribution:** Streams of Southern Western Ghats. - **Elevation:** 100 - 200 m. - **Range (Sq. km):** < 5,000. - **Area Occupied (Sq. km):** < 500. - **Number of location:** Not known (Daksin Kannada). **Population Trends - % change - % Decline:** Not known . - **Time / Rate (Yrs or gens):** Not known. - **No of Mature Individuals:** Not known. **Global Population:** Not known. **Data Quality:** Museums/collections/records. **Recent Field Studies:** Not known. **Threats:** Not known. **Trade:** Not known. **Other Comments:** —. **Status - IUCN:** **DATA DEFICIENT** . - **Criteria based on:** —. - **CITES:** No. - **IWPA (1972;91):** No. - **RDB, National (1994):** No. - **RDB, International (1996):** No. **Recommendations - Research management:** Survey; Life history studies. - **PHVA:** No. **Captive breeding Recommendations - Captive breeding:** Level 3. - **Level of difficulty:** Very difficult. **Existing Captive Programs:** None. - **Names of facilities:** —. **Sources (Refer Appendix):** 202. **Compilers:** T.V. Annamercy, M. Arunachalam, A. Gopalakrishnan, B.M. Kurup, . A. Manimekalan, O. Alphonse, P. Subramanian, C.P. Shaji.

28. *Barilius corbetti* Tilak & Husain — CR (B1, 2c) . **Family:** Cyprinidae. **Taxonomic status:** Species. **Habit:** Omnivorous, Column feeder. **Habitat:** Slow moving hill sub - mountain streams. **Global Distribution:** ENDEMIC to India. **Current Regional Distribution:** Garhwal District. - **Elevation:** 700 m. - **Range (Sq. km):** < 100. - **Area Occupied (Sq. km):**

< 10. - **Number of location:** 1 (Corbett National Park). **Population Trends - % change - % Decline:** Declining. - **Time / Rate (Yrs or gens):** 17 yrs. - **No of Mature Individuals:** Not known. **Global Population:** Continuing decline observed. **Data Quality:** General field study (Tilak & Husain, 1980 Corbett National Park, Uttar Pradesh); Museum/collections/records. **Recent Field Studies:** None. **Threats:** Predation. **Trade:** Not known. **Other Comments:** Small sized fish of no fishery and sport value. **Status - IUCN:** CRITICALLY ENDANGERED. - **Criteria based on:** B1, 2c (Restricted distribution, single location, continuing decline observed in extent of occurrence, area of occupancy and/or quality of habitat). - **CITES:** No. - **IWPA (1972;91):** No. - **RDB, National (1994):** No. - **RDB, International (1996):** No. **Recommendations - Research management:** Survey; Monitoring; Habitat management; Limiting factor research. - **PHVA:** Yes. **Captive breeding Recommendations - Captive breeding:** Level 1. - **Level of difficulty:** Least difficult. **Existing Captive Programs:** None. - **Names of facilities:** —. **Sources (Refer Appendix):** 215. **Compilers:** A. Husain, A.C. Pandey, A.K. Pandey, U.K. Sarkar, A.K. Singh.

29. *Barilius dimorphicus* Tilak & Husain — CR (B1, 2c). **Family:** Cyprinidae. **Taxonomic status:** Species. **Habit:** Column feeder, Omnivorous. **Habitat:** Hill stream at lower altitudes. **Global Distribution:** ENDEMIC to India. **Current Regional Distribution:** Uttar Pradesh. - **Elevation:** 700 m. - **Range (Sq. km):** < 100. - **Area Occupied (Sq. km):** < 10. - **Number of location:** 2 (Rajaji National Park, Dehradun). **Population Trends - % change - % Decline:** Declining. - **Time / Rate (Yrs or gens):** 7 yrs. - **No of Mature Individuals:** Not known. **Global Population:** Continuing decline observed. **Data Quality:** General field study; Museum/collections/records. **Recent Field Studies:** Tilak & Husain, 1990 Rajaji National Park, Uttar Pradesh. **Threats:** Damming; Fishing; Human interference; Loss of habitat; Poisoning; Trade. **Trade:** Local. **Other Comments:** Good sized fish (about 20 cm). Hence being exploited along with other fishes locally. **Status - IUCN:** CRITICALLY ENDANGERED. - **Criteria based on:** B1, 2c (Restricted distribution, limited location, continuing decline observed in extent of occurrence, area of occupancy and/or quality of habitat). - **CITES:** No. - **IWPA (1972;91):** No. - **RDB, National (1994):** No. - **RDB, International (1996):** No. **Recommendations - Research management:** Survey; Monitoring; Genetic management; Habitat management; Limiting factor research. - **PHVA:** Yes. **Captive breeding Recommendations - Captive breeding:** Level 1; Level 2; Level 4. - **Level of difficulty:** Least difficult. **Existing Captive Programs:** None. - **Names of facilities:** —. **Sources (Refer Appendix):** 215. **Compilers:** A. Husain, A.C. Pandey, U.K. Sarkar, A.K. Singh, A.K. Pandey.

30. *Barilius dogarsinghi* Hora, 1921 — EN (B1, 2a, 2b, 2d). **Family:** Cyprinidae. **Taxonomic status:** Species. **Habit:** Carnivores. **Habitat:** Hill stream. **Global Distribution:** ENDEMIC to India. **Current Regional Distribution:** Manipur. - **Elevation:** 300 - 600 m. - **Range (Sq. km):** < 100. - **Area Occupied (Sq. km):** < 100. - **Number of location:** 3; Fragmented (Tributaries of Manipur river). **Population Trends - % change - % Decline:** 50% . - **Time / Rate (Yrs or gens):** 10 yrs. - **No of Mature Individuals:** Not known. **Global Population:** Rapid continuing decline observed. **Data Quality:** Reliable census; General field study; Museum/collections/records. **Recent Field Studies:** W. Viswanath, 1985 - 93 in Manipur river; Karmakar, 1993 in Manipur river. **Threats:** Dynamite and other destructive fishing; Human interference; Poisoning; Trade. **Trade:** Local. **Other Comments:** This species is restricted to higher stream tributaries of Manipur river only. **Status - IUCN:** ENDANGERED. - **Criteria based on:** B1, 2a, 2b, 2d (Restricted distribution, limited locations, severely fragmented, continuing decline observed in extent of occurrence, area of occupancy and number of locations or subpopulations). - **CITES:** No. - **IWPA (1972;91):** No. - **RDB, National (1994):** No. - **RDB, International (1996):** No. **Recommendations - Research management:** Survey; Monitoring; Life history studies; Limiting factor research. - **PHVA:** Pending. **Captive breeding Recommendations - Captive breeding:** No. - **Level of difficulty:** Not known. **Existing Captive Programs:** None. - **Names of facilities:** —. **Sources (Refer Appendix):** 68, 228. **Compilers:** A.K. Karmakar, W. Vishwanath, S.P. Biswas, P.C. Mahanta, B.A. Daniel.

31. *Barilius evezardi* (Day, 1872) — LRnt. **Family:** Cyprinidae. **Taxonomic status:** Species. **Habit:** Omnivorous. **Habitat:** Riverine. **Global Distribution:** ENDEMIC to India. **Current Regional Distribution:** Narmada river, Bima river (near Poona), Krishna river. - **Elevation:** Up to 300 m. - **Range (Sq. km):** < 20,000. - **Area Occupied (Sq. km):** < 500. - **Number of location:** Few. **Population Trends - % change - % Decline:** Not known. - **Time / Rate (Yrs or gens):** Not known. - **No of Mature Individuals:** Not known. **Global Population:** Not known. **Data Quality:** Indirect information; Museum/collections/records. **Recent Field Studies:** G.P. Dubey, 1994 in Narmada; G.P. Dubey, 1995 - 96 in Narmada. **Threats:** Fishing; Trade. **Trade:** Local. **Other Comments:** —. **Status - IUCN:** LOWER RISK - NEAR THREATENED. - **Criteria based on:** —. - **CITES:** No. - **IWPA (1972;91):** No. - **RDB, National (1994):** No. - **RDB, International (1996):** No. **Recommendations - Research management:** Survey; Monitoring. - **PHVA:** No. **Captive breeding Recommendations - Captive breeding:** No. - **Level of difficulty:** Not known. **Existing Captive Programs:** None. - **Names of facilities:** —. **Sources (Refer Appendix):** 50, 52. **Compilers:** G.P. Dubey, S.V. Sharma, N. More, V.S. Basheer, A. Apte, K.W. Dhamge, J.K. Jena.

32. *Barilius shacra* (Hamilton - Buchanan, 1822) — LRnt/N. (*Cyprinus shacra* Hamilton - Buchanan). **Family:** Cyprinidae. **Taxonomic status:** Species. **Habit:** Omnivorous. **Habitat:** Hill stream. **Global Distribution:** India, Bangladesh, Nepal. **Current Regional Distribution:** Ganga, Yamuna, Brahmaputra system. - **Elevation:** 1200 m. - **Range (Sq. km):** < 5,000. - **Area Occupied (Sq. km):** < 2,000. - **Number of location:** Many. **Population Trends - % change - % Decline:** 10% . - **Time / Rate (Yrs or gens):** 15 yrs. - **No of Mature Individuals:** Not known. **Global Population:** Not known. **Regional Population:** Continuing decline observed. **Data Quality:** General field study. **Recent Field Studies:** None. **Threats:** Human interference; Loss of habitat; Pollution; Siltation; Trade. **Trade:** Local. **Other Comments:** —. **Status - IUCN:** LOWER RISK - NEAR THREATENED (Nationally). **DATA DEFICIENT (Globally).** - **Criteria based on:** —. - **CITES:** Not known. - **IWPA (1972;91):** Not known. - **RDB, National (1994):** Not known. - **RDB, International (1996):** Not known. **Recommendations - Research management:** Monitoring; Other (specify). - **PHVA:** Yes. **Captive breeding Recommendations - Captive breeding:** Pending. - **Level of difficulty:** Moderate difficulty. **Existing Captive Programs:** None. - **Names of facilities:** —. **Sources (Refer Appendix):** 185, 202. **Compilers:** C.S. Singh, C.B. Joshi, D. Kapoor, S.K. Srivastava, R.S. Patiyal, S.M. Srivastava, A.K. Singh, S.K. Paul.

33. *Barilius tileo* (Hamilton - Buchanan, 1822) — LRnt/N. (*Cyprinus tileo* Hamilton - Buchanan). Family: Cyprinidae. Taxonomic status: Species. Habit: Omnivorous. Habitat: Eastern Himalayan rivers and streams, Stony bottom. Global Distribution: India, Bangladesh, Nepal, Myanmar. Current Regional Distribution: Northeastern and eastern India. - Elevation: 2000 m. - Range (Sq. km): < 5,000. - Area Occupied (Sq. km): < 500. - Number of location: Many. Population Trends - % change - % Decline: 10% . - Time / Rate (Yrs or gens): 15 yrs. - No of Mature Individuals: Not known. Global Population: Not known. Regional Population: Continuing decline observed. Data Quality: General field study; Indirect information. Recent Field Studies: C.S. Singh, 1996. Threats: Human interference; Loss of habitat; Siltation; Trade. Trade: Local. Other Comments: —. Status - IUCN: LOWER RISK - NEAR THREATENED (Nationally). DATA DEFICIENT (Globally). - Criteria based on: —. - CITES: No. - IWPA (1972;91): No. - RDB, National (1994): No. - RDB, International (1996): No. Recommendations - Research management: Monitoring; Habitat Management. - PHVA: Pending. Captive breeding Recommendations - Captive breeding: No. - Level of difficulty: Moderate difficult. Existing Captive Programs: None. - Names of facilities: —. Sources (Refer Appendix): 202. Compilers: C.S. Singh, D. Kapoor, C.B. Joshi, S.K. Srivastava, S.M. Srivastava, R.S. Patiyal, A.K. Singh, S.K. Paul.

34. *Barilius vagra* (Hamilton - Buchanan, 1822) — VU/N (A1a, 1c). (*Cyprinus vagra* (Hamilton - Buchanan)). Family: Cyprinidae. Taxonomic status: Species. Habit: Omnivorous. Habitat: Himalayan, Sub Himalayan rivers. Global Distribution: Afghanistan, Pakistan, Sri Lanka, India. Current Regional Distribution: Himalayan rivers. - Elevation: 1500 m. - Range (Sq. km): > 20,000. - Area Occupied (Sq. km): < 2,000. - Number of location: Many (river systems); Fragmented. Population Trends - % change - % Decline: 20% . - Time / Rate (Yrs or gens): 10 yrs. - No of Mature Individuals: Not known. Global Population: Not known. Regional Population: Not known. Data Quality: General field study; Informal field sightings. Recent Field Studies: C.B. Joshi, 1996; Dobrial *et al.*, 1992 ; Sunder *et al.*, 1996 . Threats: Human interference; Loss of habitat; Trade. Trade: Local. Other Comments: —. Status - IUCN: VULNERABLE (Nationally). DATA DEFICIENT (Globally). - Criteria based on: A1a, 1c (Observed population reduction due to decline in extent of occurrence, area of occupancy and/or quality of habitat). - CITES: No. - IWPA (1972;91): No. - RDB, National (1994): No. - RDB, International (1996): No. Recommendations - Research management: Survey; Monitoring; Habitat management. - PHVA: Yes. Captive breeding Recommendations - Captive breeding: Pending. - Level of difficulty: Least difficult. Existing Captive Programs: None. - Names of facilities: —. Sources (Refer Appendix): 202. Compilers: C.S. Singh, C.B. Joshi, S. Srivastava, S.M. Srivastava, R.S. Patiyal, A.K. Singh, S.K. Pal.

35. *Batasio travancoria* Hora & Law, 1941 — EN (A1b; B1, 2b). Family: Bagridae. Taxonomic status: Species. Habit: Fresh water. Habitat: Riverine habitat. Global Distribution: ENDEMIC to India. Current Regional Distribution: Kerala . - Elevation: 200 - 500 m. - Range (Sq. km): < 5,000. - Area Occupied (Sq. km): < 500. - Number of location: 6; Fragmented (Chalakkudy, Chaliyar, Achankovil rivers). Population Trends - % change - % Decline: Declining. - Time / Rate (Yrs or gens): 5 yrs. - No of Mature Individuals: Not known. Global Population: Continuing decline observed. Data Quality: General field study. Recent Field Studies: C.P. Shaji & M. Manimekhalan . Threats: Damming; Fishing; Human interference; Pollution; Poisoning; Pesticides;. Siltation. Trade: No. Other Comments: —. Status - IUCN: ENDANGERED. - Criteria based on: A1b (Population reduction due to decline in index of abundance); B1, 2b (Restricted distribution, limited location, severely fragmented, continuing decline observed in area of occupancy). - CITES: No. - IWPA (1972;91): No. - RDB, National (1994): No. - RDB, International (1996): No. Recommendations - Research management: Taxonomic and morphological genetic study; Survey; Monitoring; Habitat . management; Life history studies. - PHVA: Yes. Captive breeding Recommendations - Captive breeding: Level 3. - Level of difficulty: Very difficult. Existing Captive Programs: None. - Names of facilities: —. Sources (Refer Appendix): —. Compilers: C.P. Shaji, B.M. Kurup, A. Gopalakrishnan, T. V. Anna Mercy, M. Arunachalam, A. Manimekalan, O. Alphonse, P. Subramanian.

36. *Bhavana australis* (Jerdon, 1849) — EN (B1, 2c). Family: Balitoridae. Taxonomic status: Species. Habit: Fresh water. Habitat: Torrential streams. Global Distribution: ENDEMIC to India. Current Regional Distribution: Western Ghats. - Elevation: 500 - 1200 m. - Range (Sq. km): < 5,000. - Area Occupied (Sq. km): < 500. - Number of location: + 20; Fragmented (Chittur, Tambaraparani, Manimuthar, Moyar, Kallar, Chalakudy, Kabani, Chaliyar, Cheenkanmipuzha). Population Trends - % change - % Decline: Not known . - Time / Rate (Yrs or gens): Not known. - No of Mature Individuals: Not known. Global Population: Not known. Regional Population: Not known. Data Quality: General field study. Recent Field Studies: P.S. Easa & C.P. Shaji, 1996 - 97 in Chalakudy river (Unpublished); P.S. Easa, 1993 - 95 in Nilgiri Biosphere reserve, Kerala part. Threats: Loss of habitat; Siltation. Trade: Not known. Other Comments: —. Status - IUCN: ENDANGERED. - Criteria based on: B1, 2c (Restricted distribution, severely fragmented, continuing decline observed in extent of occurrence, area of occupancy and/or quality of habitat). - CITES: No. - IWPA (1972;91): No. - RDB, National (1994): No. - RDB, International (1996): No. Recommendations - Research management: Survey. - PHVA: Yes. Captive breeding Recommendations - Captive breeding: Level 3. - Level of difficulty: Very difficult. Existing Captive Programs: None. - Names of facilities: —. Sources (Refer Appendix): 11 (vi), 27 (xvii), 53, 191. Compilers: T.V. Annamercy, M. Arunachalam, A. Gopalakrishnan, B.M. Kurup, O. Alphonse,. A. Manimekalan, C.P. Shaji, P. Subramanian.

37. *Botia almorhae* (Gray, 1831) — EN (B1, 2c). Family: Cobitidae. Taxonomic status: Species. Habit: Omnivorous. Habitat: Hill stream . Global Distribution: ENDEMIC to India. Current Regional Distribution: Western Himalaya. - Elevation: 1500 m. - Range (Sq. km): < 5,000. - Area Occupied (Sq. km): < 2,000. - Number of location: Few (Kumaon hills, Almora); Fragmented. Population Trends - % change - % Decline: Not known . - Time / Rate (Yrs or gens): Not known. - No of Mature Individuals: Not known. Global Population: Not known. Regional Population: Not known. Data Quality: General field study (S. S. Pathani, C.B. Joshi, 1944 in Kumaon hills). Recent Field Studies: None. Threats: Dynamite and other destructive fishing; Edaphic factors; Human interference;. Loss of habitat; Overexploitation; Poisoning; Siltation; Trade. Trade: Local. Other Comments: —. Status - IUCN: ENDANGERED. - Criteria based on: B1, 2c (Restricted distribution, limited locations, severely fragmented, continuing decline observed in extent of occurrence, area of occupancy and/or quality of habitat). - CITES: No. - IWPA (1972;91): No. - RDB, National (1994): No. - RDB,

International (1996): No. **Recommendations - Research management:** Life history studies; Habitat management; Monitoring. - **PHVA:** Yes. **Captive breeding Recommendations - Captive breeding:** Pending. - **Level of difficulty:** Not known. **Existing Captive Programs:** None. - **Names of facilities:** —. **Sources (Refer Appendix):** 184, 202. **Compilers:** C.B. Joshi, C.S. Singh, S.K. Srivastava, S.M. Srivastava, R.S. Patiyal, S.K. Paul, A.K. Singh.

38. *Botia berdmorei* (Blyth, 1860) — EN/N (A1a, 1c, 1d). (*Syncrossus berdmorei* Blyth). **Family:** Cobitidae. **Taxonomic status:** Species. **Habit:** Omnivorous. **Habitat:** Hill stream, sometimes found in bheels also. **Global Distribution:** India, Myanmar. **Current Regional Distribution:** Manipur region hill streams. - **Elevation:** 500 - 1000 m. - **Range (Sq. km):** < 5,000. - **Area Occupied (Sq. km):** < 500. - **Number of location:** Many (Chindwin drainage). **Population Trends - % change - % Decline:** 50% . - **Time / Rate (Yrs or gens):** 10 yrs. - **No of Mature Individuals:** Not known. **Global Population:** Not known. **Regional Population:** Continuing rapid decline observed. **Data Quality:** General field study (A.G.K. Menon, 1992 in Manipur). **Recent Field Studies:** W. Vishwanath, 1991 - 92. Collection for Manipur range (reported by . Karmakar & Das). **Threats:** Damming; Trade; Dynamite and other destructive fishing; Loss of habitat; Poisoning. **Trade:** Local; Domestic. **Other Comments:** Beautiful aquarium fish. Decline in occurrence due to loss of habitat. **Status - IUCN: ENDANGERED (Nationally).** **DATA DEFICIENT (Globally).** - **Criteria based on: A1a, 1c, 1d** (Observed population reduction due to decline in extent of occurrence, area of occupancy and/or quality of habitat and actual or potential levels of exploitation). - **CITES:** No. - **IWPA (1972;91):** No. - **RDB, National (1994):** No. - **RDB, International (1996):** No. **Recommendations - Research management:** Survey; Monitoring. - **PHVA:** Yes. **Captive breeding Recommendations - Captive breeding:** Level 1. - **Level of difficulty:** Moderate difficult. **Existing Captive Programs:** None. - **Names of facilities:** —. **Sources (Refer Appendix):** 100, 132. **Compilers:** A.K. Karmakar, W. Vishwanath, S.P. Biswas, R. Dayal, P.C. Mahanta, B.A. Daniel.

39. *Botia birdi* Chanduri, 1909 — LRnt. **Family:** Cobitidae. **Taxonomic status:** Species. **Habit:** Omnivorous. **Habitat:** Hill stream. **Global Distribution:** ENDEMIC to India. **Current Regional Distribution:** Jammu & Kashmir, Punjab rivers . - **Elevation:** Up to 1000 m. - **Range (Sq. km):** > 20,000. - **Area Occupied (Sq. km):** < 2,000. - **Number of location:** Many (Indus drainage). **Population Trends - % change - % Decline:** 10% . - **Time / Rate (Yrs or gens):** 20 yrs. - **No of Mature Individuals:** Not known. **Global Population:** Continuing decline observed. **Data Quality:** General field study. **Recent Field Studies:** None. **Threats:** Human interference; Loss of habitat; Pollution; Siltation; Fishing; Trade. **Trade:** Local. **Other Comments:** —. **Status - IUCN: LOWER RISK - NEAR THREATENED.** - **Criteria based on:** —. - **CITES:** No. - **IWPA (1972;91):** No. - **RDB, National (1994):** No. - **RDB, International (1996):** No. **Recommendations - Research management:** Habitat management; Limiting factor management; Others. - **PHVA:** Yes. **Captive breeding Recommendations - Captive breeding:** Pending. - **Level of difficulty:** Moderate difficult. **Existing Captive Programs:** None. - **Names of facilities:** —. **Sources (Refer Appendix):** 202. **Compilers:** C.S. Singh, C.B. Joshi, S.K. Srivastava, S.M. Srivastava, R.S. Patiyal, . A.K. Singh, S.K. Paul.

40. *Botia geto* (Hamilton - Buchanan) — LRnt/N . (*Botia dario* Hamilton - Buchanan). **Family:** Cobitidae. **Taxonomic status:** Species. **Habit:** Omnivorous. **Habitat:** Hill stream. **Global Distribution:** India, Bangladesh. **Current Regional Distribution:** Darjeeling Himalaya, Brahmaputra basin and Assam. - **Elevation:** 1500 m. - **Range (Sq. km):** < 5,000. - **Area Occupied (Sq. km):** < 2,000. - **Number of location:** Many (Gangetic, Brahmaputra, Chindwin drainage); Fragmented. **Population Trends - % change - % Decline:** 10% . - **Time / Rate (Yrs or gens):** 20 yrs. - **No of Mature Individuals:** Not known. **Global Population:** Not known. **Regional Population:** Continuing decline observed. **Data Quality:** General field study. **Recent Field Studies:** Dobriyal *et al.* , 1987 . **Threats:** Human interference; Poisoning; Siltation; Trade. **Trade:** Local. **Other Comments:** —. **Status - IUCN: LOWER RISK - NEAR THREATENED (Nationally).** **DATA DEFICIENT (Globally).** - **Criteria based on:** —. - **CITES:** No. - **IWPA (1972;91):** No. - **RDB, National (1994):** No. - **RDB, International (1996):** No. **Recommendations - Research management:** Survey; Other. - **PHVA:** Yes. **Captive breeding Recommendations - Captive breeding:** Pending. - **Level of difficulty:** Moderate difficult. **Existing Captive Programs:** None. - **Names of facilities:** —. **Sources (Refer Appendix):** 202. **Compilers:** C.S. Singh, C.B. Joshi, S.K. Srivastava, R.S. Patiyal, S.M. Srivastava, . A.K. Singh, S.K. Paul.

41. *Botia histrionica* Blyth, 1860 — VU/N (B1, 2c). **Family:** Cobitidae. **Taxonomic status:** Species. **Habit:** Omnivorous. **Habitat:** Hill stream. **Global Distribution:** India, Myanmar. **Current Regional Distribution:** Assam, Manipur, Uttar Pradesh. - **Elevation:** 200 - 800 m. - **Range (Sq. km):** > 20,000. - **Area Occupied (Sq. km):** < 2,000. - **Number of location:** Many (Gangetic, Brahmaputra, Chindwin drainage); Fragmented. **Population Trends - % change - % Decline:** Not known . - **Time / Rate (Yrs or gens):** Not known. - **No of Mature Individuals:** Not known. **Global Population:** Not known. **Regional Population:** Not known. **Data Quality:** General field study (S.L. Hora, 1921 in Manipur). **Recent Field Studies:** None. **Threats:** Human interference; Loss of habitat. **Trade:** Not known. **Other Comments:** —. **Status - IUCN: VULNERABLE (Nationally).** **DATA DEFICIENT (Globally).** - **Criteria based on: B1, 2c** (Restricted distribution, severely fragmented, continuing decline observed in extent of occurrence, area of occupancy and/or quality of habitat). - **CITES:** No. - **IWPA (1972;91):** No. - **RDB, National (1994):** No. - **RDB, International (1996):** No. **Recommendations - Research management:** Survey; Monitoring. - **PHVA:** No. **Captive breeding Recommendations - Captive breeding:** No. - **Level of difficulty:** Not known. **Existing Captive Programs:** None. - **Names of facilities:** —. **Sources (Refer Appendix):** 70. **Compilers:** A.K. Karmakar, W. Vishwanath, S.P. Biswas, P.C. Mahanta, B.A. Daniel.

42. *Botia lohachata* Chaudhuri, 1912 — EN/N (B1, 2c). **Family:** Cobitidae. **Taxonomic status:** Species. **Habit:** Omnivorous. **Habitat:** Inhabitat of sub mountains of Himalaya. **Global Distribution:** India, Pakistan, Bangladesh, Nepal. **Current Regional Distribution:** Kumaon, Garhwal, Himachal Pradesh. - **Elevation:** 500 m. - **Range (Sq. km):** < 5,000. - **Area Occupied (Sq. km):** < 2,000. - **Number of location:** Few; Fragmented. **Population Trends - % change - % Decline:** Declining. - **Time / Rate (Yrs or gens):** Not known. - **No of Mature Individuals:** Not known. **Global Population:** Not known. **Regional Population:** Continuing decline observed. **Data Quality:** General field study. **Recent Field Studies:** S.S. Pathani, 1996 in Kumaon hills. **Threats:** Dynamite and other destructive fishing; Edaphic factors; Human interference; Loss of habitat; Overexploitation; Poisoning; Siltation; Trade. **Trade:** Local. **Other Comments:** —. **Status - IUCN:**

ENDANGERED (Nationally). DATA DEFICIENT (Globally). - Criteria based on: **B1, 2c** (Restricted distribution, limited locations, severely fragmented, continuing decline observed in extent of occurrence, area of occupancy and/or quality of habitat). - **CITES:** No. - **IWPA (1972;91):** No. - **RDB, National (1994):** No. - **RDB, International (1996):** No. **Recommendations - Research management:** Life history studies; Habitat management; Monitoring. - **PHVA:** Yes. **Captive breeding Recommendations - Captive breeding:** Level 1. - **Level of difficulty:** Very difficult. **Existing Captive Programs:** None. - **Names of facilities:** —. **Sources (Refer Appendix):** 184, 202. **Compilers:** C.S. Singh, C.B. Joshi, S. Kumar, S.M. Srivastava, R.S. Patiyal, A.K. Singh, S.K. Paul.

43. *Botia striata* Rao, 1920 — EN (B1, 2c). Family: Cobitidae. **Taxonomic status:** Species. **Habit:** Column and Bottom feeder, Insectivorous. **Habitat:** Hill stream at lower altitudes. **Global Distribution:** ENDEMIC to India. **Current Regional Distribution:** Western Ghats. - **Elevation:** 600 - 700 m. - **Range (Sq. km):** > 20,000. - **Area Occupied (Sq. km):** < 500. - **Number of location:** Many (Tunga river system in Karnataka and Kolhapur, Satara district); Fragmented. **Population Trends - % change - % Decline:** 10% . - **Time / Rate (Yrs or gens):** 10 yrs. - **No of Mature Individuals:** Not known. **Global Population:** Continuing decline observed. **Data Quality:** General field study (Rao & Yazdani, 1986 Tunga river, Karnataka); Museum/ collections/records. **Recent Field Studies:** None. **Threats:** Loss of habitat; Pollution; Trade. **Trade:** International. **Other Comments:** Aquarium fish. **Status - IUCN:** ENDANGERED. - **Criteria based on: B1, 2c** (Restricted distribution, severely fragmented, continuing decline observed in extent of occurrence, area of occupancy and/or quality of habitat). - **CITES:** No. - **IWPA (1972;91):** No. - **RDB, National (1994):** No. - **RDB, International (1996):** No. **Recommendations - Research management:** Survey; Monitoring; Husbandry research; Life history studies. - **PHVA:** Yes. **Captive breeding Recommendations - Captive breeding:** Level 1. - **Level of difficulty:** Least difficult. **Existing Captive Programs:** None. - **Names of facilities:** —. **Sources (Refer Appendix):** 11 (vii), 27 (xviii). **Compilers:** A.C. Pandey, A.K. Singh, A.K. Pandey, A. Husain, U.K. Sarkar.

44. *Brachydanio acuticephala* (Hora, 1921) — VU (A1c; B1, 2c) . (*Danio acuticephala*). Family: Cyprinidae. **Taxonomic status:** Species. **Habit:** Carnivore, Surface feeder. **Habitat:** Hill stream. **Global Distribution:** ENDEMIC to India. **Current Regional Distribution:** Manipur, Arunachal Pradesh. - **Elevation:** 300 - 500 m. - **Range (Sq. km):** < 20,000. - **Area Occupied (Sq. km):** < 2,000. - **Number of location:** Many (Brahmaputra and Chindwin river system); Fragmented. **Population Trends - % change - % Decline:** 20% . - **Time / Rate (Yrs or gens):** 10 yrs. - **No of Mature Individuals:** Not known. **Global Population:** Continuing decline. **Data Quality:** Reliable census (M. Viswanath and Tombi, 1985 in Litan River);. General field study (ZSI Survey, 1981 in Namdapha river); Museum/collections/ records. **Recent Field Studies:** None. **Threats:** Dynamite and other destructive fishing; Human interference; Poisoning. **Trade:** No. **Other Comments:** Highly restricted distribution. This is a good aquarium fish. **Status - IUCN:** VULNERABLE. - **Criteria based on: A1c** (Population reduction due to decline in extent of occurrence, area of occupancy and/or quality of habitat); **B1, 2c** (Restricted distribution, severely fragmented, continuing decline observed in extent of occurrence, area of occupancy and/or quality of habitat). - **CITES:** No. - **IWPA (1972;91):** No. - **RDB, National (1994):** No. - **RDB, International (1996):** No. **Recommendations - Research management:** Survey; Monitoring; Life history studies; Limiting factor research. - **PHVA:** Pending . **Captive breeding Recommendations - Captive breeding:** No. - **Level of difficulty:** Not known. **Existing Captive Programs:** None. - **Names of facilities:** —. **Sources (Refer Appendix):** 17, 70, 228. **Compilers:** R. Dayal, A.K. Karmakar, W. Vishwanath, S.P. Biswas, P.C. Mahanta.

45. *Brachydanio rerio* (Hamilton - Buchanan, 1822) — LRnt/N . (*Danio rerio* Day). Family: Cyprinidae. **Taxonomic status:** Species. **Habit:** Planktivorous, Breeds throughout year. **Habitat:** Ponds, streams, pools, rivers. **Global Distribution:** India, Bangladesh, Pakistan. **Current Regional Distribution:** Eastern India, Indo Ganges, Krishna river, Narmada, Tapti, Mahanadhi, Brahmaputra. - **Elevation:** Up to 300 m. - **Range (Sq. km):** > 20,000. - **Area Occupied (Sq. km):** > 2,000. - **Number of location:** Many (Krishna, Narmada, Tapti, Mahanadi). **Population Trends - % change - % Decline:** 10% . - **Time / Rate (Yrs or gens):** 20 yrs. - **No of Mature Individuals:** Not known. **Global Population:** Not known. **Regional Population:** Continuing decline. **Data Quality:** Indirect information; Museum/collections/records. **Recent Field Studies:** Dubey, 1995 - 96 in Narmada river. **Threats:** Dynamite and other destructive fishing; Human interference; Loss of habitat;. Pollution; Siltation; Trade. **Trade:** Local. **Other Comments:** —. **Status - IUCN:** LOWER RISK - NEAR THREATENED (Nationally). **DATA DEFICIENT (Globally).** - **Criteria based on:** —. - **CITES:** Not known. - **IWPA (1972;91):** Not known. - **RDB, National (1994):** Not known. - **RDB, International (1996):** Not known. **Recommendations - Research management:** Survey; Habitat management. - **PHVA:** No. **Captive breeding Recommendations - Captive breeding:** No. - **Level of difficulty:** Not known. **Existing Captive Programs:** None. - **Names of facilities:** —. **Sources (Refer Appendix):** 27 (xix), 187, 202 . **Compilers:** G.P. Dubey, S.V. Sharma, N. More, V.S. Basheer, J.K. Jena, A. Apte,. K.W. Dhamge, C.S. Singh, C.B. Joshi, D. Kapoor, S.K. Srivastava, . S.M. Srivastava, R.S. Patiyal, A.K. Singh, S.K. Paul.

46. *Catla catla* (Hamilton - Buchanan) — VU/N (A1a, 1c, 1d, 1e). (*Cyprinus catla* Hamilton - Buchanan). Family: Cyprinidae. **Taxonomic status:** Species. **Habit:** Planktonophagus surface feeder. **Habitat:** Rivers reservoirs. **Global Distribution:** India and Southeast Asia, Ganga river system (now widely transplanted to Peninsular India, Bangladesh, Myanmar, Pakistan). **Current Regional Distribution:** All over India. - **Elevation:** < 500 m. - **Range (Sq. km):** > 20,000. - **Area Occupied (Sq. km):** > 2,000. - **Number of location:** Many, not fragmented in individual river systems. **Population Trends - % change - % Decline:** 40 % . - **Time / Rate (Yrs or gens):** 20 Yrs. - **No of Mature Individuals:** Not known. **Global Population:** Not known. **Regional Population:** Continuing decline observed . **Data Quality:** General field study . **Recent Field Studies:** Basu, 1996 in Yamuna; Arvind Mishra, 1997; D.N. Saksena, 1995 - 96 in Chambal. **Threats:** Human interference; Loss of habitat; Loss of habitat because of exotic animal;. Overexploitation; Pollution; Trade. **Trade:** Commercial. **Other Comments:** Suspected gross reduction in maximum sizes and numbers in rivers, species is sustained through wide spread aquaculture. **Status - IUCN:** VULNERABLE (Nationally). **DATA DEFICIENT (Globally).** - **Criteria based on: A1a, 1c, 1d, 1e** (Observed population reduction due to decline in extent of occurrence, area of occupancy and/or quality of habitat and actual or potential levels of exploitation and due to the effects of introduced taxa, hybridisation, pathogens, pollutants, competitors or parasites). - **CITES:** No. - **IWPA (1972;91):** No. - **RDB, National (1994):** No. - **RDB, International (1996):** No. **Recommendations - Research management:** Genetic management; Monitoring(in rivers); Habitat

management. - PHVA: No. **Captive breeding Recommendations - Captive breeding:** Level 1; Level 4. - **Level of difficulty:** No. **Existing Captive Programs:** Many. - **Names of facilities:** Many and widespread. **Sources (Refer Appendix):** 27 (xx), 109 (i), 202. **Compilers:** D. Basu, A. Mishra, P. Das, D.N. Saksena, R. Abidi.

47. *Channa baculis* (Hamilton - Buchanan, 1822) — LRlc. (*Pseudambassis baculis* (Hamilton - Buchanan)). **Family:** Channidae. **Taxonomic status:** Species. **Habit:** Column feeder, Carnivorous. **Habitat:** Ponds, ditches, pools and rivers. **Global Distribution:** ENDEMIC to India. **Current Regional Distribution:** Himalaya and Indo gangetic plains. - **Elevation:** 200 to 600 MSL. - **Range (Sq. km):** > 20,000. - **Area Occupied (Sq. km):** > 2,000. - **Number of location:** Many, Fragmented. **Population Trends - % change - % Decline:** < 20% . - **Time / Rate (Yrs or gens):** 20 Yrs. - **No of Mature Individuals:** Not known. **Global Population:** Not known. **Regional Population:** Not known. **Data Quality:** Informal field sightings; Indirect information; Museums/ collections/ records. **Recent Field Studies:** Talwar P.K. & A.G. Jhingaran 1991. **Threats:** Human interference; Pollution; Trade. **Trade:** Local; International. **Other Comments:** Weed and aquarium fish. **Status - IUCN:** LOWER RISK - LEAST CONCERN. - **Criteria based on:** —. - **CITES:** No. - **IWPA (1972;91):** No. - **RDB, National (1994):** No. - **RDB, International (1996):** No. **Recommendations - Research management:** Survey; Monitoring. - **PHVA:** No. **Captive breeding Recommendations - Captive breeding:** No. - **Level of difficulty:** Not known. **Existing Captive Programs:** None. - **Names of facilities:** —. **Sources (Refer Appendix):** 202. **Compilers:** P. Das, D.N. Saxena, A.K. Pandey, U.K. Sarkar, A.K. Singh, A. Husain, A.C. Pandey, A. Mishra.

48. *Channa marulius* (Hamilton - Buchanan, 1822) — LRnt/N . (*Ophiocephalus marulims* Hamilton - Buchanan). **Family:** Channidae. **Taxonomic status:** Species. **Habit:** Carnivorous, bottom living, air breathing, annual breeder. **Habitat:** Ponds, pools, lakes, rivers. **Global Distribution:** India, Pakistan, Nepal, Bangladesh, Myanmar, China, Thailand. **Current Regional Distribution:** Throughout India (Andhra Pradesh, West Bengal, Maharashtra). - **Elevation:** Up to 500 m. MSL. - **Range (Sq. km):** > 20,000. - **Area Occupied (Sq. km):** > 2,000. - **Number of location:** Many. **Population Trends - % change - % Decline:** 30 % . - **Time / Rate (Yrs or gens):** 20 Yrs. - **No of Mature Individuals:** Abundant. **Global Population:** Not known. **Regional Population:** Continuing decline observed. **Data Quality:** Reliable census; General field study; Indirect information; Museums/collections/ records. **Recent Field Studies:** Arunachalam, 1995 to date in Madras, TN; Johal, 1997 in Rajasthan; Saxena & Srivastava, 1989 in MP & Kanwari river; Sugunan & Yadava, 1992 in Mahanadi. **Threats:** Fishing; Loss of habitat; Overexploitation; Trade. **Trade:** Domestic; Commercial. **Other Comments:** —. **Status - IUCN:** LOWER RISK - NEAR THREATENED (Nationally). **DATA DEFICIENT (Globally).** - **Criteria based on:** —. - **CITES:** No. - **IWPA (1972;91):** No. - **RDB, National (1994):** No. - **RDB, International (1996):** No. **Recommendations - Research management:** Monitoring; Husbandry research. - **PHVA:** No. **Captive breeding Recommendations - Captive breeding:** No. - **Level of difficulty:** Least difficult. **Existing Captive Programs:** None. - **Names of facilities:** —. **Sources (Refer Appendix):** 11 (viii), 27 (xxii), 52, 93, 183 . **Compilers:** G.P. Dubey, S.V. Sharma, N. More, V.S. Basheer, J.K. Jena, A. Apte, . K.W. Dhangre.

49. *Channa micropeltes* (Cuvier, 1831) — CR (A1a, 1b, 1c, 1d; B1, 2c). (*Ophiocephalus micropettes* Cuvier). **Family:** Channidae. **Taxonomic status:** Species. **Habit:** Omnivore. **Habitat:** Riverine, Drainage canals. **Global Distribution:** ENDEMIC to India. **Current Regional Distribution:** Western Ghats. - **Elevation:** 50 m. - **Range (Sq. km):** < 100. - **Area Occupied (Sq. km):** < 10. - **Number of location:** 1 (Parumalakadavu in Pampa river, Kerala). **Population Trends - % change - % Decline:** 99 % (> 80 %). - **Time / Rate (Yrs or gens):** 55 Yrs. (10 yrs). - **No of Mature Individuals:** Not known. **Global Population:** Continuing rapid decline. **Data Quality:** General field study. **Recent Field Studies:** Kurup, 1987 - 91 in Central Kerala; Kurup, 1992 In account on threatened fishes of the river system flowing through kerala . **Threats:** Disease; Dynamite and other destructive fishing; Fishing; Loss of habitat; Poisoning; Pollution; Siltation. **Trade:** No. **Other Comments:** A view of the literature show that recently, this species has disappeared from those region where it was exceedingly common. Therefore every effort should be made to replenish the stock of this critically threatened species. **Status - IUCN:** CRITICALLY ENDANGERED. - **Criteria based on:** A1a, 1b, 1c, 1d (Observed population reduction due to decline in abundance. extent of occurrence, area of occupancy and/or quality of habitat and actual or potential levels of exploitation); B1, 2c (Restricted distribution, single location, continuing decline observed in extent of occurrence, area of occupancy and/or quality of habitat). - **CITES:** No. - **IWPA (1972;91):** No. - **RDB, National (1994):** No. - **RDB, International (1996):** No. **Recommendations - Research management:** Taxonomic and morphological genetic studies; Translocations; Survey; Monitoring; Genetic management; Habitat management; O (Captive breeding and ranching found very urgent). - **PHVA:** Yes. **Captive breeding Recommendations - Captive breeding:** Level 1. - **Level of difficulty:** Very difficult. **Existing Captive Programs:** None. - **Names of facilities:** No attempt has so far been to captive breed this species. **Sources (Refer Appendix):** —. **Compilers:** T.V. Annamercy, M. Arunachalam, A. Gopalakrishnan, B.M. Kurup, . A. Manimekalan, O. Alphonse, P. Subramanian, C.P. Shaji.

50. *Channa orientalis* Bloch & Schneider, 1801 — VU/N (A1a, 1c, 1d). (*Channa gachua*; *Ophiocephalus gachua* Hamilton - Buchanan). **Family:** Channidae. **Taxonomic status:** Species. **Habit:** Carnivores, Bottom living, air breathing, annual breeder. **Habitat:** Ponds, pools, lakes, rivers. **Global Distribution:** Afghanistan, India, Pakistan, Iran, East Indies, Bangladesh, Nepal, Sri Lanka. **Current Regional Distribution:** Throughout India. - **Elevation:** Up to 500 m. - **Range (Sq. km):** > 20,000. - **Area Occupied (Sq. km):** > 2,000. - **Number of location:** Many. **Population Trends - % change - % Decline:** 40% . - **Time / Rate (Yrs or gens):** 20 yrs. - **No of Mature Individuals:** Not known. **Global Population:** Not known. **Regional Population:** Continuing decline observed. **Data Quality:** Reliable census; General field study; Indirect information; Records. **Recent Field Studies:** Johal, 1997 in Rajasthan; Jayaraj & Sharma, 1995 in Kolluru lake, Andhra Pradesh; Saxena, 1993, 94, 95 in Gwalior, Madhya Pradesh; Sugunan & Yadav. 1992. **Threats:** Fishing; Loss of habitat; Trade. **Trade:** Domestic. **Other Comments:** —. **Status - IUCN:** VULNERABLE (Nationally). **DATA DEFICIENT (Globally).** - **Criteria based on:** A1a, 1c, 1d (Observed population reduction due to decline in extent of occurrence, area of occupancy and/or quality of habitat and actual or potential levels of exploitation). - **CITES:** No. - **IWPA (1972;91):** No. - **RDB, National (1994):** No. - **RDB, International (1996):** No. **Recommendations - Research management:** Habitat management; Survey; Monitoring. - **PHVA:** Pending. **Captive breeding Recommendations - Captive breeding:** No. -

Level of difficulty: Least difficult. **Existing Captive Programs:** None. - **Names of facilities:** —. **Sources (Refer Appendix):** 27 (xxiii), 93, 202. **Compilers:** G.P. Dubey, S.V. Sharma, N. More, V.S. Basheer, J.K. Jena, A. Apte., K.W. Dhamge.

51. *Channa punctatus* (Bloch, 1793) — LRnt/N . (*Ophiocephalus punctatus* Bloch). Family: Channidae. **Taxonomic status:** Species. **Habit:** Carnivores, bottom living, air breathing, annual breeders. **Habitat:** Pond, pools, lakes, rivers. **Global Distribution:** Afghanistan, Pakistan, Sri Lanka, Nepal, India, Bangladesh, Myanmar, China. **Current Regional Distribution:** All over India, abundant in Terai and Duras of North Bengal and Chilka lake (Orissa). - **Elevation:** Up to 600 MSL. - **Range (Sq. km):** > 20,000. - **Area Occupied (Sq. km):** > 2,000. - **Number of location:** Many. **Population Trends - % change - % Decline:** 30 % . - **Time / Rate (Yrs or gens):** 20 Yrs. - **No of Mature Individuals:** Not known. **Global Population:** Not known. **Regional Population:** Continuing decline observed. **Data Quality:** Reliable census; General field study; Indirect information; Museum/collections/ records. **Recent Field Studies:** Jayaraj & Sharma, 1995 in Kolleru lake, Andhra Pradesh; Johal, 1997 in Rajasthan; Sugunan & Yadava, 1992. **Threats:** Fishing; Loss of habitat; Overexploitation; Trade. **Trade:** Commercial. **Other Comments:** None. **Status - IUCN:** LOWER RISK - NEAR THREATENED (Nationally). **DATA DEFICIENT (Globally).** - **Criteria based on:** —. - **CITES:** No. - **IWPA (1972;91):** No. - **RDB, National (1994):** No. - **RDB, International (1996):** No. **Recommendations - Research management:** Husbandry research; Habitat management. - **PHVA:** No. **Captive breeding Recommendations - Captive breeding:** No. - **Level of difficulty:** Least difficult. **Existing Captive Programs:** None. - **Names of facilities:** —. **Sources (Refer Appendix):** 27 (xxiv), 93, 202. **Compilers:** G.P. Dubey, S.V. Sharma, N. More, U. S. Basheer, J.K. Jena, A. Apte, . K.W. Dhamge.

52. *Channa striatus* (Bloch, 1793) — LRlc/N . (*Ophiocephalus striatus* Bloch). Family: Channidae. **Taxonomic status:** Species. **Habit:** Carnivore, bottom living, annual breeder and Grass tanks. **Habitat:** Ponds, lakes, Rivers. **Global Distribution:** Pakistan, India, Sri Lanka, Bangladesh, Nepal, Myanmar, Malay, archipelago, Thailand, South China, . **Current Regional Distribution:** All over India (Tamil Nadu, West Bengal). - **Elevation:** Up to 600 m. MSL. - **Range (Sq. km):** > 20,000. - **Area Occupied (Sq. km):** > 2,000. - **Number of location:** Many. **Population Trends - % change - % Decline:** Not known. - **Time / Rate (Yrs or gens):** Not known. - **No of Mature Individuals:** Not known. **Global Population:** Not known. **Regional Population:** Not known. **Data Quality:** Reliable census; General field study; Indirect information; Museums/records/ collections. **Recent Field Studies:** Jayaraj & Sharma, 1995 in Kolleru lake, Andhra Pradesh; Dubey, 1994 in Riversystems of Madhya Pradesh; Saxena & Shrivastava, 1989 in Kunwar river in Madhya Pradesh; Johal, 1997 in Rajasthan. **Threats:** Fishing; Trade. **Trade:** Commercial. **Other Comments:** None. **Status - IUCN:** LOWER RISK - LEAST CONCERN (Nationally). **DATA DEFICIENT (Globally).** - **Criteria based on:** —. - **CITES:** No. - **IWPA (1972;91):** No. - **RDB, National (1994):** No. - **RDB, International (1996):** No. **Recommendations - Research management:** Husbandry research. - **PHVA:** No. **Captive breeding Recommendations - Captive breeding:** No. - **Level of difficulty:** Least difficult. **Existing Captive Programs:** None. - **Names of facilities:** —. **Sources (Refer Appendix):** 27 (xxv), 52, 93, 183. **Compilers:** G.P. Dubey, S.V. Sharma, N. More, V.S. Basheer, J.K. Jena, A. Apte, K.W. Dhamge.

53. *Chaudhuri indica* (Yazdani, 1991) — VU (B1, 2c, 2d; D2). (*Hill stream Spineless - eel; Pillaia indica* Yazdani, 1972). Family: Chaudhuriidae. **Taxonomic status:** Species. **Habit:** Carnivore. **Habitat:** Buried in mud, cling to submerged vegetation along stream edge. **Global Distribution:** ENDEMIC to India. **Current Regional Distribution:** Meghalaya, Arunachal Pradesh, Assam (Brahmaputra river system). - **Elevation:** 500 - 1500 m. - **Range (Sq. km):** < 20,000. - **Area Occupied (Sq. km):** < 2,000. - **Number of location:** 4 (Khari and Garo hills, Brahmaputra river system); Fragmented. **Population Trends - % change - % Decline:** Not known. - **Time / Rate (Yrs or gens):** Not known. - **No of Mature Individuals:** Not known. **Global Population:** Restricted distribution. **Data Quality:** General field study (G. M. Yazdani, 1972 near Shillong, Khasi Hills). Museum/collections/records (Sen, T. K. , 1985 Summer stream . Khasi hills). **Recent Field Studies:** N. Sen, 1996 in Assam, Arunachal Pradesh. **Threats:** Human interference; Loss of habitat. **Trade:** No. **Other Comments:** None. **Status - IUCN:** VULNERABLE. - **Criteria based on:** B1, 2c, 2d (Restricted distribution, limited locations, severely fragmented, continuing decline observed in extent of occurrence, area of occupancy and/or quality of habitat, number of locations or subpopulations); D2 (Very few mature individuals). - **CITES:** No. - **IWPA (1972;91):** No. - **RDB, National (1994):** No. - **RDB, International (1996):** No. **Recommendations - Research management:** Survey; Monitoring; Limiting factor research. - **PHVA:** No. **Captive breeding Recommendations - Captive breeding:** No. - **Level of difficulty:** No. **Existing Captive Programs:** None. - **Names of facilities:** —. **Sources (Refer Appendix):** 188, 189 (iii), 232. **Compilers:** A.K. Karmakar, W. Viswanath, P.C. Mahanta, S.P. Biswas, R. Dayal., B.A. Daniel.

54. *Chaudhuri khajuriai* (Talwar, Yazdani & Kundu 1991) — EN (B1, 2b, 2c) . (*Pillaia khajuriai* Talwar, Yazdani & Kundu 1977 (Garo spineless - eel)). Family: Chaudhuriidae. **Taxonomic status:** Species. **Habit:** Omnivore. **Habitat:** Paddy field and rivers. **Global Distribution:** ENDEMIC to India. **Current Regional Distribution:** Garo Hills (Meghalaya) and Upper Assam. - **Elevation:** < 500 m. - **Range (Sq. km):** < 20,000. - **Area Occupied (Sq. km):** < 500. - **Number of location:** 2; Fragmented (Barhmaputra river). **Population Trends - % change - % Decline:** Not known. - **Time / Rate (Yrs or gens):** Not known. - **No of Mature Individuals:** Not known. **Global Population:** Not known. **Data Quality:** General field study (Khajuria, 1957 in Rongrengiri Garo hills); . Museums/collections/records. **Recent Field Studies:** None. **Threats:** Human interference; Loss of habitat; Overexploitation. **Trade:** No. **Other Comments:** This species is restricted to Northeast only. A detail survey is required. **Status - IUCN:** ENDANGERED. - **Criteria based on:** B1, 2b, 2c (Restricted distribution, limited locations, severely fragmented, continuing decline observed in area of occupancy and/or extent of occurrence and quality of habitat). - **CITES:** No. - **IWPA (1972;91):** No. - **RDB, National (1994):** No. - **RDB, International (1996):** No. **Recommendations - Research management:** Survey; Monitoring; Life history studies. - **PHVA:** No. **Captive breeding Recommendations - Captive breeding:** No. - **Level of difficulty:** No. **Existing Captive Programs:** None. - **Names of facilities:** —. **Sources (Refer Appendix):** 189 (iv), 202 (1035 - 1036). **Compilers:** A.K. Karmakar, W. Viswanath, P.C. Mahanta, S.P. Biswas, R. Dayal, B.A. Daniel.

55. *Chela dadyburjori* (Menon, 1952) — DD. (*Chela dadidurjori* Menon 1952; *Laubuca dadidurjori* Menon, 1952).
Family: Cyprinidae. **Taxonomic status:** Species. **Habit:** Surface feeding. **Habitat:** Lowland rivers, tanks and pools. **Global Distribution:** ENDEMIC to India. **Current Regional Distribution:** Western Ghats. - **Elevation:** 0 - 50 MSL. - **Range (Sq. km):** < 100. - **Area Occupied (Sq. km):** < 500. - **Number of location:** 3 (Cochin, Nagercoil, Trivandrum); Fragmented. **Population Trends - % change - % Decline:** Not known. - **Time / Rate (Yrs or gens):** Not known. - **No of Mature Individuals:** Not known. **Global Population:** Restricted distribution. **Data Quality:** Literature. **Recent Field Studies:** No. **Threats:** Not known. **Trade:** Not known. **Other Comments:** None. **Status - IUCN:** DATA DEFICIENT. - **Criteria based on:** —. - **CITES:** No. - **IWPA (1972;91):** No. - **RDB, National (1994):** No. - **RDB, International (1996):** No. **Recommendations - Research management:** Survey; Monitoring. - **PHVA:** No. **Captive breeding Recommendations - Captive breeding:** No. - **Level of difficulty:** Not known. **Existing Captive Programs:** None. - **Names of facilities:** —. **Sources (Refer Appendix):** 15, 202, 231 (iii). **Compilers:** T.V. Annamercy, M. Arunachalam, B.M. Kurup, A. Gopalakrishnan, . A. Manimekalan, O. Alphonse, C.P. Shaji, P. Subramanian.

56. *Chela laubuca* (Hamilton - Buchanan, 1822) — LRlc/N. (*Cyprinus laubuca* Hamilton - Buchanan).
Family: Cyprinidae. **Taxonomic status:** Species. **Habit:** Planktophagous. **Habitat:** Ponds, streams, rivers. **Global Distribution:** India, Pakistan, Myanmar, Nepal. **Current Regional Distribution:** India ((Western Ghats, Gangetic water sheds). - **Elevation:** Up to 500 m. - **Range (Sq. km):** > 20,000. - **Area Occupied (Sq. km):** > 2,000. - **Number of location:** Many; in India fragmented. **Population Trends - % change - % Decline:** Stable. - **Time / Rate (Yrs or gens):** Not known. - **No of Mature Individuals:** Not known. **Global Population:** Not known. **Regional Population:** Not known. **Data Quality:** Not known. **Recent Field Studies:** Not known. **Threats:** Trade. **Trade:** Local. **Other Comments:** —. **Status - IUCN:** LOWER RISK - LEAST CONCERN (Nationally). **DATA DEFICIENT (Globally).** - **Criteria based on:** —. - **CITES:** No. - **IWPA (1972;91):** No. - **RDB, National (1994):** No. - **RDB, International (1996):** No. **Recommendations - Research management:** Survey; Monitoring. - **PHVA:** No. **Captive breeding Recommendations - Captive breeding:** No. - **Level of difficulty:** Not known. **Existing Captive Programs:** None. - **Names of facilities:** —. **Sources (Refer Appendix):** 11 (ix), 27 (xxviii), 202. **Compilers:** G.P. Dubey, S.V. Sharma, N. More, V.S. Basheer, J.K. Jena, A. Apte, . K.W. Dhamge.

57. *Chelonodon fluviatilis* Hamilton - Buchanan, 1822— LRnt/ N. (*Tetradon fluviatilis* Hamilton - Buchanan; *Arothron dorsavittatus* Blyth). **Family:** Tetradontidae. **Taxonomic status:** Species. **Habit:** carnivorous. **Habitat:** Riverine. **Global Distribution:** Indian estuaries, sea, freshwater of Malaya, Sri Lanka, Bangladesh, Myanmar and Borneo archipelago. **Current Regional Distribution:** Freshwater of Bihar, Uttar Pradesh, West Bengal, etc.,. - **Elevation:** < 500 m. - **Range (Sq. km):** > 20,000. - **Area Occupied (Sq. km):** > 2,000. - **Number of location:** Many; Fragmented. **Population Trends - % change - % Decline:** Not known. - **Time / Rate (Yrs or gens):** Not known. - **No of Mature Individuals:** Not known. **Global Population:** Not known. **Regional Population:** Not known. **Data Quality:** Museums/records/collections. **Recent Field Studies:** None. **Threats:** Human interference; Loss of habitat; Pollution; Trade. **Trade:** Local. **Other Comments:** Of no fisheries interest, hardy and attractive, may be used as aquarium fish. **Status - IUCN:** LOWER RISK - NEAR THREATENED (Nationally). **DATA DEFICIENT (Globally).** - **Criteria based on:** —. - **CITES:** No. - **IWPA (1972;91):** No. - **RDB, National (1994):** No. - **RDB, International (1996):** No. **Recommendations - Research management:** Survey; Monitoring; Life history studies. - **PHVA:** No. **Captive breeding Recommendations - Captive breeding:** Level 3. - **Level of difficulty:** Very difficult. **Existing Captive Programs:** None. - **Names of facilities:** —. **Sources (Refer Appendix):** 202. **Compilers:** D. N. Saxena, P. K. Das, D. Basu, R. Abidi, A. Mishra.

58. *Cirrhinus cirrhosus* (Bloch, 1795) — VU (B1, 2c). (*Cyprinus cirrhosus* Bloc; *Cirrhina cirrhosa* Day).
Family: Cyprinidae. **Taxonomic status:** Species. **Habit:** Planktophagus, riverine, Herbivorous. **Habitat:** Riverine. **Global Distribution:** ENDEMIC to India. **Current Regional Distribution:** Cauvery, Godavari, Krishna, Pench (Madhya Pradesh), Karnataka, Tamil Nadu, Madhya Pradesh. - **Elevation:** Up to 300 m. MSL. - **Range (Sq. km):** > 20,000. - **Area Occupied (Sq. km):** < 2,000. - **Number of location:** 8 to 10; Fragmented. **Population Trends - % change - % Decline:** Not known. - **Time / Rate (Yrs or gens):** Not known. - **No of Mature Individuals:** Not known. **Global Population:** Not known. **Data Quality:** Indirect information; Museums/records/collections. **Recent Field Studies:** None. **Threats:** Human interference; Loss of habitat; Overexploitation; Pollution; Trade. **Trade:** Local. **Other Comments:** None. **Status - IUCN:** VULNERABLE. - **Criteria based on:** B1, 2c (Restricted distribution, severely fragmented, continuing decline observed in extent of occurrence, area of occupancy, and/or quality of habitat). - **CITES:** No. - **IWPA (1972;91):** No. - **RDB, National (1994):** No. - **RDB, International (1996):** No. **Recommendations - Research management:** Husbandry research; Genetic management; Monitoring. - **PHVA:** Pending. **Captive breeding Recommendations - Captive breeding:** Level 3. - **Level of difficulty:** Least difficult. **Existing Captive Programs:** None. - **Names of facilities:** —. **Sources (Refer Appendix):** 46, 202 (170). **Compilers:** G.P. Dubey, S.V. Sharma, N. More, V.S. Basheer, J.K. Jena, A. Apte, K.W. Dhamge.

59. *Cirrhinus fulungee* (Sykes, 1839) — LRnt. (*Chondrostoma fulungee*, Sykes; *Cirrhina fulungee*, Day).
Family: Cyprinidae. **Taxonomic status:** Species. **Habit:** Omnivorous. **Habitat:** Riverine. **Global Distribution:** ENDEMIC to India. **Current Regional Distribution:** Maharashtra, Karnataka and some parts of Peninsular India. - **Elevation:** Up to 400 m. MSL. - **Range (Sq. km):** > 20,000. - **Area Occupied (Sq. km):** > 2,000. - **Number of location:** Many (Krishna, Tapti). **Population Trends - % change - % Decline:** Not known. - **Time / Rate (Yrs or gens):** Not known. - **No of Mature Individuals:** Not known. **Global Population:** Not known. **Data Quality:** Indirect information; Museums/records/collections. **Recent Field Studies:** None. **Threats:** Fishing; Loss of habitat; Pollution; Trade. **Trade:** Domestic. **Other Comments:** Endemic species. **Status - IUCN:** LOWER RISK - NEAR THREATENED. - **Criteria based on:** —. - **CITES:** No. - **IWPA (1972;91):** No. - **RDB, National (1994):** No. - **RDB, International (1996):** No. **Recommendations - Research management:** Habitat management; Husbandry research. - **PHVA:** No. **Captive breeding Recommendations - Captive breeding:** No. - **Level of difficulty:** Not known. **Existing Captive Programs:** None. - **Names of facilities:** —. **Sources (Refer Appendix):** 27 (xxix), 202. **Compilers:** V.S. Basheer, K.W. Dhamge, J.K. Jena, G.P. Dubey, N. More, S.V. Sharma.

60. *Cirrhinus macrops* Steindachner, 1870 — DD. (*Cirrhinus horai*, Lakshmanan, 1966). **Family:** Cyprinidae. **Taxonomic status:** Species. **Habit:** Omnivorous. **Habitat:** River. **Global Distribution:** ENDEMIC to India. **Current Regional Distribution:** Andhra Pradesh, Tamil Nadu. - **Elevation:** Up to 100 m. - **Range (Sq. km):** < 5,000. - **Area Occupied (Sq. km):** < 500. - **Number of location:** Not known (Godavari river). **Population Trends - % change - % Decline:** Not known. - **Time / Rate (Yrs or gens):** Not known. - **No of Mature Individuals:** Not known. **Global Population:** Not known. **Data Quality:** Indirect information; Museums/records/collections. **Recent Field Studies:** No. **Threats:** Fishing; Trade. **Trade:** Local. **Other Comments:** —. **Status - IUCN:** DATA DEFICIENT. - **Criteria based on:** —. - **CITES:** No. - **IWPA (1972;91):** No. - **RDB, National (1994):** No. - **RDB, International (1996):** No. **Recommendations - Research management:** Survey; Monitoring. - **PHVA:** No. **Captive breeding Recommendations - Captive breeding:** No. - **Level of difficulty:** No. **Existing Captive Programs:** None. - **Names of facilities:** —. **Sources (Refer Appendix):** 85, 202. **Compilers:** G.P. Dubey, S.V. Sharma, N. More, V.S. Basheer, J.K. Jena, A. Apte, . K.W. Dhamge.

61. *Cirrhinus mrigala* Hamilton - Buchanan, 1822 — LRnt/N. (*Cirrhina mrigala*, Day). **Family:** Cyprinidae. **Taxonomic status:** Species. **Habit:** Bottom feeder omnivores. **Habitat:** Rivers, reservoirs, lakes connected to rivers, tanks and ponds. **Global Distribution:** Pakistan, Northern India, Nepal, Bangladesh, Myanmar, now transplanted in Southern India, Northern India, Subcontinent of Myanmar. **Current Regional Distribution:** Entire India. - **Elevation:** < 500 m. - **Range (Sq. km):** > 20,000. - **Area Occupied (Sq. km):** > 2,000. - **Number of location:** Many. **Population Trends - % change - % Decline:** 20% . - **Time / Rate (Yrs or gens):** 40 yrs. - **No of Mature Individuals:** Not known. **Global Population:** Not known. **Regional Population:** Continuing decline observed. **Data Quality:** General field study (Pandey, A. C. , 1980, Varanasi). **Recent Field Studies:** CIFA, 1996; Uttar Pradesh Govt, 1996 - 97; Madhya Pradesh Fisheries Dept. , 1996 - 97; Pandey, A.C. , 1996 - 97, Faizabad, Uttar Pradesh. **Threats:** Loss of habitat; Overexploitation; Siltation; Trade. **Trade:** Commercial. **Other Comments:** Highly valued food fish widespread aquaculture is in practised, reports of hybridization in nature. **Status - IUCN:** LOWER RISK - NEAR THREATENED (Nationally). **DATA DEFICIENT (Globally).** - **Criteria based on:** —. - **CITES:** No. - **IWPA (1972;91):** No. - **RDB, National (1994):** No. - **RDB, International (1996):** No. **Recommendations - Research management:** Genetic management. - **PHVA:** No. **Captive breeding Recommendations - Captive breeding:** Not required, widely practised. - **Level of difficulty:** Least difficult. **Existing Captive Programs:** Many. - **Names of facilities:** . **Sources (Refer Appendix):** 27 (xxx), 148, 200, 202, 222 (i). **Compilers:** R. Abidi, A. Mishra, D. N. Saxena, P. Das.

62. *Cirrhinus reba* (Hamilton - Buchanan, 1822) — VU/N (A1b, 1c, 1d, 2c, 2d). (*Cyprinus reba* Hamilton - Buchanan). **Family:** Cyprinidae. **Taxonomic status:** Species. **Habit:** Column bottom feeder, planktonophagous/detrifus feeder. **Habitat:** Riverine, transplanted in reservoirs. **Global Distribution:** India, Nepal, Bangladesh, Pakistan. **Current Regional Distribution:** Throughout India. - **Elevation:** < 500 MSL. - **Range (Sq. km):** > 20,000. - **Area Occupied (Sq. km):** > 2,000. - **Number of location:** Many, Contiguous. **Population Trends - % change - % Decline:** 20% . - **Time / Rate (Yrs or gens):** 10 Yrs. - **No of Mature Individuals:** Not known. **Global Population:** Not known. **Regional Population:** Continuing decline observed. **Data Quality:** General field study; Indirect information; Museums/collections/ records. **Recent Field Studies:** Arvind Mishra, 1997 in Eastern Uttar Pradesh; A.C. Pandey, 1996 - 97, Faizabad, Uttar Pradesh; U. P. Sarkar & A.K. Dutta, 1995 at CIFA centre, Kahara, West Bengal. **Threats:** Damming; Fishing; Human interference; Trade; Loss of habitat; Overexploitation; Pollution; Siltation. **Trade:** Domestic; Commercial. **Other Comments:** Good growth in tanks, used in aquaculture but not as widely as major crops. **Status - IUCN:** VULNERABLE (Nationally). **DATA DEFICIENT (Globally).** - **Criteria based on:** A1b, 1c, 1d, 2c, 2d (Population reduction due to decline in abundance, extent of occurrence, area of occupancy and/or quality of habitat and actual or potential levels of exploitation and predicted decline due to extent of occurrence, area of occupancy and/or quality of habitat and actual or potential levels of exploitation). - **CITES:** No. - **IWPA (1972;91):** No. - **RDB, National (1994):** No. - **RDB, International (1996):** No. **Recommendations - Research management:** Survey; Monitoring. - **PHVA:** Not known. **Captive breeding Recommendations - Captive breeding:** Pending. - **Level of difficulty:** Least difficult. **Existing Captive Programs:** Yes. - **Names of facilities:** Many not listed. **Sources (Refer Appendix):** 27 (xxxii), 50, 200. **Compilers:** P. Das, D.N. Saksena, A. Mishra, R. Abidi, C.S. Singh, D. Kapoor, C.B. Joshi., S.K. Srivastava, R.S. Patiyal, S.M. Srivastava, A.K. Singh, S.K. Paul.

63. *Clarias batrachus* (Linnaeus, 1758) — VU (A1a, 1c, 1d). (*Clarias magur* (Hamilton - Buchanan)). **Family:** Clariidae. **Taxonomic status:** Species. **Habit:** Carnivorous. **Habitat:** Rivers, ponds, pools, ditches, swamps, fresh and brackish water. **Global Distribution:** ENDEMIC to India. **Current Regional Distribution:** Throughout India. - **Elevation:** 100 - 150 m. - **Range (Sq. km):** > 20,000. - **Area Occupied (Sq. km):** > 2,000. - **Number of location:** Many. **Population Trends - % change - % Decline:** < 50% . - **Time / Rate (Yrs or gens):** 20 yrs. - **No of Mature Individuals:** Not known. **Global Population:** Not known. **Regional Population:** Not known. **Data Quality:** General field study (Jayaram, 1981; Srivastava, 1980, Gorakhpur); Museum/records/ collection. **Recent Field Studies:** Hussain 1997 in Delhi; Menon, 1997, Unpublished; Johal, 1997 in Haryana; Khan, 1997 in Uttar Pradesh; A.C. Pandey, (1981, 1996, 1997) in Varanasi, Faizabad, Sultanpur (Uttar Pradesh) and Mizoram state. **Threats:** Trade. **Trade:** Local; Domestic; Commercial. **Other Comments:** Cultured in ponds. **Status - IUCN:** VULNERABLE. - **Criteria based on:** A1a, 1c, 1d (Observed population reduction due to decline in extent of occurrence, area of occupancy and/or quality of habitat and actual or potential levels of exploitation). - **CITES:** No. - **IWPA (1972;91):** No. - **RDB, National (1994):** No. - **RDB, International (1996):** No. **Recommendations - Research management:** Survey; Monitoring; Genetic management; Habitat management; Limiting factor management; Limiting factor research. - **PHVA:** Yes. **Captive breeding Recommendations - Captive breeding:** Level 1; Level 2; Level 4. - **Level of difficulty:** Least difficult. **Existing Captive Programs:** None. - **Names of facilities:** —. **Sources (Refer Appendix):** 27 (xxxii), 63, 78, 85, 148, 169, 200, 202. **Compilers:** A. Husain, A.K. Singh, A.K. Pandey, A.C. Pandey, U.K. Sarkar.

64. *Clarias dayi* Hora, 1936 — EN (B1, 2c). **Family:** Clariidae. **Taxonomic status:** Species. **Habit:** Freshwater. **Habitat:** Wetland areas, ponds, swamps. **Global Distribution:** ENDEMIC to India. **Current Regional Distribution:** Western Ghats (Kerala, Tamil Nadu). - **Elevation:** 500 MSL. - **Range (Sq. km):** < 5,000. - **Area Occupied (Sq. km):** < 500. -

Number of location: 2 (Wayanad and Mudumali). **Population Trends - % change - % Decline:** Not known. **- Time / Rate (Yrs or gens):** Not known. **- No of Mature Individuals:** Not known. **Global Population:** Restricted distribution. **Data Quality:** Reliable census; General field study. **Recent Field Studies:** Manimekhalan, 1996. **Threats:** Fishing; Poisoning; Pollution. **Trade:** Not known. **Other Comments:** This species is originally described by Hora from Wayanad with a single specimen (*Clarias dayii*). Later there has been no report of its occurrence anywhere. This seems the second report. Misra (1976) Considered it as a variety as *Clarias dussumieri dayii*. **Status - IUCN:** ENDANGERED. **- Criteria based on:** B1, 2c (Restricted distribution, limited locations, continuing decline observed in extent of occurrence, area of occupancy and/or quality of habitat). **- CITES:** No. **- IWPA (1972;91):** No. **- RDB, National (1994):** No. **- RDB, International (1996):** No. **Recommendations - Research management:** Taxonomic and morphological genetic studies; Survey; Life history studies. **- PHVA:** Yes. **Captive breeding Recommendations - Captive breeding:** Level 1. **- Level of difficulty:** Not known. **Existing Captive Programs:** None. **- Names of facilities:** —. **Sources (Refer Appendix):** 119, 140, 200. **Compilers:** T.V. Annamercy, M. Arunachalam, A. Gopalakrishnan, B.M. Kurup, C.P. Shaji, A. Manimekalan, P. Subramanian.

65. *Clarias dussumieri* (Valenciennes, 1840)— VU (A1a, 1b, 1c, 1d). **Family:** Claridae. **Taxonomic status:** Species. **Habit:** Freshwater. **Habitat:** Streams, canals, rivers, wetlands, paddy fields. **Global Distribution:** ENDEMIC to India. **Current Regional Distribution:** Western Ghats. **- Elevation:** 0 - 25 m. **- Range (Sq. km):** > 20,000. **- Area Occupied (Sq. km):** < 2,000. **- Number of location:** Many (Wetlands of Kerala and Karnataka); Fragmented. **Population Trends - % change - % Decline:** 70 - 80 % . **- Time / Rate (Yrs or gens):** 30 Yrs. **- No of Mature Individuals:** Not known. **Global Population:** Rapid continuing decline observed. **Data Quality:** General field study. **Recent Field Studies:** Kurup B. M. , 1987 - 91. **Threats:** Disease; Dynamite and other destructive fishing; Fishing; Loss of habitat; Overexploitation; Pesticides; Poisoning; Pollution; Siltation; Trade. **Trade:** Domestic; Local. **Other Comments:** Threat of extinction. An alarming depletion in the stock could be noted in Kerala during the past decade. **Status - IUCN:** VULNERABLE. **- Criteria based on:** A1a, 1b, 1c, 1d (Observed population reduction due to decline in extent of occurrence, area of occupancy, abundance, quality of habitat and actual or potential levels of exploitation). **- CITES:** No. **- IWPA (1972;91):** No. **- RDB, National (1994):** No. **- RDB, International (1996):** No. **Recommendations - Research management:** Taxonomic and morphological genetic studies; Translocations; Survey; Monitoring; Habitat management; Other (Captive breeding). **- PHVA:** Yes. **Captive breeding Recommendations - Captive breeding:** Level 1. **- Level of difficulty:** Very difficult. **Existing Captive Programs:** Yes. **- Names of facilities:** Preliminary attempt to breed in captivity at CIFA Bhubanesher. **Sources (Refer Appendix):** 27 (xxxiii), 110, 114. **Compilers:** B.M. Kurup, P. Subramanian, C.P. Shaji, T.V. Annamercy, M. Arunachalam, A. Manimekalan, A. Gopalakrishnan, O. Alphonse.

66. *Clupisoma bastari* Datta & Karmakar, 1980 — EN (B1, 2c). **Family:** Schilbeidae. **Taxonomic status:** Species. **Habit:** Carnivorous. **Habitat:** Hill stream. **Global Distribution:** ENDEMIC to India. **Current Regional Distribution:** Bastar District, Madhya Pradesh, Maharashtra. **- Elevation:** < 500 m. **- Range (Sq. km):** < 20,000. **- Area Occupied (Sq. km):** < 500. **- Number of location:** 2; Fragmented (Indravati, Bhima, Godavari, Krishna rivers). **Population Trends - % change - % Decline:** Not known. **- Time / Rate (Yrs or gens):** Not known. **- No of Mature Individuals:** Not known. **Global Population:** Restricted distribution. **Data Quality:** General field study (A.K. Karmakar, 1980 in Bastar, Madhya Pradesh; A.K. Karmakar, 1985 in Maharashtra); Indirect information; Museums/collection/ records. **Recent Field Studies:** —. **Threats:** Damming; Dynamite and other destructive fishing. **Trade:** No. **Other Comments:** Prominent occurrence in Bastar in Madhya Pradesh and Bhima in Maharashtra. Warrants survey monitoring. **Status - IUCN:** ENDANGERED. **- Criteria based on:** B1, 2c (Restricted distribution, limited locations, severely fragmented, continuing decline observed in extent of occurrence, area of occupancy and/or quality of habitat). **- CITES:** No. **- IWPA (1972;91):** No. **- RDB, National (1994):** No. **- RDB, International (1996):** No. **Recommendations - Research management:** Habitat management. **- PHVA:** No. **Captive breeding Recommendations - Captive breeding:** No. **- Level of difficulty:** No. **Existing Captive Programs:** None. **- Names of facilities:** —. **Sources (Refer Appendix):** 35. **Compilers:** G.P. Dubey, S.V. Sharma, N. More, V.S. Basheer, J.K. Jena, A. Apte, K.W. Dhamge, A.K. Karmakar.

67. *Clupisoma garua* (Hamilton - Buchanan, 1822) — VU/N (A1a, 1c, 1d, 2c, 2d). (*Silurus garua* Hamilton - Buchanan). **Family:** Schilbeidae. **Taxonomic status:** Species. **Habit:** Carnivorous. **Habitat:** Riverine. **Global Distribution:** India, Pakistan, Myanmar, Bangladesh, Nepal. **Current Regional Distribution:** Rivers of Northern India, Assam, West Bengal and Bihar. **- Elevation:** < 500 m. **- Range (Sq. km):** > 20,000. **- Area Occupied (Sq. km):** > 2,000. **- Number of location:** Many. **Population Trends - % change - % Decline:** 40% . **- Time / Rate (Yrs or gens):** 20 Yrs. **- No of Mature Individuals:** Not known. **Global Population:** Not known. **Regional Population:** Continuing decline observed. **Data Quality:** General field study; Museums/collection/ records. **Recent Field Studies:** D. Basu, 1996; A. Mishra, 1997; Saxena, 1995 - 96; Singh, 1996. **Threats:** Human interference; Loss of habitat; Overexploitation; Pollution; Siltation; Trade. **Trade:** Commercial. **Other Comments:** Around the Ganges system, fisheries is centered around this, hence declining, Overexploited in Ganges, Chambal. **Status - IUCN:** VULNERABLE (Nationally). **DATA DEFICIENT (Globally).** **- Criteria based on:** A1a, 1c, 1d, 2c, 2d (Observed population reduction due to decline in extent of occurrence, area of occupancy and/or quality of habitat and actual or potential levels of exploitation and predicted decline due to extent of occurrence, area of occupancy and/or quality of habitat and actual or potential levels of exploitation). **- CITES:** No. **- IWPA (1972;91):** No. **- RDB, National (1994):** No. **- RDB, International (1996):** No. **Recommendations - Research management:** Monitoring; Survey; Habitat management; Limiting factor management; Limiting factor research. **- PHVA:** No. **Captive breeding Recommendations - Captive breeding:** No. **- Level of difficulty:** Very difficult. **Existing Captive Programs:** None. **- Names of facilities:** —. **Sources (Refer Appendix):** 63, 200, 202. **Compilers:** R. Abidi, D. Basu, A. Mishra, Saxena, A.C. Pandey, D. Das, D. Kapoor.

68. *Colisa fasciatus* (Bloch & Schneider, 1801)— LRnt/N. (*Colisa fasciata* (Bloch & Schneider, 1801)). **Family:** Anabantidae. **Taxonomic status:** Species. **Habit:** Insectivorous/ Carnivorous. **Habitat:** River, ponds, streams, lakes (ubiquitous) swamps. **Global Distribution:** India, Pakistan, Nepal, Bangladesh, Myanmar. **Current Regional Distribution:** Uttar Pradesh, Bihar, West Bengal, Assam, Mizoram, Orissa, Andhra Pradesh, Orissa, Kerala, Karnataka,

Madhya Pradesh. - **Elevation:** < 800 MSL. - **Range (Sq. km):** > 20,000. - **Area Occupied (Sq. km):** > 2,000. - **Number of location:** Many, Contiguous. **Population Trends - % change - % Decline:** 20% . - **Time / Rate (Yrs or gens):** 40 Yrs. - **No of Mature Individuals:** Not known. **Global Population:** Not known. **Regional Population:** Continuing gradual decline observed. **Data Quality:** General field study (Haider & Pandey, 1981 Varanasi, Jaunpur); Indirect information; Museums/collection/records. **Recent Field Studies:** Pandey, 1990 - 97 in Eastern Uttar Pradesh and Mizoram; Dubey, G.P. 1994 in Narmada river. **Threats:** Fishing; Human interference; Hunting; Pollution; Trade. **Trade:** Domestic; Commercial. **Other Comments:** Commercially important as aquarium fish hardy air breathing fish consumed locally in Bengal where regarded to be superior taste. **Status - IUCN:** LOWER RISK - NEAR THREATENED (Nationally). **DATA DEFICIENT (Globally).** - **Criteria based on:** —. - **CITES:** No. - **IWPA (1972;91):** No. - **RDB, National (1994):** No. - **RDB, International (1996):** No. **Recommendations - Research management:** Monitoring; Survey; Habitat management. - **PHVA:** No. **Captive breeding Recommendations - Captive breeding:** No. - **Level of difficulty:** Least difficult. **Existing Captive Programs:** None. - **Names of facilities:** —. **Sources (Refer Appendix):** 63, 85, 151, 152, 153, 156, 164, 202. **Compilers:** A.C. Pandey, R. Abidi, A. Mishra, D.N. Saksena, P. Das, G.P. Dubey, S.V. Sharma, N. More, V.S. Basheer, J.K. Jena, A. Apte, K.W. Dhange.

69. *Crossocheilus burmanicus* Hora, 1936 — VU/N (B1, 2c). Family: Cyprinidae. **Taxonomic status:** Species. **Habit:** Omnivorous. **Habitat:** Hill stream. **Global Distribution:** India, Myanmar. **Current Regional Distribution:** Manipur - Chindwin drainage. - **Elevation:** 500 - 1000 m. - **Range (Sq. km):** < 5,000. - **Area Occupied (Sq. km):** < 500. - **Number of location:** Many. **Population Trends - % change - % Decline:** + 30% . - **Time / Rate (Yrs or gens):** 10 yrs. - **No of Mature Individuals:** Not known. **Global Population:** Not known. **Regional Population:** Continuing gradual decline observed. **Data Quality:** General field study (S.L. Hora, 1936 in Manipur; W. Vishwanath, 1984 - 85 in Manipur. **Recent Field Studies:** W. Manojkumar, 1992 - 93 in Chindwin drainage in Manipur. **Threats:** Damming; Dynamite and other destructive fishing; Poisoning; Human interference; Trade. **Trade:** Local; Domestic. **Other Comments:** Decline in population; Good food fish. **Status - IUCN:** VULNERABLE (Nationally). **DATA DEFICIENT (Globally)** . - **Criteria based on:** B1, 2c (Restricted distribution, continuing decline observed in extent of occurrence, area of occupancy and/or quality of habitat). - **CITES:** No. - **IWPA (1972;91):** No. - **RDB, National (1994):** No. - **RDB, International (1996):** No. **Recommendations - Research management:** Survey; Monitoring; Habitat management. - **PHVA:** No. **Captive breeding Recommendations - Captive breeding:** No. - **Level of difficulty:** Not known. **Existing Captive Programs:** None. - **Names of facilities:** —. **Sources (Refer Appendix):** 72, 120, 228. **Compilers:** W. Vishwanath, A.K. Karmakar, S.P. Biswas, P.C. Mahanta, R. Dayal, B.A. Daniel

70. *Crossocheilus latius latius* (Hamilton & Buchanan, 1822) - - DD. (*Cyprinus latius* Hamilton - Buchanan). Family: Cyprinidae. **Taxonomic status:** Species. **Habit:** Omnivorous. **Habitat:** Cold water, streams, lakes and freshwater. **Global Distribution:** ENDEMIC to India. **Current Regional Distribution:** Not known. - **Elevation:** 1500 m. - **Range (Sq. km):** < 5,000. - **Area Occupied (Sq. km):** > 2,000. - **Number of location:** Many. **Population Trends - % change - % Decline:** Not known . - **Time / Rate (Yrs or gens):** Not known. - **No of Mature Individuals:** Not known. **Global Population:** Not known. **Regional Population:** Not known. **Data Quality:** General field study; Indirect information. **Recent Field Studies:** S. S. Pathani, 1994; C.B. Joshi, 1996; C.B. Joshi & Sunder, 1996. **Threats:** Dynamite and other destructive fishing; Loss of habitat. **Trade:** Not known. **Other Comments:** —. **Status - IUCN:** DATA DEFICIENT. - **Criteria based on:** —. - **CITES:** No. - **IWPA (1972;91):** No. - **RDB, National (1994):** No. - **RDB, International (1996):** No. **Recommendations - Research management:** Life history studies. - **PHVA:** No. **Captive breeding Recommendations - Captive breeding:** No. - **Level of difficulty:** Not known. **Existing Captive Programs:** None. - **Names of facilities:** —. **Sources (Refer Appendix):** —. **Compilers:** C.B. Joshi, C.S. Singh, S. Sanjeev, K. V. Sriovastava, R.S. Patiyal, S. Srivastava, A.K. Singh, S.K. Paul.

71. *Crossocheilus periyarensis* Menon & Jacob — VU (D2). Family: Cyprinidae. **Taxonomic status:** Species. **Habit:** Freshwater. **Habitat:** High altitude streams. **Global Distribution:** ENDEMIC to India. **Current Regional Distribution:** Western Ghats (Kerala). - **Elevation:** 900 - 1210 MSL. - **Range (Sq. km):** < 100. - **Area Occupied (Sq. km):** < 10. - **Number of location:** 1(Periyar above Thannikkudy). **Population Trends - % change - % Decline:** Not known. - **Time / Rate (Yrs or gens):** Not known. - **No of Mature Individuals:** Not known. **Global Population:** Highly restricted distribution. **Data Quality:** Reliable census; General field study. **Recent Field Studies:** C.P. Shaji, 1994 - 95 Personal collection; L.K. Arun, Collection and field study (see KFRI Research report). **Threats:** No. **Trade:** Not known. **Other Comments:** It is recently described species from Periyar so nothing is known about its status. **Status - IUCN:** VULNERABLE. - **Criteria based on:** D2 (Restricted population in single location). - **CITES:** No. - **IWPA (1972;91):** No. - **RDB, National (1994):** No. - **RDB, International (1996):** No. **Recommendations - Research management:** Life history studies; Survey. - **PHVA:** Yes. **Captive breeding Recommendations - Captive breeding:** Level 3. - **Level of difficulty:** Very difficult. **Existing Captive Programs:** None. - **Names of facilities:** —. **Sources (Refer Appendix):** 8, 136. **Compilers:** C.P. Shaji, M. Arunachalam, T.V. Annamercy, A. Gopalakrishnan, P. Subramanian, A. Manimekalan, B.M. Kurup, O. Alphonse.

72. *Danio aequipinnatus* (McClelland, 1839) — LRnt/N. (*Perilampus aequipinnatus* (McClelland); *Danio deyi* Sen and Dey 1985). Family: Cyprinidae. **Taxonomic status:** Species. **Habit:** Omnivorous, riverine, breeds throughout the year. **Habitat:** Hill stream, ponds, rivers. **Global Distribution:** India, Nepal, Bangladesh, Myanmar, Thailand, Sri Lanka. **Current Regional Distribution:** Northeastern Region, Himalaya, Krishna river, Mahanadhi river. - **Elevation:** 1000 m. - **Range (Sq. km):** > 20,000. - **Area Occupied (Sq. km):** < 2,000. - **Number of location:** Many. **Population Trends - % change - % Decline:** 10% . - **Time / Rate (Yrs or gens):** 15 Yrs. - **No of Mature Individuals:** Not known. **Global Population:** Not known. **Regional Population:** Continuing gradual decline observed. **Data Quality:** General field study; Indirect information; Museums/collection/records . **Recent Field Studies:** Dubey, 1995 - 96 in Narmada; Arunachalam, 1996 in Western Ghats. **Threats:** Human interference; Loss of habitat; Pollution; Trade. **Trade:** Local. **Other Comments:** None. **Status - IUCN:** LOWER RISK - NEAR THREATENED (Nationally). **DATA DEFICIENT (Globally).** - **Criteria based on:** —. - **CITES:** No. - **IWPA (1972;91):** No. - **RDB, National (1994):** No. - **RDB, International (1996):** No. **Recommendations -**

Research management: Survey; Other; Monitoring. - **PHVA:** No. **Captive breeding Recommendations - Captive breeding:** Pending. - **Level of difficulty:** Moderate difficulty. **Existing Captive Programs:** None. - **Names of facilities:** —. **Sources (Refer Appendix):** 11 (xi), 27 (xxxvi), 145, 202. **Compilers:** C.S. Singh, C.B. Joshi, D. Kapoor, S.K. Srivastava, R.S. Patiyal, S.M. Srivastava, A.K. Singh, S.K. Paul, G.P. Dubey, S.V. Sharma, N. More, V.S. Basheer, J.K. Jena, A. Apte, K.W. Dhamge.

73. *Danio devario* (Hamilton - Buchanan, 1822) — LRnt/N. (*Cyprinus devario* Hamilton - Buchanan). **Family:** Cyprinidae. **Taxonomic status:** Species. **Habit:** Omnivorous, Column feeder. **Habitat:** Ponds, ditches, nullahs, rivers. **Global Distribution:** India, Bangladesh, Pakistan. **Current Regional Distribution:** Assam, West Bengal, Punjab, Uttar Pradesh, Bihar, Orissa, Madhya Pradesh, Deccan Ahmedabad, Himachal Pradesh, West coast. - **Elevation:** Up to 1000 m. - **Range (Sq. km):** > 20,000. - **Area Occupied (Sq. km):** > 2,000. - **Number of location:** Many, (Narmada, Krishna, Godavari, Dikrong, Noadhing, Laupuli, Shadyannai (Khasi hills)). **Population Trends - % change - % Decline:** 30 % . - **Time / Rate (Yrs or gens):** 20 Yrs. - **No of Mature Individuals:** Not known. **Global Population:** Not known. **Regional Population:** Continuing decline observed. **Data Quality:** General field study (Gopalji Srivastav, 1981 Choti gandak (Deoria)); Museums/ herbarium/collections/records. **Recent Field Studies:** Yadav and Chandra, 1994; Dhanje, 1994; Singh *et al*, 1994; Hussain, 1995; Khan 1997; P. Natti, 1990 in Northeast hills; G.P. Dubey; 1995 - 96. **Threats:** Human interference; Overexploitation; Poisoning; Pollution; Trade. **Trade:** Local; Domestic. **Other Comments:** An aquarium fish of no fishery value. **Status - IUCN:** LOWER RISK - NEAR THREATENED (Nationally). **DATA DEFICIENT (Globally).** - **Criteria based on:** —. - **CITES:** No. - **IWPA (1972;91):** No. - **RDB, National (1994):** No. - **RDB, International (1996):** No. **Recommendations - Research management:** Survey; Monitoring; Limiting factor research; Habitat management; Life history studies. - **PHVA:** Yes. **Captive breeding Recommendations - Captive breeding:** Level 1. - **Level of difficulty:** Moderate difficult. **Existing Captive Programs:** None. - **Names of facilities:** —. **Sources (Refer Appendix):** 27 (xxxvii), 145, 200. **Compilers:** U.K. Sarkar, A. Husain, A.K. Singh, A.K. Pandey, A.C. Pandey, R.S. Patiyal, C.B. Joshi, C.S. Singh, S.M. Srivastava, A.K. Singh, S.K. Paul, G.P. Dubey, S.V. Sharma, N. More, V.S. Basheer, J.K. Jena, A. Apte, K.W. Dhamge.

74. *Danio naganensis* Chaudhuri, 1912 — VU (A1a, 1c). (*Danio manipurensis* Barman, 1987). **Family:** Cyprinidae. **Taxonomic status:** Species. **Habit:** Omnivorous, surface feeder. **Habitat:** Hill stream. **Global Distribution:** ENDEMIC to India. **Current Regional Distribution:** Manipur and Nagaland. - **Elevation:** 1000 - 1800 m. - **Range (Sq. km):** < 20,000. - **Area Occupied (Sq. km):** < 2,000. - **Number of location:** Many (Manipur, Nagaland); Fragmented. **Population Trends - % change - % Decline:** > 20% . - **Time / Rate (Yrs or gens):** 10 yrs. - **No of Mature Individuals:** Not known. **Global Population:** Restricted and continuing decline observed. **Data Quality:** General field study (B. L. Chadhuri, 1912; W. Vishwanath, 1987 Hill stream of Manipur; Records. **Recent Field Studies:** W. Vishwanath, 1994 - 96 in Hill stream of Manipur; P.K. Talwar, A.G. Jhingran, 1991. **Threats:** Dynamite and other destructive fishing; Human interference; Loss of habitat; Poisoning; Trade. **Trade:** Local. **Other Comments:** —. **Status - IUCN:** VULNERABLE. - **Criteria based on:** A1a, 1c (Observed population reduction due to decline in extent of occurrence, area of occupancy and/or quality of habitat). - **CITES:** No. - **IWPA (1972;91):** No. - **RDB, National (1994):** No. - **RDB, International (1996):** No. **Recommendations - Research management:** Survey; Monitoring; Habitat management. - **PHVA:** Pending further data. **Captive breeding Recommendations - Captive breeding:** Level 3. - **Level of difficulty:** Very difficult. **Existing Captive Programs:** None. - **Names of facilities:** —. **Sources (Refer Appendix):** 29, 202. **Compilers:** W. Viswanath, S.P. Biswas, A.K. Karmakar, P.C. Mahanta, B.A. Daniel, R. Dayal

75. *Dayella malabarica* (Day, 1873) — CR (A1a, 1c, 1d, 2c, 2d). **Family:** Clupeidae. **Taxonomic status:** Species. **Habit:** Freshwater. **Habitat:** Lacustrine region. **Global Distribution:** ENDEMIC to India. **Current Regional Distribution:** Western Ghats. - **Elevation:** 1 m. below MSL. - **Range (Sq. km):** < 100 (50). - **Area Occupied (Sq. km):** < 10 (5). - **Number of location:** 2 (Kuttanad region of Kerala). **Population Trends - % change - % Decline:** Not known . - **Time / Rate (Yrs or gens):** Not known. - **No of Mature Individuals:** Not known. **Global Population:** Restricted distribution. **Data Quality:** General field study (B.M. Kurup, 1982, 1983, 1990 Cochin University; B.M. Kurup, 1987 - 89 Cochin University of Science and Technology). **Recent Field Studies:** —. **Threats:** Damming; Fishing; Poisoning; Pollution; Predation; Trade. **Trade:** Local. **Other Comments:** Highly Endemic to central Kerala. A group which is very important from taxonomic point of view. Only a very few specimens were collected since its original description. **Status - IUCN:** CRITICALLY ENDANGERED. - **Criteria based on:** A1a, 1c, 1d, 2c, 2d (Observed population reduction due to decline in extent of occurrence, area of occupancy and/or quality of habitat and actual or potential levels of exploitation and predicted decline due to extent of occurrence, area of occupancy and/or quality of habitat and actual or potential levels of exploitation). - **CITES:** No. - **IWPA (1972;91):** No. - **RDB, National (1994):** No. - **RDB, International (1996):** No. **Recommendations - Research management:** Taxonomic and morphological genetic studies; Translocations; Survey; Monitoring; Limiting factor management. - **PHVA:** Yes. **Captive breeding Recommendations - Captive breeding:** Level 3. - **Level of difficulty:** Very difficult. **Existing Captive Programs:** None. - **Names of facilities:** No attempt has so far been made to breed in captive conditions. **Sources (Refer Appendix):** 110, 112. **Compilers:** C.P. Shaji, T.V. Annamercy, M. Arunachalam, P. Subramanian, A. Gopalakrishnan, A. Manimekalan, B.M. Kurup.

76. *Erethistoides montana pipri* Hora, 1950 — CR (B1, 2a, 2b, 2c, 2d). **Family:** Sisoridae. **Taxonomic status:** Sub - species. **Habit:** bottom dwelling, carnivore. **Habitat:** River (Rihand and Sone river, Sonbhadra district). **Global Distribution:** ENDEMIC to India. **Current Regional Distribution:** Uttar Pradesh, Bihar. - **Elevation:** 200 - 300 m. - **Range (Sq. km):** < 100. - **Area Occupied (Sq. km):** < 10. - **Number of location:** 1 (Sone river). **Population Trends - % change - % Decline:** 50 % . - **Time / Rate (Yrs or gens):** 40 Yrs. - **No of Mature Individuals:** Not known. **Global Population:** Not known. **Regional Population:** Not known. **Data Quality:** Informal field sightings; Indirect information. **Recent Field Studies:** A.K. Singh, 1992 in Rihand river/ reservoir. **Threats:** Damming; Human interference; Loss of habitat; Pollution. **Trade:** No. **Other Comments:** No commercial values not recorded since 1951 not found in 1992 in Rihand river Thermal effluents from power station. **Status - IUCN:** CRITICALLY ENDANGERED. - **Criteria based on:** B1, 2a, 2b, 2c, 2d (Restricted distribution, single location, continuing decline observed in extent of occurrence, area of occupancy, quality of habitat and number of locations or subpopulations). - **CITES:** No. - **IWPA (1972;91):** No. - **RDB, National (1994):** No. -

RDB, International (1996): No. Recommendations - Research management: Taxonomic and morphological genetic studies; Survey; Translocations; Monitoring; Genetic management; Life history studies; Limiting factor research. - **PHVA:** No. **Captive breeding Recommendations - Captive breeding:** Level 3. - **Level of difficulty:** Not known. **Existing Captive Programs:** None. - **Names of facilities:** —. **Sources (Refer Appendix):** 45, 141, 202. **Compilers:** P. Das, D. N. Saxena, A. K. Pandry, U.K. Sarkar, A.K. Singh, A. Husain, A.C. Pandey, A. Mishra.

77. *Esomus danricus* (Hamilton - Buchanan, 1822) — LRlc/N . (*Cyprinus danrica* Hamilton - Buchanan; *Esomus jabalpurensis* Rao & Sharma, 1972; *Esomus manipurensis* Tilak & Jain, 1990). **Family:** Cyprinidae. **Taxonomic status:** Species. **Habit:** Insectivore. **Habitat:** Ponds and Pools. **Global Distribution:** India, Pakistan, Nepal, Sri Lanka, Myanmar. **Current Regional Distribution:** Throughout India . - **Elevation:** . - **Range (Sq. km):** > 20,000. - **Area Occupied (Sq. km):** > 2,000. - **Number of location:** Many (Krishna, Narmada, Mahanadi, Ganga, Western Ghats rivers). **Population Trends - % change - % Decline:** Stable . - **Time / Rate (Yrs or gens):** Not known. - **No of Mature Individuals:** Not known. **Global Population:** Not known. **Regional Population:** No decline in population. **Data Quality:** General field study (Jayaraj & Sharma, 1989 Munnaru tributaries of River Krishna in Andhra Pradesh; Indirect information; Museums/collections/ records. **Recent Field Studies:** Dubey, G.P., 1995 in Narmada; Sugunana & Yadav, 1992 in Mahanadi; Jayaraj, 1995 in Kolleru lake, Andhra Pradesh; . **Threats:** Fishing; Trade. **Trade:** Local; Domestic . **Other Comments:** Non Endemic. **Status - IUCN:** LOWER RISK - LEAST CONCERN (Nationally). **DATA DEFICIENT (Globally).** - **Criteria based on:** —. - **CITES:** No. - **IWPA (1972;91):** No. - **RDB, National (1994):** No. - **RDB, International (1996):** No. **Recommendations - Research management:** Monitoring. - **PHVA:** No. **Captive breeding Recommendations - Captive breeding:** No. - **Level of difficulty:** Least difficult. **Existing Captive Programs:** None. - **Names of facilities:** —. **Sources (Refer Appendix):** 11 (xiii), 27 (xl), 200, 202. **Compilers:** Dubey, G. P. , S.V. Sharma, N. More, V.S. Basheer, J.K. Jena, A. Apte, . K.W. Dhamge.

78. *Etroplus canarensis* Day — DD. **Family:** Cichilidae. **Taxonomic status:** Species. **Habit:** Freshwater. **Habitat:** Running water. **Global Distribution:** ENDEMIC to India. **Current Regional Distribution:** Karnataka. - **Elevation:** 0 - 50 MSL. - **Range (Sq. km):** < 5,000. - **Area Occupied (Sq. km):** < 500. - **Number of location:** South Canara - Dakshina Kannada. **Population Trends - % change - % Decline:** Not known. - **Time / Rate (Yrs or gens):** Not known. - **No of Mature Individuals:** Not known. **Global Population:** Restricted distribution. **Data Quality:** Museums/collections/records. **Recent Field Studies:** Not known. **Threats:** Not known. **Trade:** Not known. **Other Comments:** None. **Status - IUCN:** DATA DEFICIENT. - **Criteria based on:** —. - **CITES:** No. - **IWPA (1972;91):** No. - **RDB, National (1994):** No. - **RDB, International (1996):** No. **Recommendations - Research management:** Survey; Monitoring. - **PHVA:** Yes. **Captive breeding Recommendations - Captive breeding:** Level 3. - **Level of difficulty:** Very difficult. **Existing Captive Programs:** None. - **Names of facilities:** —. **Sources (Refer Appendix):** 202. **Compilers:** M. Arunachalam, A. Manimekalan, C.P. Shaji, P. Subramanian, T. V. Anna Mercy, . A. Gopalakrishnan, B.M. Kurup, O. Alphonse.

79. *Euchiloglanis hodgarti* (Hora) — VU/N (A1c) . (*Exostoma blythii* Day). **Family:** Sisoridae. **Taxonomic status:** Species. **Habit:** Omnivorous. **Habitat:** Cold waters and Fresh water, torrential stream. **Global Distribution:** India, Bangladesh. **Current Regional Distribution:** Uttar Pradesh and West Bengal. - **Elevation:** 1200 m. - **Range (Sq. km):** < 20,000. - **Area Occupied (km²):** < 2,000. - **Number of location:** Many (Darjeeling Abor hills, Kali river); Fragmented. **Population Trends - % change - % Decline:** 15% . - **Time / Rate (Yrs or gens):** 20 Yrs. - **No of Mature Individuals:** Not known. **Global Population:** Not known. **Regional Population:** Continuing decline observed. **Data Quality:** General field study; Indirect information. **Recent Field Studies:** None. **Threats:** Damming; Human interference; Loss of habitat; Poisoning; Pollution; Trade. **Trade:** Local. **Other Comments:** None. **Status - IUCN:** VULNERABLE (Nationally). **DATA DEFICIENT (Globally).** - **Criteria based on:** A1c (Population reduction due to decline in extent of occurrence, area of occupancy and/or quality of habitat). - **CITES:** No. - **IWPA (1972;91):** No. - **RDB, National (1994):** No. - **RDB, International (1996):** No. **Recommendations - Research management:** Survey; Monitoring. - **PHVA:** Yes. **Captive breeding Recommendations - Captive breeding:** Pending. - **Level of difficulty:** Moderate difficulty. **Existing Captive Programs:** None. - **Names of facilities:** —. **Sources (Refer Appendix):** 202. **Compilers:** C.S. Singh, C.B. Joshi, D. Kapoor, S.K. Srivastava, S.M. Srivastava, R.S. Patiyal, A.K. Singh, S.K. Paul.

80. *Euchiloglanis kamengensis* Jayaram, 1966 — EN (B1, 2c, 2d). **Family:** Sisoridae. **Taxonomic status:** Species. **Habit:** Carnivorous. **Habitat:** Hill station. **Global Distribution:** ENDEMIC to India. **Current Regional Distribution:** Arunachal Pradesh. - **Elevation:** 2000 m. - **Range (Sq. km):** < 5,000. - **Area Occupied (Sq. km):** < 500. - **Number of location:** 2 (Norgum River, Kameng River). **Population Trends - % change - % Decline:** Not known . - **Time / Rate (Yrs or gens):** Not known. - **No of Mature Individuals:** Not known. **Global Population:** Restricted distribution. **Data Quality:** General field study (Jayaram, 1966 Arunachal Pradesh); Informal field sightings (P. Nath, & S.C. Dey, 1989 from Arunachal Pradesh. **Recent Field Studies:** None. **Threats:** Catastrophic events; Landslide; Loss of habitat. **Trade:** No. **Other Comments:** None. **Status - IUCN:** ENDANGERED. - **Criteria based on:** B1, 2c, 2d (Restricted distribution, limited locations, continuing decline observed in extent of occurrence, area of occupancy and/or quality of habitat and number of locations of subpopulations). - **CITES:** No. - **IWPA (1972;91):** No. - **RDB, National (1994):** No. - **RDB, International (1996):** No. **Recommendations - Research management:** Survey; Monitoring; Life history studies. - **PHVA:** No. **Captive breeding Recommendations - Captive breeding:** No. - **Level of difficulty:** No. **Existing Captive Programs:** None. - **Names of facilities:** —. **Sources (Refer Appendix):** 82, 145. **Compilers:** W. Vishwanath, A.K. Karmakar, S.P. Biswas, P. C. Mahanata, R. Dayal, . B.A. Daniel.

81. *Eutropiichthys murius* (Hamilton - Buchanan, 1822) — LRnt/ N. **Family:** Schilbeidae. **Taxonomic status:** Species. **Habit:** Carnivorous. **Habitat:** Riverine, Lacustrine. **Global Distribution:** India, Bangladesh, Nepal, Pakistan. **Current Regional Distribution:** Yamuna, Northern Ganga and tributaries, Mahanadi rivers of Bengal and Assam. - **Elevation:** < 500 m. - **Range (Sq. km):** > 20,000. - **Area Occupied (Sq. km):** > 2,000. - **Number of location:** Many. **Population Trends - % change - % Decline:** Decline likely . - **Time / Rate (Yrs or gens):** Not known. - **No of Mature Individuals:** Not known. **Global Population:** Not known. **Regional Population:** Likely decline inferred. **Data Quality:**

Informal field sightings; Indirect information. **Recent Field Studies:** None. **Threats:** Human interference; Harvest; Overexploitation; Pollution; Trade. **Trade:** Local. **Other Comments:** Commercially important cat fish of Indian area attains length 28 cms. greater oil content and less bones. **Status - IUCN:** LOWER RISK - NEAR THREATENED (Nationally). **DATA DEFICIENT (Globally).** - **Criteria based on:** —. - **CITES:** No. - **IWPA (1972;91):** No. - **RDB, National (1994):** No. - **RDB, International (1996):** No. **Recommendations - Research management:** Habitat management; Limiting factor management; Limiting factor research; Genetic management; Survey; Monitoring. - **PHVA:** No. **Captive breeding Recommendations - Captive breeding:** No. - **Level of difficulty:** Not known. **Existing Captive Programs:** None. - **Names of facilities:** —. **Sources (Refer Appendix):** 200, 202. **Compilers:** P. Das, R. Abidi, A. Mishra, D.N. Saksena, D. Basu.

82. *Eutropiichthys vacha* (Hamilton - Buchanan, 1822) — EN/N (A1a, 1b, 1c, 1d, 2b, 2c, 2d).

Family: Schilbeidae, Sub family - Schilbeinae. **Taxonomic status:** Species. **Habit:** Carnivorous. **Habitat:** Riverine (Fresh and tidal waters). **Global Distribution:** India, Pakistan, Bangladesh, Myanmar, Thailand. **Current Regional Distribution:** Northern India, West Bengal, Bihar, Madhya Pradesh. - **Elevation:** < 500 m. - **Range (Sq. km):** > 20,000. - **Area Occupied (Sq. km):** < 2,000. - **Number of location:** Many, Fragmented. **Population Trends - % change - % Decline:** > 50% . - **Time / Rate (Yrs or gens):** 10 Yrs. - **No of Mature Individuals:** Not known. **Global Population:** Not known. **Regional Population:** Continuing rapid decline observed. **Data Quality:** General field study; Museums/collections/records. **Recent Field Studies:** P. Das, 1997; A. Mishra, 1997; Kapoor, D. , 1996 in Allahabad. **Threats:** Human interference; Loss of habitat; Overexploitation; Pollution. **Trade:** No. **Other Comments:** Highly prized food fish which presently has almost absent from trade because of status. **Status - IUCN:** ENDANGERED (Nationally). **DATA DEFICIENT (Globally).** - **Criteria based on:** A1a, 1b, 1c, 1d, 2b, 2c, 2d (Observed population reduction due to decline in abundance, extent of occurrence, area of occupancy and/or quality of habitat, actual or potential levels of exploitation and predicted decline due to decline in abundance, extent of occurrence, area of occupancy and/or quality of habitat and potential levels of exploitation). - **CITES:** No. - **IWPA (1972;91):** No. - **RDB, National (1994):** No. - **RDB, International (1996):** No. **Recommendations - Research management:** Taxonomic and morphological genetic studies; Survey; Monitoring; Habitat management; Genetic management. - **PHVA:** Pending (Not presently possible). **Captive breeding Recommendations - Captive breeding:** Level 1. - **Level of difficulty:** Very difficult. **Existing Captive Programs:** None. - **Names of facilities:** —. **Sources (Refer Appendix):** 27 (xliv), 148, 200, 202. **Compilers:** D. Das, A. Mishra, R. Abidi, D.N. Saksena.

83. *Gagata sexualis* Tilak 1970 — LRnt.

Family: Sisoridae. **Taxonomic status:** Species. **Habit:** Bottom dwelling, carnivorous. **Habitat:** Rivers. **Global Distribution:** ENDEMIC to India. **Current Regional Distribution:** Bihar. - **Elevation:** 50 - 150 m. - **Range (Sq. km):** < 20,000. - **Area Occupied (Sq. km):** > 2,000. - **Number of location:** 3 (Yamuna and Ganga rivers, Chotanagpur). **Population Trends - % change - % Decline:** 20% . - **Time / Rate (Yrs or gens):** 30 Yrs. - **No of Mature Individuals:** Not known. **Global Population:** Not known. **Regional Population:** Continuing decline observed. **Data Quality:** General field study; Informal field sightings. **Recent Field Studies:** A. Husain, 1997 (no fish record from Delhi in Fauna of Delhi). **Threats:** Human interference; Loss of habitat; Pollution. **Trade:** No. **Other Comments:** No commercial value. **Status - IUCN:** LOWER RISK - NEAR THREATENED. - **Criteria based on:** —. - **CITES:** No. - **IWPA (1972;91):** No. - **RDB, National (1994):** No. - **RDB, International (1996):** No. **Recommendations - Research management:** Taxonomic and morphological genetic studies; Survey; Monitoring; Habitat management; Limiting factor research; Life history studies. - **PHVA:** No. **Captive breeding Recommendations - Captive breeding:** No. - **Level of difficulty:** Not known. **Existing Captive Programs:** None. - **Names of facilities:** —. **Sources (Refer Appendix):** 78, 202. (Refer Appendix) . **Compilers:** P. Das, Saxena, D. N. , A.K. Pandey, U.K. Sarkar, A.K. Singh, A. Husain, . A.C. Pandey, A. Mishra.

84. *Garra gotyla gotyla* (Gray, 1830) — VU/N (A1a, 1c) . (*Cyprinus gotyla*).

Family: Cyprinidae. **Taxonomic status:** Species. **Habit:** Bottom feeder. **Habitat:** Hill streams and lakes. **Global Distribution:** Pakistan, India, Myanmar, Bangladesh. **Current Regional Distribution:** All along the stream and lake of Himalaya. - **Elevation:** Up to 2000 m. (Approx.). - **Range (Sq. km):** > 20,000. - **Area Occupied (Sq. km):** > 2,000. - **Number of location:** Plenty; Fragmented. **Population Trends - % change - % Decline:** 20% . - **Time / Rate (Yrs or gens):** 10 Yrs. - **No of Mature Individuals:** Not known. **Global Population:** Not known. **Regional Population:** Continuing decline observed. **Data Quality:** General field study. **Recent Field Studies:** P.C. Mahanta & R.S. Patiyal 1997 Ladhya river, Uttar Pradesh hills; U.K. Sarkar and S.K. Srivastava 1997 in Ladhya stream. **Threats:** Dynamite and other destructive fishing; Edaphic factors; Human interference; Loss of habitat; Overexploitation; Pesticides; Poisoning; Siltation; Trade. **Trade:** Local. **Other Comments:** None. **Status - IUCN:** VULNERABLE (Nationally). **DATA DEFICIENT (Globally).** - **Criteria based on:** A1a, 1c (Observed population reduction due to decline in extent of occurrence, area of occupancy and/or quality of habitat). - **CITES:** No. - **IWPA (1972;91):** No. - **RDB, National (1994):** No. - **RDB, International (1996):** No. **Recommendations - Research management:** Monitoring; Life history studies; Habitat management. - **PHVA:** Yes. **Captive breeding Recommendations - Captive breeding:** No. - **Level of difficulty:** Not known. **Existing Captive Programs:** None. - **Names of facilities:** —. **Sources (Refer Appendix):** 184, 202. **Compilers:** C.B. Joshi, C.S. Singh, S.K. Srivastava, R.S. Patiyal, S.M. Srivastava, S.K. Paul, A.K. Singh.

85. *Garra gotyla stenorhynchus* Jerdon, 1849 — EN (B1, 2c).

Family: Cyprinidae. **Taxonomic status:** Species. **Habit:** Freshwater. **Habitat:** Torrential streams. **Global Distribution:** ENDEMIC to India. **Current Regional Distribution:** Western Ghats. - **Elevation:** 100 - 500 MSL. - **Range (Sq. km):** < 5,000. - **Area Occupied (Sq. km):** < 500. - **Number of location:** 5; Fragmented (Chaliyar, Bhavani, Kabani, Moyar, Mudumalai). **Population Trends - % change - % Decline:** 10% . - **Time / Rate (Yrs or gens):** 15 yrs. - **No of Mature Individuals:** Not known. **Global Population:** Continuing decline observed. **Data Quality:** Reliable census; General field study. **Recent Field Studies:** Manimekhalan in Nilgiri Biosphere Reserve; M. Arunachalam, in DBT Project . **Threats:** Dynamite and other destructive fishing; Pesticides; Poisoning. **Trade:** No. **Other Comments:** None. **Status - IUCN:** ENDANGERED. - **Criteria based on:** B1, 2c (Restricted distribution, limited locations, severely fragmented, continuing decline observed in extent of occurrence, area of occupancy and/or quality of habitat). - **CITES:** No. - **IWPA (1972;91):** No. - **RDB, National (1994):** No. - **RDB, International (1996):** No. **Recommendations - Research management:** Monitoring; Survey. - **PHVA:** Yes. **Captive breeding**

Recommendations - Captive breeding: Level 3. - **Level of difficulty:** Very difficult. **Existing Captive Programs:** None. - **Names of facilities:** —. **Sources (Refer Appendix):** 27 (xlvii), 85, 90, 202. **Compilers:** T.V. Annameray, M. Arunachalam, A. Gopalakrishnan, B.M. Kurup, O. Alphonse, P. Subramanian, A. Manimekalan, C.P. Shaji.

86. *Garra hughii* Silas, 1955 — EN (A1a, 1c). **Family:** Cyprinidae. **Taxonomic status:** Species. **Habit:** Freshwater. **Habitat:** Fast flowing streams with rocky substratum. **Global Distribution:** ENDEMIC to India. **Current Regional Distribution:** Western Ghats. - **Elevation:** 700 - 900 m. - **Range (Sq. km):** < 5,000. - **Area Occupied (Sq. km):** < 500. - **Number of location:** 15 (Perumal malai stream, Palani hills, Nilgiri in Tamil Nadu); Fragmented. **Population Trends - % change - % Decline:** 10% . - **Time / Rate (Yrs or gens):** 3 Yrs. - **No of Mature Individuals:** Not known. **Global Population:** Not known. **Regional Population:** 1500. **Data Quality:** Reliable census; General field study . **Recent Field Studies:** Arunachalam, 1994 - 96 in Palani Hills; Silas, Cardamom and Palani hills. **Threats:** Loss of habitat; Pesticides. **Trade:** No. **Other Comments:** This is the second report of its occurrence after its original description. **Status - IUCN:** **ENDANGERED.** - **Criteria based on:** A1a, 1c (Observed population reduction due to decline in extent of occurrence, area of occupancy and/or quality of habitat). - **CITES:** No. - **IWPA (1972;91):** No. - **RDB, National (1994):** No. - **RDB, International (1996):** No. **Recommendations - Research management:** Taxonomic and morphological genetic studies; Survey. - **PHVA:** No. **Captive breeding Recommendations - Captive breeding:** No. - **Level of difficulty:** No. **Existing Captive Programs:** None. - **Names of facilities:** —. **Sources (Refer Appendix):** 9, 11 (xlviii), 27 (xlviii), 85, 198, 202. **Compilers:** T.V. Annameray, M. Arunachalam, A. Gopalakrishnan, B.M. Kurup. O. Alphonse, P. Subramanian, A. Manimekalan, C.P. Shaji.

87. *Garra kempfi* Hora, 1921 — VU (A1a, 1c; B1, 2c) . (*Garra tirapensis* Datta & Barman, 1984). **Family:** Cyprinidae. **Taxonomic status:** Species. **Habit:** Herbivore. **Habitat:** Torrential hillstream. **Global Distribution:** ENDEMIC to India. **Current Regional Distribution:** Abor hill in Arunachal Pradesh, Hill streams of Manipur . - **Elevation:** 1000 - 2000 m. - **Range (Sq. km):** < 20,000. - **Area Occupied (Sq. km):** < 2,000. - **Number of location:** Many (Chindwin, Brahmaputra (Abor hills) Barak); Fragmented. **Population Trends - % change - % Decline:** 20% . - **Time / Rate (Yrs or gens):** 10 Yrs. - **No of Mature Individuals:** Not known. **Global Population:** Continuing decline observed. **Data Quality:** General field study (W. Vishwanath, 1984 - 1990 in Manipur). **Recent Field Studies:** Karmakar, 1993 in Manipur. **Threats:** Human interference; Poisoning; Trade. **Trade:** Local . **Other Comments:** None. **Status - IUCN:** **VULNERABLE.** - **Criteria based on:** A1a, 1c (Observed population reduction due to decline in extent of occurrence, area of occupancy and/or quality of habitat); B1, 2c (Restricted distribution, severely fragmented, continuing decline observed in extent of occurrence, area of occupancy and/or quality of habitat). - **CITES:** No. - **IWPA (1972;91):** No. - **RDB, National (1994):** No. - **RDB, International (1996):** No. **Recommendations - Research management:** Monitoring; Life history studies. - **PHVA:** No. **Captive breeding Recommendations - Captive breeding:** No. - **Level of difficulty:** No. **Existing Captive Programs:** None. - **Names of facilities:** —. **Sources (Refer Appendix):** 203 (425), 224. **Compilers:** R. Dayal, W. Vishwanath, A.K. Karmakar, S.P. Biswas, P.C. Mahanta, B.A. Daniel.

88. *Garra lissorhynchus* (McClelland, 1842) — VU (A1a, 1c) . (*Platycaea lissorhynchus* McClelland, 1843). **Family:** Cyprinidae. **Taxonomic status:** Species. **Habit:** Herbivore. **Habitat:** Torrential, hillstream. **Global Distribution:** ENDEMIC to India. **Current Regional Distribution:** Northern India. - **Elevation:** 200 - 1500 m. - **Range (Sq. km):** < 20,000. - **Area Occupied (Sq. km):** < 2,000. - **Number of location:** Many (Brahmaputra river system, Barak & Manipur river system); Fragmented. **Population Trends - % change - % Decline:** 20% . - **Time / Rate (Yrs or gens):** 10 Yrs. - **No of Mature Individuals:** Not known. **Global Population:** Continuing decline observed. **Data Quality:** General field study (McClelland, 1843 in Khasi hills Meghalaya); Museum/ collections/records. **Recent Field Studies:** Karmakar, 1993 in Manipur; Vishwanath, 1980 - 95 in Manipur. **Threats:** Human interference; Poisoning; Trade. **Trade:** Local . **Other Comments:** None. **Status - IUCN:** **VULNERABLE.** - **Criteria based on:** A1a, 1c (Observed population reduction due to decline in extent of occurrence, area of occupancy and/or quality of habitat). - **CITES:** No. - **IWPA (1972;91):** No. - **RDB, National (1994):** No. - **RDB, International (1996):** No. **Recommendations - Research management:** Habitat management; Survey. - **PHVA:** No. **Captive breeding Recommendations - Captive breeding:** No. - **Level of difficulty:** No. **Existing Captive Programs:** None. - **Names of facilities:** —. **Sources (Refer Appendix):** 121, 224. **Compilers:** W. Vishwanath, A.K. Karmakar, S.P. Biswas, P.C. Mahanta, R. Dayal, B.A. Daniel.

89. *Garra litanensis*, Vishwanath, 1993 — CR (B1, 2c). **Family:** Cyprinidae. **Taxonomic status:** Species. **Habit:** Herbivore. **Habitat:** Hill stream. **Global Distribution:** ENDEMIC to India. **Current Regional Distribution:** Manipur. - **Elevation:** > 1000 m. - **Range (Sq. km):** < 100. - **Area Occupied (Sq. km):** < 10. - **Number of location:** 1 (Litan stream). **Population Trends - % change - % Decline:** Not known . - **Time / Rate (Yrs or gens):** Not known. - **No of Mature Individuals:** Not known. **Global Population:** Restricted distribution. **Data Quality:** General field study (Vishwanath, 1986 - 1988 in Litan stream). **Recent Field Studies:** No. **Threats:** Human interference; Poisoning; Trade. **Trade:** Local. **Other Comments:** Restricted newly described, Needs intensive survey of the habitat. **Status - IUCN:** **CRITICALLY ENDANGERED.** - **Criteria based on:** B1, 2c (Restricted distribution, single location, continuing decline observed in extent of occurrence, area of occupancy and/or quality of habitat). - **CITES:** No. - **IWPA (1972;91):** No. - **RDB, National (1994):** No. - **RDB, International (1996):** No. **Recommendations - Research management:** Survey; Life history studies. - **PHVA:** No. **Captive breeding Recommendations - Captive breeding:** No. - **Level of difficulty:** Not known. **Existing Captive Programs:** None. - **Names of facilities:** —. **Sources (Refer Appendix):** 224. **Compilers:** W. Vishwanath, A.K. Karmakar, S.P. Biswas, P.C. Mahanta, R. Dayal, B.A. Daniel.

90. *Garra manipurensis* Vishwanath & Sarojnalini, 1988 — CR (B1, 2c). **Family:** Cyprinidae. **Taxonomic status:** Species. **Habit:** Herbivore. **Habitat:** Hill stream. **Global Distribution:** ENDEMIC to India. **Current Regional Distribution:** Manipur river (Chindwin drainage). - **Elevation:** 800 m. - **Range (Sq. km):** < 5,000. - **Area Occupied (Sq. km):** < 10. - **Number of location:** 2; Fragmented (Chakpi river, Manipur river). **Population Trends - % change - % Decline:** Not known . - **Time / Rate (Yrs or gens):** Not known. - **No of Mature Individuals:** Not known. **Global Population:** Restricted distribution. **Data Quality:** General field study (Vishwanath & Sarojnalini, 1986 in Chindwin drainage).

Recent Field Studies: Vishwanath, 1995 in Manipur river. **Threats:** Dynamite and other destructive fishing; Poisoning. **Trade:** No. **Other Comments:** Newly described, further study is required. **Status - IUCN:** **CRITICALLY ENDANGERED**. - **Criteria based on:** B1, 2c (Restricted distribution, limited locations, severely fragmented, continuing decline observed in extent of occurrence, area of occupancy and/or quality of habitat). - **CITES:** No. - **IWPA (1972;91):** No. - **RDB, National (1994):** No. - **RDB, International (1996):** No. **Recommendations - Research management:** Survey; Life history studies. - **PHVA:** No. **Captive breeding Recommendations - Captive breeding:** No. - **Level of difficulty:** No. **Existing Captive Programs:** None. - **Names of facilities:** —. **Sources (Refer Appendix):** 229. **Compilers:** W. Vishwanath, A.K. Karmakar, S.P. Biswas, P.C. Mahanta, R. Dayal, B.A. Daniel.

91. *Garra menoni*, Rema Devi & Indra — VU (D2). (*Garra mullya* (Sykes)). **Family:** Cyprinidae. **Taxonomic status:** Species. **Habit:** Freshwater. **Habitat:** Torrential streams. **Global Distribution:** ENDEMIC to India. **Current Regional Distribution:** Western Ghats. - **Elevation:** 600 MSL. - **Range (Sq. km):** < 5,000. - **Area Occupied (Sq. km):** < 500. - **Number of location:** 1 (Kunthipuzha - Bharathapuzha basin). **Population Trends - % change - % Decline:** Not known. - **Time / Rate (Yrs or gens):** Not known. - **No of Mature Individuals:** Not known. **Global Population:** Restricted distribution. **Data Quality:** Reliable census; General field study (Rama Devi & Indra, 1986 in Silent Valley). **Recent Field Studies:** P.S. Easa, 1995. **Threats:** None. **Trade:** Not known. **Other Comments:** None. **Status - IUCN:** **VULNERABLE**. - **Criteria based on:** D2 (Restricted population in single location). - **CITES:** No. - **IWPA (1972;91):** No. - **RDB, National (1994):** No. - **RDB, International (1996):** No. **Recommendations - Research management:** Not known. - **PHVA:** Not known. **Captive breeding Recommendations - Captive breeding:** Not known. - **Level of difficulty:** Not known. **Existing Captive Programs:** None. - **Names of facilities:** —. **Sources (Refer Appendix):** 27 (I), 54, 180. **Compilers:** T.V. Annamercy, M. Arunachalam, A. Gopalakrishnan, B.M. Kurup, O. Alphonse, P. Subramanian, A. Manimekalan, C.P. Shaji.

92. *Garra naganensis* Hora, 1921 — VU (B1, 2c). **Family:** Cyprinidae. **Taxonomic status:** Species. **Habit:** Herbivore. **Habitat:** Hill stream. **Global Distribution:** ENDEMIC to India. **Current Regional Distribution:** Manipur, Meghalaya, Arunachal Pradesh. - **Elevation:** 200 - 1000 m. - **Range (Sq. km):** < 20,000. - **Area Occupied (Sq. km):** < 2,000. - **Number of location:** Many (Barak drainage, impal river at Kanglatongbi, Brahmaputra system); Fragmented. **Population Trends - % change - % Decline:** Declining. - **Time / Rate (Yrs or gens):** Not known. - **No of Mature Individuals:** Not known. **Global Population:** Continuing decline observed. **Data Quality:** General field study. **Recent Field Studies:** Vishwanath, 1995 in Manipur; A.K. Karmakar, 1993 in Manipur. **Threats:** Dynamite and other destructive fishing; Poisoning; Trade. **Trade:** Local. **Other Comments:** None. **Status - IUCN:** **VULNERABLE**. - **Criteria based on:** B1, 2c (Restricted distribution, severely fragmented, continuing decline observed in extent of occurrence, area of occupancy and/or quality of habitat). - **CITES:** No. - **IWPA (1972;91):** No. - **RDB, National (1994):** No. - **RDB, International (1996):** No. **Recommendations - Research management:** Habitat management; Life history studies. - **PHVA:** No. **Captive breeding Recommendations - Captive breeding:** No. - **Level of difficulty:** No. **Existing Captive Programs:** None. - **Names of facilities:** —. **Sources (Refer Appendix):** 31, 70. **Compilers:** W. Vishwanath, A.K. Karmakar, S.P. Biswas, P.C. Mahanta, R. Dayal, B.A. Daniel.

93. *Garra rupecula* (McClelland, 1839) — VU (A1a; B1, 2b). (*Gonorhynchus rupicululus* McClelland). **Family:** Cyprinidae. **Taxonomic status:** Species. **Habit:** Carnivorous. **Habitat:** Hill Stream. **Global Distribution:** ENDEMIC to India. **Current Regional Distribution:** Arunachal Pradesh, Manipur. - **Elevation:** 1000 - 2000 m. - **Range (Sq. km):** < 20,000. - **Area Occupied (Sq. km):** < 2,000. - **Number of location:** Many (Mishmi hills, Hill stream of Manipur); Fragmented. **Population Trends - % change - % Decline:** 30%. - **Time / Rate (Yrs or gens):** 10 Yrs. - **No of Mature Individuals:** Not known. **Global Population:** Restricted distribution & Continuing decline observed. **Data Quality:** General field study (J. McClelland, 1835 in Arunachal Pradesh). **Recent Field Studies:** Vishwanath, W. (1990 - 95) in Hill stream of Manipur. **Threats:** Dynamite and other destructive fishing; Poisoning; Trade. **Trade:** Local. **Other Comments:** None. **Status - IUCN:** **VULNERABLE**. - **Criteria based on:** A1a, 1d (Observed population reduction due to actual or potential levels of exploitation); B1, 2b (Restricted distribution, severely fragmented, continuing decline in area of occupancy). - **CITES:** No. - **IWPA (1972;91):** No. - **RDB, National (1994):** No. - **RDB, International (1996):** No. **Recommendations - Research management:** Monitoring; Life history studies. - **PHVA:** No. **Captive breeding Recommendations - Captive breeding:** No. - **Level of difficulty:** Not known. **Existing Captive Programs:** None. - **Names of facilities:** —. **Sources (Refer Appendix):** 121, 224. **Compilers:** W. Vishwanath, A.K. Karmakar, S. Biswas, P.C. Mahanta, R. Dayal, B.A. Daniel.

94. *Garra surendranathnii* Shaji, Arun & Easa — EN (B1, 2c). **Family:** Cyprinidae. **Taxonomic status:** Species. **Habit:** Freshwater. **Habitat:** Rivers and Streams. **Global Distribution:** ENDEMIC to India. **Current Regional Distribution:** Western Ghats. - **Elevation:** 300 - 500 MSL. - **Range (Sq. km):** < 5,000. - **Area Occupied (Sq. km):** < 500. - **Number of location:** 3 (Chalakydy river, Periyar and Pamba). **Population Trends - % change - % Decline:** Not known. - **Time / Rate (Yrs or gens):** Not known. - **No of Mature Individuals:** Not known. **Global Population:** Restricted distribution. **Data Quality:** Reliable census; General field study. **Recent Field Studies:** Known only from the type description - 1996. **Threats:** Dynamite and other destructive fishing; Pesticides; Poisoning; Trade. **Trade:** Local. **Other Comments:** Newly described species. Not in a position to assess the status. **Status - IUCN:** **ENDANGERED**. - **Criteria based on:** B1, 2c (Restricted distribution, limited locations, continuing decline observed in extent of occurrence, area of occupancy and/or quality of habitat). - **CITES:** No. - **IWPA (1972;91):** No. - **RDB, National (1994):** No. - **RDB, International (1996):** No. **Recommendations - Research management:** Survey; Monitoring; Habitat management. - **PHVA:** Yes. **Captive breeding Recommendations - Captive breeding:** Not known. - **Level of difficulty:** Not known. **Existing Captive Programs:** None. - **Names of facilities:** —. **Sources (Refer Appendix):** 194. **Compilers:** C.P. Shaji, B.M. Kurup, O. Alphonse, T.V. Annamercy, M. Arunachalam, A. Manimekalan, P. Subramanian.

95. *Glossogobius gluris* (Hamilton - Buchanan, 1822) — LRnt/N. **Family:** Gobiidae. **Taxonomic status:** Species. **Habit:** Omnivorous. **Habitat:** Ponds, Lakes, rivers, plains. **Global Distribution:** India, East Africa, Sri Lanka, Bangladesh, Pakistan, Malaya Peninsular, China, Japan, Philippines, Australia, South Pacific island. **Current Regional**

Distribution: Uttar Pradesh, Bihar, West Bengal, Delhi, Northeast regions, Narmada, Tapi. - **Elevation:** 100 - 800 m. - **Range (Sq. km):** > 20,000. - **Area Occupied (Sq. km):** > 2,000. - **Number of location:** Many (mostly throughout India). **Population Trends - % change - % Decline:** 10 % . - **Time / Rate (Yrs or gens):** 20 Yrs. - **No of Mature Individuals:** Not known. **Global Population:** Continuing decline observed. **Data Quality:** General field study; Museum/records/collections. **Recent Field Studies:** A.C. Pandey, 1980 - 1997 in Eastern Uttar Pradesh and Mizoram; Hussain, 1997 in Fauna of Delhi; G. J. Srivastava, 1980 in Gorakhpur in Uttar Pradesh. **Threats:** Hunting. **Trade:** No. **Other Comments:** Formed a minor fishery in Hoogly Estuary of West Bengal. **Status - IUCN:** LOWER RISK - NEAR THREATENED (Nationally). **DATA DEFICIENT (Globally).** - **Criteria based on:** —. - **CITES:** No. - **IWPA (1972;91):** No. - **RDB, National (1994):** No. - **RDB, International (1996):** No. **Recommendations - Research management:** Monitoring; Survey. - **PHVA:** No. **Captive breeding Recommendations - Captive breeding:** Level 1. - **Level of difficulty:** Least difficult. **Existing Captive Programs:** None. - **Names of facilities:** —. **Sources (Refer Appendix):** 63, 78, 93, 162, 169, 172, 201. **Compilers:** A.C. Pandey, A.K. Pandey, A.K. Singh, A. Husain, U.K. Sarkar.

96. *Glyphis gangeticus* (Muller & Henle, 1839) — VU/N (D2). (*Carcharias gangeticus* (Day, 1889 & Mishra, 1969)). **Family:** Carcharhinidae. **Taxonomic status:** Species. **Habit:** Carnivorous. **Habitat:** Inshore and Marine estuaries, Ascends to rivers. **Global Distribution:** India, Pakistan. **Current Regional Distribution:** West Bengal, Orissa. - **Elevation:** < 500 m. - **Range (Sq. km):** > 20,000. - **Area Occupied (Sq. km):** < 2,000. - **Number of location:** 2 (Hoogly - Ganga system, Chilka lake); Fragmented. **Population Trends - % change - % Decline:** 90% . - **Time / Rate (Yrs or gens):** 100 Yrs. - **No of Mature Individuals:** Not known. **Global Population:** Continuing rapid decline observed. **Data Quality:** General field study; Informal field sightings; Museums/records/collections. **Recent Field Studies:** None. **Threats:** Damming; Fishing; Human interference; Hunting; Overexploitation; Pollution. **Trade:** No. **Other Comments:** LJV Compagno (1997) has reported that only few specimens were collected in the last century but none recently. Thus indicating a possible extinction. It is also distributed in marine habitat, information for which is not available. Marine habitat information required. Probable extinction in freshwater. **Status - IUCN:** VULNERBLE (Nationally). **DATA DEFICIENT (Globally).** - **Criteria based on:** D2 (Restricted population in < 5 locations). - **CITES:** No. - **IWPA (1972;91):** No. - **RDB, National (1994):** No. - **RDB, International (1996):** Critically endangered. **Recommendations - Research management:** Survey; Monitoring; Habitat management; Limiting factor research. - **PHVA:** No. **Captive breeding Recommendations - Captive breeding:** No. - **Level of difficulty:** Very difficult. **Existing Captive Programs:** None. - **Names of facilities:** —. **Sources (Refer Appendix):** 40, 63, 169, 172, 200, 202. **Compilers:** D.N. Saksena, N. K. More, D. Basu.

97. *Glyptosternum reticulatum* McClelland, 1842 — EN/N (B1, 2c). (*Exostoma stoliczkae* Day 1876). **Family:** Sisoridae. **Taxonomic status:** Species. **Habit:** Carnivorous. **Habitat:** Himalayan stream. **Global Distribution:** India, Afghanistan, Pakistan. **Current Regional Distribution:** —. - **Elevation:** 2000 m. - **Range (Sq. km):** < 5,000. - **Area Occupied (Sq. km):** < 2,000. - **Number of location:** Many; Fragmented. **Population Trends - % change - % Decline:** 15% . - **Time / Rate (Yrs or gens):** 25 Yrs. - **No of Mature Individuals:** Not known. **Global Population:** Continuing decline observed. **Data Quality:** General field study; Informal field sightings. **Recent Field Studies:** Singh, 1996; NBFGR, Lucknow, 1995. **Threats:** Dynamite and other destructive fishing; Loss of habitat; Siltation; Trade. **Trade:** Local. **Other Comments:** None. **Status - IUCN:** ENDANGERED (Nationally). **DATA DEFICIENT (Globally).** - **Criteria based on:** B1, 2c (Restricted distribution, severely fragmented, continuing decline observed in extent of occurrence, area of occupancy and/or quality of habitat). - **CITES:** No. - **IWPA (1972;91):** No. - **RDB, National (1994):** No. - **RDB, International (1996):** No. **Recommendations - Research management:** Survey; Limiting factor management. - **PHVA:** Yes. **Captive breeding Recommendations - Captive breeding:** Pending. - **Level of difficulty:** Very difficult. **Existing Captive Programs:** None. - **Names of facilities:** —. **Sources (Refer Appendix):** 140, 202. **Compilers:** C.S. Singh, C.B. Joshi, S.K. Srivastava, S.M. Srivastava, R.S. Patiyal, A.K. Singh, S.K. Paul.

98. *Glyptothorax alaknandi* Tilak — CR (B1, 2c). **Family:** Sisoridae. **Taxonomic status:** Species. **Habit:** Carnivore, bottom dweller. **Habitat:** Hill stream of Garhwal Himalaya. **Global Distribution:** ENDEMIC to India. **Current Regional Distribution:** Uttar Pradesh. - **Elevation:** 1200 m. - **Range (Sq. km):** < 100. - **Area Occupied (Sq. km):** < 10. - **Number of location:** 1 (Alaknanda river, Srinagar). **Population Trends - % change - % Decline:** > 20% . - **Time / Rate (Yrs or gens):** 28 Yrs. (7% over 10yrs.). - **No of Mature Individuals:** Not known. **Global Population:** Restricted distribution and Continuing decline observed. **Data Quality:** General field study; Museums/records/collections. **Recent Field Studies:** None. **Threats:** Damming; Trade; Dynamite and other destructive fishing; Poisoning. **Trade:** Local. **Other Comments:** Of no importance to fishes (Talwar & Jhingran, 1991). **Status - IUCN:** CRITICALLY ENDANGERED. - **Criteria based on:** B1, 2c (Restricted distribution, single location, continuing decline observed in extent of occurrence, area of occupancy and/or quality of habitat). - **CITES:** No. - **IWPA (1972;91):** No. - **RDB, National (1994):** No. - **RDB, International (1996):** No. **Recommendations - Research management:** Survey; Monitoring; Genetic management; Limiting factor management; Habitat management. - **PHVA:** Yes. **Captive breeding Recommendations - Captive breeding:** Level 1. - **Level of difficulty:** Least difficult. **Existing Captive Programs:** None. - **Names of facilities:** —. **Sources (Refer Appendix):** 202. **Compilers:** A.C. Pandey, A.K. Pandey, A.K. Singh, A. Husain, U.K. Sarkar

99. *Glyptothorax anamalaiensis* Silas 1951 — CR (B1, 2c). **Family:** Sisoridae. **Taxonomic status:** Species. **Habit:** Freshwater. **Habitat:** Torrential streams. **Global Distribution:** ENDEMIC to India. **Current Regional Distribution:** Western Ghats. - **Elevation:** 100 - 900 m. MSL. - **Range (Sq. km):** < 100. - **Area Occupied (Sq. km):** < 10. - **Number of location:** 2; Fragmented (Chaliyar and type locality, Anamalai hills). **Population Trends - % change - % Decline:** Not known . - **Time / Rate (Yrs or gens):** Not known. - **No of Mature Individuals:** Not known. **Global Population:** Restricted distribution. **Data Quality:** Reliable census; General field study. **Recent Field Studies:** C.P. Shaji, 1993 onwards in general field studies in Nilgiri biosphere reserve. **Threats:** Dynamite and other destructive fishing; Pesticides; Poisoning. **Trade:** No. **Other Comments:** This species is so far known only from the type specimens. There is no report further except Easa & Basheer, 1995). **Status - IUCN:** CRITICALLY ENDANGERED. - **Criteria based on:** B1, 2c (Restricted distribution,

limited locations, severely fragmented, continuing decline observed in extent of occurrence, area of occupancy and/or quality of habitat). - CITES: No. - IWPA (1972;91): No. - RDB, National (1994): No. - RDB, International (1996): No. **Recommendations - Research management:** Survey; Monitoring; Habitat management. - PHVA: Yes. **Captive breeding Recommendations - Captive breeding:** Level 3. - **Level of difficulty:** Very difficult. **Existing Captive Programs:** None. - **Names of facilities:** —. **Sources (Refer Appendix):** 85, 202. **Compilers:** T.V. Annamerly, M. Arunachalam, A. Gopalakrishnan, A. Manimekalan, . B.M. Kurup, C.P. Shaji, P. Subramanian.

100. *Glyptothorax brevipinnis* Hora, 1923 — VU (A1a, 1c, 1d; 2c, 2d; B1, 2c). Family: Sisoridae. **Taxonomic status:** Species. **Habit:** Bottom dwelling, Carnivorous. **Habitat:** Hill streams. **Global Distribution:** ENDEMIC to India. **Current Regional Distribution:** Himachal Pradesh. - **Elevation:** 700 - 1000 m. - **Range (Sq. km):** < 5,000. - **Area Occupied (Sq. km):** < 500. - **Number of location:** 1 (Kangra in Himachal Pradesh, Beas drainage system). **Population Trends - % change - % Decline:** < 20% . - **Time / Rate (Yrs or gens):** 10 Yrs. - **No of Mature Individuals:** Not known. **Global Population:** Restricted distribution and continuing decline observed. **Data Quality:** Museums/collections/records. **Recent Field Studies:** Dhanze & Dhanze, 1994, Himachal Pradesh. **Threats:** Dynamite and other destructive fishing; Loss of habitat; Siltation; Trade. **Trade:** Local. **Other Comments:** No commercial value. **Status - IUCN:** VULNERABLE. - **Criteria based on:** A1a, 1c, 1d, 2c, 2d (Observed population reduction due to decline in extent of occurrence, area of occupancy and/or quality of habitat and actual or potential levels of exploitation and predicted decline due to extent of occurrence, area of occupancy and/or quality of habitat and actual or potential levels of exploitation); B1, 2c (Restricted distribution, single location, continuing decline observed in extent of occurrence, area of occupancy and/or quality of habitat). - CITES: No. - IWPA (1972;91): No. - RDB, National (1994): No. - RDB, International (1996): No. **Recommendations - Research management:** Taxonomic and morphological genetic studies; Survey; Monitoring; Limiting factor management; Limiting factor research. - PHVA: No. **Captive breeding Recommendations - Captive breeding:** Level 1. - **Level of difficulty:** Very difficult. **Existing Captive Programs:** None. - **Names of facilities:** —. **Sources (Refer Appendix):** 48. **Compilers:** P. Das, A. Mishra, R. Abidi, D. N. Saxena.

101. *Glyptothorax cavia* Hamilton - Buchanan 1822 — EN/N (A1a, 1c, 1d). Family: Sisoridae. **Taxonomic status:** Species. **Habit:** Carnivorous, bottom dweller. **Habitat:** Hill streams and rivers. **Global Distribution:** Nepal, Bangladesh, Pakistan, Myanmar. **Current Regional Distribution:** North Bengal, Assam, Uttar Pradesh. - **Elevation:** 800 m. - **Range (Sq. km):** > 20,000. - **Area Occupied (Sq. km):** > 2,000. - **Number of location:** Many. **Population Trends - % change - % Decline:** > 50 % . - **Time / Rate (Yrs or gens):** 10 Yrs. - **No of Mature Individuals:** Not known. **Global Population:** Not known. **Regional Population:** Rapid Continuing decline. **Data Quality:** General field study (Mishra, 1976 in North Bengal; Tilak & Husain 1976 in Doon Valley); Museums/collections/records. **Recent Field Studies:** —. **Threats:** Damming; Fishing; Human interference; Loss of habitat; Pollution; Trade. **Trade:** Local. **Other Comments:** A minor interest to fisheries though attains a large size 30 cm. **Status - IUCN:** ENDANGERED (Nationally). **DATA DEFICIENT (Globally).** - **Criteria based on:** A1a, 1c, 1d (Observed population reduction due to decline in extent of occurrence, area of occupancy, quality of habitat and/or actual or potential levels of exploitation). - CITES: No. - IWPA (1972;91): No. - RDB, National (1994): No. - RDB, International (1996): No. **Recommendations - Research management:** Survey; Monitoring; Genetic management; Habitat management; Limiting factor management; Limiting factor research. - PHVA: Yes. **Captive breeding Recommendations - Captive breeding:** Level 1; Level 4. - **Level of difficulty:** Least difficult. **Existing Captive Programs:** None. - **Names of facilities:** —. **Sources (Refer Appendix):** 79 (i), 140, 203 (649 - 650), 210. **Compilers:** A.C. Pandey, A. Husain, A.K. Singh, U.K. Sarkar, A.K. Pandey.

102. *Glyptothorax dakpathari* Tilak & Husain, 1976 — CR (B1, 2c). Family: Sisoridae. **Taxonomic status:** Species. **Habit:** Carnivorous and bottom dweller. **Habitat:** Yamuna river. **Global Distribution:** ENDEMIC to India. **Current Regional Distribution:** Uttar Pradesh. - **Elevation:** 700 m. - **Range (Sq. km):** < 100. - **Area Occupied (Sq. km):** < 10. - **Number of location:** 1 (Dakpathar, Dehradun). **Population Trends - % change - % Decline:** > 50% . - **Time / Rate (Yrs or gens):** 20 yrs. - **No of Mature Individuals:** Not known. **Global Population:** Continuing decline observed & highly restricted. **Data Quality:** General field study; Museums/collections/records. **Recent Field Studies:** Tilak & Husain, 1976. **Threats:** Damming; Dynamite and other destructive fishing; Poisoning. **Trade:** Not known. **Other Comments:** No fishery value. **Status - IUCN:** CRITICALLY ENDANGERED. - **Criteria based on:** B1, 2c (Restricted distribution, single location, continuing decline observed in extent of occurrence, area of occupancy and/or quality of habitat). - CITES: No. - IWPA (1972;91): No. - RDB, National (1994): No. - RDB, International (1996): No. **Recommendations - Research management:** Survey; Monitoring; Genetic management; Limiting factor management; Habitat management; Limiting factor research. - PHVA: Yes. **Captive breeding Recommendations - Captive breeding:** Level 1. - **Level of difficulty:** Least difficult. **Existing Captive Programs:** None. - **Names of facilities:** —. **Sources (Refer Appendix):** 203 (652), 210. **Compilers:** A. Husain, U.K. Sarkar, A. K. Sng, A.K. Pandey, A.C. Pandey.

103. *Glyptothorax davissinghi* Manimekalan & Das — CR (B1, 2c). Family: Sisoridae. **Taxonomic status:** Species. **Habit:** Fresh water. **Habitat:** Clear stream and river. **Global Distribution:** ENDEMIC to India. **Current Regional Distribution:** Western Ghats. - **Elevation:** 210 - 280 m. - **Range (Sq. km):** < 100. - **Area Occupied (Sq. km):** < 10. - **Number of location:** 2 (Kalimpuzha, Nilambur Chaliyar basin, Kerala); Fragmented. **Population Trends - % change - % Decline:** 5% . - **Time / Rate (Yrs or gens):** 4 Yrs. - **No of Mature Individuals:** Not known. **Global Population:** Continuing decline observed. **Data Quality:** Reliable census; General field study . **Recent Field Studies:** Manimekalan & Arunachalam 1995 - 96 in Kalimpuzha & Chaliyar basin. **Threats:** Poisoning. **Trade:** No. **Other Comments:** Newly described. Many details are not known. **Status - IUCN:** CRITICALLY ENDANGERED. - **Criteria based on:** B1, 2c (Restricted distribution, limited location, severely fragmented, continuing decline observed in extent of occurrence, area of occupancy and/or quality of habitat). - CITES: No. - IWPA (1972;91): No. - RDB, National (1994): No. - RDB, International (1996): No. **Recommendations - Research management:** Taxonomic and morphological genetic studies; Monitoring; Life history studies. - PHVA: Yes. **Captive breeding Recommendations - Captive breeding:** No. - **Level of difficulty:** Not known. **Existing Captive Programs:** None. - **Names of facilities:** —. **Sources (Refer Appendix):** 119. **Compilers:** A. Manimekalan, M. Arunachalam, A. Gopalakrishnan, T. V. Anna Mercy, Shaji,. B.M. Kurup, O. Alphonse, P. Subramanian.

104. *Glyptothorax garhwali* Tilak, 1969 — CR (B1, 2c). Family: Sisoridae. Taxonomic status: Species. Habit: Carnivorous, bottom dweller. Habitat: Hillstream. Global Distribution: ENDEMIC to India. Current Regional Distribution: Uttar Pradesh. - Elevation: 1200 m. - Range (Sq. km): < 100. - Area Occupied (Sq. km): < 10. - Number of location: 1 (Himalayan range, west of Koshi river - Western Himalaya). Population Trends - % change - % Decline: Not known. - Time / Rate (Yrs or gens): Not known. - No of Mature Individuals: Not known. Global Population: Highly restricted and single location. Data Quality: General field study (Tilak, 1969 in Alkanada, Srinagar - Garhwal, Uttar Pradesh); Museums/collections/records. Recent Field Studies: Not known. Threats: Damming; Dynamite and other destructive fishing; Poisoning. Trade: No. Other Comments: No fishery value. Status - IUCN: CRITICALLY ENDANGERED. - Criteria based on: B1, 2c (Restricted distribution, limited location, severely fragmented, continuing decline observed in extent of occurrence, area of occupancy and/or quality of habitat). - CITES: No. - IWPA (1972;91): No. - RDB, National (1994): No. - RDB, International (1996): No. Recommendations - Research management: Survey; Monitoring; Genetic management; Limiting factor management; Habitat management; Limiting factor research. - PHVA: Yes. Captive breeding Recommendations - Captive breeding: Level 1. - Level of difficulty: Least difficult. Existing Captive Programs: None. - Names of facilities: —. Sources (Refer Appendix): 203 (652 - 653), 208. Compilers: A. Husain, U.K. Sarkar, A.K. Singh, A.K. Pandey & A.C. Pandey.

105. *Glyptothorax housei* Herre, 1942 — DD . Family: Sisoridae. Taxonomic status: Species. Habit: Freshwater. Habitat: Torrential streams. Global Distribution: ENDEMIC to India. Current Regional Distribution: Western Ghats. - Elevation: 100 - 900 MSL. - Range (Sq. km): < 100. - Area Occupied (Sq. km): < 10. - Number of location: 1 (Anamalai hills). Population Trends - % change - % Decline: Not known. - Time / Rate (Yrs or gens): Not known. - No of Mature Individuals: Not known. Global Population: Restricted distribution and single location. Data Quality: Reliable census; General field study. Recent Field Studies: None. Threats: None. Trade: No. Other Comments: This species is known only from the type locality. No further report of its occurrence from any where in India. Status - IUCN: DATA DEFICIENT. - Criteria based on: —. - CITES: No. - IWPA (1972;91): No. - RDB, National (1994): No. - RDB, International (1996): No. Recommendations - Research management: Monitoring. - PHVA: Pending. Captive breeding Recommendations - Captive breeding: Level 1. - Level of difficulty: Not known. Existing Captive Programs: None. - Names of facilities: —. Sources (Refer Appendix): 85, 140, 198, 203 (653 - 654). Compilers: T.V. Annamercy, M. Arunachalam, A. Gopalakrishnan, A. Manimekalan, B.M. Kurup, C.P. Shaji, O. Alphonse, P. Subramanian.

106. *Glyptothorax indicus* Talwar, 1991 — VU/N (A1a, 1c, 1d). Family: Sisoridae. Taxonomic status: Species. Habit: Bottom dweller, Carnivore. Habitat: Hill streams (Torrential). Global Distribution: India, Nepal. Current Regional Distribution: Jarai (Eastern Himalaya), Rihand river (Uttar Pradesh), Punjab hills, Himachal Pradesh. - Elevation: > 1000 m. - Range (Sq. km): < 5,000. - Area Occupied (Sq. km): < 500. - Number of location: Many. Population Trends - % change - % Decline: About 40% . - Time / Rate (Yrs or gens): 10 Yrs. - No of Mature Individuals: Not known. Global Population: Not known. Regional Population: Continuing decline observed. Data Quality: General field study (Menon, 1954 in Terai, North Bengal; Tilak & Tandon, 1976 in Rinand river; Mishra, 1976 in Punjab hills; Motuari & David, 1957; Anor, 1981; Johal, 1977 in Punjab hills); Museums/collections/records. Recent Field Studies: Khan, 1997. Threats: Dynamite and other destructive fishing; Fishing; Human interference; . Loss of habitat. Trade: No. Other Comments: Being a small sized fish no fishery importance. Status - IUCN: VULNERABLE (Nationally). DATA DEFICIENT (Globally). - Criteria based on: A1a, 1c, 1d (Observed population reduction due to decline in extent of occurrence, area of occupancy and/or quality of habitat and/or due to actual or potential levels of exploitation) . - CITES: No. - IWPA (1972;91): No. - RDB, National (1994): No. - RDB, International (1996): No. Recommendations - Research management: Survey; Monitoring; Genetic management; Limiting factor management; Limiting factor research. - PHVA: Yes. Captive breeding Recommendations - Captive breeding: Level 1. - Level of difficulty: Least difficult. Existing Captive Programs: None. - Names of facilities: —. Sources (Refer Appendix): 93, 95, 103, 127, 140, 203 (654 - 655), 219. Compilers: U.K. Sarkar, A.K. Singh, A. Husain, A.K. Pandey, A.C. Pandey.

107. *Glyptothorax kashmirensis* (Hora, 1921) — EN/N (B1, 2c). Family: Sisoridae. Taxonomic status: Species. Habit: Omnivorous. Habitat: Hill stream. Global Distribution: Pakistan, India. Current Regional Distribution: River and Streams of Kashmir. - Elevation: 2000 m. - Range (Sq. km): < 5,000. - Area Occupied (Sq. km): < 500. - Number of location: < 5. Population Trends - % change - % Decline: 5% . - Time / Rate (Yrs or gens): 15 yrs. - No of Mature Individuals: Not known. Global Population: Not known. Regional Population: Continuing decline observed in restricted distribution. Data Quality: General field study. Recent Field Studies: None. Threats: Human interference; Loss of habitat; Pesticides; Trade. Trade: Local. Other Comments: None. Status - IUCN: ENDANGERED (Nationally). DATA DEFICIENT (Globally). - Criteria based on: B1, 2c (Restricted distribution, limited location, severely fragmented, continuing decline observed in extent of occurrence, area of occupancy and/or quality of habitat). - CITES: No. - IWPA (1972;91): No. - RDB, National (1994): No. - RDB, International (1996): No. Recommendations - Research management: Habitat management; Other (Specify). - PHVA: Yes. Captive breeding Recommendations - Captive breeding: Pending. - Level of difficulty: Not known. Existing Captive Programs: None. - Names of facilities: —. Sources (Refer Appendix): 140, 203 (655). Compilers: C.S. Singh, C.B. Joshi, S.K. Srivastava, S.M. Srivastava, R.S. Patiyal, A.K. Singh, S.K. Paul.

108. *Glyptothorax lonah* (Sykes, 1839) — LRnt. (*Bagrus lonah*; *Glyptosternum lonah*; *Glyptosternum dekkannensis*). Family: Sisoridae. Taxonomic status: Species. Habit: Carnivorous. Habitat: Riverine. Global Distribution: ENDEMIC to India. Current Regional Distribution: Deccan Plateau, Godavari, Krishna river system. - Elevation: Up to 300 m. MSL. - Range (Sq. km): > 20,000. - Area Occupied (Sq. km): < 500. - Number of location: Many, (Godavari, Krishna). Population Trends - % change - % Decline: 20% . - Time / Rate (Yrs or gens): 20 Yrs. - No of Mature Individuals: Not known. Global Population: Continuing decline observed. Data Quality: General field study; Indirect information; Museums/collections/ records. Recent Field Studies: Dubey, G. P. , 1994 in Narmada River, Madhya Pradesh; CICFRI, 1991 in Narmada river in Madhya Pradesh. Threats: Damming; Loss of habitat; Trade. Trade: Local. Other Comments: —. Status - IUCN: LOWER RISK - NEAR THREATENED. - Criteria based on: —. - CITES: No. - IWPA

(1972;91): No. - RDB, National (1994): No. - RDB, International (1996): No. **Recommendations - Research management:** Habitat management; Survey. - **PHVA:** No. **Captive breeding Recommendations - Captive breeding:** No. - **Level of difficulty:** Moderate difficulty. **Existing Captive Programs:** None. - **Names of facilities:** —. **Sources (Refer Appendix):** 27 (lii)50, 140, 203 (655 - 656). **Compilers:** G.P. Dubey, S.V. Sharma, N. More, V.S. Basheer, J.K. Jena, A. Apte, . K.W. Dhamge.

109. *Glyptothorax madraspatanum* (Day, 1873) — VU (D2). Family: Sisoridae. **Taxonomic status:** Species. **Habit:** Fresh water. **Habitat:** Torrential streams. **Global Distribution:** ENDEMIC to India. **Current Regional Distribution:** Western Ghats. - **Elevation:** 300 - 900 MSL. - **Range (Sq. km):** < 5,000. - **Area Occupied (Sq. km):** < 500. - **Number of location:** 3 (Kabani, Chaliyar, Periyar, Annamalai and Nilgiri Hills, Cauveri river). **Population Trends - % change - % Decline:** Not known. - **Time / Rate (Yrs or gens):** Not known. - **No of Mature Individuals:** Not known. **Global Population:** Restricted distribution. **Data Quality:** Reliable census; General field study. **Recent Field Studies:** Not known. **Threats:** Not known. **Trade:** Not known. **Other Comments:** None. **Status - IUCN:** VULNERABLE. - **Criteria based on:** D2 (Restricted population in < 5 locations). - **CITES:** No. - **IWPA (1972;91):** No. - **RDB, National (1994):** No. - **RDB, International (1996):** No. **Recommendations - Research management:** Survey; Monitoring. - **PHVA:** No. **Captive breeding Recommendations - Captive breeding:** No. - **Level of difficulty:** Not known. **Existing Captive Programs:** None. - **Names of facilities:** —. **Sources (Refer Appendix):** 6, 40, 53, 84, 203 (656 - 657). **Compilers:** T.V. Annameray, M. Arunachalam, A. Gopalakrishnan, A. Manimekalan, . B.M. Kurup, C.P. Shaji, O. Alphonse, P. Subramanian.

110. *Glyptothorax nelsoni* Ganguly, Dutta & Sen, 1972 — EN (B1, 2c). Family: Sisoridae. **Taxonomic status:** Species. **Habit:** Carnivorous, bottom dweller. **Habitat:** Turbulent hill streams. **Global Distribution:** ENDEMIC to India. **Current Regional Distribution:** Bihar. - **Elevation:** 1500 m. - **Range (Sq. km):** < 5,000. - **Area Occupied (Sq. km):** < 500. - **Number of location:** 2 (Subsneka river Chota Nagpur Plateau). **Population Trends - % change - % Decline:** 30% approx. - **Time / Rate (Yrs or gens):** 25 Yrs. - **No of Mature Individuals:** Not known. **Global Population:** Continuing decline observed in restricted distribution. **Data Quality:** General field study; Museums/herbarium/collections/records. **Recent Field Studies:** Ganguli, Dutta & Sen, 1972 in Subarnarekha river, Chhitanagpur, Plateau, Bihar. **Threats:** Damming; Trade; Loss of habitat because of exotic animal. **Trade:** Local. **Other Comments:** Of no interest to fishery. **Status - IUCN:** ENDANGERED. - **Criteria based on:** B1, 2c (Restricted distribution, limited location, severely fragmented, continuing decline observed in extent of occurrence, area of occupancy and/or quality of habitat). - **CITES:** No. - **IWPA (1972;91):** No. - **RDB, National (1994):** No. - **RDB, International (1996):** No. **Recommendations - Research management:** Survey; Monitoring; Limiting factor research. - **PHVA:** Yes. **Captive breeding Recommendations - Captive breeding:** Level 1. - **Level of difficulty:** Least difficult. **Existing Captive Programs:** None. - **Names of facilities:** —. **Sources (Refer Appendix):** 56, 203 (656 - 658). **Compilers:** A. Husain, U.K. Sarkar, A.K. Pandey, A.C. Pandey & A.K. Singh

111. *Glyptothorax pectinopterus* (McClelland, 1842) — LRnt/N. Family: Sisoridae. **Taxonomic status:** Species. **Habit:** Carnivorous. **Habitat:** Cold water streams. **Global Distribution:** India, Pakistan and Nepal. **Current Regional Distribution:** Jammu & Kashmir, Himachal Pradesh, Uttar Pradesh, Sikkim, Andhra Pradesh, Meghalaya. - **Elevation:** 2000 m. - **Range (Sq. km):** > 20,000. - **Area Occupied (Sq. km):** Up to 1000. - **Number of location:** Many; Fragmented. **Population Trends - % change - % Decline:** Not known. - **Time / Rate (Yrs or gens):** Not known. - **No of Mature Individuals:** Not known. **Global Population:** Not known. **Regional Population:** Widely distributed. **Data Quality:** General field study; Indirect information. **Recent Field Studies:** C.B. Joshi, & S.S. Pathani 1982 & 1984 in Kumoun Hills. **Threats:** Dynamite and other destructive fishing; Poisoning. **Trade:** No. **Other Comments:** None. **Status - IUCN:** LOWER RISK - NEAR THREATENED (Nationally). **DATA DEFICIENT (Globally).** - **Criteria based on:** —. - **CITES:** No. - **IWPA (1972;91):** No. - **RDB, National (1994):** No. - **RDB, International (1996):** No. **Recommendations - Research management:** Survey; Life history studies; Monitoring. - **PHVA:** No. **Captive breeding Recommendations - Captive breeding:** No. - **Level of difficulty:** Not known. **Existing Captive Programs:** None. - **Names of facilities:** —. **Sources (Refer Appendix):** 203 (658). **Compilers:** C.S. Singh, C.B. Joshi, S.K. Srivastava, R.S. Patiyal, A.K. Singh, S.K. Paul.

112. *Glyptothorax saisii* (Jenkins, 1910) — EN (B1, 2c). Family: Sisoridae. **Taxonomic status:** Species. **Habit:** Carnivore, bottom dwelling. **Habitat:** Shallow moving hill streams. **Global Distribution:** ENDEMIC to India. **Current Regional Distribution:** Bihar, Uttar Pradesh and Maharashtra. - **Elevation:** 700 - 1000 m. - **Range (Sq. km):** > 20,000. - **Area Occupied (Sq. km):** < 500. - **Number of location:** 3 (Parenathu hills, Pauri Garhwal, Yena river). **Population Trends - % change - % Decline:** 50% . - **Time / Rate (Yrs or gens):** 80 Yrs. - **No of Mature Individuals:** Not known. **Global Population:** Continuing decline observed. **Data Quality:** General field study (Tilak & Hussain, 1978 in Pauri in Garhwal, Uttar Pradesh; Jayaram, 1979 in Yenna river in Maharashtra); Museum/collections/records. **Recent Field Studies:** Menon, 1997 in Paresaath Hills in Bihar. **Threats:** Damming; Dynamite and other destructive fishing; Poisoning. **Trade:** No. **Other Comments:** No fishery value. **Status - IUCN:** ENDANGERED. - **Criteria based on:** B1, 2c (Restricted distribution, limited location, severely fragmented, continuing decline observed in extent of occurrence, area of occupancy and/or quality of habitat). - **CITES:** No. - **IWPA (1972;91):** No. - **RDB, National (1994):** No. - **RDB, International (1996):** No. **Recommendations - Research management:** Survey; Monitoring; Genetic management; Limiting factor management; Habitat management; Limiting factor research. - **PHVA:** Yes. **Captive breeding Recommendations - Captive breeding:** Level 1. - **Level of difficulty:** Least difficult. **Existing Captive Programs:** None. - **Names of facilities:** —. **Sources (Refer Appendix):** 203 (660 - 661), 213. **Compilers:** A. Husain, U.K. Sarkar, A.K. Singh, A.K. Pandey, A.C. Pandey.

113. *Glyptothorax stoliczkae* (Steindachner, 1867) — CR (B1, 2c). Family: Sisoridae. **Taxonomic status:** Species. **Habit:** Carnivores. **Habitat:** Hilly region of Western Himalaya. **Global Distribution:** ENDEMIC to India. **Current Regional Distribution:** Western Himalaya, Ganga water shed. - **Elevation:** 1000 m. - **Range (Sq. km):** < 100. - **Area Occupied (Sq. km):** < 10. - **Number of location:** 1. **Population Trends - % change - % Decline:** 20% . - **Time / Rate (Yrs or gens):** 30 Yrs. - **No of Mature Individuals:** Not known. **Global Population:** India. **Regional Population:** Western

Himalaya of Ganga water shed. **Data Quality:** General field study (Jayaram, 1979,81 in Western Himalayas and Ganga water shed); Museum/collections/records. **Recent Field Studies:** Menon, 1997. **Threats:** Dynamite and other destructive fishing; Edaphic factors; Loss of habitat . because of fragmentation. **Trade:** No. **Other Comments:** No fishery value. **Status - IUCN: CRITICALLY ENDANGERED.** - **Criteria based on:** B1, 2c (Restricted distribution, limited location, severely fragmented, continuing decline observed in extent of occurrence, area of occupancy and/or quality of habitat). - **CITES:** No. - **IWPA (1972;91):** No. - **RDB, National (1994):** No. - **RDB, International (1996):** No. **Recommendations - Research management:** Survey; Monitoring; Genetic management; Habitat management; Limiting factor management; Limiting factor research. - **PHVA:** Yes. **Captive breeding Recommendations - Captive breeding:** Level 1. - **Level of difficulty:** Least difficult. **Existing Captive Programs:** None. - **Names of facilities:** —. **Sources (Refer Appendix):** 84. **Compilers:** A. Husain, U.K. Sarkar, A.C. Pandey, A.K. Pandey, A.K. Singh.

114. *Glyptothorax striatus* (McClelland, 1842; Hora, 1923) — VU (B1, 2c; D2). (*Glyptosternus striatum*, Day, 1877). **Family:** Sisodidae. **Taxonomic status:** Species. **Habit:** Carnivore. **Habitat:** Hillstream. **Global Distribution:** ENDEMIC to India. **Current Regional Distribution:** Meghalaya and Sikkim. - **Elevation:** 500 - 1500 m. - **Range (Sq. km):** > 20,000. - **Area Occupied (Sq. km):** < 2,000. - **Number of location:** 3 (Khasi hills, Garo hills, Sikkim); Fragmented. **Population Trends - % change - % Decline:** Not known . - **Time / Rate (Yrs or gens):** Not known. - **No of Mature Individuals:** Not known. **Global Population:** Restricted distribution. **Data Quality:** General field study; Museum/collections/records (McClelland, 1842 . in Khasi hills). **Recent Field Studies:** Karmakar, 1993 in Manipur Valley. **Threats:** Damming; Human interference. **Trade:** No. **Other Comments:** Restricted to Northeastern part of India. **Status - IUCN: VULNERABLE.** - **Criteria based on:** B1, 2c (Restricted distribution, limited location, severely fragmented, continuing decline observed in extent of occurrence, area of occupancy and/or quality of habitat); D2 (Restricted population in < 5 locations). - **CITES:** No. - **IWPA (1972;91):** No. - **RDB, National (1994):** No. - **RDB, International (1996):** No. **Recommendations - Research management:** Survey; Monitoring. - **PHVA:** No. **Captive breeding Recommendations - Captive breeding:** No. - **Level of difficulty:** No. **Existing Captive Programs:** None. - **Names of facilities:** —. **Sources (Refer Appendix):** 203 (663). **Compilers:** W. Vishwanath, A.K. Karmakar, S.P. Biswas, P.C. Mahanta, R. Dayal, B.A. Daniel.

115. *Glyptothorax telchitta* (Hamilton - Buchanan) — LRnt/N. **Family:** Sisoridae. **Taxonomic status:** Species. **Habit:** Bottom dweller, Carnivorous. **Habitat:** Slow moving, submountain stream, sometimes washed down to palins. **Global Distribution:** India, Pakistan, Bangladesh, Nepal. **Current Regional Distribution:** Uttar Pradesh, Delhi, Bihar, Madhya Pradesh, West Bengal, Brahmaputra. - **Elevation:** 200 - 500 m. - **Range (Sq. km):** > 20,000. - **Area Occupied (Sq. km):** > 2,000. - **Number of location:** Many. **Population Trends - % change - % Decline:** 20 % . - **Time / Rate (Yrs or gens):** 20 Yrs. /20 % . - **No of Mature Individuals:** Not known. **Global Population:** Not known. **Regional Population:** Continuing decline observed. **Data Quality:** General field study; Museum/collections/records. **Recent Field Studies:** Khan, & Hussain, 1997; Talwar & Jhingran, 1991; Menon, 1949; Mishra, 1976 . **Threats:** Damming; Human interference; Pollution. **Trade:** No. **Other Comments:** Common cat fishes in North Bengal in Small quantities, no commercial importance. **Status - IUCN: LOWER RISK - NEAR THREATENED (Nationally).** **DATA DEFICIENT (Globally).** - **Criteria based on:** —. - **CITES:** No. - **IWPA (1972;91):** No. - **RDB, National (1994):** No. - **RDB, International (1996):** No. **Recommendations - Research management:** Survey; Monitoring; Limiting factor research. - **PHVA:** Yes. **Captive breeding Recommendations - Captive breeding:** Level 1. - **Level of difficulty:** Least difficult. **Existing Captive Programs:** None. - **Names of facilities:** —. **Sources (Refer Appendix):** 3(iii), 105, 123, 140, 203 (663 - 664). **Compilers:** U. K Sarkar, A. Husain, A.K. Singh, A.K. Pandey, A.C. Pandey.

116. *Gonialosa manmina* Hamilton - Buchanan, 1822 — VU/N (A1a, 1c, 1d). (*Gonialosa manminna* Hamilton - Buchanan, 1822). **Family:** Clupeidae. **Taxonomic status:** Species. **Habit:** Herbivorous, column feeder. **Habitat:** Rivers and associated water bodies and plains. **Global Distribution:** India, Bangladesh, Pakistan. **Current Regional Distribution:** Ganga and other rivers of Orissa, Uttar Pradesh, Madhya Pradesh, West Bengal, Assam. - **Elevation:** > 100 m. - **Range (Sq. km):** < 20,000. - **Area Occupied (Sq. km):** < 2,000. - **Number of location:** Several. **Population Trends - % change - % Decline:** 40 - 50 % . - **Time / Rate (Yrs or gens):** 17 Yrs. , 40 - 50 % . - **No of Mature Individuals:** Not known. **Global Population:** Not known. **Regional Population:** Continuing decline observed. **Data Quality:** General field study (Natrajan, 1989; Jhingran, 1970 in Ganga and Mahanadhi); Museum/collections/records. **Recent Field Studies:** Khan, 1997 in Uttar Pradesh; Dubey, 1994 in Madhya Pradesh. **Threats:** Damming; Fishing; Loss of habitat; Overexploitation; Pollution. **Trade:** Not known. **Other Comments:** Minor fisheries importance. **Status - IUCN: VULNERABLE (Nationally).** **DATA DEFICIENT (Globally).** - **Criteria based on:** A1a, 1c, 1d (Observed population reduction due to decline in extent of occurrence, area of occupancy and/or quality of habitat and due to actual or potential levels of exploitation) . - **CITES:** No. - **IWPA (1972;91):** No. - **RDB, National (1994):** No. - **RDB, International (1996):** No. **Recommendations - Research management:** Taxonomic and morphological genetic studies; Survey; Monitoring; Habitat management. - **PHVA:** Not known. **Captive breeding Recommendations - Captive breeding:** Level 1; Level 2. - **Level of difficulty:** Least difficult. **Existing Captive Programs:** None. - **Names of facilities:** —. **Sources (Refer Appendix):** 50, 64, 103, 158, 200, 203 (107 - 108). **Compilers:** A. Husain, A.C. Pandey, A.K. Pandey, A. K. Sigh & U.K. Sarkar.

117. *Gudusia chapra* (Hamilton - Buchanan, 1822) — LRlc/N. (*Clupanodon chapra*; *Clupeo chapra*). **Family:** Clupeidae. **Taxonomic status:** Species. **Habit:** Omnivores. **Habitat:** Riverine, Lacustrine. **Global Distribution:** India, Bangladesh. **Current Regional Distribution:** Ganga, Bharamaputra, Mahanadhi. - **Elevation:** Up to 300 m. MSL. - **Range (Sq. km):** > 20,000. - **Area Occupied (Sq. km):** > 2,000. - **Number of location:** Many (Mahanadi, Ganga). **Population Trends - % change - % Decline:** near Stable . - **Time / Rate (Yrs or gens):** Not known. - **No of Mature Individuals:** Abundant. **Global Population:** Not known. **Regional Population:** No decline observed. **Data Quality:** General field study; Museum/collections/records. **Recent Field Studies:** Johal, 1994 in Rajasthan; Sughan & Yadao, 1992 in Hirakud. **Threats:** Fishing; Trade. **Trade:** Domestic . **Other Comments:** None. **Status - IUCN: LOWER RISK - LEAST CONCERN (Nationally).** **DATA DEFICIENT (Globally).** - **Criteria based on:** —. - **CITES:** No. - **IWPA (1972;91):** No. - **RDB,**

National (1994): No. - **RDB, International (1996):** No. **Recommendations - Research management:** Monitoring. - **PHVA:** No. **Captive breeding Recommendations - Captive breeding:** No. - **Level of difficulty:** Moderate difficulty. **Existing Captive Programs:** None. - **Names of facilities:** —. **Sources (Refer Appendix):** 52, 64, 92, 140, 158, 200, 202 (96 - 97). **Compilers:** G. K. Dubey, S.V. Sharma, N. More, V.S. Basheer, J.K. Jena, A. V. Apte, . K.W. Dhamge.

118. *Gymnocypris biswasi* Talwar, 1978 — EX. Family: Cyprinidae. **Taxonomic status:** Species. **Habit:** Planktophagus. **Habitat:** Lakes (Talwar). **Global Distribution:** ENDEMIC to India. **Current Regional Distribution:** Jammu & Kashmir, Ladakh. - **Elevation:** Up to 3000 m. - **Range (Sq. km):** Not known. - **Area Occupied (Sq. km):** Not known. - **Number of location:** Not known. **Population Trends - % change - % Decline:** 100% . - **Time / Rate (Yrs or gens):** Not known. - **No of Mature Individuals:** Not known. **Global Population:** Not known. **Regional Population:** Not known. **Data Quality:** Museums/records/collections. **Recent Field Studies:** None. **Threats:** Not known. **Trade:** Not known. **Other Comments:** This species describes on juvenile specimens has not been rediscovered since its original discovery from Ladakh (Talwar & Jhingran, 1991). **IUCN - (Talwar, K. L. Sehgal, Threatened Fishes of India. Pp. 127).** **Status - IUCN:** EXTINCT. - **Criteria based on:** —. - **CITES:** No. - **IWPA (1972;91):** No. - **RDB, National (1994):** No. - **RDB, International (1996):** No. **Recommendations - Research management:** Survey. - **PHVA:** No. **Captive breeding Recommendations - Captive breeding:** Level 1 if found. - **Level of difficulty:** Not known. **Existing Captive Programs:** None. - **Names of facilities:** —. **Sources (Refer Appendix):** 186, 201, 205. **Compilers:** A. Husain, A.K. Pandey, A.C. Pandey, A.K. Singh, U.K. Sarkar, P. Das.

119. *Hara horai* Mishra, 1976 — EN (A1a, 1c, 1d; B1, 2c). Family: Sisoridae. **Taxonomic status:** Species. **Habit:** Carnivorous, bottom dweller. **Habitat:** Slow moving stream of Terai. **Global Distribution:** ENDEMIC to India. **Current Regional Distribution:** West Bengal. - **Elevation:** 400 m. - **Range (Sq. km):** < 5,000. - **Area Occupied (Sq. km):** < 500. - **Number of location:** 2 (Torai and Duan). **Population Trends - % change - % Decline:** 80% (50%). - **Time / Rate (Yrs or gens):** 20 yrs (10 yrs). - **No of Mature Individuals:** Not known. **Global Population:** Continuing decline observed. **Data Quality:** General field study (Mishra, 1976 in Terai and Duars, North Bengal; Tilak & Talwar in 1976; Tikak, 1978); Indirect information; Museum/collections/records. **Recent Field Studies:** Menon, 1997 in Galley; Talwar & Jhingran, 1991 . **Threats:** Damming; Trade; Dynamite and other destructive fishing; Poisoning; Trade. **Trade:** Local. **Other Comments:** No fishing value, rared Talwar & Jhingran, 1991. **Status - IUCN:** ENDANGERED. - **Criteria based on:** A1a, 1c, 1d (Observed population reduction due to decline in extent of occurrence, area of occupancy and/or quality of habitat and due to actual or potential levels of exploitation); B1, 2c (Restricted distribution, limited location, severely fragmented, continuing decline observed in extent of occurrence, area of occupancy and/or quality of habitat). - **CITES:** No. - **IWPA (1972;91):** No. - **RDB, National (1994):** No. - **RDB, International (1996):** No. **Recommendations - Research management:** Survey; Monitoring; Limiting factor management. - **PHVA:** Yes. **Captive breeding Recommendations - Captive breeding:** Level 1. - **Level of difficulty:** Least difficult. **Existing Captive Programs:** None. - **Names of facilities:** —. **Sources (Refer Appendix):** 140, 203 (668 - 669), 218. **Compilers:** U.K. Sarkar, A. Husain, A.K. Pandey, A.K. Singh, A.C. Pandey.

120. *Heteropneustes fossilis* (Bloch, 1794) — VU/N (A1a, 1c, 1d). Family: Heteropneustidae. **Taxonomic status:** Species. **Habit:** Carnivorous. **Habitat:** Ponds, ditches, pools, swamps, marshes, rivers. **Global Distribution:** India, Bhutan, Bangladesh, Pakistan, Sri Lanka, Myanmar, Thailand, Laos. **Current Regional Distribution:** Not known. - **Elevation:** 100 - 650 m. - **Range (Sq. km):** > 20,000. - **Area Occupied (Sq. km):** : > 2,000. - **Number of location:** Several. **Population Trends - % change - % Decline:** > 20% . - **Time / Rate (Yrs or gens):** 10 Yrs. - **No of Mature Individuals:** Not known. **Global Population:** Continuing decline observed. **Data Quality:** General field study (Jayaram, 1981 in Ganga and Cauveri river); Museum/ collections/records. **Recent Field Studies:** Srivastava, 1995 in Uttar Pradesh; Pandey & Sharma, 1997 in Faizabad, Uttar Pradesh; Husain, 1997 in Delhi; Khan, 1997 in Uttar Pradesh; Johal, 1997 in Hararyana; A.C. Pandey, 1994 in Faizabad, Uttar Pradesh . **Threats:** Fishing; Human interference; Loss of habitat; Trade. **Trade:** Local; Domestic; Commercial . **Other Comments:** Commercially important. Cultured in ponds. Induced breeding technique available, culture technique available. **Status - IUCN:** VULNERABLE (Nationally). **DATA DEFICIENT (Globally).** - **Criteria based on:** A1a, 1c, 1d (Observed population reduction due to decline in extent of occurrence, area of occupancy and/or quality of habitat and due to actual or potential levels of exploitation) . - **CITES:** No. - **IWPA (1972;91):** No. - **RDB, National (1994):** No. - **RDB, International (1996):** No. **Recommendations - Research management:** Survey; Monitoring; Husbandry research; Habitat management. - **PHVA:** Yes. **Captive breeding Recommendations - Captive breeding:** Level 1. - **Level of difficulty:** Least difficult. **Existing Captive Programs:** Not known. - **Names of facilities:** Yes. **Sources (Refer Appendix):** 27 (lviii), 63, 85, 140, 150, 171, 200, 203 (689 - 690). **Compilers:** A.C. Pandey, A.K. Singh, A.K. Pandey, A. Husain, U.K. Sarkar.

121. *Hilsa ilisha* (Hamilton - Buchanan, 1822) — VU/N (A1a, 1c, 1d) . (*Clupanodon ilisha*; *Clupea ilisha*; *Macrura ilisha*). Family: Clupeidae. **Taxonomic status:** Species. **Habit:** Filter feeder, Anadromous migration. **Habitat:** River system, Estuarine, Marine. **Global Distribution:** India, Bangladesh, Myanmar. **Current Regional Distribution:** Narmada, Tapti, Ganga, Mahanadhi. - **Elevation:** Up to 300 m. MSL. - **Range (Sq. km):** > 20,000. - **Area Occupied (Sq. km):** > 2,000. - **Number of location:** Many. **Population Trends - % change - % Decline:** 80% (> 20%) . - **Time / Rate (Yrs or gens):** 30 yrs (10 yrs). - **No of Mature Individuals:** Not known. **Global Population:** Not known. **Regional Population:** Continuing decline observed. **Data Quality:** Reliable census; General field study; Informal field sightings; Indirect information; Museum/collections/records. **Recent Field Studies:** CICFRI, 1994,95,96,97 in Ganga; Vijaydevsingh, 1997 in Uttar Pradesh; A.C. Pandey & A. P. Rao, 1996 in Gomati river (Jaunpur, Uttar Pradesh); D. K. De *et al.* , 1994 in Hooghly estuary. **Threats:** Damming; Fishing; Loss of habitat; Overexploitation; Pollution; Trade. **Trade:** Commercial. **Other Comments:** None. **Status - IUCN:** VULNERABLE (Nationally). **DATA DEFICIENT (Globally).** - **Criteria based on:** A1a, 1c, 1d (Observed population reduction due to decline in extent of occurrence, area of occupancy and/or quality of habitat and due to actual or potential levels of exploitation) . - **CITES:** No. - **IWPA (1972;91):** No. - **RDB, National (1994):** No. - **RDB, International (1996):** No. **Recommendations - Research management:** Survey; Monitoring; Husbandry research; Habitat management; Limiting factor management. - **PHVA:** Yes. **Captive breeding Recommendations - Captive breeding:** Level

1. - **Level of difficulty:** Moderate difficulty. **Existing Captive Programs:** Not known. - **Names of facilities:** CICFRI _ Barrackpore (West Bengal). **Sources (Refer Appendix):** 42, 43, 44, 50, 128, 200. **Compilers:** G.P. Dubey, S.V. Sharma, N. More, V.S. Basheer, J.K. Jena, A. Apte, . K.W. Dhamge.

122. *Homaloptera montana* Herre, 1945 — CR (B1, 2c). Family: Balitoridae (Homalopteridae). **Taxonomic status:** Species. **Habit:** Freshwater. **Habitat:** Torrential streams. **Global Distribution:** ENDEMIC to India. **Current Regional Distribution:** Western Ghats. - **Elevation:** 900 MSL. - **Range (Sq. km):** < 5,000. - **Area Occupied (Sq. km):** < 500. - **Number of location:** 1(Puthuthottam estate). **Population Trends - % change - % Decline:** Not known. - **Time / Rate (Yrs or gens):** Not known. - **No of Mature Individuals:** Not known. **Global Population:** Restricted distribution. **Data Quality:** Reliable census; General field study. **Recent Field Studies:** Shaji, C.P. 1993 - 95 in Nilgiri biosphere reserve. **Threats:** Pesticides. **Trade:** Not known. **Other Comments:** None. **Status - IUCN:** CRITICALLY ENDANGERED. - **Criteria based on:** B1, 2c (Restricted distribution, limited location, severely fragmented, continuing decline observed in extent of occurrence, area of occupancy and/or quality of habitat). - **CITES:** No. - **IWPA (1972;91):** No. - **RDB, National (1994):** No. - **RDB, International (1996):** No. **Recommendations - Research management:** Survey; Monitoring. - **PHVA:** Pending. **Captive breeding Recommendations - Captive breeding:** Level 1. - **Level of difficulty:** Not known. **Existing Captive Programs:** None. - **Names of facilities:** —. **Sources (Refer Appendix):** 85, 130, 203. **Compilers:** T.V. Annamercy, M. Arunachalam, A. Gopalakrishnan, A. Manimekalan, . B.M. Kurup, O. Alphonse, C.P. Shaji, P. Subramanian.

123. *Homaloptera pillaii* Rema Devi & Indira — VU (D2). Family: Balitoridae. **Taxonomic status:** Species. **Habit:** Fresh water. **Habitat:** Torrential streams. **Global Distribution:** ENDEMIC to India. **Current Regional Distribution:** Western Ghats. - **Elevation:** 600 MSL. - **Range (Sq. km):** < 5,000. - **Area Occupied (Sq. km):** < 500. - **Number of location:** 1 (Kunthi river - Bharathapuzha basin, Kerala). **Population Trends - % change - % Decline:** Not known. - **Time / Rate (Yrs or gens):** Not known. - **No of Mature Individuals:** Not known. **Global Population:** Restricted distribution. **Data Quality:** Reliable census; General field study. **Recent Field Studies:** ZSI, 1986 Fishes of Silent Valley; P.S. Easa, 1992 - 95 in Nilgiri biosphere reserve. **Threats:** No. **Trade:** Not known. **Other Comments:** Relatively pristine condition observed in Kunthi river system. **Status - IUCN:** VULNERABLE. - **Criteria based on:** D2 (Restricted population in < 5 locations). - **CITES:** No. - **IWPA (1972;91):** No. - **RDB, National (1994):** No. - **RDB, International (1996):** No. **Recommendations - Research management:** Monitoring. - **PHVA:** No. **Captive breeding Recommendations - Captive breeding:** No. - **Level of difficulty:** Not known. **Existing Captive Programs:** None. - **Names of facilities:** —. **Sources (Refer Appendix):** 53, 180. **Compilers:** T.V. Annamercy, M. Arunachalam, A. Gopalakrishnan, A. Manimekalan, . B.M. Kurup, O. Alphonse, C.P. Shaji, P. Subramanian.

124. *Horabagrus brachysoma* (Gunther, 1864) — EN (A1a, 1c, 1d). (*Pseudobagrus chryseus* (Day)). Family: Bagridae. **Taxonomic status:** Species. **Habit:** Freshwater. **Habitat:** River. **Global Distribution:** ENDEMIC to India. **Current Regional Distribution:** Western Ghats. - **Elevation:** 0 - 100 m. - **Range (Sq. km):** 100 - 500. - **Area Occupied (Sq. km):** < 500. - **Number of location:** 3 (Pamba river, Manimala, Chalakudy - Kerala). **Population Trends - % change - % Decline:** 60 - 70% . - **Time / Rate (Yrs or gens):** 10 Yrs. - **No of Mature Individuals:** < 50 (annual breeder). **Global Population:** Continuing decline observed in restricted distribution. **Data Quality:** General field study (Day, 1877 in Kariyannu river in Kerala; Jayaram, 1966 in Cochin). **Recent Field Studies:** Not known. **Threats:** Dynamite and other destructive fishing; Fishing; Human interference; . Loss of habitat; Overexploitation; Pesticides; Poisoning; Pollution; Siltation; Trade. **Trade:** Local; Commercial; International. **Other Comments:** Broad stock development. Span stock during S. W. Monsoon. Mature individuals very rare. **Status - IUCN:** ENDANGERED. - **Criteria based on:** A1a, 1c, 1d (Observed population reduction due to decline in extent of occurrence, area of occupancy and/or quality of habitat and due to actual or potential levels of exploitation) . - **CITES:** No. - **IWPA (1972;91):** No. - **RDB, National (1994):** No. - **RDB, International (1996):** No. **Recommendations - Research management:** Taxonomic and morphological genetic studies; Translocation; Survey; Monitoring; Genetic management; Habitat management; Life history studies; Other (Captive breeding). - **PHVA:** Yes. **Captive breeding Recommendations - Captive breeding:** Level 1. - **Level of difficulty:** Very difficult. **Existing Captive Programs:** None. - **Names of facilities:** Not available. **Sources (Refer Appendix):** 41, 57 (ii), 83, 115 (i), 203 (553 - 554). **Compilers:** T.V. Annamercy, M. Arunachalam, A. Gopalakrishnan, A. Manimekalan, . B.M. Kurup, O. Alphonse, C.P. Shaji, P. Subramanian.

125. *Horabagrus nigricollaris* (Pethiyagoda & Kottelat, 1994) — CR (B1, 2c). Family: Bagridae. **Taxonomic status:** Species. **Habit:** Freshwater river. **Habitat:** Free flowing water with pools in stream. **Global Distribution:** ENDEMIC to India. **Current Regional Distribution:** Kerala. - **Elevation:** above 100 m. MSL. - **Range ((km²):** < 100. - **Area Occupied (Sq. km):** Not known. - **Number of location:** One (upper reaches of chalakkudy river). **Population Trends - % change - % Decline:** Not known. - **Time / Rate (Yrs or gens):** Not known. - **No of Mature Individuals:** Not known. **Global Population:** Highly restricted distribution. **Data Quality:** Reliable census. **Recent Field Studies:** Pethiyagoda & Kottelat, 1994 in Chalakudy river in Kerala - First report only in 1994. **Threats:** Loss of habitat. **Trade:** Not known. **Other Comments:** Its closely related species (Threatened species), *Horabagrus brachysoma* - L, D, I (to Sri Lanka etc.). Two location of same river separated by about 4 km. only, width of river 60 - 80 m. **Status - IUCN:** CRITICALLY ENDANGERED. - **Criteria based on:** B1, 2c (Restricted distribution, limited location, severely fragmented, continuing decline observed in extent of occurrence, area of occupancy and/or quality of habitat). - **CITES:** No. - **IWPA (1972;91):** No. - **RDB, National (1994):** No. - **RDB, International (1996):** No. **Recommendations - Research management:** Survey; Monitoring; Habitat management; Limiting factor management; Genetic management - **PHVA:** Yes. **Captive breeding Recommendations - Captive breeding:** Pending. - **Level of difficulty:** Very difficult. **Existing Captive Programs:** None. - **Names of facilities:** —. **Sources (Refer Appendix):** 173. **Compilers:** T.V. Annamercy, M. Arunachalam, A. Gopalakrishnan, A. Manimekalan, . B.M. Kurup, O. Alphonse, C.P. Shaji, P. Subramanian.

126. *Horadandia atukorali brittani* Menon — EN (B1, 2c). Family: Cyprinidae Sub family : Rasborinae . **Taxonomic status:** Sub-species. **Habit:** Freshwater. **Habitat:** Lowlands. **Global Distribution:** ENDEMIC to India. **Current**

Regional Distribution: Kollam, Kerala. - **Elevation:** 0 - 150 MSL. - **Range (Sq. km):** < 5,000. - **Area Occupied (Sq. km):** < 500. - **Number of location:** 1 (Kollam river). **Population Trends - % change - % Decline:** Not known. - **Time / Rate (Yrs or gens):** Not known. - **No of Mature Individuals:** Not known. **Global Population:** Restricted distribution. **Data Quality:** Reliable census; General field study; Hearsay/Popular belief. **Recent Field Studies:** None. **Threats:** Human interference. **Trade:** Not known. **Other Comments:** This is a newly described subspecies so nothing is known about its status. **Status - IUCN:** ENDANGERED. - **Criteria based on:** B1, 2c (Restricted distribution, limited location, severely fragmented, continuing decline observed in extent of occurrence, area of occupancy and/or quality of habitat). - **CITES:** No. - **IWPA (1972;91):** No. - **RDB, National (1994):** No. - **RDB, International (1996):** No. **Recommendations - Research management:** Survey; Monitoring. - **PHVA:** No. **Captive breeding Recommendations - Captive breeding:** Level 1. - **Level of difficulty:** Not known. **Existing Captive Programs:** None. - **Names of facilities:** —. **Sources (Refer Appendix):** 137. **Compilers:** T.V. Annamercy, M. Arunachalam, A. Gopalakrishnan, A. Manimekalan, . B.M. Kurup, O. Alphonse, C.P. Shaji, P. Subramanian.

127. *Horaglanis krishnai* Menon, 1950 — CR (B1, 2a, 2c; D2). **Family:** Claridae. **Taxonomic status:** Species. **Habit:** Dugout wells. **Habitat:** Subterranean channels. **Global Distribution:** ENDEMIC to India. **Current Regional Distribution:** Kerala. - **Elevation:** Below ground level. - **Range (Sq. km):** < 10. - **Area Occupied (Sq. km):** < 10. - **Number of location:** 5 (Kottayam); Fragmented. **Population Trends - % change - % Decline:** Not known. - **Time / Rate (Yrs or gens):** Not known. - **No of Mature Individuals:** < 50. **Global Population:** < 50 mature individuals. **Regional Population:** 25 to 30. **Data Quality:** General field study (Menon, 1951 in Kottayam in Kerala; Anna Mercy, 1980 in Tamil Nadu). **Recent Field Studies:** Not known. **Threats:** Human interference; Loss of habitat. **Trade:** No. **Other Comments:** Conservation of the fish is urgently required to prevent it from extinction. **Status - IUCN:** CRITICALLY ENDANGERED. - **Criteria based on:** B1, 2a, 2c (Restricted distribution, limited locations, continuing decline observed in extent of occurrence, area of occupancy and/or quality of habitat). - **CITES:** No. - **IWPA (1972;91):** No. - **RDB, National (1994):** No. - **RDB, International (1996):** Vulnerable. **Recommendations - Research management:** Survey; Monitoring; Genetic management; Habitat management; . Other (The wells should be protected). - **PHVA:** Yes. **Captive breeding Recommendations - Captive breeding:** Level 3. - **Level of difficulty:** Very difficult. **Existing Captive Programs:** None. - **Names of facilities:** So far, no attempts have been made, due to non availability of brood stock. **Sources (Refer Appendix):** 4, 5(i), 125, 139, 140, 203 (687 - 688). **Compilers:** M. Arunachalam, A. Gopalakrishnan, M. Manimekalan, T.V. Annamercy, . B.M. Kurup, O. Alphonse, C.P. Shaji, P. Subramanian.

128. *Hyporhamphus xanthopterus* (Valenciennes) — CR (A1a, 1b, 1c, 1d; B1, 2c). **Family:** Hernirhamphidae. **Taxonomic status:** Species. **Habit:** Freshwater and slightly brackishwaters. **Habitat:** Lower reaches of river and upstream part of the river. **Global Distribution:** ENDEMIC to India. **Current Regional Distribution:** Kerala. - **Elevation:** Below sea level. - **Range (Sq. km):** < 100. - **Area Occupied (Sq. km):** < 20. - **Number of location:** 1 (Upstream part of the Vembanad lake). **Population Trends - % change - % Decline:** 60 - 70% . - **Time / Rate (Yrs or gens):** 15 Yrs. - **No of Mature Individuals:** Not known. **Global Population:** Continuing decline observed. **Data Quality:** General field study (B.M. Kurup, 1978 - 82 in Vembanad lake). **Recent Field Studies:** Not known. **Threats:** Fishing; Human interference; Loss of habitat; Overexploitation; Pesticides; Poisoning; Trade. **Trade:** Local; Domestic. **Other Comments:** Endemic to Vembanad lake in Kerala where it coexist with *H. limbatus*. **Status - IUCN:** CRITICALLY ENDANGERED. - **Criteria based on:** A1a, 1b, 1c, 1d (Observed population reduction due to decline in abundance, extent of occurrence, area of occupancy and/or quality of habitat and due to actual or potential levels of exploitation); B1, 2c (Restricted distribution, limited location, severely fragmented, continuing decline observed in extent of occurrence, area of occupancy and/or quality of habitat). - **CITES:** No. - **IWPA (1972;91):** No. - **RDB, National (1994):** No. - **RDB, International (1996):** No. **Recommendations - Research management:** Taxonomic and morphological genetic studies; Survey; Monitoring; Limiting factor research; Habitat management. - **PHVA:** Yes. **Captive breeding Recommendations - Captive breeding:** Level 3. - **Level of difficulty:** Very difficult. **Existing Captive Programs:** None. - **Names of facilities:** No captive breeding has so far been attempted. **Sources (Refer Appendix):** 107, 110, 111, 112, 113, 203 (735). **Compilers:** M. Arunachalam, A. Gopalakrishnan, M. Manimekalan, T.V. Annamercy, . B.M. Kurup, O. Alphonse, C.P. Shaji, P. Subramanian.

129. *Hypselobarbus curmuca* (Day) — EN (A1a, 1c, 1d, 1e). (*Hypselobarbus Kurali*; *Cyprinus curmuca*; *Gonopnkopterus curmuca* (Day); *Puntius curmuca*). **Family:** Cyprinidae. **Taxonomic status:** Species. **Habit:** Fresh waters. **Habitat:** Riverine. **Global Distribution:** ENDEMIC to India. **Current Regional Distribution:** Kerala and Tamil Nadu. - **Elevation:** 100 - 300 MSL. - **Range (Sq. km):** < 5,000. - **Area Occupied (Sq. km):** < 2,000. - **Number of location:** 15 (Chaliyar, Achankovil, Pambar, Periyar, Manimuthar, Moyar, Kallar, Tambaraparani); Highly Fragmented. **Population Trends - % change - % Decline:** 60 - 70% . - **Time / Rate (Yrs or gens):** 40 Yrs. - **No of Mature Individuals:** Not known. **Global Population:** Continuing decline observed. **Data Quality:** General field study; Indirect information; Hearsay/Popular belief (From tribals they call it as "Kooral". According to them its population declined sharply during recent years). **Recent Field Studies:** C.P. Shaji, & P.S. Easa, 1993 - 95 in Nilgiri Biosphere reserve; A. Gopalakrishnan, 1997 in Pambar river; B.M. Kurup, 1987 - 91; M. Arunachalam, 1994; L.K. Arun, 1993 - 95, in Studies on the fishes of periyar Lake Valley system. **Threats:** Disease; Dynamite and other destructive fishing; Fishing; Loss of habitat; Loss of habitat because of exotic animal; Overexploitation; Predation; Predation by exotics; Trade. **Trade:** Local; Domestic. **Other Comments:** Menon, 1995 Synonymised *H. kolar* with *H. Curmuca* without any discussion. Taxonomic ambiguity still exists. Here we considered ia as a separate species. It is an animal breeder. Breeds during SW monsoon in Kerala. **Status - IUCN:** ENDANGERED. - **Criteria based on:** A1a, 1c, 1d, 1e (Observed population reduction due to decline in extent of occurrence, area of occupancy and/or quality of habitat and due to actual or potential levels of exploitation and the effects of introduced taxa, hybridisation, pathogens, pollutants, competitors or parasites). - **CITES:** No. - **IWPA (1972;91):** No. - **RDB, National (1994):** No. - **RDB, International (1996):** No. **Recommendations - Research management:** Taxonomic and morphological genetic studies; Survey; Monitoring; Genetic management; Habitat management; Life history studies. - **PHVA:** Yes. **Captive breeding Recommendations - Captive breeding:** Level 1. - **Level of difficulty:** Least difficult. **Existing Captive Programs:** None. - **Names of facilities:** —. **Sources (Refer Appendix):** 27 (liv), 57 (i), 85, 88 (iii), 115 (iii), 137, 203. **Compilers:** M. Arunachalam, B.M. Kurup, A. Gopalakrishnan, Manimekhalan, A. Mercy, . C.P. Shaji, O. Alphonse, P. Subramanian, T. V. Anna Mercy.

130. *Hypselobarbus dubius* (Day) — EN (B1, 2c, 2d). (*Gonoproktoptorus dubius*; *Barbus dubius*; *Puntius dubius*). **Family:** Cyprinidae. **Taxonomic status:** Species. **Habit:** Freshwater. **Habitat:** Rivers and streams. **Global Distribution:** ENDEMIC to India. **Current Regional Distribution:** Tamil Nadu. - **Elevation:** 200 - 400 m. - **Range (Sq. km):** < 5,000. - **Area Occupied (Sq. km):** < 500. - **Number of location:** 3 (Bhavani, Tambrabarani river); Fragmented. **Population Trends - % change - % Decline:** 70 - 80% . - **Time / Rate (Yrs or gens):** 10 - 20 Yrs. - **No of Mature Individuals:** Not known. **Global Population:** Continuing decline observed. **Data Quality:** Reliable census; General field study. **Recent Field Studies:** M. Arunachalam & A. Manimekalan, 1995 ongoing in Tambrabarani river in Tamil Nadu. **Threats:** Damming; Fishing; Interspecific competition; Loss of habitat; Trade. **Trade:** Local. **Other Comments:** If available only in two river system in Tamil Nadu. This habitat can be protected. **Status - IUCN: ENDANGERED.** - **Criteria based on: B1, 2c, 2d** (Restricted distribution, limited location, severely fragmented, continuing decline observed in extent of occurrence, area of occupancy and/or quality of habitat, and number of locations or subpopulations). - **CITES:** No. - **IWPA (1972;91):** No. - **RDB, National (1994):** No. - **RDB, International (1996):** No. **Recommendations - Research management:** Taxonomic and morphological genetic studies; Translocations; Survey; Genetic management; Husbandry research; Life history studies. - **PHVA:** Yes. **Captive breeding Recommendations - Captive breeding:** Level 1. - **Level of difficulty:** Moderate difficulty. **Existing Captive Programs:** None. - **Names of facilities:** —. **Sources (Refer Appendix):** 9, 27 (iv), 119. **Compilers:** M. Arunachalam, A. Gopalakrishnan, M. Manimekalan, T.V. Annamercy, . B.M. Kurup, O. Alphonse, C.P. Shaji, P. Subramanian.

131. *Hypselobarbus Jerdoni* Day, 1870 — EN (B1, 2c) . (*Puntius pulchellus*; *Puntius jerdoni* (Day, 1870)). **Family:** Cyprinidae. **Taxonomic status:** Species. **Habit:** Freshwater. **Habitat:** Running water. **Global Distribution:** ENDEMIC to India. **Current Regional Distribution:** Tamil Nadu. - **Elevation:** > 500. - **Range (Sq. km):** < 5,000. - **Area Occupied (Sq. km):** < 500. - **Number of location:** 5 (Cauvery and Tambrabarani rivers); Fragmented. **Population Trends - % change - % Decline:** > 40% . - **Time / Rate (Yrs or gens):** 10 - 20 Yrs. - **No of Mature Individuals:** Not known. **Global Population:** Continuing decline observed. **Data Quality:** Reliable census; General field study. **Recent Field Studies:** Arunachalam's team, 1997 in Tambrabarani river in Tamil Nadu. **Threats:** Damming; Dynamite and other destructive fishing; Loss of habitat; Trade. **Trade:** Local. **Other Comments:** One of the most tastiest peninsular barb. Present now only in Tambrabarani river Gadana river a tributary of Tambrabarani may be declared as a sanctuary for the above species. **Status - IUCN: ENDANGERED.** - **Criteria based on: B1, 2c** (Restricted distribution, limited location, severely fragmented, continuing decline observed in extent of occurrence, area of occupancy and/or quality of habitat). - **CITES:** No. - **IWPA (1972;91):** No. - **RDB, National (1994):** No. - **RDB, International (1996):** No. **Recommendations - Research management:** Taxonomic and morphological genetic studies; Translocations; Survey; Genetic management; Husbandry research; Life history studies. - **PHVA:** Yes. **Captive breeding Recommendations - Captive breeding:** Level 1. - **Level of difficulty:** Very difficulty. **Existing Captive Programs:** None. - **Names of facilities:** —. **Sources (Refer Appendix):** 9, 27 (cxlii). **Compilers:** M. Arunachalam, A. Gopalakrishnan, M. Manimekalan, T.V. Annamercy, . B.M. Kurup, O. Alphonse, C.P. Shaji, P. Subramanian.

132. *Hypselobarbus kolus* (Sykes) — EN (A1a; B1, 2c). **Family:** Cyprinidae. **Taxonomic status:** Species. **Habit:** Fresh water. **Habitat:** Riverine/Reservoirs. **Global Distribution:** ENDEMIC to India. **Current Regional Distribution:** Western Ghats river basins. - **Elevation:** 100 - 600 MSL. - **Range (Sq. km):** < 5,000. - **Area Occupied (Sq. km):** < 500. - **Number of location:** Many (Manimuthur river/ Chalakudy river in Kerala); Fragmented. **Population Trends - % change - % Decline:** 20% . - **Time / Rate (Yrs or gens):** 10 Yrs. - **No of Mature Individuals:** Not known. **Global Population:** Continuing decline observed. **Data Quality:** Reliable census; General field study. **Recent Field Studies:** Arunachalam Ongoing Project on the fish ecology of Western Ghats. **Threats:** Damming; Dynamite and other destructive fishing; Fishing; Hunting/Harvest; Loss of habitat; Poisoning; Trade. **Trade:** Local. **Other Comments:** This big sized barb occurs in very limited habitats of Manimuthur river, a tributary of Tambrabarani river. This needs high priority for conservation. **Status - IUCN: ENDANGERED.** - **Criteria based on: A1a** (Population reduction observed); **B1, 2c** (Restricted distribution, limited location, severely fragmented, continuing decline observed in extent of occurrence, area of occupancy and/or quality of habitat). - **CITES:** No. - **IWPA (1972;91):** No. - **RDB, National (1994):** No. - **RDB, International (1996):** No. **Recommendations - Research management:** Survey; Monitoring; Genetic management; Habitat management; Life history studies. - **PHVA:** Yes. **Captive breeding Recommendations - Captive breeding:** Level 1. - **Level of difficulty:** Very difficult. **Existing Captive Programs:** None. - **Names of facilities:** —. **Sources (Refer Appendix):** 11 (xxiii), 12, 53. **Compilers:** M. Arunachalam, A. Gopalakrishnan, M. Manimekalan, T.V. Annamercy, . B.M. Kurup, O. Alphonse, C.P. Shaji, P. Subramanian.

133. *Hypselobarbus kurali* Menon & Rema Devi — EN (B1, 2c). **Family:** Cyprinidae. **Taxonomic status:** Species. **Habit:** Freshwater. **Habitat:** Streams and rivers. **Global Distribution:** ENDEMIC to India. **Current Regional Distribution:** Karnataka, Southern Kerala, Southern Tamil Nadu. - **Elevation:** 100 - 200 m. - **Range (Sq. km):** < 5,000. - **Area Occupied (Sq. km):** < 500. - **Number of location:** 10 (Achankoil, Kollar, Tambrabarani river); Fragmented. **Population Trends - % change - % Decline:** Not known because it is a recently described species. - **Time / Rate (Yrs or gens):** Not known. - **No of Mature Individuals:** Not known. **Global Population:** Not known. **Data Quality:** Reliable census; General field study. **Recent Field Studies:** C.P. Shaji Personal collection; M. Arunachalam. **Threats:** Damming; Disease; Dynamite and other destructive fishing; Fishing; Genetic problem; Loss of habitat; Pesticides. **Trade:** Not known. **Other Comments:** Recently described as a new species by A.G.K. Menon, 1995 *Hypselobarbus kurali* a new large barb from Southern Western Ghats, *J. Bom. Nat. Hist.* **Status - IUCN: ENDANGERED.** - **Criteria based on: B1, 2c** (Restricted distribution, limited location, severely fragmented, continuing decline observed in extent of occurrence, area of occupancy and/or quality of habitat). - **CITES:** No. - **IWPA (1972;91):** No. - **RDB, National (1994):** No. - **RDB, International (1996):** No. **Recommendations - Research management:** Taxonomic and morphological genetic studies; Translocations; Survey; Monitoring; Genetic management; Habitat management; Life history studies. - **PHVA:** Yes. **Captive breeding Recommendations - Captive breeding:** Level 1. - **Level of difficulty:** Very difficult. **Existing Captive Programs:** None. - **Names of facilities:** —. **Sources (Refer Appendix):** 9, 135. **Compilers:** M. Arunachalam, A. Gopalakrishnan, M. Manimekalan, T.V. Annamercy, . B.M. Kurup, O. Alphonse, C.P. Shaji, P. Subramanian.

134. *Hypselobarbus lithopides* (Day, 1874) — EN (A1a, 1c, 1d; B1, 2c). Family: Cyprinidae. Taxonomic status: Species. Habit: Freshwater. Habitat: Reverine. Global Distribution: ENDEMIC to India. Current Regional Distribution: Western Ghats (Karnataka, Tamil Nadu, Kerala). - Elevation: 400 - 500 m. MSL. - Range (Sq. km): > 20,000. - Area Occupied (Sq. km): < 500. - Number of location: Few (South Kanar river, Moyar, Aralam); Fragmented. Population Trends - % change - % Decline: 50 % . - Time / Rate (Yrs or gens): 5 Yrs. - No of Mature Individuals: Not known. Global Population: Continuing decline observed. Data Quality: Reliable census; General field study. Recent Field Studies: Not known. Threats: Fishing; Human interference; Poisoning; Trade. Trade: Local. Other Comments: Commercially important species. Madhya Pradesh population needs to be studied. Status - IUCN: ENDANGERED. - Criteria based on: A1a, 1c, 1d (Observed population reduction due to decline in extent of occurrence, area of occupancy and/or quality of habitat and due to actual or potential levels of exploitation); B1, 2c (Restricted distribution, limited location, severely fragmented, continuing decline observed in extent of occurrence, area of occupancy and/or quality of habitat). - CITES: No. - IWPA (1972;91): No. - RDB, National (1994): No. - RDB, International (1996): No. Recommendations - Research management: Taxonomic and morphological genetic studies; Survey; Monitoring; Genetic management. - PHVA: Yes. Captive breeding Recommendations - Captive breeding: Level 1. - Level of difficulty: Very difficult. Existing Captive Programs: None. - Names of facilities: —. Sources (Refer Appendix): 119. Compilers: M. Arunachalam, A. Gopalakrishnan, M. Manimekalan, T.V. Annamercy, . B.M. Kurup, O. Alphonse, C.P. Shaji, P. Subramanian.

135. *Hypselobarbus micropogon periyarensis* Raj — EN (B1, 2a, 2b, 2c). (*Puntius micropogon periyarensis*). Family: Cyprinidae. Taxonomic status: Sub - species. Habit: Fresh water. Habitat: River and streams. Global Distribution: ENDEMIC to India. Current Regional Distribution: Western Ghats. - Elevation: 900 - 1210 MSL. - Range (Sq. km): < 100. - Area Occupied (Sq. km): < 10. - Number of location: 1 (Periyar and association strems of Kerala). Population Trends - % change - % Decline: Not known . - Time / Rate (Yrs or gens): Not known. - No of Mature Individuals: Not known. Global Population: Not known. Regional Population: > 1500. Data Quality: Reliable census; General field study (Raj, 1941 New species (Subspecies) from Periyar Lake). Recent Field Studies: L.K. Arun, 1993 in Periyar lake Valley system; C.P. Shaji, 1992 - 97 . V.J. Zacharias, 1992 - 93 in Periyar lake. Threats: Fishing; Loss of habitat; Overexploitation; Trade. Trade: Local. Other Comments: Fastgrowing corp ideal for aquaculture purpose. Status - IUCN: ENDANGERED. - Criteria based on: B1, 2a, 2b, 2c (Restricted distribution, single location, severely fragmented, continuing decline observed in extent of occurrence, area of occupancy and quality of habitat) . - CITES: No. - IWPA (1972;91): No. - RDB, National (1994): No. - RDB, International (1996): No. Recommendations - Research management: Habitat management; Life history study; Survey; Monitoring; Genetic management. - PHVA: Yes. Captive breeding Recommendations - Captive breeding: Level 1. - Level of difficulty: Least difficult. Existing Captive Programs: None. - Names of facilities: —. Sources (Refer Appendix): 6, 178, 235. Compilers: M. Arunachalam, A. Gopalakrishnan, M. Manimekalan, T.V. Annamercy, . B.M. Kurup, O. Alphonse, C.P. Shaji, P. Subramanian.

136. *Hypselobarbus thomassi* (Day, 1874) — EN (B1, 2c) . (*Gonoproktoptorus thomassi*). Family: Cyprinidae. Taxonomic status: Species. Habit: Freshwater. Habitat: Rivers and Streams. Global Distribution: ENDEMIC to India. Current Regional Distribution: Western Ghats. - Elevation: 300 - 900 MSL. - Range (Sq. km): > 20,000. - Area Occupied (Sq. km): < 500. - Number of location: Few (South Canara and Cardamon hills); Fragmented. Population Trends - % change - % Decline: Not known . - Time / Rate (Yrs or gens): Not known. - No of Mature Individuals: Not known. Global Population: Not known. Data Quality: Reliable census; General field study. Recent Field Studies: ZSI, 1997, Draft report. Threats: Poisoning; Pollution; Trade. Trade: Local. Other Comments: Grows upto 100 cms. Status - IUCN: ENDANGERED. - Criteria based on: B1, 2c (Restricted distribution, limited location, severely fragmented, continuing decline observed in extent of occurrence, area of occupancy and/or quality of habitat). - CITES: No. - IWPA (1972;91): No. - RDB, National (1994): No. - RDB, International (1996): No. Recommendations - Research management: Survey; Life history studies. - PHVA: Yes. Captive breeding Recommendations - Captive breeding: Level 3. - Level of difficulty: Very difficult. Existing Captive Programs: None. - Names of facilities: —. Sources (Refer Appendix): 27 (Ivii), 58, 85, 88 (i), 203, 238. Compilers: M. Arunachalam, A. Gopalakrishnan, M. Manimekalan, T.V. Annamercy, . B.M. Kurup, O. Alphonse, C.P. Shaji, P. Subramanian.

137. *Johnius gangaticus* Talwar, 1991 — EN/N (B1, 2c). (*Johnius Novae hollandiae* (Steindachner)). Family: Sciaenidae. Taxonomic status: Species. Habit: Carnivorous, Column feeder. Habitat: Ganga river including its estuary. Global Distribution: India, Bangladesh. Current Regional Distribution: Ganga river at Uttar Pradesh, Sunderban. - Elevation: 100 m. - Range (Sq. km): < 5,000. - Area Occupied (Sq. km): < 500. - Number of location: (Allahabad, Sundrabans). Population Trends - % change - % Decline: 20 % . - Time / Rate (Yrs or gens): 20 Yrs. - No of Mature Individuals: Not known. Global Population: Not known. Regional Population: Continuing decline observed. Data Quality: General field study; Museums/collections/records. Recent Field Studies: Talwar & Jhingran, 1991 in Allahabad; Srivastava et al., 1996 in Ganga river. Threats: Fishing; Human interference; Pollution; Trade. Trade: Local; Domestic; Commercial. Other Comments: This fish contributes a minor fishery and hardy in nature. Status - IUCN: ENDANGERED (Nationally). DATA DEFICIENT (Globally). - Criteria based on: B1, 2c (Restricted distribution, limited location, severely fragmented, continuing decline observed in extent of occurrence, area of occupancy and/or quality of habitat). - CITES: No. - IWPA (1972;91): No. - RDB, National (1994): No. - RDB, International (1996): No. Recommendations - Research management: Translocations; Survey; Monitoring; Genetic management; Habitat management. - PHVA: Yes. Captive breeding Recommendations - Captive breeding: Level 4. - Level of difficulty: Least difficult. Existing Captive Programs: None. - Names of facilities: —. Sources (Refer Appendix): 179, 203 (858 - 859). Compilers: A. Husain, A.C. Pandey, A.K. Pandey, A.K. Singh, U.K. Sarkar.

138. *Kryptopterus indicus* Datta, Barman & Jayaram, 1987 — CR (B1, 2c). Family: Siluridae. Taxonomic status: Species. Habit: Carnivorous. Habitat: Hill stream. Global Distribution: ENDEMIC to India. Current Regional Distribution: Arunachal Pradesh. - Elevation: 500 - 1000 m. - Range (Sq. km): < 100. - Area Occupied (Sq. km): < 10. - Number of location: 1 (Narmdapha river, Narmdapha wildlie sanctuary). Population Trends - % change - %

Decline: Not known . - **Time / Rate (Yrs or gens):** Not known. - **No of Mature Individuals:** Not known. **Global Population:** Restricted distribution. **Data Quality:** General field study (Datta, Barman & Jayaram, 1987 in Namdapha river, Arunachal Pradesh). **Recent Field Studies:** None. **Threats:** Loss of habitat. **Trade:** No. **Other Comments:** Reported only from Namdapha sanctuary. **Status - IUCN: CRITICALLY ENDANGERED.** - **Criteria based on: B1, 2c** (Restricted distribution, limited location, severely fragmented, continuing decline observed in extent of occurrence, area of occupancy and/or quality of habitat). - **CITES:** No. - **IWPA (1972;91):** No. - **RDB, National (1994):** No. - **RDB, International (1996):** No. **Recommendations - Research management:** Survey; Monitoring; Habitat management. - **PHVA:** No. **Captive breeding Recommendations - Captive breeding:** No. - **Level of difficulty:** No. **Existing Captive Programs:** None. - **Names of facilities:** —. **Sources (Refer Appendix):** 36, 203 (580 - 581). **Compilers:** A.K. Karmakar, S.P. Biswas, W. Vishwanath, P. C. Mahantha, B.A. Daniel.

139. *Labeo angra* (Hamilton - Buchanan, 1822) — LRnt/N. Family: Cyprinidae. **Taxonomic status:** Species. **Habit:** Herbivorous, column feeder. **Habitat:** River and reservoirs, Lakes and ponds. **Global Distribution:** India, Bangladesh, Myanmar, Nepal. **Current Regional Distribution:** Northern India: Assam, West Bengal, Bihar, Uttar Pradesh, Punjab, Orissa. - **Elevation:** < 500 m. - **Range (Sq. km):** > 20,000. - **Area Occupied (Sq. km):** > 2,000. - **Number of location:** Many, not fragmented within river systems and water bodies. **Population Trends - % change - % Decline:** Not known . - **Time / Rate (Yrs or gens):** Not known. - **No of Mature Individuals:** Not known. **Global Population:** Not known. **Regional Population:** Widely distributed. **Data Quality:** General field study; Informal field sightings. **Recent Field Studies:** None. **Threats:** Human interference; Hunting/Harvest; Trade. **Trade:** Local. **Other Comments:** Fairly common in Mahanadhi orissa, but workers from Ganga system have reported. This as 'endangered'. **Status - IUCN: LOWER RISK - NEAR THREATENED (Nationally).** **DATA DEFICIENT (Globally).** - **Criteria based on: — .** - **CITES:** No. - **IWPA (1972;91):** No. - **RDB, National (1994):** No. - **RDB, International (1996):** No. **Recommendations - Research management:** Monitoring; Genetic management. - **PHVA:** No. **Captive breeding Recommendations - Captive breeding:** No. - **Level of difficulty:** Not known. **Existing Captive Programs:** None. - **Names of facilities:** —. **Sources (Refer Appendix):** 85, 200, 202 (198). **Compilers:** R. Abidi, A. Mishra, D.N. Saksena, P. Das.

140. *Labeo ariza* (Hamilton - Buchanan, 1807) — CR (B1, 2c). Family: Cyprinidae. **Taxonomic status:** Species. **Habit:** Freshwater. **Habitat:** Fast flowing stream with rocky substratum. **Global Distribution:** ENDEMIC to India. **Current Regional Distribution:** Tamil Nadu. - **Elevation:** 800. - **Range (Sq. km):** < 100. - **Area Occupied (Sq. km):** < 10. - **Number of location:** < 10 (Moyar river, Nilgiri); Fragmented. **Population Trends - % change - % Decline:** 70% . - **Time / Rate (Yrs or gens):** 10 Yrs. - **No of Mature Individuals:** < 100. **Global Population:** Continuing drastic decline observed. **Data Quality:** Reliable census; General field study. **Recent Field Studies:** M. Arunachalam & A. Manimekalan, 1996 in Moyar river, Nilgiri. **Threats:** Damming; Dynamite and other destructive fishing; Fishing; Loss of habitat; Pollution; Trade. **Trade:** Local. **Other Comments:** An endangered, fast growing economically important peninsular fish. **Status - IUCN: CRITICALLY ENDANGERED.** - **Criteria based on: B1, 2c** (Restricted distribution, limited location, severely fragmented, continuing decline observed in extent of occurrence, area of occupancy and/or quality of habitat). - **CITES:** No. - **IWPA (1972;91):** No. - **RDB, National (1994):** No. - **RDB, International (1996):** No. **Recommendations - Research management:** Translocations; Survey; Monitoring; Limiting factor management; Life history studies. - **PHVA:** Yes. **Captive breeding Recommendations - Captive breeding:** Level 1. - **Level of difficulty:** Very difficult. **Existing Captive Programs:** None. - **Names of facilities:** —. **Sources (Refer Appendix):** 27 (lxiii), 41, 74, 119, 202 (198 - 199). **Compilers:** M. Arunachalam, A. Gopalakrishnan, M. Manimekalan, T.V. Annamercy, . B.M. Kurup, O. Alphonse, C.P. Shaji, P. Subramanian.

141. *Labeo bata* (Hamilton - Buchanan, 1822) — LRnt/N. Family: Cyprinidae. **Taxonomic status:** Species. **Habit:** Herbivorous, column feeder. **Habitat:** Rivers and reservoirs (introduced). **Global Distribution:** India, Bangladesh, Nepal (introduced). **Current Regional Distribution:** Throughout India . - **Elevation:** < 500 m. - **Range (Sq. km):** > 20,000. - **Area Occupied (Sq. km):** > 2,000. - **Number of location:** Many (Krishna and Godavari, Rivers throughout Orissa, Lower Bengal & Assam). **Population Trends - % change - % Decline:** Not known . - **Time / Rate (Yrs or gens):** Not known. - **No of Mature Individuals:** Not known. **Global Population:** Not known. **Regional Population:** Not known. **Data Quality:** General field study. **Recent Field Studies:** Uttar Pradesh Fisheries Department 1997 in Uttar Pradesh; Madhya Pradesh Fisheries Department 1997 in Madhya Pradesh; CIFA, 1996 - 97 in Bhubaneswar; CICFRI in Ganga, Orissa, Assam; A.C. Pandey, 1996 - 97 in Rivers of Eastern Uttar Pradesh. **Threats:** Loss of habitat; Overexploitation; Siltation; Trade. **Trade:** Commercial. **Other Comments:** Used for stocking ponds, tanks, Edible. **Status - IUCN: LOWER RISK - NEAR THREATENED (Nationally).** **DATA DEFICIENT (Globally).** - **Criteria based on: — .** - **CITES:** No. - **IWPA (1972;91):** No. - **RDB, National (1994):** No. - **RDB, International (1996):** No. **Recommendations - Research management:** Moitoring. - **PHVA:** No. **Captive breeding Recommendations - Captive breeding:** No. - **Level of difficulty:** Not known. **Existing Captive Programs:** None. - **Names of facilities:** —. **Sources (Refer Appendix):** 27 (lxiv), 85, 142, 200, 202 (199 - 200). **Compilers:** P. Das, R. Abidi, D.N. Saksena, A. Mishra, G.P. Dubey.

142. *Labeo boga* (Hamilton - Buchanan, 1822) — LRnt/N . Family: Cyprinidae. **Taxonomic status:** Species. **Habit:** Column feeder, Predominantly Plankton feeder. **Habitat:** Riverine fish. **Global Distribution:** Region covering Pakistan, India, Bangladesh, Eastern Nepal and Myanmar. **Current Regional Distribution:** Assam, Orissa, Andhra Pradesh, Tamil Nadu, Punjab, Bihar, Uttar Pradesh, Bengal. - **Elevation:** < 500 MSL. - **Range (Sq. km):** > 20,000. - **Area Occupied (Sq. km):** > 2,000. - **Number of location:** Many, not fragmented within individual river systems. **Population Trends - % change - % Decline:** 20 % . - **Time / Rate (Yrs or gens):** 20 Yrs. - **No of Mature Individuals:** Not known. **Global Population:** Not known. **Regional Population:** Continuing decline observed. **Data Quality:** General field study; Museums/collections/records. **Recent Field Studies:** J.K. Jena, 1996 in Mahanadhi, Orissa. **Threats:** Human interference; Hunting; Over exploitation; Pollution; Trade. **Trade:** Local. **Other Comments:** Good food fish. **Status - IUCN: LOWER RISK - NEAR THREATENED (Nationally).** **DATA DEFICIENT (Globally).** - **Criteria based on: — .** - **CITES:** No. - **IWPA (1972;91):** No. - **RDB, National (1994):** No. - **RDB, International (1996):** No. **Recommendations - Research management:** Monitoring. - **PHVA:** No. **Captive breeding Recommendations - Captive breeding:** No. - **Level of difficulty:** Very difficult.

Existing Captive Programs: None. - **Names of facilities:** —. **Sources (Refer Appendix):** 27 (lxv), 85, 200, 202 (200 - 201). **Compilers:** R. Abidi, A. Mishra, D.N. Saksena, P. Das.

143. *Labeo calbasu* (Hamilton - Buchanan, 1822) — LRnt/N. Family: Cyprinidae. **Taxonomic status:** Species. **Habit:** Bottom and Column feeder. **Habitat:** Riverine. **Global Distribution:** India, Pakistan, Myanmar, Bangladesh, Nepal, Thailand, South China. **Current Regional Distribution:** Uttar Pradesh, West Bengal, Punjab, Himachal Pradesh, Assam, Orissa, Andhra Pradesh, Tamil Nadu, Madhya Pradesh, Kerala, Bihar. - **Elevation:** < 500 MSL. - **Range (Sq. km):** > 20,000. - **Area Occupied (Sq. km):** > 2,000. - **Number of location:** Many not Fragmented. **Population Trends - % change - % Decline:** 30% (in rivers) Widely cultivated in aquaculture. - **Time / Rate (Yrs or gens):** 20 Yrs. - **No of Mature Individuals:** Not known. **Global Population:** Not known. **Regional Population:** Continuing decline observed. **Data Quality:** General field study; Museums/herbarium/collections/records. **Recent Field Studies:** Jena, J.K., 1996 in Mahanadhi, Orissa; A.C. Pandey, 1996 - 97 in Rivers of Eastern Uttar Pradesh. **Threats:** Human interference; Hunting/Harvest; Overexploitation; Pollution; Trade. **Trade:** Commercial. **Other Comments:** Losing in popularity as aquaculture species because of comparatively slower growth than other major corps. **Status - IUCN:** LOWER RISK - NEAR THREATENED (Nationally). **DATA DEFICIENT (Globally).** - **Criteria based on:** —. - **CITES:** No. - **IWPA (1972;91):** No. - **RDB, National (1994):** No. - **RDB, International (1996):** No. **Recommendations - Research management:** Genetic management; Monitoring. - **PHVA:** No. **Captive breeding Recommendations - Captive breeding:** No. - **Level of difficulty:** Not known. **Existing Captive Programs:** Yes. - **Names of facilities:** Many. **Sources (Refer Appendix):** 1, 11 (xxv), 27 (lxvii), 84, 200, 202. **Compilers:** J.K. Jena, R. Abidi, D.N. Saksena, A. Mishra.

144. *Labeo dero* (Hamilton - Buchanan) — VU/N (A1a, 1c, 1d). (*Cyprinus dero* Hamilton - Buchanan). Family: Cyprinidae. **Taxonomic status:** Species. **Habit:** Bottom feeder. **Habitat:** Upland streams. **Global Distribution:** India, Pakistan, Sri Lanka, Nepal, Bangladesh. **Current Regional Distribution:** Upland cold water of Northern and northeastern Himalayas. - **Elevation:** 1500 m. - **Range (Sq. km):** > 20,000. - **Area Occupied (Sq. km):** > 2,000. - **Number of location:** Plenty (Uttar Pradesh, Assam, Madhya Pradesh). **Population Trends - % change - % Decline:** 50% (> 20%). - **Time / Rate (Yrs or gens):** 20 yrs (10 yrs). - **No of Mature Individuals:** 20%. **Global Population:** Not known. **Regional Population:** Continuing decline observed. **Data Quality:** General field study; Museums/collections/records; Informal field sightings. **Recent Field Studies:** S.P. Biswas, 1993 in Meghalaya, Assam & Arunachal Pradesh; C.B. Joshi, Singh, Sehgal, NBFGR in Uttar Pradesh hills, Northeastern Himalayas. **Threats:** Damming; Drowning; Dynamite and other destructive fishing; Fishing; Human interference; Hunting; Loss of habitat; Loss of habitat because of exotic plants; Overexploitation; Siltation; Trade. **Trade:** Local; Domestic. **Other Comments:** NGO's to be incorporated for conservation. **Status - IUCN:** VULNERABLE (Nationally). **DATA DEFICIENT (Globally).** - **Criteria based on:** A1a, 1c, 1d (Observed population reduction due to decline in extent of occurrence, area of occupancy and/or quality of habitat and due to actual or potential levels of exploitation). - **CITES:** No. - **IWPA (1972;91):** No. - **RDB, National (1994):** No. - **RDB, International (1996):** No. **Recommendations - Research management:** Survey; Monitoring; Habitat management; Limiting factor management. - **PHVA:** Not known. **Captive breeding Recommendations - Captive breeding:** Level 1. - **Level of difficulty:** Least difficult. **Existing Captive Programs:** None. - **Names of facilities:** —. **Sources (Refer Appendix):** 11 (xxvi), 24 (iii), 200. **Compilers:** C.S. Singh, C.B. Joshi, S.K. Srivastava, R.S. Patiyal, S.M. Srivastava, A.K. Singh, S.K. Paul.

145. *Labeo dussumieri* (Valenciennes, 1842) — EN/N (A1a, 1c, 1d, 1e, 2c, 2d, 2e). (*Rohita dussumieri*). Family: Cyprinidae. **Taxonomic status:** Species. **Habit:** Fresh water. **Habitat:** Riverine. **Global Distribution:** Peninsular India, Sri Lanka. **Current Regional Distribution:** Kerala. - **Elevation:** 0 - 150 MSL (During breeding time). - **Range (Sq. km):** < 5,000. - **Area Occupied (Sq. km):** < 2,000. - **Number of location:** Many (Pamba, Meenachil Pichan Kovil; Maninela); Fragmented. **Population Trends - % change - % Decline:** 50%. - **Time / Rate (Yrs or gens):** 10 Yrs. - **No of Mature Individuals:** Not known. **Global Population:** Not known. **Regional Population:** Continuing drastic decline observed. **Data Quality:** Reliable census; General field study. **Recent Field Studies:** B.M. Kurup, 1987 to 1991 in rivers of Kerala; A. Gopalakrishnan, Aug 1997 - Recent Survey, NBFGR, Cochin University, Kerala. **Threats:** Damming; Dynamite and other destructive fishing; Fishing; Overexploitation; Poisoning; Pollution; Siltation; Trade. **Trade:** Local; Commercial. **Other Comments:** Germ plasm conservation, Genetic characterisation by A. Gopalakrishnan, NBFGR, cochin & Kurup, Cochin Univ., Spawn stock during S. W. Monsoon. Breeding adults rare. **Status - IUCN:** ENDANGERED (Nationally). **DATA DEFICIENT (Globally).** - **Criteria based on:** A1a, 1c, 1d, 1e, 2c, 2d, 2e (Observed population reduction due to decline in extent of occurrence, area of occupancy and/or quality of habitat and actual or potential levels of exploitation and due to the effects of introduced taxa, hybridisation, pathogens, pollutants, competitors or parasites). - **CITES:** No. - **IWPA (1972;91):** No. - **RDB, National (1994):** No. - **RDB, International (1996):** No. **Recommendations - Research management:** Taxonomic and morphological genetic studies; Translocations; Monitoring; Genetic management; Habitat management; Other (Introduction in Fresh water fish culture - Government of Kerala now recommends this species for aquaculture). - **PHVA:** Yes. **Captive breeding Recommendations - Captive breeding:** Level 1. - **Level of difficulty:** Moderate difficult. **Existing Captive Programs:** —. - **Names of facilities:** Induced breeding and Larval rearing expt. standardised as part of the ICAR sponsored research project. **Sources (Refer Appendix):** 41, 57 (iii), 73, 110, 115 (ii), 202 (206 - 207). **Compilers:** M. Arunachalam, A. Gopalakrishnan, M. Manimekalan, T.V. Annamercy, B.M. Kurup, O. Alphonse, C.P. Shaji, P. Subramanian.

146. *Labeo dyocheilus* (McClelland) — VU/N (A1a, 1c, 1d). Family: Cyprinidae. **Taxonomic status:** Species. **Habit:** Bottom feeder. **Habitat:** Upland streams. **Global Distribution:** India, Pakistan, Sri Lanka, Nepal, Bangladesh. **Current Regional Distribution:** Rivers and streams of Upland. - **Elevation:** 1500 m. - **Range (Sq. km):** < 5,000. - **Area Occupied (Sq. km):** > 2,000. - **Number of location:** Plenty (All along Himalayas, Assam, Mahanadhi and Damodar rivers). **Population Trends - % change - % Decline:** 50% (20%). - **Time / Rate (Yrs or gens):** 20 yrs (10 yrs). - **No of Mature Individuals:** Not known. **Global Population:** Not known. **Regional Population:** Continuing decline observed. **Data Quality:** General field study; Informal field sightings; Museums/collections/records. **Recent Field Studies:** Uttar Pradesh hills, Northeastern Himalayas. **Threats:** Damming; Drowning; Dynamite and other destructive fishing; Fishing;

Human interference; Hunting; Loss of habitat; Overexploitation; Trade. **Trade:** Local; Domestic. **Other Comments:** None. **Status - IUCN:** VULNERABLE (Nationally). **DATA DEFICIENT (Globally).** - **Criteria based on:** A1a, 1c, 1d (Observed population reduction due to decline in extent of occurrence, area of occupancy and/or quality of habitat and due to actual or potential levels of exploitation) . - **CITES:** No. - **IWPA (1972;91):** No. - **RDB, National (1994):** No. - **RDB, International (1996):** No. **Recommendations - Research management:** Survey; Monitoring; Habitat management; Limiting factor management. - **PHVA:** Pending. **Captive breeding Recommendations - Captive breeding:** Level 1. - **Level of difficulty:** Moderate difficult. **Existing Captive Programs:** None. - **Names of facilities:** —. **Sources (Refer Appendix):** 41, 85, 202 (207 - 208). **Compilers:** C.S. Singh, C.B. Joshi, S.K. Srivastava, R.S. Patiyal, S.M. Srivastava, . A.K. Singh, S.K. Paul

147. *Labeo fimbriatus* (Bloch, 1795) — LRnt/N. (*Cyprinus fimbriatus* Bloch). **Family:** Cyprinidae. **Taxonomic status:** Species. **Habit:** Herbivore, column - feeder, planktophagic, carnivorous. **Habitat:** Riverine, Lacustrine. **Global Distribution:** India, Pakistan, Myanmar, Nepal. **Current Regional Distribution:** Narmada, Tapi, Punjab, Orissa, Krishna. - **Elevation:** Up to 300 m. MSL. - **Range (Sq. km):** < 20,000. - **Area Occupied (Sq. km):** < 2,000. - **Number of location:** Many. **Population Trends - % change - % Decline:** 20 % . - **Time / Rate (Yrs or gens):** 20 Yrs. - **No of Mature Individuals:** Not known. **Global Population:** Not known. **Regional Population:** Continuing decline observed. **Data Quality:** General field study; Informal field sightings; Indirect information; Museums/ collections/records. **Recent Field Studies:** G.P. Dubey, 1995 - 96 in A portion of Narmada, MP; S.V. Sharma, 1996 and 1992 in Krishna river (Lower); V. V. Sugunan & Y. S. Yadav 1989 - 92 in Mahanadhi (Hirakud) ; V. R. Desai, 1994 in Narmada, Madhya Pradesh. **Threats:** Damming; Fishing; Trade. **Trade:** Domestic . **Other Comments:** It can be taken as a candidate species for culture captive breeding. **Status - IUCN:** LOWER RISK - NEAR THREATENED (Nationally). **DATA DEFICIENT (Globally).** - **Criteria based on:** —. - **CITES:** No. - **IWPA (1972;91):** No. - **RDB, National (1994):** No. - **RDB, International (1996):** No. **Recommendations - Research management:** Monitoring; Husbandry research. - **PHVA:** No. **Captive breeding Recommendations - Captive breeding:** No. - **Level of difficulty:** Least difficult. **Existing Captive Programs:** None. - **Names of facilities:** —. **Sources (Refer Appendix):** 27 (lxviii), 46, 85, 202 (208 - 209). **Compilers:** G.P. Dubey, S.V. Sharma, N. More, V.S. Basheer, J.K. Jena, A. S. Apte, . K.W. Dhamge.

148. *Labeo gonius* (Hamilton - Buchanan, 1822) — LRnt/N. **Family:** Cyprinidae. **Taxonomic status:** Species. **Habit:** Column feeder; Planktonphagous; Omnivorous . **Habitat:** Riverine, lacustrine. **Global Distribution:** Pakistan, Northern India, Bangladesh and Myanmar. **Current Regional Distribution:** Northern India: Indo - Gangetic plain, Gujarat, Assam along east coast to . Krishna river. - **Elevation:** < 500 m. - **Range (Sq. km):** > 20,000. - **Area Occupied (Sq. km):** > 2,000. - **Number of location:** Many, not fragmented within individual river system. **Population Trends - % change - % Decline:** 30% in Mahanadhi . - **Time / Rate (Yrs or gens):** 20 Yrs. - **No of Mature Individuals:** Not known. **Global Population:** Not known. **Regional Population:** Continuing decline observed. **Data Quality:** General field study; Museums/collections/records. **Recent Field Studies:** V.V. Sugunan & Y.S. Yadava, 1992 . **Threats:** Human interference; Hunting; Trade; Overexploitation; Pollution. **Trade:** Commercial. **Other Comments:** Lesser valued food fish, not cultivated in aquaculture on significant scale. Decline: Percieved parallel situation in other parts of its range. **Status - IUCN:** LOWER RISK - NEAR THREATENED (Nationally). **DATA DEFICIENT (Globally).** - **Criteria based on:** — . - **CITES:** No. - **IWPA (1972;91):** No. - **RDB, National (1994):** No. - **RDB, International (1996):** No. **Recommendations - Research management:** Genetic management; Monitoring; Survey. - **PHVA:** Pending. **Captive breeding Recommendations - Captive breeding:** Level 3. - **Level of difficulty:** Moderate difficult. **Existing Captive Programs:** None. - **Names of facilities:** —. **Sources (Refer Appendix):** 1, 52, 183, 200, 202 (210 - 211). **Compilers:** P. Das, R. Abidi, A. Mishra, D.N. Saksena.

149. *Labeo kontius* (Jerdon, 1849) — EN (B1, 2c). (*Cyprinus kontius*). **Family:** Cyprinidae. **Taxonomic status:** Species. **Habit:** Fresh water. **Habitat:** Rivers and Streams. **Global Distribution:** ENDEMIC to India. **Current Regional Distribution:** Tamil Nadu. - **Elevation:** 800 m. - **Range (Sq. km):** < 5,000. - **Area Occupied (Sq. km):** < 500. - **Number of location:** 5(Cauvery system); Fragmented. **Population Trends - % change - % Decline:** 30 % . - **Time / Rate (Yrs or gens):** 10 Yrs. - **No of Mature Individuals:** Not known. **Global Population:** Continuing decline observed. **Data Quality:** Reliable census; General field study. **Recent Field Studies:** K.C. Jayaram, 1992 ; M. Arunachalam & A. Manimekalan, 1995 - 96; A. Manimekalan & Arunachalam, 1994 - 95 in Cauvery river system, Tambarabarani river, Tamil Nadu. **Threats:** Damming; Trade; Dynamite and other destructive fishing; Fishing; Loss of habitat; Poisoning. **Trade:** Local; Domestic. **Other Comments:** Predict a decline in population in the next five years. **Status - IUCN:** ENDANGERED. - **Criteria based on:** B1, 2c (Restricted distribution, limited location, severely fragmented, continuing decline observed in extent of occurrence, area of occupancy and/or quality of habitat). - **CITES:** Not known. - **IWPA (1972;91):** Not known. - **RDB, National (1994):** Not known. - **RDB, International (1996):** Not known. **Recommendations - Research management:** Survey; Monitoring. - **PHVA:** Yes. **Captive breeding Recommendations - Captive breeding:** Level 1. - **Level of difficulty:** Very difficult. **Existing Captive Programs:** None. - **Names of facilities:** —. **Sources (Refer Appendix):** 9, 27 (lix), 85, 87, 88 (ix), 202 (212). **Compilers:** M. Arunachalam, A. Manimekalan, C.P. Shaji, B.M. Kurup, O. Alphonse,. A. Gopalakrishnan, T.V. Anna Mercy, P. Subramanian.

150. *Labeo pangusia* (Hamilton - Buchanan, 1822) — LRnt/N. **Family:** Cyprinidae. **Taxonomic status:** Species. **Habit:** Column feeder, Planktonophagous. **Habitat:** Rivers, lakes and ponds, reservoirs of upper reaches. **Global Distribution:** India, Pakistan, Myanmar, Bangladesh. **Current Regional Distribution:** Ganges river system, Assam, Bihar, West Bengal. - **Elevation:** < 500 m. - **Range (Sq. km):** > 20,000. - **Area Occupied (Sq. km):** > 2,000. - **Number of location:** Many, not fragmented within individual rivers. **Population Trends - % change - % Decline:** Not known . - **Time / Rate (Yrs or gens):** Not known. - **No of Mature Individuals:** Not known. **Global Population:** Not known. **Regional Population:** Not known. **Data Quality:** General field study. **Recent Field Studies:** Biswas, 1993 in Brahmaputra drainage system. **Threats:** Human interference; Hunting; Overexploitation; Pollution; Trade. **Trade:** Domestic. **Other Comments:** Known to be a good food fish, of commercial importance, minor fishery in W. Bengal and Assam (Medium carp). **Status - IUCN:** LOWER RISK - NEAR THREATENED (Nationally). **DATA DEFICIENT (Globally).** - **Criteria based on:** —. - **CITES:** No.

- IWPA (1972;91): No. - RDB, National (1994): No. - RDB, International (1996): No. **Recommendations - Research management:** Survey; Monitoring; Life history studies; Habitat management. - PHVA: No. **Captive breeding Recommendations - Captive breeding:** Level 3. - **Level of difficulty:** Very difficult. **Existing Captive Programs:** None. - **Names of facilities:** —. **Sources (Refer Appendix):** 27 (lxxi), 85, 200, 202. **Compilers:** P. Das, R. Abidi, D.N. Saksena, A. Mishra, D. Basu.

151. *Labeo rajasthanicus* (Datta & Majumdar, 1970) — CR (B1, 2c). Family: Cyprinidae. **Taxonomic status:** Species. **Habit:** Herbivorous, Column feeder. **Habitat:** Lake. **Global Distribution:** ENDEMIC to India. **Current Regional Distribution:** Rajasthan. - **Elevation:** 100 m. - **Range (Sq. km):** < 100. - **Area Occupied (Sq. km):** < 10. - **Number of location:** 1 (Jaisanand Lake - Udaipur district). **Population Trends - % change - % Decline:** 80% . - **Time / Rate (Yrs or gens):** 27 Yrs. / 80% . - **No of Mature Individuals:** Not known. **Global Population:** Not known. **Regional Population:** Not known. **Data Quality:** General field study (Datta & Mazumdar, 1970 in Jaisamand lake, Udaipur in Rajasthan); Museums/collections/records. **Recent Field Studies:** Not known. **Threats:** Fishing; Human interference; Predation; Trade. **Trade:** Local. **Other Comments:** The species has been sighted since its discovery (Talwar & Jhingram, 1991). **Status - IUCN:** CRITICALLY ENDANGERED. - **Criteria based on:** B1, 2c (Restricted distribution, limited location, severely fragmented, continuing decline observed in extent of occurrence, area of occupancy and/or quality of habitat). - **CITES:** No. - **IWPA (1972;91):** No. - **RDB, National (1994):** No. - **RDB, International (1996):** No. **Recommendations - Research management:** Survey; Monitoring; Genetic management; Habitat management; Limiting factor management; Limiting factor research. - **PHVA:** Yes. **Captive breeding Recommendations - Captive breeding:** Level 1; Level 2; Level 4. - **Level of difficulty:** Least difficult. **Existing Captive Programs:** None. - **Names of facilities:** —. **Sources (Refer Appendix):** 34, 202 (218 - 219). **Compilers:** A. Husain, A.K. Pandey, A.K. Singh, U.K. Sarkar, A.C. Pandey.

152. *Labeo rohita* (Hamilton - Buchanan, 1822) — LRnt/N. Family: Cyprinidae. **Taxonomic status:** Species. **Habit:** Column feeder, Planktonophagous. **Habitat:** Rivers, reservoirs and Lakes. **Global Distribution:** India, Pakistan, Myanmar, Nepal, Bangladesh, Sri Lanka. **Current Regional Distribution:** Throughout India. - **Elevation:** < 500 m. - **Range (Sq. km):** > 20,000. - **Area Occupied (Sq. km):** > 2,000. - **Number of location:** Many, not Fragmented in individual river systems and water bodies. **Population Trends - % change - % Decline:** 20% . - **Time / Rate (Yrs or gens):** 40 Yrs. - **No of Mature Individuals:** No comprehensive records available. **Global Population:** Not known. **Regional Population:** Continuing decline observed. **Data Quality:** General field study. **Recent Field Studies:** Uttar Pradesh Fisheries Dept. 1997 in Uttar Pradesh; Madhya Pradesh Fisheries Dept. 1997 in Madhya Pradesh; CIFA 1996 - 97 in Mahanadi, Orissa; CICFRI in Ganga, Brahmaputra; A.C. Pandey, 1996 - 97 in Ganga, Gomti and Saryu rivers in eastern Uttar Pradesh. **Threats:** Loss of habitat; Overexploitation; Siltation; Trade. **Trade:** Commercial. **Other Comments:** Highly valued food fish, widespread aquaculture is practised hybridization report in nature and artificially propagated. **Status - IUCN:** LOWER RISK - NEAR THREATENED (Nationally). **DATA DEFICIENT (Globally).** - **Criteria based on:** —. - **CITES:** No. - **IWPA (1972;91):** No. - **RDB, National (1994):** No. - **RDB, International (1996):** No. **Recommendations - Research management:** Genetic management. - **PHVA:** No. **Captive breeding Recommendations - Captive breeding:** No. - **Level of difficulty:** Least difficult. **Existing Captive Programs:** Yes. - **Names of facilities:** Many. **Sources (Refer Appendix):** 27 (lxxiv), 63, 85, 200, 202 (218 - 219). **Compilers:** A. Mishra, R. Abidi, D.N. Saksena, P. Das.

153. *Laguvia kapuri* (Tilak & Hussain, 1975) — CR (B1, 2a, 2c, 2d). Family: Sisoridae. **Taxonomic status:** Species. **Habit:** Carnivore and bottom dweller. **Habitat:** Slow moving streams. **Global Distribution:** ENDEMIC to India. **Current Regional Distribution:** Uttar Pradesh. - **Elevation:** 500 m. - **Range (Sq. km):** < 100. - **Area Occupied (Sq. km):** < 10. - **Number of location:** 1 (Saharanpur). **Population Trends - % change - % Decline:** < 20% . - **Time / Rate (Yrs or gens):** 20 Yrs. / < 20. - **No of Mature Individuals:** Not known. **Global Population:** Not known. **Regional Population:** Not known. **Data Quality:** General field study (Tilak & Hussain, 1974); Museums/collections/records. **Recent Field Studies:** Tawlar & Jhingran, 1991, in Padhoi river in Saharanpur, Uttar Pradesh. **Threats:** Poisoning. **Trade:** No. **Other Comments:** Being a very small sized fish, it has no fishing value in the area. **Status - IUCN:** CRITICALLY ENDANGERED. - **Criteria based on:** B1, 2a, 2b, 2c (Restricted distribution, single location, severely fragmented, continuing decline observed in extent of occurrence, area of occupancy and quality of habitat). - **CITES:** No. - **IWPA (1972;91):** No. - **RDB, National (1994):** No. - **RDB, International (1996):** No. **Recommendations - Research management:** Monitoring; Genetic management; Habitat management. - **PHVA:** Yes. **Captive breeding Recommendations - Captive breeding:** Level 1. - **Level of difficulty:** Least difficult. **Existing Captive Programs:** None. - **Names of facilities:** —. **Sources (Refer Appendix):** 203 (671 - 672), 209. **Compilers:** A.C. Pandey, A.K. Pandey, A.K. Singh, A. Husain & U.K. Sarkar.

154. *Laguvia ribeiroi* Hora, 1921 — LRnt. (*Glyptothorax ribeiroi*). Family: Sisoridae. **Taxonomic status:** Species. **Habit:** Omnivorous. **Habitat:** Riverine. **Global Distribution:** India, Nepal. **Current Regional Distribution:** Western India. - **Elevation:** Up to 500 m. MSL. - **Range (Sq. km):** > 20,000. - **Area Occupied (Sq. km):** < 2,000. - **Number of location:** Many (Tista river in North Bengal, Vindhyas, Tapti, Ganga). **Population Trends - % change - % Decline:** 20% . - **Time / Rate (Yrs or gens):** 20 Yrs. - **No of Mature Individuals:** Not known. **Global Population:** Not known. **Regional Population:** Continuing decline observed. **Data Quality:** General field study; Indirect information; Museums/collections/ records. **Recent Field Studies:** Prem Sankar Prasad, 1994 in Bihar; Talwar & Jhingran, 1991 in Khoila river a tributary of Tista river at Jalpaiguri, North Bengal and Vindhyas. **Threats:** Damming; Fishing; Loss of habitat; Poisoning; Trade. **Trade:** Local. **Other Comments:** None. **Status - IUCN:** LOWER RISK - NEAR THREATENED. - **Criteria based on:** —. - **CITES:** No. - **IWPA (1972;91):** No. - **RDB, National (1994):** No. - **RDB, International (1996):** No. **Recommendations - Research management:** Survey; Monitoring. - **PHVA:** No. **Captive breeding Recommendations - Captive breeding:** No. - **Level of difficulty:** Least difficult. **Existing Captive Programs:** None. - **Names of facilities:** —. **Sources (Refer Appendix):** 84, 103, 177, 203. **Compilers:** G.P. Dubey, S.V. Sharma, N. More, V.S. Basheer, J.K. Jena, A. Apte, K.W. Dhamge, A. Husain, V. K. Sarkar, A.C. Pandey, A.K. Singh, A.K. Pandey.

155. *Laguvia shawi* Hora, 1921 — EN (B1, 2c) . (*Glyptothorax shawi*, Menon, 1954). **Family:** Sisoridae. **Taxonomic status:** Species. **Habit:** Bottom dweller, Carnivorous. **Habitat:** Slow moving hillstream in submountain. **Global Distribution:** ENDEMIC to India. **Current Regional Distribution:** West Bengal. - **Elevation:** 500 - 1500 m. - **Range (Sq. km):** < 5,000. - **Area Occupied (Sq. km):** < 500. - **Number of location:** 1 (Tista drainage - Mahananda and Siroke river). **Population Trends - % change - % Decline:** < 20% . - **Time / Rate (Yrs or gens):** 20 yrs. - **No of Mature Individuals:** Not known. **Global Population:** Continuing decline observed. **Data Quality:** General field study (Menon, 1954 in Mahanadhi and Sivoke rivers in Darjeeling, West Bengal; Mishra, 1976; Jayaram, 1979; Hora, 1921 in Tista drainage); Museums/collections/records. **Recent Field Studies:** Talwar & Jhingran, 1991 in Tista drainage. **Threats:** Damming; Human interference. **Trade:** No. **Other Comments:** Very small sized cat fish of no commercial value. **Status - IUCN:** **ENDANGERED**. - Criteria based on **B1, 2c** (Restricted distribution, limited location, severely fragmented, continuing decline observed in extent of occurrence, area of occupancy and/or quality of habitat). - **CITES:** No. - **IWPA (1972;91):** No. - **RDB, National (1994):** No. - **RDB, International (1996):** No. **Recommendations - Research management:** Survey; Monitoring; Limiting factor research. - **PHVA:** Yes. **Captive breeding Recommendations - Captive breeding:** Level 1. - **Level of difficulty:** Least difficult. **Existing Captive Programs:** None. - **Names of facilities:** —. **Sources (Refer Appendix):** 127, 203 (672 - 673). **Compilers:** U.K. Sarkar, A. , Hussain, A.K. Pandey, A.K. Singh, W. Vishwanath, A.K. Karmakar, S.P. Biswas, P.C. Mahanta, R. Dayal, B.A. Daniel.

156. *Lepidocephalus annandalei* (Chaudhuri, 1912) — LRnt. (*Lepidocephalus menoni* Pillai & Yazdani, 1976). **Family:** Cobitidae. **Taxonomic status:** Species. **Habit:** Bottom dwelling, Omnivorous. **Habitat:** Stream. **Global Distribution:** ENDEMIC to India. **Current Regional Distribution:** Assam, West Bengal, Arunachal Pradesh. - **Elevation:** 200 - 500 m. - **Range (Sq. km):** > 20,000. - **Area Occupied (Sq. km):** > 2,000. - **Number of location:** Many (Teesta river, Mahanadhi river, Ganga river basin, Garo hills); Fragmented. **Population Trends - % change - % Decline:** Not known . - **Time / Rate (Yrs or gens):** Not known. - **No of Mature Individuals:** Not known. **Global Population:** Widely distributed. **Data Quality:** General field study (Chaudhuri, B. L. , 1912 in Teesta and river Mahananda). **Recent Field Studies:** None. **Threats:** Dynamite and other destructive fishing; Human interference; Poisoning. **Trade:** No. **Other Comments:** None. **Status - IUCN:** **LOWER RISK - NEAR THREATENED**. - **Criteria based on:** —. - **CITES:** No. - **IWPA (1972;91):** No. - **RDB, National (1994):** No. - **RDB, International (1996):** No. **Recommendations - Research management:** Survey; Monitoring. - **PHVA:** No. **Captive breeding Recommendations - Captive breeding:** No. - **Level of difficulty:** Not known. **Existing Captive Programs:** None. - **Names of facilities:** —. **Sources (Refer Appendix):** 29, 203 (522 - 523). **Compilers:** W. Vishwanath, A.K. Karmakar, S.P. Biswas, P.C. Mahanta, R. Dayal, B.A. Daniel, A. Husain, U.K. Sarkar, A.K. Pandey, A.K. Singh, A.C. Pandey.

157. *Lepidocephalus berdmorei* (Blyth, 1860) — EN (A1c; B1, 2c) . (*Acanthopsis berdmorei*, Blyth, 1861). **Family:** Cobitidae. **Taxonomic status:** Species. **Habit:** Bottom dwelling, Omnivorous. **Habitat:** Hill stream. **Global Distribution:** India, Myanmar. **Current Regional Distribution:** Manipur. - **Elevation:** 300 - 1000 m. - **Range (Sq. km):** < 5,000. - **Area Occupied (Sq. km):** < 500. - **Number of location:** 2. **Population Trends - % change - % Decline:** 20%. - **Time / Rate (Yrs or gens):** 10 Yrs. - **No of Mature Individuals:** Not known. **Global Population:** Not known. **Regional Population:** Continuing decline observed. **Data Quality:** General field study (Hora, 1921 in Manipur; Tilak & Hussain, 1981 in Manipur). **Recent Field Studies:** A.K. Karmakar, 1993 in Chindwin drainage in Manipur. **Threats:** Damming; Fishing; Human interference; Poisoning. **Trade:** No. **Other Comments:** Further survey is necessary. **Status - IUCN:** **ENDANGERED**. - **Criteria based on:** **A1c** (Population reduction due to decline in area of occupancy, extent of occurrence and/or quality of habitat); **B1, 2c** (Restricted distribution, limited location, severely fragmented, continuing decline observed in extent of occurrence, area of occupancy and/or quality of habitat). - **CITES:** No. - **IWPA (1972;91):** No. - **RDB, National (1994):** No. - **RDB, International (1996):** No. **Recommendations - Research management:** Survey; Monitoring. - **PHVA:** No. **Captive breeding Recommendations - Captive breeding:** No. - **Level of difficulty:** Not known. **Existing Captive Programs:** None. - **Names of facilities:** —. **Sources (Refer Appendix):** 100, 203. **Compilers:** A.K. Karmakar, W. Vishwanath, S.P. Biswas, P. C. Mahantha, R. Dayal, . B.A. Daniel.

158. *Lepidocephalus caudofurcatus* Tilak & Hussain, 1978 — VU (B1, 2c). **Family:** Cobitidae. **Taxonomic status:** Species. **Habit:** Omnivorous, bottom level fish. **Habitat:** Shallow moving streams with sandy bed. **Global Distribution:** ENDEMIC to India. **Current Regional Distribution:** Assam, Uttar Pradesh. - **Elevation:** 100 - < 500 m. - **Range (Sq. km):** > 20,000. - **Area Occupied (Sq. km):** < 2,000. - **Number of location:** 4 (Doon valley, Saharanpur, Moradabad). **Population Trends - % change - % Decline:** < 20% . - **Time / Rate (Yrs or gens):** 20 yrs. - **No of Mature Individuals:** Not known. **Global Population:** Continuing decline observed. **Data Quality:** General field study (Tilak & Hussain, 1978 & 1981 in Rishikesh, Uttar Pradesh; Jayaram, 1981); Museums/collections/records. **Recent Field Studies:** Talwar & Jhingran, 1991 in Doon Valley, Uttar Pradesh, Brahmaputra drainage, Assam. **Threats:** Pollution. **Trade:** No. **Other Comments:** Being a small fish of fishery value. **Status - IUCN:** **VULNERABLE**. - **Criteria based on:** **B1, 2c** (Restricted distribution, limited location, severely fragmented, continuing decline observed in extent of occurrence, area of occupancy and/or quality of habitat). - **CITES:** No. - **IWPA (1972;91):** No. - **RDB, National (1994):** No. - **RDB, International (1996):** No. **Recommendations - Research management:** Survey; Monitoring; Genetic management; Habitat management. - **PHVA:** No. **Captive breeding Recommendations - Captive breeding:** Level 2. - **Level of difficulty:** Least difficult. **Existing Captive Programs:** None. - **Names of facilities:** —. **Sources (Refer Appendix):** 85, 203 (623 - 624), 213, 216. **Compilers:** A.C. Pandey, U.K. Sarkar, A.K. Pandey, A.K. Singh, A. Husain.

159. *Lepidocephalus goalparensis* (Pillai & Yazdani, 1976) — CR (B1, 2c). **Family:** Cobitidae. **Taxonomic status:** Species. **Habit:** Bottom dwelling, detritus feeder. **Habitat:** Hill stream. **Global Distribution:** ENDEMIC to India. **Current Regional Distribution:** Assam. - **Elevation:** > 500 m. - **Range (Sq. km):** < 100. - **Area Occupied (Sq. km):** < 500. - **Number of location:** 1(Brahmaputra drainage). **Population Trends - % change - % Decline:** Not known . - **Time / Rate (Yrs or gens):** Not known. - **No of Mature Individuals:** Not known. **Global Population:** Restricted distribution. **Data Quality:** General field study (Pillai & Y. M. Yazdani in Goalpara, Assam). **Recent Field Studies:** None. **Threats:**

Human interference; Loss of habitat. **Trade:** No. **Other Comments:** Reported from single locality only. **Status - IUCN:** **CRITICALLY ENDANGERED.** - **Criteria based on:** B1, 2c (Restricted distribution, limited location, severely fragmented, continuing decline observed in extent of occurrence, area of occupancy and/or quality of habitat). - **CITES:** No. - **IWPA (1972;91):** No. - **RDB, National (1994):** No. - **RDB, International (1996):** No. **Recommendations - Research management:** Survey; Monitoring. - **PHVA:** No. **Captive breeding Recommendations - Captive breeding:** No. - **Level of difficulty:** Not known. **Existing Captive Programs:** None. - **Names of facilities:** —. **Sources (Refer Appendix):** 175, 202 (524 - 526). **Compilers:** W. Vishwanath, A.K. Karmakar, S.P. Biswas, P.C. Mahanta, R. Dayal, B.A. Daniel.

160. *Lepidocephalus irrorata* (Hora, 1921) — VU (B1, 2c). (*Lepidocephalichthys irrorata* Hora 1921). **Family:** Cobitidae. **Taxonomic status:** Species. **Habit:** Bottom feeder. **Habitat:** River and bed. **Global Distribution:** ENDEMIC to India. **Current Regional Distribution:** Manipur; Meghalaya. - **Elevation:** 500 - 1000 m. - **Range (Sq. km):** < 20,000. - **Area Occupied (Sq. km):** < 2,000. - **Number of location:** Few (Chindwin river system, Brahmaputra); Fragmented. **Population Trends - % change - % Decline:** No. - **Time / Rate (Yrs or gens):** Not known. - **No of Mature Individuals:** Numerous. **Global Population:** Restricted distribution. **Data Quality:** General field study (S. L. Hora, 1921 Loktak lake, Manipur; R. Tilak & A. Husain, 1981 Meghalaya). **Recent Field Studies:** Not known. **Threats:** Human interference; Loss of habitat because of fragmentation; Trade. **Trade:** Local. **Other Comments:** Small fish, used in preparation of fish soup in Manipur. **Status - IUCN:** **VULNERABLE.** - **Criteria based on:** B1, 2c (Restricted distribution, limited location, severely fragmented, continuing decline observed in extent of occurrence, area of occupancy and/or quality of habitat). - **CITES:** No. - **IWPA (1972;91):** No. - **RDB, National (1994):** No. - **RDB, International (1996):** No. **Recommendations - Research management:** Survey; Monitoring. - **PHVA:** No. **Captive breeding Recommendations - Captive breeding:** No. - **Level of difficulty:** Not known. **Existing Captive Programs:** None. - **Names of facilities:** —. **Sources (Refer Appendix):** 68, 132, 203 (526 - 527), 216. (Refer Appendix). **Compilers:** W. Vishwanath, A.K. Karmakar, S.P. Biswas, P.C. Mahanta, R. Dayal, B.A. Daniel.

161. *Lepidopygopsis typus* Raj, 1941 — CR (B1, 2c). **Family:** Schizothoracinae. **Taxonomic status:** Species. **Habit:** Freshwater. **Habitat:** Riverine. **Global Distribution:** ENDEMIC to India. **Current Regional Distribution:** Kerala. - **Elevation:** < 500 MSL. - **Range (Sq. km):** < 100. - **Area Occupied (Sq. km):** < 10. - **Number of location:** One (Above Thannikkudy, Periyar upstream only). **Population Trends - % change - % Decline:** Declining. - **Time / Rate (Yrs or gens):** Not known. - **No of Mature Individuals:** Not known. **Global Population:** Continuing decline observed. **Data Quality:** General field studies (Raj 1921, Periyar river, Kerala). **Recent Field Studies:** L.K. Arun, 1993 - 95 in Periyar lake valley system; C.P. Shaji, 1992 - 94, in Periyar; V. J. Zacharias, 1995, in Periyar. **Threats:** Siltation. **Trade:** Not known. **Other Comments:** The One and Only Schizothoracini fish from peninsular India. Annual breeder. **Status - IUCN:** **CRITICALLY ENDANGERED.** - **Criteria based on:** B1, 2c (Restricted distribution, limited location, severely fragmented, continuing decline observed in extent of occurrence, area of occupancy and/or quality of habitat). - **CITES:** No. - **IWPA (1972;91):** No. - **RDB, National (1994):** No. - **RDB, International (1996):** No. **Recommendations - Research management:** Survey; Monitoring; Life history studies; Taxonomic and morphological genetic studies. - **PHVA:** Yes. **Captive breeding Recommendations - Captive breeding:** Level 3. - **Level of difficulty:** Very difficult. **Existing Captive Programs:** None. - **Names of facilities:** —. **Sources (Refer Appendix):** 6, 178, 205, 235. **Compilers:** C.P. Shaji, A. Gopalakrishnan, O. Alphonse, M. Arunachalam, A. Manimekalan, T.V. Annamercy, B.M. Kurup, P. Subramanian

162. *Macroganathus aral* (Bloch & Schneider, 1801) — LRnt. (*Mecroganthus jammuensis* Malhotra and Singh Datta, 1975). **Family:** Mastacembelidae. **Taxonomic status:** Species. **Habit:** Detritivorous, bottom dwelling. **Habitat:** Ponds, riverine, wet lands. **Global Distribution:** India, Pakistan, Srilanka, Nepal, Bangladesh, Myanmar. **Current Regional Distribution:** Andhra Pradesh, Madhya Pradesh, Bihar, Uttar Pradesh, Orissa, Kerala, Assam. - **Elevation:** Up to 300 m. - **Range (Sq. km):** > 20,000. - **Area Occupied (Sq. km):** > 2,000. - **Number of location:** Many (Krishna, Mahanadi, Brahmaputra, Ganges etc.). **Population Trends - % change - % Decline:** 30% . - **Time / Rate (Yrs or gens):** 20 yrs. - **No of Mature Individuals:** Not known. **Global Population:** Not known. **Regional Population:** Continuing decline observed. **Data Quality:** General field study (Bloch and Schneider 1801, Trangnebar, Tamil Nadu; Hora 1921, Dinapur, Assam; Malhotra and Singh Dutta 1975, Gandigrah, Jammu); Indirect information; Museums/collections/records. **Recent Field Studies:** Jayaraj & Sarma, 1995 Lake Kollerue, Andhra Pradesh. **Threats:** Fishing; Loss of habitat; Pollution; Trade. **Trade:** Domestic. **Other Comments:** —. **Status - IUCN:** **LOWER RISK - NEAR THREATENED.** - **Criteria based on:** —. - **CITES:** No. - **IWPA (1972;91):** No. - **RDB, National (1994):** No. - **RDB, International (1996):** Data Deficient. **Recommendations - Research management:** Habitat management; Husbandry research. - **PHVA:** No. **Captive breeding Recommendations - Captive breeding:** No. - **Level of difficulty:** Moderate difficult. **Existing Captive Programs:** None. - **Names of facilities:** —. **Sources (Refer Appendix):** 27 (lxxvi), 26, 69, 118, 203 (1026). (Refer Appendix). **Compilers:** G.P. Dubey, S.V. Sharma, N. More, V.S. Basheer, J.K. Jena, A. Apte, K.W. Dhamge.

163. *Macroganathus guentheri* (Day, 1865) — VU (A1a, 1c, 2c, 2d; B1, 2c). **Family:** Mastacembelidae. **Taxonomic status:** Species. **Habit:** Freshwater. **Habitat:** Intricated canals, streams, ponds. **Global Distribution:** ENDEMIC to India. **Current Regional Distribution:** Kerala. - **Elevation:** 0 - 25 m. - **Range (Sq. km):** < 20,000. - **Area Occupied (Sq. km):** < 2,000. - **Number of location:** Many (Southern part of Vembanad lake, Cannannore - Cheenkannipuzha river, Trichur, Kodanad); Fragmented. **Population Trends - % change - % Decline:** 30 - 40% . - **Time / Rate (Yrs or gens):** 10 yrs. - **No of Mature Individuals:** Not known. **Global Population:** Continuing decline observed. **Data Quality:** General field study (Day 1865, Trichur, Kerala). **Recent Field Studies:** C.P. Shaji in Central Travancore; B.M. Kurup in Kerala. **Threats:** Catastrophic events; Dynamite and other destructive fishing; Fishing; Loss of habitat; Overexploitation; Pesticides; Poisoning; Pollution; Trade. **Trade:** Local. **Other Comments:** Distribution of species in Assam doubtful. **Status - IUCN:** **VULNERABLE.** - **Criteria based on:** A1a, 1c, 2c, 2d (Observed population reduction due to decline in extent of occurrence, area of occupancy and/or quality of habitat and projected decline due to extent of occurrence, area of occupancy and/or quality of habitat and actual or potential levels of exploitation); B1, 2c (Restricted distribution, limited location, severely fragmented, continuing decline observed in extent of occurrence, area of occupancy and/or quality of habitat). -

CITES: No. - **IWPA (1972;91):** No. - **RDB, National (1994):** No. - **RDB, International (1996):** No. **Recommendations - Research management:** Survey; Monitoring; Habitat management; Other. - **PHVA:** Yes. **Captive breeding Recommendations - Captive breeding:** Level 3. - **Level of difficulty:** Very difficult. **Existing Captive Programs:** None. - **Names of facilities:** —. **Sources (Refer Appendix):** 37, 114, 203 (1027). **Compilers:** M. Arunachalam, A. Gopalakrishnan, M. Manimekalan, T.V. Annamercy, . B.M. Kurup, O. Alphonse, C.P. Shaji, P. Subramanian.

164. *Macrogathus pancalus* (Hamilton - Buchanan, 1822) — LRnt. Family: Mastacembelidae. **Taxonomic status:** Species. **Habit:** Detritivorous, bottom living. **Habitat:** Ponds, rivers, pools. **Global Distribution:** India, Pakistan, Sri Lanka, Nepal, Bangladesh, Myanmar. **Current Regional Distribution:** Andhra Pradesh, Madya Pradesh, Bihar, Orissa, West Bengal, Assam. - **Elevation:** Up to 300 m. - **Range (Sq. km):** > 20,000. - **Area Occupied (Sq. km):** > 2,000. - **Number of location:** Many (Krishna, Mahanadi, Ponds of Assam). **Population Trends - % change - % Decline:** 30% . - **Time / Rate (Yrs or gens):** 20 yrs. - **No of Mature Individuals:** Not assessed but abundant. **Global Population:** Abundant. **Regional Population:** Continuing decline observed. **Data Quality:** General field study; Indirect information; Museums/collections/ records. **Recent Field Studies:** G.P. Dubey, 1995 - 96 in Narmada; Jayaraj & Sharma, 1995 in Lake Kolleyu, Andhra Pradesh); Talwar and Jhingran, Gangetic provinces. **Threats:** Fishing; Loss of habitat; Pollution; Trade. **Trade:** Domestic. **Other Comments:** None. **Status - IUCN:** LOWER RISK - NEAR THREATENED. - **Criteria based on:** —. - **CITES:** No. - **IWPA (1972;91):** No. - **RDB, National (1994):** No. - **RDB, International (1996):** No. **Recommendations - Research management:** Habitat management; Husbandry research. - **PHVA:** No. **Captive breeding Recommendations - Captive breeding:** No. - **Level of difficulty:** Moderate difficult. **Existing Captive Programs:** None. - **Names of facilities:** —. **Sources (Refer Appendix):** 27 (lxxvii), 63, 65, 81, 200, 203 (1026 - 1027). **Compilers:** G.P. Dubey, S.V. Sharma, N. More, V.S. Basheer, J.K. Jena, A. Apte, K.W. Dhamge.

165. *Mesonoemacheilus reticulofasciatus* Singh, Sen & Banarescu, 1981 — EN (B1, 2c). (*Nemacheilus reticulofasciatus* Menon, 1987). Family: Homalopteridae. **Taxonomic status:** Species. **Habit:** Bottom dwelling. **Habitat:** Hill stream. **Global Distribution:** ENDEMIC to India. **Current Regional Distribution:** Meghalaya. - **Elevation:** 500 - 1500 m. - **Range (Sq. km):** < 5,000. - **Area Occupied (Sq. km):** < 500. - **Number of location:** 1 (Jayantia hills, Meghalaya). **Population Trends - % change - % Decline:** Not known . - **Time / Rate (Yrs or gens):** Not known. - **No of Mature Individuals:** Not known. **Global Population:** Not known. **Regional Population:** Not known. **Data Quality:** General field study (A.G.K. Menon, 1987 Bavani, Shillong, Meghalaya). **Recent Field Studies:** Talwar and Jhingran, 1991 Jayantia Hills (Brahmaputra river basin). **Threats:** Human interference. **Trade:** No. **Other Comments:** —. **Status - IUCN:** ENDANGERED. - **Criteria based on:** B1, 2c (Restricted distribution, limited location, severely fragmented, continuing decline observed in extent of occurrence, area of occupancy and/or quality of habitat). - **CITES:** No. - **IWPA (1972;91):** No. - **RDB, National (1994):** No. - **RDB, International (1996):** No. **Recommendations - Research management:** Survey; Monitoring; Life history studies. - **PHVA:** No. **Captive breeding Recommendations - Captive breeding:** No. - **Level of difficulty:** Not known. **Existing Captive Programs:** None. - **Names of facilities:** —. **Sources (Refer Appendix):** 131, 202 (498). **Compilers:** W. Vishwanath, A.K. Karmakar, S.P. Biswas, P. C. Mahantha, R. Dayal, B.A. Daniel.

166. *Mesonoemacheilus sijuensis* (Menon, 1987) — VU (D2) . (*Noemachilus sijuensis* Menon, 1987). Family: Homalopteridae. **Taxonomic status:** Species. **Habit:** Bottom dweller, omnivorous. **Habitat:** Hill stream. **Global Distribution:** ENDEMIC to India. **Current Regional Distribution:** Meghalaya. - **Elevation:** > 500 m. - **Range (Sq. km):** < 100. - **Area Occupied (Sq. km):** < 10. - **Number of location:** 1 (Siju cave, Garo hills). **Population Trends - % change - % Decline:** Not known. - **Time / Rate (Yrs or gens):** Not known. - **No of Mature Individuals:** Not known. **Global Population:** Not known. **Data Quality:** General field study (A.G.K. Menon, 1987 Garo Hills, Meghalaya). **Recent Field Studies:** A.K. Karmakar, ZSI, Meghalaya . **Threats:** No. **Trade:** Not known. **Other Comments:** So far known only from Siju cave. More survey required about its range of distribution. **Status - IUCN:** VULNERABLE. - **Criteria based on:** D2 (Restricted population in single location and/or < 100 Sq. km area). - **CITES:** No. - **IWPA (1972;91):** No. - **RDB, National (1994):** No. - **RDB, International (1996):** No. **Recommendations - Research management:** Survey; Monitoring; Life history studies. - **PHVA:** No. **Captive breeding Recommendations - Captive breeding:** No. - **Level of difficulty:** Not known. **Existing Captive Programs:** None. - **Names of facilities:** —. **Sources (Refer Appendix):** 131, 202 (503 - 504). **Compilers:** W. Vishwanath, A.K. Karmakar, S.P. Biswas, P.C. Mahanta, R. Dayal, B.A. Daniel

167. *Monopterusuchia* (Hamilton - Buchanan, 1822) — LRnt/N. (*Amphipnousuchia* (Day)) . Family: Synbranchidae. **Taxonomic status:** Species. **Habit:** Carnivorous. **Habitat:** Fresh and brackish water, rivers, ponds. **Global Distribution:** India, Pakistan, Nepal, Myanmar. **Current Regional Distribution:** Northern and northeastern India. - **Elevation:** < 500 m. - **Range (Sq. km):** > 20,000. - **Area Occupied (Sq. km):** > 2,000. - **Number of location:** Many; contiguous . **Population Trends - % change - % Decline:** 10% . - **Time / Rate (Yrs or gens):** 20 yrs. - **No of Mature Individuals:** Not known. **Global Population:** Continuing decline observed. **Data Quality:** General field study (Srivastava, 1981 Uttar Pradesh); Informal field sightings; Museums/collections/records. **Recent Field Studies:** Talwar and Jhingran, 1991 Freshwater of Northeastern, north and eastern India. **Threats:** Fishing; Human interference; Pollution; Trade. **Trade:** Local. **Other Comments:** Relished food fish. **Status - IUCN:** LOWER RISK - NEAR THREATENED (Nationally). **DATA DEFICIENT (Globally).** - **Criteria based on:** —. - **CITES:** No. - **IWPA (1972;91):** No. - **RDB, National (1994):** No. - **RDB, International (1996):** No. **Recommendations - Research management:** Monitoring. - **PHVA:** No. **Captive breeding Recommendations - Captive breeding:** Yes. - **Level of difficulty:** Least difficult. **Existing Captive Programs:** None. - **Names of facilities:** —. **Sources (Refer Appendix):** 1, 200, 203 (776). **Compilers:** P. Das, R. Abidi, A. Mishra, D.N. Saksena, D. Basu, A.K. Karmakar, W. Viswanath, S.P. Biswas, P.C. Mahanta, B.A. Daniel, A.K. Pandey, A. Husain, U.K. Sarkar, A.K. Singh, A.C. Pandey.

168. *Monopterus eapeni* Talwar, 1991 — CR (B1, 2c). (*Amphiprous monopterus indicus*) . Family: Synbranchidae. **Taxonomic status:** Species. **Habit:** Fresh water. **Habitat:** Subterranean channels and wells. **Global Distribution:** ENDEMIC to India. **Current Regional Distribution:** Kerala. - **Elevation:** Below ground level. - **Range (Sq.**

km): < 100. - Area Occupied (Sq. km): < 10. - Number of location: 1(Kottayam). Population Trends - % change - % Decline: Not known. - Time / Rate (Yrs or gens): Not known. - No of Mature Individuals: Not known. Global Population: Restricted distribution. Data Quality: Reliable census (T.V. Annamercy, 1980 in Kottayam). Recent Field Studies: Talwar and Jhingran 1991, Kerala. Threats: Loss of habitat. Trade: No. Other Comments: Collected from the wells in 1990 along with *Horaglanis krishnai*. Status - IUCN: CRITICALLY ENDANGERED. - Criteria based on: B1, 2c (Restricted distribution, limited location, severely fragmented, continuing decline observed in extent of occurrence, area of occupancy and/or quality of habitat). - CITES: No. - IWPA (1972;91): No. - RDB, National (1994): No. - RDB, International (1996): No. Recommendations - Research management: Habitat management; Survey. - PHVA: Yes. Captive breeding Recommendations - Captive breeding: Level 3. - Level of difficulty: Very difficult. Existing Captive Programs: None. - Names of facilities: —. Sources (Refer Appendix): 4, 203 (779). Compilers: M. Arunachalam, A. Gopalakrishnan, M. Manimekalan, T.V. Annamercy, . B.M. Kurup, O. Alphonse, C.P. Shaji, P. Subramanian.

169. *Monopterus fossorius* (Nair, 1951) — EN (B1, 2c). (*Amphipnous fossorius*). Family: Synbranchidae. Taxonomic status: Species. Habit: Fresh water, Paddy fields, Bottom dwelling. Habitat: Low lands and rivers. Global Distribution: ENDEMIC to India. Current Regional Distribution: Kerala. - Elevation: Subterranean. - Range (Sq. km): < 5,000. - Area Occupied (Sq. km): < 500. - Number of location: 2 (Karamana river, paddy fields in Trichur). Population Trends - % change - % Decline: Not known. - Time / Rate (Yrs or gens): Not known. - No of Mature Individuals: Not known. Global Population: Restricted distribution. Data Quality: Reliable census; General field study (Nair 1952, Karamana river, Trivandrum, Kerala; A.G.K. Menon, 1987). Recent Field Studies: C.P. Shaji, 1995 Personal collection from Trichur; Talwar & Jhingran 1991, Coastal area of Kerala. Threats: Pesticides; Poisoning. Trade: No. Other Comments: —. Status - IUCN: ENDANGERED. - Criteria based on: B1, 2c (Restricted distribution, limited location, severely fragmented, continuing decline observed in extent of occurrence, area of occupancy and/or quality of habitat). - CITES: No. - IWPA (1972;91): No. - RDB, National (1994): No. - RDB, International (1996): No. Recommendations - Research management: Survey; Monitoring. - PHVA: Yes. Captive breeding Recommendations - Captive breeding: Level 3. - Level of difficulty: Very difficult. Existing Captive Programs: None. - Names of facilities: —. Sources (Refer Appendix): 131, 143, 203 (777). Compilers: M. Arunachalam, A. Gopalakrishnan, M. Manimekalan, T.V. Annamercy, . B.M. Kurup, O. Alphonse, C.P. Shaji, P. Subramanian.

170. *Moringua hodgarti* Chaudhuri, 1913 — CR (B1, 2b, 2c, 2d, 2e). (*Amphipnous hodgarti* Menon, 1974; *Indian spaghetti eel*). Family: Moringuidae. Taxonomic status: Species. Habit: Not known. Habitat: Shallow hill stream, embedded in mud. Global Distribution: ENDEMIC to India. Current Regional Distribution: Arunachal Pradesh. - Elevation: > 1000 m. - Range (Sq. km): < 5,000. - Area Occupied (Sq. km): < 10. - Number of location: 1 (Abor hills, Upper Rotung). Population Trends - % change - % Decline: Not known. - Time / Rate (Yrs or gens): Not known. - No of Mature Individuals: Not known. Global Population: Restricted area of occupancy. Data Quality: Museums/records/collections; General field study (B.L. Chaudhuri, 1913 in Upper Rotung; P. Nath in 1989 in Arunachal Pradesh). Recent Field Studies: P.C. Mahanta, Dept. of fisheries of Arunachal Pradesh 1997, Abor Hills, Assam; Talwar & Jhingran 1991, Abor Hills, Assam. Threats: Overexploitation; Poisoning. Trade: No. Other Comments: Information based on type locality (1913) only. Status - IUCN: CRITICALLY ENDANGERED. - Criteria based on: B1, 2b, 2c, 2d, 2e (Restricted distribution, single location, continuing decline observed in area of occupancy and/or extent of occurrence and quality of habitat, number of locations or subpopulations and mature individuals and number of mature individuals). - CITES: No. - IWPA (1972;91): No. - RDB, National (1994): No. - RDB, International (1996): No. Recommendations - Research management: Survey; Limiting factor research; Life history studies. - PHVA: Pending. Captive breeding Recommendations - Captive breeding: No. - Level of difficulty: Not known. Existing Captive Programs: None. - Names of facilities: —. Sources (Refer Appendix): 30, 145, 189 (v), 202 (77). (Refer Appendix). Compilers: A.K. Karmakar, B. P. Bishwas, W. Vishwanath, P.C. Mahanta, R. Dayal, B.A. Daniel, T.V. Annamercy, M. Arunachalam, A. Gopalakrishnan, A. Manimekalan, B.M. Kurup, O. Alphonse, C.P. Shaji, P. Subramanian.

171. *Mystus bleekeri* (Day, 1877) — VU (A1a, 1c, 1d). Family: Bagridae. Taxonomic status: Species. Habit: Carnivore. Habitat: Ponds, ditches, rivers, nallahs, lakes. Global Distribution: India, Pakistan, Nepal, Bangladesh, Myanmar, Sumatra. Current Regional Distribution: Uttar Pradesh, Mahanadi, west coast river system. - Elevation: 50 - 700 m. - Range (Sq. km): > 20,000. - Area Occupied (Sq. km): > 2,000. - Number of location: Many. Population Trends - % change - % Decline: 30%. - Time / Rate (Yrs or gens): 10 yrs. - No of Mature Individuals: Not known. Global Population: Continuing decline observed. Data Quality: General field study; Museums/records/collections. Recent Field Studies: Pisolker, 1994 Maharashtra; Singh, 1994 Eastern Uttar Pradesh; Dubey, 1994. Madhya Pradesh; Husain, 1997; Khan, 1997 Ganges in Uttar Pradesh; Johan, 1997; Talwar and Jhingran, 1991 Confined to Northern India, the southern most limit beiry Mahanathi head waters. Threats: Fishing; Pollution; Trade. Trade: Local; Domestic. Other Comments: Minor commercial value. Status - IUCN: VULNERABLE (Nationally). DATA DEFICIENT (Globally). - Criteria based on: A1a, 1c, 1d (Observed population reduction due to decline in extent of occurrence, area of occupancy and/or quality of habitat and due to actual or potential levels of exploitation). - CITES: No. - IWPA (1972;91): No. - RDB, National (1994): No. - RDB, International (1996): No. Recommendations - Research management: Survey; Monitoring; Limiting factor research. - PHVA: Yes. Captive breeding Recommendations - Captive breeding: Level 1. - Level of difficulty: Least difficult. Existing Captive Programs: None. - Names of facilities: —. Sources (Refer Appendix): 11 (xxxii), 50, 63, 148, 176, 199, 200, 203 (558 - 559). Compilers: U.K. Sarkar, A. Husain, A.K. Singh, A.K. Pandey, A.C. Pandey.

172. *Mystus cavasius* (Hamilton - Buchanan, 1822) — LRnt/N. (*Pimelodus cavasius*). Family: Bagaridae. Taxonomic status: Species. Habit: Carnivorous. Habitat: Rivers, ponds, lakes. Global Distribution: India, Sri Lanka, Pakistan, Bangladesh, Nepal, Thailand, Myanmar. Current Regional Distribution: Gangetic river system, Mahanadi, Narmada, Krishna, Cauvery. - Elevation: Up to 500 m. - Range (Sq. km): > 20,000. - Area Occupied (Sq. km): > 2,000. - Number of location: Many (Ganga, Mahanadi, Narmadha). Population Trends - % change - % Decline: 30%. - Time / Rate (Yrs or gens): 20 yrs. - No of Mature Individuals: Not known. Global Population: Continuing decline observed. Data Quality: General field study Srivastava 1981, Eastern Uttar Pradesh and Bihar; Indirect information; Museums/collections/

records. **Recent Field Studies:** Dubey Chatterjee, 1995 - 96 in Narmada, Madhya Pradesh; Suguanan & Yadav, 1992 in Mirakud; Talwar and Jhingran Pool, ditches, ponds, inundated fields. **Threats:** Fishing; Loss of habitat; Pollution; Trade. **Trade:** Commercial. **Other Comments:** —. **Status - IUCN:** LOWER RISK - NEAR THREATENED (Nationally). **DATA DEFICIENT (Globally).** - **Criteria based on:** —. - **CITES:** No. - **IWPA (1972;91):** No. - **RDB, National (1994):** No. - **RDB, International (1996):** No. **Recommendations - Research management:** Habitat management; Survey. - **PHVA:** Yes. **Captive breeding Recommendations - Captive breeding:** Level 3. - **Level of difficulty:** Moderate difficult. **Existing Captive Programs:** None. - **Names of facilities:** —. **Sources (Refer Appendix):** 27 (lxxxii), 63, 65, 149, 196, 200, 202. **Compilers:** G.P. Dubey, S.V. Sharma, N. More, V. S. Bhasheer, J.K. Jena, A. Apte, K.W. Dhamge.

173. *Mystus malabaricus* (Jerdon, 1849) — EN (A1a, 2b, 2c, 2d) . (*Bagrus malabaricus*). **Family:** Bagridae. **Taxonomic status:** Species. **Habit:** Carnivoro. **Habitat:** Running water. **Global Distribution:** ENDEMIC to India. **Current Regional Distribution:** Kerala and Karnataka. - **Elevation:** 0 - 800 m. - **Range (Sq. km):** > 20,000. - **Area Occupied (Sq. km):** < 500. - **Number of location:** Many; Fragmented (Pamba river, Kabani river, Upper cauvery basin). **Population Trends - % change - % Decline:** Not known . - **Time / Rate (Yrs or gens):** Not known. - **No of Mature Individuals:** Not known. **Global Population:** Restricted area of occupancy. **Data Quality:** General field study. **Recent Field Studies:** M. Arunachalam, 1995 in Western Ghats of Tamil Nadu, Kerala, Karnataka. B.M. Kurup, 1987 - 91 in Western Ghats of Kerala; Talwar and Jhingran, 1991 Western Ghats. **Threats:** Dynamite and other destructive fishing; Human interference; Loss of habitat;. Overexploitation; Poisoning; Pollution; Siltation; Trade. **Trade:** Local. **Other Comments:** —. **Status - IUCN:** ENDANGERED. - **Criteria based on:** A1a, 2b, 2c, 2d (Observed population reduction and predicted decline due to decline in abundance, extent of occurrence, area of occupancy and/or quality of habitat and potential levels of exploitation). - **CITES:** No. - **IWPA (1972;91):** No. - **RDB, National (1994):** No. - **RDB, International (1996):** No. **Recommendations - Research management:** Survey; Monitoring; Habitat management; Life history studies. - **PHVA:** No. **Captive breeding Recommendations - Captive breeding:** Level 3. - **Level of difficulty:** Very difficult. **Existing Captive Programs:** None. - **Names of facilities:** —. **Sources (Refer Appendix):** 27 (lxxxiv), 90, 110, 112, 114, 193, 203 (564 - 565). **Compilers:** M. Arunachalam, A. Gopalakrishnan, M. Manimekalan, T.V. Annamercy, . B.M. Kurup, O. Alphonse, C.P. Shaji, P. Subramanian.

174. *Mystus microphthalmus* (Day, 1877) — EN/N (A1a, 1c; B1, 2c) . (*Macrones microphthalmus* Day, 1878). **Family:** Bagridae. **Taxonomic status:** Species. **Habit:** Carnivorous. **Habitat:** Riverine. **Global Distribution:** India, Myanmar. **Current Regional Distribution:** Manipur. - **Elevation:** 300 - 800 m. - **Range (Sq. km):** < 5,000. - **Area Occupied (Sq. km):** < 500. - **Number of location:** 2 (Chindwin drainage, Irrawady river). **Population Trends - % change - % Decline:** > 50 % . - **Time / Rate (Yrs or gens):** 10 Yrs. - **No of Mature Individuals:** Not known. **Global Population:** Not known. **Regional Population:** Continuing decline observed. **Data Quality:** General field study (F. Day, 1878 in Irrawady River; Viswanath, W. & Tombi, H. , 1981 - 85 in Manipur Chindwin drainage). **Recent Field Studies:** W. Vishwanath & Manoj Kumar , 1992 - 94 Field study on Manipur river; Talwar and Jhingran, 1991 Irrawaddy river system, Manipur. **Threats:** Damming; Dynamite and other destructive fishing; Trade. **Trade:** Local; Domestic. **Other Comments:** Good food fish. A considerable decline in its occurrence in Manipur river. **Status - IUCN:** ENDANGERED (Nationally). **DATA DEFICIENT (Globally).** - **Criteria based on:** A1a, 1c (Observed population reduction due to decline in extent of occurrence, area of occupancy and/or quality of habitat); B1, 2c (Restricted distribution, limited location, severely fragmented, continuing decline observed in extent of occurrence, area of occupancy and/or quality of habitat). - **CITES:** No. - **IWPA (1972;91):** No. - **RDB, National (1994):** No. - **RDB, International (1996):** No. **Recommendations - Research management:** Survey; Monitoring. - **PHVA:** No. **Captive breeding Recommendations - Captive breeding:** No. - **Level of difficulty:** Not known. **Existing Captive Programs:** None. - **Names of facilities:** —. **Sources (Refer Appendix):** 41, 120, 203 (566 - 567), 227. **Compilers:** A.K. Karmakar, W. Viswanath, S.P. Biswas, P.C. Mahanta, R. Dayal, B.A. Daniel.

175. *Mystus montanus* (Jerdon, 1849) — VU (A1a, 1b, 1c, 1d, 2c, 2d). **Family:** Bagridae. **Taxonomic status:** Species. **Habit:** Carnivore. **Habitat:** Streams and freshwater lake. **Global Distribution:** ENDEMIC to India. **Current Regional Distribution:** Peninsular India, Central and Northern India. - **Elevation:** 0 - 600 m. - **Range (Sq. km):** < 20,000. - **Area Occupied (Sq. km):** < 2,000. - **Number of location:** Many(Pamba, Achankovil, Chalakkudy, Wayanad, Nilgiri); Fragmented. **Population Trends - % change - % Decline:** Not known . - **Time / Rate (Yrs or gens):** Not known. - **No of Mature Individuals:** Not known. **Global Population:** Not known. **Data Quality:** General field study. **Recent Field Studies:** Talwar and Jhingran, 1991 Wynaad range of Hills in Kerala, Karnataka, Maharashtra, Hoshangabad districts in Madhya Pradesh and Assam. **Threats:** Dynamite and other destructive fishing; Fishing; Human interference; Loss of habitat; Overexploitation; Trade. **Trade:** Local. **Other Comments:** —. **Status - IUCN:** VULNERABLE. - **Criteria based on:** A1a, 1b, 1c, 1d, 2c, 2d (Observed population reduction due to decline in abundance, extent of occurrence, area of occupancy and/or quality of habitat and actual or potential levels of exploitation and predicted decline due to extent of occurrence, area of occupancy and/or quality of habitat and actual or potential levels of exploitation) . - **CITES:** No. - **IWPA (1972;91):** No. - **RDB, National (1994):** No. - **RDB, International (1996):** No. **Recommendations - Research management:** Survey; Monitoring; Limiting factor management. - **PHVA:** Yes. **Captive breeding Recommendations - Captive breeding:** Level 3. - **Level of difficulty:** Very difficult. **Existing Captive Programs:** None. - **Names of facilities:** —. **Sources (Refer Appendix):** 9, 27 (lxxxv), 90, 110, 203 (567 - 568). **Compilers:** M. Arunachalam, A. Gopalakrishnan, M. Manimekalan, T.V. Annamercy, . B.M. Kurup, O. Alphonse, C.P. Shaji, P. Subramanian.

176. *Mystus punctatus* (Jerdon, 1849) — EN (B1, 2c). **Family:** Bagridae. **Taxonomic status:** Species. **Habit:** Carnivore. **Habitat:** Running water. **Global Distribution:** ENDEMIC to India. **Current Regional Distribution:** Tamil Nadu, Kerala. - **Elevation:** 100 - 400 m. - **Range (Sq. km):** < 5,000. - **Area Occupied (Sq. km):** < 500. - **Number of location:** Few (Moyar, Kabani river, Nilgiri hills); Fragmented. **Population Trends - % change - % Decline:** Not known . - **Time / Rate (Yrs or gens):** Not known. - **No of Mature Individuals:** Not known. **Global Population:** Not known. **Data Quality:** Reliable census; General field study . **Recent Field Studies:** M. Arunachalam & Team, 1994 to date DBT Project in Tamil Nadu ; . A. Manimekalan, DOEn Project in Tamil Nadu; Talwar and Jhingran, 1991 Nilgiri Hills in Tamil Nadu and

Western Ghats . **Threats:** Damming; Fishing; Loss of habitat; Predation; Trade. **Trade:** Local. **Other Comments:** —. **Status - IUCN:** ENDANGERED. - **Criteria based on:** B1, 2c (Restricted distribution, limited location, severely fragmented, continuing decline observed in extent of occurrence, area of occupancy and/or quality of habitat). - **CITES:** No. - **IWPA (1972;91):** No. - **RDB, National (1994):** No. - **RDB, International (1996):** No. **Recommendations - Research management:** Survey; Life history studies. - **PHVA:** Yes. **Captive breeding Recommendations - Captive breeding:** Level 3. - **Level of difficulty:** Very difficult. **Existing Captive Programs:** None. - **Names of facilities:** —. **Sources (Refer Appendix):** 9, 27 (lxxxvi), 63, 80, 119, 200, 203 (570 - 571). (Refer Appendix) . **Compilers:** M. Arunachalam, A. Gopalakrishnan, M. Manimekalan, T.V. Annamercy, . B.M. Kurup, O. Alphonse, C.P. Shaji, P. Subramanian.

177. *Mystus vittatus* (Bloch, 1794)— VU/N (A1a, 1c, 1d). Family: Bagridae. **Taxonomic status:** Species. **Habit:** Carnivorous. **Habitat:** Ponds, lakes, rivers, etc. in the Indian region. **Global Distribution:** Pakistan, India, Bangladesh, Nepal, Sri Lanka, Myanmar, Thailand. **Current Regional Distribution:** Not known. - **Elevation:** Not known. - **Range (Sq. km):** > 20,000. - **Area Occupied (Sq. km):** > 2,000. - **Number of location:** Many . **Population Trends - % change - % Decline:** 60% . - **Time / Rate (Yrs or gens):** 20 yrs. - **No of Mature Individuals:** Few observed in field. **Global Population:** Not known. **Regional Population:** Continuing decline observed. **Data Quality:** General field study (Goapli, 1981 Uttar Pradesh and Bihar); Museums/collections/ records. **Recent Field Studies:** Singh *et al.*, 1994 Eastern Uttar Pradesh; Talwar & Jhingran, 1991 Ponds, lakes, rivers of the Gangetic plain. **Threats:** Pesticides; Trade. **Trade:** Local. **Other Comments:** This is one of the most common small sized catfishes caught in large quantities. **Status - IUCN:** VULNERABLE (Nationally). **DATA DEFICIENT (Globally).** - **Criteria based on:** A1a, 1c, 1d (Observed population reduction due to decline in extent of occurrence, area of occupancy and/or quality of habitat and due to actual or potential levels of exploitation) . - **CITES:** No. - **IWPA (1972;91):** No. - **RDB, National (1994):** No. - **RDB, International (1996):** No. **Recommendations - Research management:** Not known. - **PHVA:** Yes. **Captive breeding Recommendations - Captive breeding:** Level 1. - **Level of difficulty:** Not known. **Existing Captive Programs:** None. - **Names of facilities:** —. **Sources (Refer Appendix):** 11 (xxxiv), 25, 27 (lxxxvii), 63, 199, 200, 203 (573). **Compilers:** A.K. Singh, A. Husain, U.K. Sarkar, A.K. Pandey, A.C. Pandey.

178. *Nandus nandus* (Hamilton - Buchanan, 1822) — LRnt. Family: Nandidae. **Taxonomic status:** Species. **Habit:** Freshwater, Carnivorous. **Habitat:** Rivers, lakes, reservoirs. **Global Distribution:** ENDEMIC to India. **Current Regional Distribution:** Uttar Pradesh, Madhya Pradesh, Kerala, Orissa. - **Elevation:** 50 - 500 MSL. - **Range (Sq. km):** > 20,000. - **Area Occupied (Sq. km):** > 2,000. - **Number of location:** Many; Fragement (Pamba, Meenachil, Chalakkudy, Periyar, Mahanadi, . Narmada, Chambal, Parvathi, Ganges tributa ries, Brahmaputra). **Population Trends - % change - % Decline:** Not known . - **Time / Rate (Yrs or gens):** Not known. - **No of Mature Individuals:** Not known. **Global Population:** Not known. **Data Quality:** General field study Srivastava, 1981 in Uttar Pradesh and Bihar. **Recent Field Studies:** C.P. Shaji, 1996 - 97 March in Kumorakom; Saksena, 1994 - 96 in Kumarkom lake, cannal & Pathiramanal; Sugunan & Yadav, 1992 in Mehanadi; Talwar and Jhingran, 1991 Indus plain. **Threats:** Human interference; Loss of habitat; Poisoning; Pollution; Siltation; Trade. **Trade:** Local. **Other Comments:** Not very import food fish. **Status - IUCN:** LOWER RISK - NEAR THREATENED. - **Criteria based on:** —. - **CITES:** No. - **IWPA (1972;91):** No. - **RDB, National (1994):** No. - **RDB, International (1996):** No. **Recommendations - Research management:** Survey; Monitoring; Genetic management. - **PHVA:** Yes. **Captive breeding Recommendations - Captive breeding:** Level 3. - **Level of difficulty:** Least difficult. **Existing Captive Programs:** None. - **Names of facilities:** —. **Sources (Refer Appendix):** 2, 65, 94, 183, 200, 203 (878 - 879). **Compilers:** T.V. Annamercy, B.M. Kurup, M. Arunachala, A. Gopalakrishnan, A. Manimekalan, O. Alphonse, C.P. Shaji, P. Subramanian.

179. *Nangra nangra* (Hamilton - Buchanan, 1822) — VU/N (A1a, 1c, 1d). Family: Sisoridae. **Taxonomic status:** Species. **Habit:** Column - cum - bottom dweller. **Habitat:** Fresh and tidal waters. **Global Distribution:** India, Pakistan, Nepal, Bangladesh. **Current Regional Distribution:** Ganga and Yamuna river system . - **Elevation:** 150 - 300 m. - **Range (Sq. km):** < 5,000. - **Area Occupied (Sq. km):** < 500. - **Number of location:** Many. **Population Trends - % change - % Decline:** 30% . - **Time / Rate (Yrs or gens):** 10 yrs. - **No of Mature Individuals:** Not known. **Global Population:** Not known. **Regional Population:** Continuing decline observed. **Data Quality:** General field study (Jayaraman, 1979) ; Museums/collections/records. **Recent Field Studies:** A. Husain, 1997 Delhi ; Talwar & Jhingran, 1991 Ganga and Yamuna river system . **Threats:** Human interference; Loss of habitat; Pollution; Trade. **Trade:** Local. **Other Comments:** No fishery value. **Status - IUCN:** VULNERABLE (Nationally). **DATA DEFICIENT (Globally).** - **Criteria based on:** A1a, 1c, 1d (Observed population reduction due to decline in extent of occurrence, area of occupancy and/or quality of habitat and due to actual or potential levels of exploitation) . - **CITES:** No. - **IWPA (1972;91):** No. - **RDB, National (1994):** No. - **RDB, International (1996):** No. **Recommendations - Research management:** Survey; Monitoring. - **PHVA:** Yes. **Captive breeding Recommendations - Captive breeding:** Level 1. - **Level of difficulty:** Least difficult. **Existing Captive Programs:** None. - **Names of facilities:** —. **Sources (Refer Appendix):** 85, 203 (676 - 677). **Compilers:** A. Husain, A.K. Pandey, U.K. Sarkar, A.K. Singh.

180. *Nangra viridescens* (Hamilton - Buchanan, 1822) — LRnt/N. Family: Sisoridae. **Taxonomic status:** Species. **Habit:** Not known. **Habitat:** Rivers and riverlets of fresh water. **Global Distribution:** India, Bangladesh. **Current Regional Distribution:** Yamuna river of Delhi, North Bengal, Punjab, Uttar Pradesh, Bihar, Assam. - **Elevation:** > 200. - **Range (Sq. km):** > 20,000. - **Area Occupied (Sq. km):** > 2,000. - **Number of location:** Many. **Population Trends - % change - % Decline:** 30% . - **Time / Rate (Yrs or gens):** 20 yrs. - **No of Mature Individuals:** Not known. **Global Population:** Not known. **Regional Population:** Continuing decline observed. **Data Quality:** General field study (Jayaram, 1981); Museums/collections/records. **Recent Field Studies:** Talwar & Jhingran, 1991 Son river in Bihar, Yamuna river at Delhi, Northern parts of West Bengal, Punjab, Uttar Pradesh, Bihar and Assam; Hussain, 1997 Delhi; Johal, 1997 Punjab . **Threats:** Human interference; Pollution; Trade. **Trade:** Local; Domestic. **Other Comments:** Fishery exists in some rivers, Bihar and minor fishery of North Bengal though this is small sized fish (8.5 cm). **Status - IUCN:** LOWER RISK - NEAR THREATENED (Nationally). **DATA DEFICIENT (Globally).** - **Criteria based on:** —. - **CITES:** No. - **IWPA (1972;91):** No. -

RDB, National (1994): No. - **RDB, International (1996):** No. **Recommendations - Research management:** Survey; Monitoring; Genetic management; Limiting factor research. - **PHVA:** Yes. **Captive breeding Recommendations - Captive breeding:** Level 1. - **Level of difficulty:** Least difficult. **Existing Captive Programs:** None. - **Names of facilities:** —. **Sources (Refer Appendix):** 85, 203 (677 - 678). **Compilers:** U.K. Sarkar, A. Husain, A.K. Pandey, A.C. Pandey.

181. *Nemacheilus carletonii* Fowler — EN (B1, 2c). **Family:** Balitoridae. **Taxonomic status:** Species. **Habit:** Omnivorous and bottom feeder. **Habitat:** Hill stream - Beas river (Himachal Pradesh). **Global Distribution:** ENDEMIC to India. **Current Regional Distribution:** Himachal Pradesh. - **Elevation:** 1000 - 1500 m. - **Range (Sq. km):** < 20,000. - **Area Occupied (Sq. km):** < 500. - **Number of location:** Few (Beas river basin, Kangra Valley); Fragmented. **Population Trends - % change - % Decline:** 50 % . - **Time / Rate (Yrs or gens):** 20 Yrs. / 50 % . - **No of Mature Individuals:** Not known. **Global Population:** Continuing decline observed. **Data Quality:** General field study (Tilak & Hussain, 1977 ; Menon, 1987 in Fauna of India); Informal field sightings; Museums/collections/records. **Recent Field Studies:** Talwar and Jhingran, 1991 Beas river basin and Kullu valley in Himachal Pradesh. **Threats:** Damming; Dynamite and other destructive fishing; Human interference; Loss of habitat; Poisoning; Trade. **Trade:** Local. **Other Comments:** No fishery value. **Status - IUCN:** ENDANGERED. - **Criteria based on:** B1, 2c (Restricted distribution, limited location, severely fragmented, continuing decline observed in extent of occurrence, area of occupancy and/or quality of habitat). - **CITES:** No. - **IWPA (1972;91):** No. - **RDB, National (1994):** No. - **RDB, International (1996):** No. **Recommendations - Research management:** Survey; Monitoring; Habitat management; Limiting factor management; Limiting factor research. - **PHVA:** Pending. **Captive breeding Recommendations - Captive breeding:** No. - **Level of difficulty:** Least difficult. **Existing Captive Programs:** None. - **Names of facilities:** —. **Sources (Refer Appendix):** 130, 203 (475), 212. **Compilers:** A. Husain, A.K. Singh, U.K. Sarkar, A.K. Pandey, A.C. Pandey, C.S. Singh,; C.B. Joshi, S.K. Srivastava, R.S. Patiyal, S.M. Srivastava, S.K. Paul.

182. *Nemacheilus chindwinicus* Tilak & Hussain — EN (B1, 2c). **Family:** Balitoridae. **Taxonomic status:** Species. **Habit:** Bottom dwelling, omnivorous. **Habitat:** Hill streams in Manipur Valley. **Global Distribution:** ENDEMIC to India. **Current Regional Distribution:** Manipur . - **Elevation:** 1000 m. - **Range (Sq. km):** < 5,000. - **Area Occupied (Sq. km):** < 500. - **Number of location:** 1 (Manipur valley) . **Population Trends - % change - % Decline:** Not known . - **Time / Rate (Yrs or gens):** 7 yrs. - **No of Mature Individuals:** Not known. **Global Population:** Restricted distribution. **Data Quality:** General field study; Museums/collections/records. **Recent Field Studies:** Tilak & Hussain, 1990 . **Threats:** Damming; Human interference; Poisoning; Trade. **Trade:** Local. **Other Comments:** No fishery value but exploited by local people. **Status - IUCN:** ENDANGERED. - **Criteria based on:** B1, 2c (Restricted distribution, limited location, severely fragmented, continuing decline observed in extent of occurrence, area of occupancy and/or quality of habitat). - **CITES:** No. - **IWPA (1972;91):** No. - **RDB, National (1994):** No. - **RDB, International (1996):** No. **Recommendations - Research management:** Survey; Monitoring; Limiting factor research. - **PHVA:** Yes. **Captive breeding Recommendations - Captive breeding:** Level 1. - **Level of difficulty:** Least difficult. **Existing Captive Programs:** None. - **Names of facilities:** —. **Sources (Refer Appendix):** —. (Refer Appendix). **Compilers:** U.K. Sarkar, A. Husain, A.K. Pandey, A.C. Pandey.

183. *Nemacheilus corica* (Hamilton - Buchanan, 1822) — LRnt/N . (*Cobitis corica* (Hamilton - Buchanan)). **Family:** Balitoridae. **Taxonomic status:** Species. **Habit:** Herbivorous. **Habitat:** Hill streams. **Global Distribution:** India, Bangladesh, Pakistan, Nepal. **Current Regional Distribution:** Sub Himalayan range from Darjeeling through Kumaon to Himachal Pradesh, Punjab. - **Elevation:** 2000 m. - **Range (Sq. km):** > 20,000. - **Area Occupied (Sq. km):** > 2,000. - **Number of location:** Plenty. **Population Trends - % change - % Decline:** 10% . - **Time / Rate (Yrs or gens):** 20 yrs. - **No of Mature Individuals:** Not known. **Global Population:** Continuing gradual decline observed. **Data Quality:** General field study. **Recent Field Studies:** Talwar and Jhingran, 1991 Sub - Himalayan range from Darjeeling through Kumaon, Himachal Pradesh and Punjab (Sutlej bank). **Threats:** Damming; Dynamite and other destructive fishing; Fishing; Human interference; Loss of habitat; Trade. **Trade:** Local. **Other Comments:** —. **Status - IUCN:** LOWER RISK - NEAR THREATENED (Nationally). **DATA DEFICIENT (Globally).** - **Criteria based on:** —. - **CITES:** No. - **IWPA (1972;91):** No. - **RDB, National (1994):** No. - **RDB, International (1996):** No. **Recommendations - Research management:** Monitoring; Life history study; Other. - **PHVA:** Yes. **Captive breeding Recommendations - Captive breeding:** Pending. - **Level of difficulty:** Moderate difficult. **Existing Captive Programs:** None. - **Names of facilities:** —. **Sources (Refer Appendix):** 202 (476). **Compilers:** C.S. Singh, D. Kapoor, C.B. Joshi, S.K. Srivastava, S.M. Srivastava, R.S. Patiyal, A.K. Singh, S.K. Paul.

184. *Nemacheilus doonensis* (Tilak & Hussain, 1977) — EN (B1, 2c). **Family:** Balitoridae. **Taxonomic status:** Species. **Habit:** Omnivorous. **Habitat:** Not known. **Global Distribution:** ENDEMIC to India. **Current Regional Distribution:** Ganga river system . - **Elevation:** 800 m. - **Range (Sq. km):** < 5,000. - **Area Occupied (Sq. km):** < 500. - **Number of location:** 1+ (Dehradun). **Population Trends - % change - % Decline:** 10% . - **Time / Rate (Yrs or gens):** 20 yrs. - **No of Mature Individuals:** Not known. **Global Population:** Not known. **Regional Population:** Not known. **Data Quality:** General field study (Tilak & Hussain, 1977 Dehradun, Uttar Pradesh); Museums/ collections/records. **Recent Field Studies:** Talwar and Jhingran, 1991 Dehradun . **Threats:** Damming; Dynamite and other destructive fishing; Human interference; Loss of habitat. **Trade:** No. **Other Comments:** Small loach, of no fishery value. **Status - IUCN:** ENDANGERED. - **Criteria based on:** B1, 2c (Restricted distribution, limited location, severely fragmented, continuing decline observed in extent of occurrence, area of occupancy and/or quality of habitat). - **CITES:** No. - **IWPA (1972;91):** No. - **RDB, National (1994):** No. - **RDB, International (1996):** No. **Recommendations - Research management:** Survey; Monitoring. - **PHVA:** No. **Captive breeding Recommendations - Captive breeding:** No. - **Level of difficulty:** No. **Existing Captive Programs:** None. - **Names of facilities:** —. **Sources (Refer Appendix):** 202 (479), 212. **Compilers:** A. Husain, U.K. Sarkar, A.K. Singh, A.C. Pandey, A.K. Pandey.

185. *Nemacheilus guentheri* Day, 1867 — LRlc. **Family:** Balitoridae (= Homalopteridae). **Taxonomic status:** Species. **Habit:** Freshwater. **Habitat:** Torrential streams. **Global Distribution:** ENDEMIC to India. **Current Regional Distribution:** Western Ghats of Kerala. - **Elevation:** 300 - 900 m. - **Range (Sq. km):** > 20,000. - **Area Occupied (Sq. km):** < 2,000. - **Number of location:** 4 (Chaliyar, Chalakudy river, Cheenkannipuzha, Periyar, Nilgiri hills). **Population Trends - %**

change - % Decline: No decline . - **Time / Rate (Yrs or gens):** 5 yrs. - **No of Mature Individuals:** Not known. **Global Population:** No decline observed. **Data Quality:** Reliable census; General field study. **Recent Field Studies:** L.K. Arun, 1993 - 95, Fish Assemblages in Periyar Lake Valley System; P.S. Easa, 1993 - 95, Freshwater fishes of Nilgiri biosphere reserve; C.P. Shaji & P.S. Easa, 1995 - 97, Recent field collection (unpublished); Talwar and Jhingran, 1991 Annamalai Hills, Valparai, Peninsular India, Kerala, Western ghats. **Threats:** Not known. **Trade:** Not known. **Other Comments:** —. **Status - IUCN:** LOWER RISK - LEAST CONCERN. - **Criteria based on:** —. - **CITES:** No. - **IWPA (1972;91):** No. - **RDB, National (1994):** No. - **RDB, International (1996):** No. **Recommendations - Research management:** Monitoring. - **PHVA:** No. **Captive breeding Recommendations - Captive breeding:** Level 3. - **Level of difficulty:** Very difficult. **Existing Captive Programs:** None. - **Names of facilities:** —. **Sources (Refer Appendix):** 8, 27 (xcii), 41, 85, 130, 202 (480 - 483). **Compilers:** M. Arunachalam, A. Gopalakrishnan, M. Manimekalan, T.V. Annamercy, . B.M. Kurup, O. Alphonse, C.P. Shaji, P. Subramanian.

186. *Nemacheilus himachalensis* (Menon, 1987) — EN (B1, 2c). Family: Balitoridae. **Taxonomic status:** Species. **Habit:** Herbivorous. **Habitat:** Hill stream. **Global Distribution:** ENDEMIC to India. **Current Regional Distribution:** Himachal Pradesh. - **Elevation:** 1500 m. - **Range (Sq. km):** < 20,000. - **Area Occupied (Sq. km):** < 500. - **Number of location:** Few (Beas drainage). **Population Trends - % change - % Decline:** 5% . - **Time / Rate (Yrs or gens):** 20 yrs. - **No of Mature Individuals:** Not known. **Global Population:** Gradual continuing decline observed. **Data Quality:** General field study; Informal field sightings. **Recent Field Studies:** Dhange in Himachal Pradesh; Talwar and Jhingran, 1991 Kangra district Beas drainage in Himachal Pradesh. **Threats:** Damming; Human interference; Loss of habitat; Poisoning; Siltation; Trade. **Trade:** Domestic. **Other Comments:** 10% of captured. **Status - IUCN:** ENDANGERED. - **Criteria based on:** B1, 2c (Restricted distribution, limited location, severely fragmented, continuing decline observed in extent of occurrence, area of occupancy and/or quality of habitat). - **CITES:** No. - **IWPA (1972;91):** No. - **RDB, National (1994):** No. - **RDB, International (1996):** No. **Recommendations - Research management:** Habitat management; Life history studies. - **PHVA:** Yes. **Captive breeding Recommendations - Captive breeding:** Pending. - **Level of difficulty:** Moderate difficult. **Existing Captive Programs:** None. - **Names of facilities:** —. **Sources (Refer Appendix):** 131, 202 (483). **Compilers:** C.S. Singh, C.B. Joshi, R.S. Patiyal, S.M. Srivastava, S.K. Paul, A.K. Singh.

187. *Nemacheilus horai* Menon, 1952 — VU/N (B1, 2c). (*Schistura curtistigma*). Family: Balitoridae. **Taxonomic status:** Species. **Habit:** Omnivorous. **Habitat:** Hill stream rivers and Freshwater. **Global Distribution:** Pakistan, India. **Current Regional Distribution:** Himachal Pradesh, Punjab and Jammu. - **Elevation:** 1500 m. - **Range (Sq. km):** < 20,000. - **Area Occupied (Sq. km):** < 2,000. - **Number of location:** Many (Chenab, Beas, Sutley); Fragmented. **Population Trends - % change - % Decline:** 15 % . - **Time / Rate (Yrs or gens):** 20 Yrs. - **No of Mature Individuals:** Not known. **Global Population:** Not known. **Regional Population:** Gradual continuing decline observed. **Data Quality:** General field study. **Recent Field Studies:** Talwar & Jhingran, 1991 Himachal Pradesh, Punjab and Jammu (Beas and Chanab drainage). **Threats:** Damming; Human interference; Loss of habitat; Pesticides; Pollution; Trade. **Trade:** Local. **Other Comments:** —. **Status - IUCN:** VULNERABLE (Nationally). **DATA DEFICIENT (Globally).** - **Criteria based on:** B1, 2c (Restricted distribution, limited location, severely fragmented, continuing decline observed in extent of occurrence, area of occupancy and/or quality of habitat). - **CITES:** No. - **IWPA (1972;91):** No. - **RDB, National (1994):** No. - **RDB, International (1996):** No. **Recommendations - Research management:** Survey; Habitat management; Other. - **PHVA:** Yes. **Captive breeding Recommendations - Captive breeding:** Pending. - **Level of difficulty:** Moderate difficult. **Existing Captive Programs:** None. - **Names of facilities:** —. **Sources (Refer Appendix):** 124, 202 (483 - 484). **Compilers:** C.S. Singh, C.B. Joshi, D. Kapoor, S.K. Srivastava, S.M. Srivastava, . R.S. Patiyal. A.K. Singh.

188. *Nemacheilus kangrae* (Menon) — EN (B1, 2c). Family: Balitoridae. **Taxonomic status:** Species. **Habit:** Herbivorous. **Habitat:** Hill stream. **Global Distribution:** ENDEMIC to India. **Current Regional Distribution:** Madhya Pradesh, Himachal Pradesh. - **Elevation:** 1500 m. - **Range (Sq. km):** < 20,000. - **Area Occupied (Sq. km):** < 500. - **Number of location:** Few (Kangra valley, Beas system). **Population Trends - % change - % Decline:** 20 % . - **Time / Rate (Yrs or gens):** 20 yrs. - **No of Mature Individuals:** Not known. **Global Population:** Gradual continuing decline observed. **Data Quality:** General field study; Informal field sightings. **Recent Field Studies:** Dhange, 1994 Kangra valley, Beas drainage . **Threats:** Human interference; Loss of habitat; Trade. **Trade:** Local. **Other Comments:** —. **Status - IUCN:** ENDANGERED. - **Criteria based on:** B1, 2c (Restricted distribution, limited location, severely fragmented, continuing decline observed in extent of occurrence, area of occupancy and/or quality of habitat). - **CITES:** No. - **IWPA (1972;91):** No. - **RDB, National (1994):** No. - **RDB, International (1996):** No. **Recommendations - Research management:** Habitat management; Life history studies. - **PHVA:** Yes. **Captive breeding Recommendations - Captive breeding:** Pending. - **Level of difficulty:** Not known. **Existing Captive Programs:** None. - **Names of facilities:** —. **Sources (Refer Appendix):** 48. **Compilers:** C.S. Singh, C.B. Joshi, S.K. Srivastava, R.S. Patiyal, S.M. Srivastava, A.K. Singh, S.K. Paul.

189. *Nemacheilus keralensis* (Rita Banarescu & Nalbant, 1978) — EN (B1, 2c, 2d). Family: Balitoridae (Homalopteridae). **Taxonomic status:** Species. **Habit:** Freshwater. **Habitat:** Torrential streams. **Global Distribution:** ENDEMIC to India. **Current Regional Distribution:** Western Ghats. - **Elevation:** 800 m. - **Range (Sq. km):** < 5,000. - **Area Occupied (Sq. km):** < 500. - **Number of location:** 1 (Periyar drainage, Kerala). **Population Trends - % change - % Decline:** Not known . - **Time / Rate (Yrs or gens):** 3 yrs. - **No of Mature Individuals:** . **Global Population:** Restricted distribution. **Data Quality:** Reliable census; General field study. **Recent Field Studies:** L.K. Arun, 1997; C.P. Shaji, 1993, Personal collection; K.C. Gopi, 1995, ZSI Collection; Talwar and Jhingran, Pampadampara in Kerala (Western Ghats) . **Threats:** Dynamite and other destructive fishing; Human interference; Interspecific competition from exotics; Loss of habitat; Pesticides. **Trade:** No. **Other Comments:** —. **Status - IUCN:** ENDANGERED. - **Criteria based on:** B1, 2c, 2d (Restricted distribution, limited location, severely fragmented, continuing decline observed in extent of occurrence, area of occupancy and/or quality of habitat and number of locations or subpopulations). - **CITES:** No. - **IWPA (1972;91):** No. - **RDB, National (1994):** No. - **RDB, International (1996):** No. **Recommendations - Research management:** Not known. - **PHVA:** Not known. **Captive breeding Recommendations - Captive breeding:** Not known. - **Level of difficulty:** No. **Existing Captive Programs:** None. - **Names of facilities:** —. **Sources (Refer Appendix):** 181, 202 (484 - 485).

Compilers: M. Arunachalam, A. Gopalakrishnan, M. Manimekalan, T.V. Annamercy, . B.M. Kurup, O. Alphonse, C.P. Shaji, P. Subramanian.

190. *Nemacheilus labeosus* (Kottelat, 1982) — VU/N (B1, 2c) . (*Nemacheilus assamensis*, Menon 1987). **Family:** Balitoridae. **Taxonomic status:** Species. **Habit:** Bottom dweller, Omnivorous. **Habitat:** Stream. **Global Distribution:** India, Myanmar, Thailand. **Current Regional Distribution:** Northeastern India, Assam, Brahmaputra and Chindwin drainage system. - **Elevation:** 200 - 100 m. - **Range (Sq. km):** > 20,000. - **Area Occupied (Sq. km):** < 2,000. - **Number of location:** Many; Fragmented; Assam, Manipur. **Population Trends - % change - % Decline:** Not known . - **Time / Rate (Yrs or gens):** Not known. - **No of Mature Individuals:** Not known. **Global Population:** Not known. **Regional Population:** Not known. **Data Quality:** General field study (M. Kottelat, 1982 in Salween drainage; A.G.K. Menon, 1987 in R. Pagladia - Brahmaputra drainage). **Recent Field Studies:** None. **Threats:** Dynamite and other destructive fishing; Human interference; Poisoning. **Trade:** No. **Other Comments:** Further survey needed to understand the population status of the species. **Status - IUCN:** VULNERABLE (Nationally). **DATA DEFICIENT (Globally)**. - **Criteria based on:** B1, 2c (Restricted distribution, limited location, severely fragmented, continuing decline observed in extent of occurrence, area of occupancy and/or quality of habitat). - **CITES:** No. - **IWPA (1972;91):** No. - **RDB, National (1994):** No. - **RDB, International (1996):** No. **Recommendations - Research management:** Survey; Monitoring. - **PHVA:** No. **Captive breeding Recommendations - Captive breeding:** Not known. - **Level of difficulty:** Not known. **Existing Captive Programs:** None. - **Names of facilities:** —. **Sources (Refer Appendix):** 106, 130, 202 (487). **Compilers:** W. Vishwanath, A.K. Karmakar, S.P. Biswas, P. C. Mahantha, R. Dayal, B.A. Daniel.

191. *Nemacheilus monilis* Hora, 1921 — EN (B1, 2c). **Family:** Balitoridae (= Homalopteridae). **Taxonomic status:** Species. **Habit:** Freshwater. **Habitat:** Torrential streams. **Global Distribution:** ENDEMIC to India. **Current Regional Distribution:** Western Ghats. - **Elevation:** 200 - 500 m. - **Range (Sq. km):** < 5,000. - **Area Occupied (Sq. km):** < 500. - **Number of location:** 2 (Bhavani at Thevalam, Muthikkulam in Siruvani). **Population Trends - % change - % Decline:** Not known . - **Time / Rate (Yrs or gens):** Not known. - **No of Mature Individuals:** Not known. **Global Population:** Not known. **Data Quality:** Reliable census; General field study. **Recent Field Studies:** P.S. Easa, 1993 - 95 in Nilgiri biosphere reserve. **Threats:** Dynamite and other destructive fishing; Human interference; Loss of habitat. **Trade:** No. **Other Comments:** —. **Status - IUCN:** ENDANGERED. - **Criteria based on:** B1, 2c (Restricted distribution, limited location, severely fragmented, continuing decline observed in extent of occurrence, area of occupancy and/or quality of habitat). - **CITES:** No. - **IWPA (1972;91):** No. - **RDB, National (1994):** No. - **RDB, International (1996):** No. **Recommendations - Research management:** Not known. - **PHVA:** Not known. **Captive breeding Recommendations - Captive breeding:** Not known. - **Level of difficulty:** No. **Existing Captive Programs:** None. - **Names of facilities:** —. **Sources (Refer Appendix):** 68, 85, 130, 202 (488 - 489). **Compilers:** M. Arunachalam, A. Gopalakrishnan, M. Manimekalan, T.V. Annamercy, . B.M. Kurup, O. Alphonse, C.P. Shaji, P. Subramanian.

192. *Nemacheilus montanus* (McClelland, 1839) — EN (B1, 2c). **Family:** Balitoridae. **Taxonomic status:** Species. **Habit:** Herbivorous. **Habitat:** Hill stream of Himachal Pradesh. **Global Distribution:** ENDEMIC to India. **Current Regional Distribution:** Madhya Pradesh, Uttar Pradesh, West Himalaya. - **Elevation:** 1500 m. - **Range (Sq. km):** < 20,000. - **Area Occupied (Sq. km):** < 500. - **Number of location:** Few (Kangra & Shimla river, Indus river); Fragmented. **Population Trends - % change - % Decline:** 7 % . - **Time / Rate (Yrs or gens):** Not known. - **No of Mature Individuals:** Not known. **Global Population:** Gradual decline observed. **Data Quality:** General field study; Informal field sightings. **Recent Field Studies:** Dhange, 1994 in Himachal Pradesh; Talwar and Jhingran, 1991 Shimla, Kangra, Himachal Pradesh. **Threats:** Damming; Human interference; Loss of habitat; Poisoning; Siltation; Trade. **Trade:** Domestic . **Other Comments:** None. **Status - IUCN:** ENDANGERED . - **Criteria based on:** B1, 2c (Restricted distribution, limited location, severely fragmented, continuing decline observed in extent of occurrence, area of occupancy and/or quality of habitat). - **CITES:** No. - **IWPA (1972;91):** No. - **RDB, National (1994):** No. - **RDB, International (1996):** No. **Recommendations - Research management:** Habitat management; Limiting factor management. - **PHVA:** Yes. **Captive breeding Recommendations - Captive breeding:** Pending. - **Level of difficulty:** Moderate difficult. **Existing Captive Programs:** None. - **Names of facilities:** —. **Sources (Refer Appendix):** 48, 116 (i), 122, 124, 202 (489 - 490). **Compilers:** C.S. Singh, C. B. Singh, R.S. Patiyal, S.M. Srivastava, A.K. Singh, S.K. Srivastava, S.K. Paul.

193. *Nemacheilus multifasciatus* Day, 1878 — EN/N (B1, 2c) . (*Nemacheilus rubicola* (McClelland)). **Family:** Balitoridae. **Taxonomic status:** Species. **Habit:** Herbivorous. **Habitat:** Himalayan stream rivers. **Global Distribution:** India, Nepal. **Current Regional Distribution:** Not known. - **Elevation:** 1500 m. - **Range (Sq. km):** < 5,000. - **Area Occupied (Sq. km):** < 500. - **Number of location:** Many; Fragmented. **Population Trends - % change - % Decline:** 10% . - **Time / Rate (Yrs or gens):** 20 yrs. - **No of Mature Individuals:** Not known. **Global Population:** Not known. **Regional Population:** Continuing decline observed. **Data Quality:** General field study; Indirect information. **Recent Field Studies:** Dobrial *et al.* , 1992; Talwar and Jhingran, 1991 at Eastern Himalayas from Teesta through the base of Nepal, Himalaya and in Ghaghra and Kali drainages . **Threats:** Human interference; Loss of habitat; Siltation; Trade. **Trade:** Local. **Other Comments:** —. **Status - IUCN:** ENDANGERED (Nationally). **DATA DEFICIENT (Globally)**. - **Criteria based on:** B1, 2c (Restricted distribution, limited location, severely fragmented, continuing decline observed in extent of occurrence, area of occupancy and/or quality of habitat). - **CITES:** No. - **IWPA (1972;91):** No. - **RDB, National (1994):** No. - **RDB, International (1996):** No. **Recommendations - Research management:** Habitat management; Limiting factor management. - **PHVA:** Yes. **Captive breeding Recommendations - Captive breeding:** Pending. - **Level of difficulty:** Least difficult. **Existing Captive Programs:** None. - **Names of facilities:** —. **Sources (Refer Appendix):** 41, 202. **Compilers:** C.S. Singh, C.B. Joshi, S.K. Srivastava, S.M. Srivastava, R.S. Patiyal, A.K. Singh;. S.K. Paul.

194. *Nemacheilus nilgiriensis* (Menon, 1987) — EN (B1, 2c) . **Family:** Balitoridae. **Taxonomic status:** Species. **Habit:** Fresh water. **Habitat:** Streams. **Global Distribution:** ENDEMIC to India. **Current Regional Distribution:** Nilgiri biosphere reserve. - **Elevation:** 600 - 800 m. - **Range (Sq. km):** < 100. - **Area Occupied (Sq. km):** < 10. - **Number**

of location: 1 (Moyar river). **Population Trends - % change - % Decline:** Not known. **- Time / Rate (Yrs or gens):** Not known. **- No of Mature Individuals:** Not known. **Global Population:** Not known. **Data Quality:** Reliable census; General field study. **Recent Field Studies:** Talwar and Jhingran, 1991 Pykara Dam, Nilgiri District Tamil Nadu. **Threats:** Loss of habitat; Poisoning. **Trade:** No. **Other Comments:** —. **Status - IUCN:** ENDANGERED. **- Criteria based on:** B1, 2c (Restricted distribution, limited location, severely fragmented, continuing decline observed in extent of occurrence, area of occupancy and/or quality of habitat). **- CITES:** No. **- IWPA (1972;91):** No. **- RDB, National (1994):** No. **- RDB, International (1996):** No. **Recommendations - Research management:** Taxonomic and morphological genetic studies; Survey. **- PHVA:** Yes. **Captive breeding Recommendations - Captive breeding:** No. **- Level of difficulty:** Least difficult. **Existing Captive Programs:** None. **- Names of facilities:** —. **Sources (Refer Appendix):** 9, 119, 130, 131, 202 (492). **Compilers:** M. Arunachalam, A. Gopalakrishnan, M. Manimekalan, T.V. Annamercy, . B.M. Kurup, O. Alphonse, C.P. Shaji, P. Subramanian.

195. *Nemacheilus petrubanarescui* (Menon, 1984) — DD. **Family:** Balitoridae. **Taxonomic status:** Species. **Habit:** Fresh water. **Habitat:** Torrential streams. **Global Distribution:** ENDEMIC to India. **Current Regional Distribution:** Western Ghats (Kerala, Karnataka). **- Elevation:** 50 - 150 m. **- Range (Sq. km):** > 20,000. **- Area Occupied (Sq. km):** < 500. **- Number of location:** 3 (Chalakyady river, Kabani river, Netravathi at Dharmasthala). **Population Trends - % change - % Decline:** Not known. **- Time / Rate (Yrs or gens):** Not known. **- No of Mature Individuals:** Not known. **Global Population:** Restricted area of occupancy. **Data Quality:** Reliable census; General field study. **Recent Field Studies:** C.P. Shaji, 1993 - 95 - Personal collection; P.S. Easa, 1993 - 95 - Fishes of Nilgiri Biosphere river; Talwar and Jhingran (1991) Netravathi river, Dharmasthala in Karnataka. **Threats:** Not known. **Trade:** Not known. **Other Comments:** —. **Status - IUCN:** DATA DEFICIENT. **- Criteria based on:** —. **- CITES:** No. **- IWPA (1972;91):** No. **- RDB, National (1994):** No. **- RDB, International (1996):** No. **Recommendations - Research management:** Not known. **- PHVA:** Not known. **Captive breeding Recommendations - Captive breeding:** Not known. **- Level of difficulty:** Not known. **Existing Captive Programs:** Not known. **- Names of facilities:** Not known. **Sources (Refer Appendix):** 129, 130, 202 (495). **Compilers:** M. Arunachalam, A. Gopalakrishnan, M. Manimekalan, T.V. Annamercy, . B.M. Kurup, O. Alphonse, C.P. Shaji, P. Subramanian.

196. *Nemacheilus pulchellus* Day, 1873 — DD. **Family:** Balitoridae. **Taxonomic status:** Species. **Habit:** Fresh water. **Habitat:** Riverine. **Global Distribution:** ENDEMIC to India. **Current Regional Distribution:** Not known. **- Elevation:** 300 m. **- Range (Sq. km):** Not known. **- Area Occupied (Sq. km):** Not known. **- Number of location:** Not known. **Population Trends - % change - % Decline:** Not known. **- Time / Rate (Yrs or gens):** Not known. **- No of Mature Individuals:** Not known. **Global Population:** Not known. **Regional Population:** Not known. **Data Quality:** Reliable census; General field study. **Recent Field Studies:** Talwar & Jhingran, 1991 Bhavani rivers at base of Nilgiris, Western ghats. **Threats:** Damming; Fishing; Human interference; Loss of habitat; Overexploitation; Poisoning; Pollution; Trade. **Trade:** Local. **Other Comments:** —. **Status - IUCN:** DATA DEFICIENT. **- Criteria based on:** —. **- CITES:** No. **- IWPA (1972;91):** No. **- RDB, National (1994):** No. **- RDB, International (1996):** No. **Recommendations - Research management:** Not known. **- PHVA:** No. **Captive breeding Recommendations - Captive breeding:** Not known. **- Level of difficulty:** Not known. **Existing Captive Programs:** None. **- Names of facilities:** —. **Sources (Refer Appendix):** 40, 202 (496 - 497). **Compilers:** M. Arunachalam, A. Gopalakrishnan, M. Manimekalan, T.V. Annamercy, . B.M. Kurup, O. Alphonse, C.P. Shaji, P. Subramanian.

197. *Nemacheilus rupecola* (McClelland, 1839) — LRnt. (*Schistura rupecola*). **Family:** Balitoridae. **Taxonomic status:** Species. **Habit:** Bottom dweller larvae - carnivorous. **Habitat:** Torrential hill streams. **Global Distribution:** ENDEMIC to India. **Current Regional Distribution:** Western Himalaya, Kumaon through Garhwal Himalaya to Yamuna, Sutlej and. beas drainages of Himachal Pradesh. **- Elevation:** 1000 - 1500 m. **- Range (Sq. km):** > 20,000. **- Area Occupied (Sq. km):** < 2,000. **- Number of location:** Many. **Population Trends - % change - % Decline:** 20% . **- Time / Rate (Yrs or gens):** 20 yrs. **- No of Mature Individuals:** Not known. **Global Population:** Not known. **Regional Population:** Not known. **Data Quality:** General field study (Menon, 1987, Fauna of India Shimla); Museums/collections/ records. **Recent Field Studies:** Hussain, 1995 in Western Himalaya; Talwar and Jhingran 1991, Western Himalayas, Kumaon through Garhwal, Himalaya to Yamuna, Sutlej and Beas drainages of Himachal Pradesh. **Threats:** Fishing; Dynamite Fishing; Damming; Human interference; Loss of habitat; Trade. **Trade:** Local. **Other Comments:** —. **Status - IUCN:** LOWER RISK - NEAR THREATENED. **- Criteria based on:** —. **- CITES:** No. **- IWPA (1972;91):** No. **- RDB, National (1994):** No. **- RDB, International (1996):** No. **Recommendations - Research management:** Survey; Monitoring. **- PHVA:** Yes. **Captive breeding Recommendations - Captive breeding:** Level 1. **- Level of difficulty:** Moderately difficult. **Existing Captive Programs:** None. **- Names of facilities:** —. **Sources (Refer Appendix):** 48, 122, 185, 202 (500). **Compilers:** U.K. Sarkar, A. Husain, A.K. Singh, A.K. Pandey, A.C. Pandey, D. Kapoor, C.S. Singh, C.B. Joshi, R.S. Patiyal, S.M. Srivastava, S.K. Paul, A.K. Singh.

198. *Nemacheilus scaturigina* (McClelland, 1839) — VU (A1a, 1c, 1d). (*Nemachailus scaturigina* Talwar & Jhingran, 1991). **Family:** Balitoridae. **Taxonomic status:** Species. **Habit:** Bottom dwelling, omnivorous. **Habitat:** Hill stream. **Global Distribution:** ENDEMIC to India. **Current Regional Distribution:** North Bengal, Manipur, Assam. **- Elevation:** 200 - 1000 m. **- Range (Sq. km):** < 20,000. **- Area Occupied (Sq. km):** < 2,000. **- Number of location:** Many; Fragmented (Brahmaputra basin, Tresta drainage, Barak basin). **Population Trends - % change - % Decline:** > 20% . **- Time / Rate (Yrs or gens):** 10 yrs. **- No of Mature Individuals:** Not known. **Global Population:** Continuing decline observed. **Data Quality:** General field study (McClelland, 1939 in Assam). **Recent Field Studies:** A.K. Karmakar, 1993 in Barak basin in Manipur; W. Vishwanath, 1996 in Churachandpur, Manipur (Barak - basin); Talwar & Jhingran, 1991 Eastern Sub - Himalaya. **Threats:** Dynamite and other destructive fishing; Human interference; Poisoning. **Trade:** No. **Other Comments:** —. **Status - IUCN:** VULNERABLE. **- Criteria based on:** A1a, 1c, 1d (Observed population reduction due to decline in extent of occurrence, area of occupancy and/or quality of habitat and due to actual or potential levels of exploitation) . **- CITES:** No. **- IWPA (1972;91):** No. **- RDB, National (1994):** No. **- RDB, International (1996):** No. **Recommendations - Research management:** Survey; Monitoring. **- PHVA:** No. **Captive breeding Recommendations - Captive breeding:** No. **- Level of difficulty:** Not known. **Existing Captive Programs:** None. **- Names of facilities:** —.

Sources (Refer Appendix): 121, 203 (501 - 502). **Compilers:** W. Vishwanath, A.K. Karmakar, S.P. Biswas, P.C. Mahanta, R. Dayal, B.A. Daniel.

199. *Nemacheilus semiarmatus* Day, 1867 — VU (D2). (*Noemachilus semiarmatus*). **Family:** Balitoridae (Homalopteridae). **Taxonomic status:** Species. **Habit:** Fresh water. **Habitat:** Torrential stream. **Global Distribution:** ENDEMIC to India. **Current Regional Distribution:** Western Ghats. - **Elevation:** 200 - 900 m. - **Range (Sq. km):** < 20,000. - **Area Occupied (Sq. km):** < 500. - **Number of location:** 3; Fragmented (Kabani (Cauvery basin), Bhavani, Eastern side of Periyar). **Population Trends - % change - % Decline:** No decline. - **Time / Rate (Yrs or gens):** 5 yrs. - **No of Mature Individuals:** > 10,000. **Global Population:** Not known. **Regional Population:** Not known. **Data Quality:** Reliable census; General field study. **Recent Field Studies:** L.K. Arun, 1994 - Fish survey in Periyar and adjacent areas; P.S. Easa, 1993 - 97, Fishes of NBR, Kerala part; Talwar and Jhingran, 1991 Peninsular India, Cauvery basin, Wynaad, Nilgiris and Mysore and Silent Valley (Bharathapuzha basin). **Threats:** Not known. **Trade:** Not known. **Other Comments:** —. **Status - IUCN:** **VULNERABLE.** - **Criteria based on:** D2 (Restricted population in < 5 locations). - **CITES:** No. - **IWPA (1972;91):** No. - **RDB, National (1994):** No. - **RDB, International (1996):** No. **Recommendations - Research management:** Not known. - **PHVA:** No. **Captive breeding Recommendations - Captive breeding:** Not known. - **Level of difficulty:** Not known. **Existing Captive Programs:** None. - **Names of facilities:** —. **Sources (Refer Appendix):** 27 (xcviii), 38, 131, 202 (502 - 503). **Compilers:** M. Arunachalam, A. Gopalakrishnan, M. Manimekalan, T.V. Annamercy, . B.M. Kurup, O. Alphonse, C.P. Shaji, P. Subramanian.

200. *Nemacheilus striatus* Day, 1867 — DD. **Family:** Balitoridae. **Taxonomic status:** Species. **Habit:** Freshwater. **Habitat:** Hill stream. **Global Distribution:** ENDEMIC to India. **Current Regional Distribution:** Kerala. - **Elevation:** 800 m. MSL. - **Range (Sq. km):** Not known. - **Area Occupied (Sq. km):** Not known. - **Number of location:** 1 (Wyanad) (Based on description). **Population Trends - % change - % Decline:** Not known. - **Time / Rate (Yrs or gens):** Not known. - **No of Mature Individuals:** Not known. **Global Population:** Not known. **Data Quality:** General field study. **Recent Field Studies:** Not known. **Threats:** Damming; Fishing; Human interference; Loss of habitat; Poisoning; Pollution; . **Trade:** Local. **Other Comments:** None. **Status - IUCN:** **DATA DEFICIENT.** - **Criteria based on:** —. - **CITES:** No. - **IWPA (1972;91):** No. - **RDB, National (1994):** No. - **RDB, International (1996):** No. **Recommendations - Research management:** Not known. - **PHVA:** Not known. **Captive breeding Recommendations - Captive breeding:** Not known. - **Level of difficulty:** Not known. **Existing Captive Programs:** None. - **Names of facilities:** —. **Sources (Refer Appendix):** 27 (xcix). **Compilers:** M. Arunachalam, A. Gopalakrishnan, M. Manimekalan, T.V. Annamercy, . B.M. Kurup, O. Alphonse, C.P. Shaji, P. Subramanian.

201. *Nemacheilus triangularis* Day, 1865 — LRlc. (*Nemacheilus triangularis*). **Family:** Balitoridae. **Taxonomic status:** Species. **Habit:** Fresh water. **Habitat:** Torrential stream. **Global Distribution:** ENDEMIC to India. **Current Regional Distribution:** Western Ghats (west flowing rivers). - **Elevation:** 300 m. - **Range (Sq. km):** < 5,000. - **Area Occupied (Sq. km):** < 2,000. - **Number of location:** 7 (Chaligar, Chalakudy, Achankovil, Pamba, Kuttanad, Cheenkanipaghe, Chittar, . Tambaraparni - continuous distribution); Fragmented. . **Population Trends - % change - % Decline:** No decline. - **Time / Rate (Yrs or gens):** 15 yrs. - **No of Mature Individuals:** > 10,000. **Global Population:** Continuing distribution observed. **Data Quality:** Reliable census; General field study. **Recent Field Studies:** B.M. Kurup, 1987 - 91; M. Arunachal, 1995 Western Ghats; P.S. Easa, 1993 Nilgiri Biosphere Reserve. **Threats:** None. **Trade:** No. **Other Comments:** —. **Status - IUCN:** **LOWER RISK - LEAST CONCERN.** - **Criteria based on:** —. - **CITES:** No. - **IWPA (1972;91):** No. - **RDB, National (1994):** No. - **RDB, International (1996):** No. **Recommendations - Research management:** Not known. - **PHVA:** Not known. **Captive breeding Recommendations - Captive breeding:** No. - **Level of difficulty:** Not known. **Existing Captive Programs:** None. - **Names of facilities:** —. **Sources (Refer Appendix):** 7, 9, 11 (xxxix), 85, 131, 202, 203. (**Refer Appendix**). **Compilers:** M. Arunachalam, A. Gopalakrishnan, M. Manimekalan, T.V. Annamercy, . B.M. Kurup, O. Alphonse, C.P. Shaji, P. Subramanian.

202. *Nemachilus botia* (Hamilton - Buchanan, 1822) — LRnt. (*Naemachilus urophthalmus*). **Family:** Balitoridae. **Taxonomic status:** Species. **Habit:** Bottom feeder. **Habitat:** All hill streams. **Global Distribution:** ENDEMIC to India. **Current Regional Distribution:** Jammu & Kashmir, Himachal Pradesh, Uttar Pradesh, Sikkim, Arunachal Pradesh, Meghalaya. - **Elevation:** 1500 m. - **Range (Sq. km):** > 20,000. - **Area Occupied (Sq. km):** > 2,000. - **Number of location:** Many; Fragmented. **Population Trends - % change - % Decline:** Declining. - **Time / Rate (Yrs or gens):** Not known. - **No of Mature Individuals:** Not known. **Global Population:** Continuing decline observed. **Data Quality:** General field study. **Recent Field Studies:** Dobriyal *et al*, 1994 in Garwal hills; C.B. Joshi, 1994 in Kumoun hills; Joshi & Sunder, 1996 in Kumoun hills; Talwar & Jhingran, 1991 Northern India, Brahmaputra and Ganga basins. **Threats:** Dynamite and other destructive fishing; Trade; Edaphic factors; Fishing; Human interference; Loss of habitat; Overexploitation; Poisoning; Siltation. **Trade:** Local. **Other Comments:** —. **Status - IUCN:** **LOWER RISK - NEAR THREATENED.** - **Criteria based on:** —. - **CITES:** No. - **IWPA (1972;91):** No. - **RDB, National (1994):** No. - **RDB, International (1996):** No. **Recommendations - Research management:** Monitoring; Life history studies; Habitat management. - **PHVA:** Pending. **Captive breeding Recommendations - Captive breeding:** Pending. - **Level of difficulty:** Not known. **Existing Captive Programs:** None. - **Names of facilities:** —. **Sources (Refer Appendix):** 202 (472 - 473). **Compilers:** C.S. Singh, C. B. Singh, R.S. Patiayal, S.M. Srivastava, S.K. Srivastava. S.K. Paul, A.K. Singh.

203. *Neoeucirrhichthys maydelli* Banarescu & Nalbant, 1968 — VU (B1, 2c). **Family:** Cobitidae. **Taxonomic status:** Species. **Habit:** Bottom feeder, Omnivorous. **Habitat:** Stream fish. **Global Distribution:** ENDEMIC to India. **Current Regional Distribution:** Assam. - **Elevation:** 200 - 500 m. - **Range (Sq. km):** < 20,000. - **Area Occupied (Sq. km):** < 2,000. - **Number of location:** 2 (Janallii River, Raimona, Goalpara dist. Assam - Bhramaputra drainage, N. Lakhimpur). **Population Trends - % change - % Decline:** Not known. - **Time / Rate (Yrs or gens):** Not known. - **No of Mature Individuals:** Not known. **Global Population:** Not known. **Data Quality:** General field study. **Recent Field Studies:** Talwar, P.K. & A.G. Jhingran, 1991; Sen, N. 1997, Field study (Unpublished) N. Lakhimpur from Assam. **Threats:** Human

interference; Siltation. **Trade:** Not known. **Other Comments:** Sen N. Recorded 4 more specimens from Northern Lakhimpur, Assam, recently. Data is unpublished Further Survey required. **Status - IUCN: VULNERABLE.** - **Criteria based on: B1, 2c** (Restricted distribution, limited locations, continuing decline observed in extent of occurrence, area of occupancy and/or quality of habitat). - **CITES:** No. - **IWPA (1972;91):** No. - **RDB, National (1994):** No. - **RDB, International (1996):** No. **Recommendations - Research management:** Survey; Monitoring; Life history studies. - **PHVA:** No. **Captive breeding Recommendations - Captive breeding:** No. - **Level of difficulty:** Not known. **Existing Captive Programs:** None. - **Names of facilities:** —. **Sources (Refer Appendix):** 189 (vii), 202 (529 - 530). (Refer Appendix) . **Compilers:** W. Vishwanath, A.K. Karmakar, S.P. Biswas, P.C. Mahanta, R. Dayal, B.A. Daniel, Singh.

204. *Neolissochilus spinulosus* (McClelland, 1845) — EN (B1, 2c). (*Barbus spinulosus* McClelland, 1845). **Family:** Cyprinidae. **Taxonomic status:** Species. **Habit:** Omnivorous. **Habitat:** Riverine (Clear stream). **Global Distribution:** ENDEMIC to India. **Current Regional Distribution:** Teesta drainage, Sikkim (India). - **Elevation:** 1000 - 2000 m. - **Range (Sq. km):** < 5000. - **Area Occupied (Sq. km):** < 500. - **Number of location:** 1. . **Population Trends - % change - % Decline:** Not known. - **Time / Rate (Yrs or gens):** Not known. - **No of Mature Individuals:** Not known. **Global Population:** Not known. **Data Quality:** Records. **Recent Field Studies:** Talwar, P. K. & A. G. Jhingran, 1991 from Teesta drainage. **Threats:** Human interference. **Trade:** No. **Other Comments:** 1) No record after McClelland's report on 1845. 2) Detail survey required to ascertain its existence and distribution. 3) It is a rare carp. **Status - IUCN: ENDANGERED.** - **Criteria based on: B1, 2c** (Restricted distribution, single location, continuing decline observed in extent of occurrence, area of occupancy and/or quality of habitat). - **CITES:** No. - **IWPA (1972;91):** No. - **RDB, National (1994):** No. - **RDB, International (1996):** No. **Recommendations - Research management:** Survey; Monitoring. - **PHVA:** No. **Captive breeding Recommendations - Captive breeding:** No. - **Level of difficulty:** No. **Existing Captive Programs:** —. - **Names of facilities:** Nil. **Sources (Refer Appendix):** 202 (232). **Compilers:** W. Viswanath, C.S. Singh, A.K. Karmakar, S.P. Biswas, P.C. Mahanta, R. Dayal, B.A. Daniel.

205. *Neolissochilus wynaadensis* (Day, 1873) — CR (B1, 2c). (*Barbodes wynaadensis*; *Barbus wynaadensis* Day 1873; *Puntius wynaadensis* (Jayaram 1982)). **Family:** Cyprinidae. **Taxonomic status:** Species. **Habit:** Fresh water. **Habitat:** Riverine. **Global Distribution:** ENDEMIC to India. **Current Regional Distribution:** Kerala. - **Elevation:** > 500 m. - **Range (Sq. km):** < 100. - **Area Occupied (Sq. km):** < 500. - **Number of location:** 2 (Wynaad hills and head waters of Cauvery); Fragmented. **Population Trends - % change - % Decline:** Not known. - **Time / Rate (Yrs or gens):** Not known. - **No of Mature Individuals:** Not known. **Global Population:** Not known. **Data Quality:** General field study. **Recent Field Studies:** K. C. Gopi, ZSI - WGRS, Calicut (Personal Communication). **Threats:** Damming; Dynamite and other destructive fishing. **Trade:** No. **Other Comments:** —. **Status - IUCN: CRITICALLY ENDANGERED.** - **Criteria based on: B1, 2c** (Restricted distribution, limited locations and severely fragmented, continuing decline observed in extent of occurrence, area of occupancy and/or quality of habitat). - **CITES:** No. - **IWPA (1972;91):** No. - **RDB, National (1994):** No. - **RDB, International (1996):** No. **Recommendations - Research management:** Survey; Monitoring; Life history studies. - **PHVA:** Yes. **Captive breeding Recommendations - Captive breeding:** Level 3. - **Level of difficulty:** Very difficult. **Existing Captive Programs:** None. - **Names of facilities:** —. **Sources (Refer Appendix):** 58. **Compilers:** M. Arunachalam, A. Gopalakrishnan, M. Manimekalan, T.V. Annamercy, . B.M. Kurup, O. Alphonse, C.P. Shaji, P. Subramanian.

206. *Neotropius khavalchor* Kulkarni, 1952 — DD. **Family:** Schilbeidae. **Taxonomic status:** Species. **Habit:** Omnivorous (Lepidophagous feeding habit). **Habitat:** Riverine. **Global Distribution:** ENDEMIC to India. **Current Regional Distribution:** Maharashtra, Andhra Pradesh, Krishna river. - **Elevation:** Up to 500 m. - **Range (Sq. km):** < 20,000. - **Area Occupied (Sq. km):** < 500. - **Number of location:** Few (Upper reaches of Krishna). . **Population Trends - % change - % Decline:** Not known. - **Time / Rate (Yrs or gens):** Not known. - **No of Mature Individuals:** Not known. **Global Population:** Not known. **Data Quality:** Indirect information; Museums/collections/records. **Recent Field Studies:** None. **Threats:** Trade. **Trade:** Local. **Other Comments:** This is endemic to Krishna river. **Status - IUCN: DATA DEFICIENT.** - **Criteria based on:** —. - **CITES:** No. - **IWPA (1972;91):** No. - **RDB, National (1994):** No. - **RDB, International (1996):** No. **Recommendations - Research management:** Survey; Monitoring. - **PHVA:** No. **Captive breeding Recommendations - Captive breeding:** No. - **Level of difficulty:** Not known. **Existing Captive Programs:** None. - **Names of facilities:** —. **Sources (Refer Appendix):** 202. **Compilers:** G.P. Dubey, S.V. Sharma, N. More, V.S. Basheer, A. Apte, K.W. Dhamge.

207. *Notopterus chilata* (Hamilton - Buchanan, 1822) — EN/N (A1a, 1b, 1c, 1d, 2c, 2d). **Family:** Notopteridae. **Taxonomic status:** Species. **Habit:** Carnivorous. **Habitat:** Riverine, Large rivers, Reservoirs, Swamps. **Global Distribution:** India, South Asia (Oriental Region). **Current Regional Distribution:** Northern, Central and Southern India. - **Elevation:** < 200 m. - **Range (Sq. km):** > 20,000. - **Area Occupied (Sq. km):** > 2,000. - **Number of location:** Many (Rivers and Reservoirs and large lakes in North and Central; South in Narmada system, Hyderabad). **Population Trends - % change - % Decline:** > 50%. - **Time / Rate (Yrs or gens):** 10 yrs. - **No of Mature Individuals:** Not known. **Global Population:** Not known. **Regional Population:** Not known. **Data Quality:** General field study; Indirect information; Museums/collections/records. **Recent Field Studies:** A. Mishra, 1997 in Gorakhpur region, Ghaghra river; D. N. Saxena, 1994 - 96 in, Chambal, Gwalior region rivers and reservoirs. **Threats:** Dynamite and other destructive fishing; Fishing; Human interference; Loss of habitat; Overexploitation; Pollution; Trade. **Trade:** Commercial. **Other Comments:** Highly prized table food fish. **Status - IUCN: ENDANGERED (Nationally). DATA DEFICIENT (Globally).** - **Criteria based on: A1a, 1b, 1c, 1d, 2c, 2d** (Observed population reduction due to decline in extent of occurrence, area of occupancy, abundance and actual or potential levels of exploitation and predicted decline due to extent of occurrence, area of occupancy and/or quality of habitat and actual or potential levels of exploitation). - **CITES:** No. - **IWPA (1972;91):** No. - **RDB, National (1994):** No. - **RDB, International (1996):** No. **Recommendations - Research management:** Survey; Monitoring; Habitat management; Genetic management; Limiting factor management; Other (Population and ecological study). - **PHVA:** No. **Captive breeding Recommendations - Captive breeding:** Level 1. - **Level of difficulty:** Very difficult. **Existing Captive Programs:** None. -

Names of facilities: —. **Sources (Refer Appendix):** 1, 46, 170, 182, 183, 202, 220. **Compilers:** R. Abidi, P. Das, A. Mishra, D. N. Saxena.

208. *Notopterus notopterus* (Pallas, 1769) — LRnt. Family: Notopteridae. **Taxonomic status:** Species. **Habit:** Carnivorous. **Habitat:** Fresh and Brackish waters, Rivers and lakes. **Global Distribution:** Oriental region - Pakistan, India, Nepal, Myanmar, Bangladesh, Thailand, Malaya and Indonesia. **Current Regional Distribution:** Northern, Northeastern and Central Indian rivers, reservoirs and lakes. - **Elevation:** < 200 m. - **Range (Sq. km):** > 20,000. - **Area Occupied (Sq. km):** > 2,000. - **Number of location:** Many. **Population Trends - % change - % Decline:** < 20% . - **Time / Rate (Yrs or gens):** 20 yrs. - **No of Mature Individuals:** Not known . **Global Population:** Not known . **Regional Population:** Not known . **Data Quality:** General field study; Informal field sightings; Indirect information; . Museums/collections/records. **Recent Field Studies:** Biswas *et al*, 1996 from the Brahmaputra river system. **Threats:** Human interference; Overexploitation; Pollution; Trade. **Trade:** Commercial. **Other Comments:** Commercial food fish highly exploited. **Status - IUCN:** LOWER RISK - NEAR THREATENED. - **Criteria based on:** —. - **CITES:** No. - **IWPA (1972;91):** No. - **RDB, National (1994):** No. - **RDB, International (1996):** No. **Recommendations - Research management:** Monitoring. - **PHVA:** No. **Captive breeding Recommendations - Captive breeding:** No. - **Level of difficulty:** Not known. **Existing Captive Programs:** None. - **Names of facilities:** —. **Sources (Refer Appendix):** 27 (cii), 202, 231 (iv). **Compilers:** P. Das, R. Abidi, D. N. Saxena, A. Mishra.

209. *Ompok bimaculatus* (Bloch, 1794) — EN/N (A1a, 1c, 1d, 2c, 2d) . (*Callichrous bimaculatus* Day 1877). Family: Siluridae. **Taxonomic status:** Species. **Habit:** Piscivorous, Carnivorous. **Habitat:** Lakes, Ponds, Rivers . **Global Distribution:** India, Pakistan, Nepal, Bangladesh, Sri Lanka, Thailand, Vietnam, East Indies, Java, Sumatra, Boreno and China. **Current Regional Distribution** Generally throughout India (Plain and submontane regions). - **Elevation:** 100 - 2500 m. - **Range (Sq. km):** > 20,000. - **Area Occupied (Sq. km):** > 2,000. - **Number of location:** Several. **Population Trends - % change - % Decline:** > 50 % . - **Time / Rate (Yrs or gens):** Over 10 Yrs. - **No of Mature Individuals:** Not known. **Global Population:** Not known . **Regional Population:** Not known. **Data Quality:** General field study (Srivastava, 1981); Museums/collections/records. **Recent Field Studies:** A.C. Pandey, 1996, 1997 Varanasi, Sultanpur, Jaunpur (Uttar Pradesh) ; M. Arunachalam, 1995 onwards; A.K. Singh *et al* 1994; Shaji & Easa, 1993 onwards Pandey & Awasthi 1994; M.D. Kurup 1987 - 91; Husain, 1997 in Fauna of Delhi ; Khan, 1997; M.S. Johal *et al*, 1997; Sugunan & Yadav, 1992 in Makanadi river. **Threats:** Disease; Dynamite and other destructive fishing; Fishing; Loss of habitat; Overexploitation; Pesticides; Poisoning; Pollution; Siltation; Trade. **Trade:** Local; Domestic; Commercial. **Other Comments:** Predatory catfish, commercially important fish. Food fish. **Status - IUCN:** ENDANGERED (Nationally). **DATA DEFICIENT (Globally)**. - **Criteria based on: A1a, 1c, 1d, 2c, 2d** (Observed population reduction due to decline in extent of occurrence, area of occupancy, quality of habitat and actual or potential levels of exploitation and predicted decline due to extent of occurrence, area of occupancy and/or quality of habitat and actual or potential levels of exploitation). - **CITES:** No. - **IWPA (1972;91):** No. - **RDB, National (1994):** No. - **RDB, International (1996):** No. **Recommendations - Research management:** Survey; Monitoring; Genetic management; Habitat management; Limiting factor management. - **PHVA:** Yes. **Captive breeding Recommendations - Captive breeding:** Level 1; Level 2; Level 3; Level 4. - **Level of difficulty:** Least difficult. **Existing Captive Programs:** None. - **Names of facilities:** —. **Sources (Refer Appendix):** 1, 27 (ciii), 63, 64, 148, 149, 154, 155, 157, 160, 161, 163 (iii), 166, 167, 168, 170, 183, 199, 200. **Compilers:** A.C. Pandey, A.K. Pandey, A.K. Singh, A. Husain, U.K. Sarkar, B.M. Kurup, O. Alphonse, A. Manimekalan, M. Arunachalam, T. V. Anna Mercy, C.P. Shaji, A. Gopalakrishnan.

210. *Ompok malabaricus* (Valenciennes, 1840) — CR (B1, 2c). (*Callichrous malabaricus*, Day 1877). Family: Siluridae. **Taxonomic status:** Species. **Habit:** Carnivorous. **Habitat:** Lower reaches of river and riverine wetland. **Global Distribution:** ENDEMIC to India - Goa and Kerala. **Current Regional Distribution:** Tamil Nadu. - **Elevation:** 10 - 50 m. - **Range (Sq. km):** < 100. - **Area Occupied (Sq. km):** < 10. - **Number of location:** 1 (Riverine wetland of Tambraparani basin). **Population Trends - % change - % Decline:** Not known . - **Time / Rate (Yrs or gens):** Not known. - **No of Mature Individuals:** Not known . **Global Population:** Not known. **Data Quality:** Reliable census; General field study. **Recent Field Studies:** Arunachalam, 1995 - 96 in Tambraparani basin. **Threats:** Edaphic factors; Human interference; Loss of habitat; Pollution. **Trade:** No. **Other Comments:** Prefers muddys substrate. . . **Status - IUCN:** CRITICALLY ENDANGERED. - **Criteria based on: B1, 2c** (Restricted distribution, single location, continuing decline observed in extent of occurrence, area of occupancy and/or quality of habitat). - **CITES:** No. - **IWPA (1972;91):** No. - **RDB, National (1994):** No. - **RDB, International (1996):** No. **Recommendations - Research management:** Translocations; Survey; Monitoring; Genetic management; Habitat management. - **PHVA:** Yes. **Captive breeding Recommendations - Captive breeding:** Level 1. - **Level of difficulty:** Very difficult. **Existing Captive Programs:** None. - **Names of facilities:** —. **Sources (Refer Appendix):** 10, 11 (liii), 27 (civ). **Compilers:** M. Arunachalam, A. Gopalakrishnan, M. Manimekalan, T.V. Annamercy, B.M. Kurup, O. Alphonse, C.P. Shaji, P. Subramanian.

211. *Ompok pabda* (Hamilton - Buchanan, 1822) — EN/N (A1a, 1c, 1d, 2c, 2d). Family: Siluridae. **Taxonomic status:** Species. **Habit:** Piscivorous, Carnivorous, Surface feeder. **Habitat:** Rivers, tanks, ponds. **Global Distribution:** India, Pakistan, Bangladesh. **Current Regional Distribution:** West Bengal, Northeastern states, Uttar Pradesh, Indus, Ganga, Bhramaputra river system. - **Elevation:** 100 - 250 m. - **Range (Sq. km):** > 20,000. - **Area Occupied (Sq. km):** > 2,000. - **Number of location:** Several. **Population Trends - % change - % Decline:** 50 % . - **Time / Rate (Yrs or gens):** 10 Yrs. - **No of Mature Individuals:** Not known. **Global Population:** Not known . **Regional Population:** Not known . **Data Quality:** General field study (Jayaram, 1981); Museums/collections/records . **Recent Field Studies:** Menon, 1997; Talwar & Jhingran, 1991; Pandey & Awasthi, 1994; Johal, 1997; Biswas *et al*, 1996 from the upper stretches of the Brahmaputra . **Threats:** Fishing; Human interference; Pollution; Trade. **Trade:** Local; Domestic; Commercial. **Other Comments:** An important fish all over India particularly West Bengal and Assam. **Status - IUCN:** ENDANGERED (Nationally). **DATA DEFICIENT (Globally)**. - **Criteria based on: A1a, 1c, 1d, 2c, 2d** (Observed population reduction due to decline in extent of occurrence, area of occupancy and/or quality of habitat and actual or potential levels of exploitation and predicted decline due to extent of occurrence, area of occupancy and/or quality of habitat and actual or potential levels of

exploitation). - **CITES:** No. - **IWPA (1972;91):** No. - **RDB, National (1994):** No. - **RDB, International (1996):** No. **Recommendations - Research management:** Survey; Monitoring; Genetic management; Habitat management; Limiting factor management; Limiting factor research. - **PHVA:** Yes. **Captive breeding Recommendations - Captive breeding:** Level 1; Level 2; Level 4. - **Level of difficulty:** Least difficult. **Existing Captive Programs:** None. - **Names of facilities:** —. **Sources (Refer Appendix):** 27 (cv), 85, 93, 170, 202. **Compilers:** A. Husain, U.K. Sarkar, A.K. Pandey, A.C. Pandey, A.K. Singh.

212. *Ophiocephalus channa gachua* Hamilton - Buchanan — VU/ N (B1, 2c) . (*Channa orientalis* Bloch and Schneider 1801). **Family:** Channidae. **Taxonomic status:** Species. **Habit:** Carnivorous. **Habitat:** Upland streams. **Global Distribution:** Afghanistan, Iran, Pakistan, India, Nepal, Sri Lanka, Bangladesh, Myanmar and East Indies. **Current Regional Distribution:** Throughout the Indian sub - continent . - **Elevation:** 1500 m. - **Range (Sq. km):** < 20,000. - **Area Occupied (Sq. km):** < 2,000. - **Number of location:** Many; Fragmented. **Population Trends - % change - % Decline:** 20 % . - **Time / Rate (Yrs or gens):** 30 Yrs. - **No of Mature Individuals:** Not known . **Global Population:** Not known . **Regional Population:** Not known . **Data Quality:** General field study; Informal field sightings. **Recent Field Studies:** Joshi, 1996; Joshi & Sunder, 1996; Biswas et al, 1996 from the upper stretches of the Bramahaputra . **Threats:** Human interference; Loss of habitat; Overexploitation; Trade. **Trade:** Local. **Other Comments:** None. **Status - IUCN:** **VULNERABLE (Nationally). DATA DEFICIENT (Globally).** - **Criteria based on:** B1, 2c (Restricted distribution, severely fragmented, continuing decline observed in extent of occurrence, area of occupancy and/or quality of habitat). - **CITES:** No. - **IWPA (1972;91):** No. - **RDB, National (1994):** No. - **RDB, International (1996):** No. **Recommendations - Research management:** Limiting factor management; Limiting factor research. - **PHVA:** Yes. **Captive breeding Recommendations - Captive breeding:** Pending. - **Level of difficulty:** Least difficult. **Existing Captive Programs:** None. - **Names of facilities:** —. **Sources (Refer Appendix):** 200. **Compilers:** C.S. Singh, C.B. Joshi, S.K. Srivastava, R.S. Patiyal, S.M. Srivastava, . A.K. Singh, S.K. Paul.

213. *Osteobrama bakeri* (Day, 1873) — EN (B1, 2c) . (*Rohkhte bakeri* Day, 1873). **Family:** Cyprinidae. **Taxonomic status:** Species. **Habit:** Freshwater. **Habitat:** Riverine habitat. **Global Distribution:** ENDEMIC to India. **Current Regional Distribution:** Kerala. - **Elevation:** 100 - 300 MSL. - **Range (Sq. km):** < 5,000. - **Area Occupied (Sq. km):** < 500. - **Number of location:** 2 (Kottayam, Manimalar, Cheliyar river). **Population Trends - % change - % Decline:** Not known . - **Time / Rate (Yrs or gens):** Not known . - **No of Mature Individuals:** 30 individuals (1993 collection). **Global Population:** Not known . **Data Quality:** General field study. **Recent Field Studies:** C.P. Shaji, P.S. Easa, 1993 - 97 in Nilgiri Biosphere Reserve. **Threats:** Damming; Dynamite and other destructive fishing; Fishing; Human interference; Poisoning; Pollution. **Trade:** Not known. **Other Comments:** None. **Status - IUCN:** **ENDANGERED.** - **Criteria based on:** B1, 2c (Restricted distribution, limited locations, continuing decline observed in extent of occurrence, area of occupancy and/or quality of habitat). - **CITES:** No. - **IWPA (1972;91):** No. - **RDB, National (1994):** No. - **RDB, International (1996):** No. **Recommendations - Research management:** Survey; Monitoring; Genetic management; Habitat management; Life history studies. - **PHVA:** Yes. **Captive breeding Recommendations - Captive breeding:** Level 3. - **Level of difficulty:** Very difficult. **Existing Captive Programs:** None. - **Names of facilities:** —. **Sources (Refer Appendix):** 133, 207. **Compilers:** M. Arunachalam, A. Gopalakrishnan, M. Manimekalan, T.V. Annamercy, . B.M. Kurup, O. Alphonse, C.P. Shaji, P. Subramanian.

214. *Osteobrama belangeri* (Valenciennes, 1844) — EW. (*Leuciscus belangeri* Valenciennes, 1844). **Family:** Cyprinidae. **Taxonomic status:** Species. **Habit:** Omnivorous. **Habitat:** Riverine (Migratory) Speceis. **Global Distribution:** India, Myanmar, Yunnan (China). **Current Regional Distribution:** Old distribution in India: Manipur - Chindwin drainage. - **Elevation:** 800 - 900 m. - **Range (Sq. km):** Nil. - **Area Occupied (Sq. km):** Nil. - **Number of location:** None in the wild, Extinct in wild Manipur. **Population Trends - % change - % Decline:** 100 % . - **Time / Rate (Yrs or gens):** 20 Yrs. - **No of Mature Individuals:** Not known . **Global Population:** Not known . **Regional Population:** Not known . **Data Quality:** General field studies (S.L. Hora, 1920 in Loktak lake; Hora & Menon, 1950 in Loktak lake). **Recent Field Studies:** Karmakar, A. K. 1993 in Takmu fish fauna, Manipur; Vishwanath, W. (1995) - (General field study of Loktak lake). **Threats:** Damming; Trade. **Trade:** Domestic; Commercial. **Other Comments:** Construction of Dam (Ithai barrage) for Hydroelectric project disturbed migration route from Chindwin of Myanmar to Loktak lake, Thus the fish is extinct in wild; 2) Artificial propagation attempts in fish farms in progress. Fish found only in captivity, totally extirpated in the wild. There is no possibility of recolonisation from Myanmar due to the migration route blocked by the construction of the Ithai barrage dam (in India). **Status - IUCN:** **EXTINCT IN THE WILD.** - **Criteria based on:** —. - **CITES:** No. - **IWPA (1972;91):** No. - **RDB, National (1994):** No. - **RDB, International (1996):** No. **Recommendations - Research management:** Husbandry research; Habitat management. - **PHVA:** Yes. **Captive breeding Recommendations - Captive breeding:** Already successful (State fisheries Dept. , Manipur Univ.) (Hypophysation & Ovaprim injection). - **Level of difficulty:** Least difficult. **Existing Captive Programs:** Yes. - **Names of facilities:** Farm culture, Induced breeding, Feed formulation and Artificial feeding. **Sources (Refer Appendix):** 27 (cx), 70, 101, 126. **Compilers:** A.K. Karmakar, W. Vishwanath, S.P. Biswas, P.C. Mahanta, R. Dayal, . B.A. Daniel.

215. *Osteobrama brevipectoralis* (Tilak & Husain) — EN (B1, 2c). **Family:** Cyprinidae. **Taxonomic status:** Species. **Habit:** Column feeder. **Habitat:** Fresh water rivers, streams in Manipur. **Global Distribution:** ENDEMIC to India. **Current Regional Distribution:** Manipur Valley in India. - **Elevation:** 800 m. - **Range (Sq. km):** < 5,000. - **Area Occupied (Sq. km):** < 500. - **Number of location:** 1+ . . **Population Trends - % change - % Decline:** Not known . - **Time / Rate (Yrs or gens):** 17 Yrs. - **No of Mature Individuals:** Not known . **Global Population:** Not known . **Regional Population:** Not known . **Data Quality:** General field study (Tilak & Husain, 1989 Loktak lake); Museums/collections/records. **Recent Field Studies:** Not known. **Threats:** Fishing; Pollution; Trade. **Trade:** Local; Domestic. **Other Comments:** New species described by Tilak & Husain in 1989 and it being fished and used locally in the Manipur valley, though of small size (about 10 cm size). **Status - IUCN:** **ENDANGERED.** - **Criteria based on:** B1, 2c (Restricted distribution, single location, continuing decline observed in extent of occurrence, area of occupancy and/or quality of habitat). - **CITES:** No. - **IWPA (1972;91):** No. - **RDB, National (1994):** No. - **RDB, International (1996):** No. **Recommendations - Research**

management: Survey; Monitoring; Habitat management; Limiting factor research. - **PHVA:** Yes. **Captive breeding Recommendations - Captive breeding:** Level 1; Level 2; Level 4. - **Level of difficulty:** Least difficult. **Existing Captive Programs:** None. - **Names of facilities:** —. **Sources (Refer Appendix):** 217. **Compilers:** A. Husain, A.C. Pandey, A.K. Pandey, U.K. Sarkar.

216. *Osteobrama cotio cotio* (Hamilton - Buchanan, 1822) — LRnt/N. (*Rohritee cotio* Day). **Family:** Cyprinidae. **Taxonomic status:** Sub - species. **Habit:** Feeding: Omnivorous; Breeding: seasonal - Not assessed. **Habitat:** Riverine, Lacustrine. **Global Distribution:** India, Nepal, Bangladesh, Pakistan. **Current Regional Distribution:** Northern India, West Bengal, Orissa. - **Elevation:** Up to 300 m. MSL. - **Range (Sq. km):** > 20,000. - **Area Occupied (Sq. km):** < 2,000. - **Number of location:** Many, Narmada, Mahanadi, Ganges. **Population Trends - % change - % Decline:** Not known. - **Time / Rate (Yrs or gens):** Not known. - **No of Mature Individuals:** Not known. **Global Population:** Not known. **Regional Population:** Not known. **Data Quality:** Indirect information; Museums/collections/records. **Recent Field Studies:** Sugunan & Yadav, 1992 in Mahanadi rivers; Dubey, 1994 in Madhya Pradesh in Narmada river; Biswas *et al* 1996 in Brahmaputra river; Pandey and Singh, 1990 - 91 in Mizoram. **Threats:** Loss of habitat; Pollution; Trade. **Trade:** Local. **Other Comments:** None. **Status - IUCN:** LOWER RISK - NEAR THREATENED (Nationally). **DATA DEFICIENT (Globally).** - **Criteria based on:** —. - **CITES:** No. - **IWPA (1972;91):** No. - **RDB, National (1994):** No. - **RDB, International (1996):** No. **Recommendations - Research management:** Survey; Monitoring; Habitat management. - **PHVA:** No. **Captive breeding Recommendations - Captive breeding:** No. - **Level of difficulty:** Not known. **Existing Captive Programs:** None. - **Names of facilities:** —. **Sources (Refer Appendix):** 50, 172, 200. **Compilers:** G.P. Dubey, S.V. Sharma, N. More, V.S. Basheer, J.K. Jena, A. Apte., K.W. Dhamge.

217. *Osteobrama cotio cunma* (Day, 1888) — VU/N (A1a, 1c, 2c). (*Rohtee cunma* Day, 1888). **Family:** Cyprinidae. **Taxonomic status:** Sub - species. **Habit:** Omnivorous. **Habitat:** Hill stream. **Global Distribution:** India, Myanmar. **Current Regional Distribution:** Manipur. - **Elevation:** 500 - 1000 m. - **Range (Sq. km):** < 5,000. - **Area Occupied (Sq. km):** < 500. - **Number of location:** Many (Lower part of Chindwin basin in the state). **Population Trends - % change - % Decline:** 20%. - **Time / Rate (Yrs or gens):** 10 Yrs. - **No of Mature Individuals:** Not known. **Global Population:** Not known. **Regional Population:** Not known. **Data Quality:** General field study (K.C. Jayaram, 1981 in Manipur). **Recent Field Studies:** A.K. Karmakar, 1993 in Field study of Manipur valley and Chindwin river basin. **Threats:** Damming; Dynamite and other destructive fishing; Human interference; Trade. **Trade:** Local; Domestic. **Other Comments:** None. **Status - IUCN:** VULNERABLE (Nationally). **DATA DEFICIENT (Globally).** - **Criteria based on:** A1a, 1c, 2c (Observed population reduction due to decline in extent of occurrence, area of occupancy and quality of habitat and predicted decline due to extent of occurrence, area of occupancy and/or quality of habitat). - **CITES:** No. - **IWPA (1972;91):** No. - **RDB, National (1994):** No. - **RDB, International (1996):** No. **Recommendations - Research management:** Survey; Monitoring. - **PHVA:** Pending. **Captive breeding Recommendations - Captive breeding:** No. - **Level of difficulty:** Not known. **Existing Captive Programs:** None. - **Names of facilities:** —. **Sources (Refer Appendix):** 27 (cxi), 85, 101. **Compilers:** A.K. Karmakar, S.P. Biswas, W. Vishwanath, P.C. Mahanta, R. Dayal, B.A. Daniel.

218. *Osteochilichthys longidorsalis* Pethiyagoda & Kottelat — CR (B1, 2c). **Family:** Cyprinidae. **Taxonomic status:** Species. **Habit:** Freshwater. **Habitat:** Rivers. **Global Distribution:** ENDEMIC to India. **Current Regional Distribution:** Kerala. - **Elevation:** 300 MSL. - **Range (Sq. km):** < 100. - **Area Occupied (Sq. km):** < 10. - **Number of location:** 1 (Chalakudy river). **Population Trends - % change - % Decline:** Not known. - **Time / Rate (Yrs or gens):** Not known. - **No of Mature Individuals:** Not known. **Global Population:** Not known. **Data Quality:** Reliable census; General field study. **Recent Field Studies:** C.P. Shaji, Personal collection and field studies. **Threats:** Human interference; Trade. **Trade:** Local. **Other Comments:** This is a new species described recently (Pethiyagoda & Kottelat, 1994) nothing is known about its status and distribution and now it is known only from the type locality. **Status - IUCN:** **CRITICALLY ENDANGERED.** - **Criteria based on:** B1, 2c (Restricted distribution, single location, continuing decline observed in extent of occurrence, area of occupancy and/or quality of habitat). - **CITES:** No. - **IWPA (1972;91):** No. - **RDB, National (1994):** No. - **RDB, International (1996):** No. **Recommendations - Research management:** Not known. - **PHVA:** No. **Captive breeding Recommendations - Captive breeding:** Not known. - **Level of difficulty:** Not known. **Existing Captive Programs:** None. - **Names of facilities:** —. **Sources (Refer Appendix):** 173. **Compilers:** M. Arunachalam, A. Gopalakrishnan, M. Manimekalan, T.V. Annamercy, B.M. Kurup, O. Alphonse, C.P. Shaji, P. Subramanian.

219. *Osteochilus brevidorsalis* (Day, 1873) — EN (B1, 2c). **Family:** Cyprinidae. **Taxonomic status:** Species. **Habit:** Fresh water. **Habitat:** Streams and rivers. **Global Distribution:** ENDEMIC to India. **Current Regional Distribution:** Tamil Nadu, Wyanad. - **Elevation:** 400 - 700 m. - **Range (Sq. km):** < 5,000. - **Area Occupied (Sq. km):** < 500. - **Number of location:** 3 (Moyar, Wyanad, Nilgiri biosphere reserve); Fragmented. **Population Trends - % change - % Decline:** 20%. - **Time / Rate (Yrs or gens):** 10 Yrs. - **No of Mature Individuals:** Not known. **Global Population:** Not known. **Regional Population:** Not known. **Data Quality:** Reliable census; General field study. **Recent Field Studies:** Arunachalam & Manimekalan, 1996, Nilgiri biosphere reserve. **Threats:** Dynamite and other destructive fishing; Fishing; Poisoning; Trade. **Trade:** Local. **Other Comments:** None. **Status - IUCN:** ENDANGERED. - **Criteria based on:** B1, 2c (Restricted distribution, limited locations, severely fragmented, continuing decline observed in extent of occurrence, area of occupancy and/or quality of habitat). - **CITES:** No. - **IWPA (1972;91):** No. - **RDB, National (1994):** No. - **RDB, International (1996):** No. **Recommendations - Research management:** Taxonomic and morphological genetic studies; Survey; Habitat management. - **PHVA:** Yes. **Captive breeding Recommendations - Captive breeding:** Level 2. - **Level of difficulty:** Moderate difficult. **Existing Captive Programs:** None. - **Names of facilities:** —. **Sources (Refer Appendix):** 27 (cxvi). **Compilers:** M. Arunachalam, A. Gopalakrishnan, M. Manimekalan, T.V. Annamercy, B.M. Kurup, O. Alphonse, C.P. Shaji, P. Subramanian.

220. *Osteochilus godavariensis* (Babu Rao, 1977) — DD. (*Osteochilichthys godavariensis* Babu Rao, 1977). **Family:** Cyprinidae. **Taxonomic status:** Species. **Habit:** Omnivorous. **Habitat:** Riverine. **Global Distribution:**

ENDEMIC to India. **Current Regional Distribution:** Godavari, Western Ghats. - **Elevation:** Up to 900 m. MSL. - **Range (Sq. km):** > 20,000. - **Area Occupied (Sq. km):** > 2,000. - **Number of location:** 6 to 10. **Population Trends - % change - % Decline:** Not known. - **Time / Rate (Yrs or gens):** Not known. - **No of Mature Individuals:** Not known. **Global Population:** Not known. **Data Quality:** Indirect information; Museums/collections/records. **Recent Field Studies:** Not known. **Threats:** Trade. **Trade:** Domestic. **Other Comments:** None. **Status - IUCN:** DATA DEFICIENT. - **Criteria based on:** —. - **CITES:** No. - **IWPA (1972;91):** No. - **RDB, National (1994):** No. - **RDB, International (1996):** No. **Recommendations - Research management:** Survey; Monitoring. - **PHVA:** No. **Captive breeding Recommendations - Captive breeding:** No. - **Level of difficulty:** Not known. **Existing Captive Programs:** None. - **Names of facilities:** —. **Sources (Refer Appendix):** 27 (cxvii), 202. **Compilers:** G.P. Dubey, S.V. Sharma, N. More, V.S. Basheer, J.K. Jena, A. Apte, . K.W. Dhamge.

221. *Pangasius pangasius* (Hamilton - Buchanan, 1822) — CR (A1a, 1b, 1c, 1d) . Family: Pangasidae. **Taxonomic status:** Species. **Habit:** Carnivorous fish. **Habitat:** Riverine, Lacustrine. **Global Distribution:** ENDEMIC to India, Myanmar, Thailand, Malaya, Java, Pakistan, Bangladesh. **Current Regional Distribution:** Andhra Pradesh, Uttar Pradesh. - **Elevation:** > 500 m. - **Range (Sq. km):** > 20,000. - **Area Occupied (Sq. km):** < 2,000. - **Number of location:** Very limited 3 or 4; River Rohini & Rapti Chambal, Godavari at Rajamundry; Upper stretches of the Brahmaputra. **Population Trends - % change - % Decline:** 80 % . - **Time / Rate (Yrs or gens):** 10 Yrs. - **No of Mature Individuals:** Not known. **Global Population:** Not known. **Regional Population:** Not known. **Data Quality:** Informal field sightings; Museums/collections/records. **Recent Field Studies:** Biswas *et al* 1996 from Brahmaputra river. **Threats:** Fishing; Human interference; Loss of habitat; Overexploitation; Trade. **Trade:** Commercial (perviously). **Other Comments:** Two species *P. pangasius upiensis* & *P. P. godavarii* have been merged in to one by Talwar & Jhingran (1991). **Status - IUCN:** CRITICALLY ENDANGERED. - **Criteria based on:** A1a, 1b, 1c, 1d (Observed population reduction due to decline in extent of occurrence, area of occupancy, quality of habitat, abundance and actual or potential levels of exploitation). - **CITES:** No. - **IWPA (1972;91):** No. - **RDB, National (1994):** No. - **RDB, International (1996):** No. **Recommendations - Research management:** Survey; Monitoring; Genetic management. - **PHVA:** No. **Captive breeding Recommendations - Captive breeding:** No. - **Level of difficulty:** Very difficult. **Existing Captive Programs:** None. - **Names of facilities:** . . **Sources (Refer Appendix):** 24 (v), 27 (cxx), 200, 202. **Compilers:** D.N. Saksena, A. Mishra, R. Abidi, D. Basu, P. Das.

222. *Pangio pangia* (Hamilton - Buchanan, 1822) — VU/N (B1, 2c) . (*Acanthopthalmus pangia* Day, 1878). Family: Cobitidae. **Taxonomic status:** Species. **Habit:** Bottom dweller, Omnivorous. **Habitat:** Sluggish streams. **Global Distribution:** India, Myanmar, Indonesia. **Current Regional Distribution:** Manipur, Northeastern Bengal. - **Elevation:** 300 - 1000 m. - **Range (Sq. km):** < 20,000. - **Area Occupied (Sq. km):** < 2,000. - **Number of location:** Many (Chindwin basin, Gangetic basin); Fragmented. **Population Trends - % change - % Decline:** Not known. - **Time / Rate (Yrs or gens):** Not known. - **No of Mature Individuals:** Not known. **Global Population:** Not known. **Regional Population:** Not known. **Data Quality:** General field study (F. B. Hamilton, 1822 in Gangetic system). **Recent Field Studies:** Karmakar, A. K. , 1993 in Manipur Valley. **Threats:** Human interference; Loss of habitat; Trade. **Trade:** Local. **Other Comments:** None. **Status - IUCN:** VULNERABLE (Nationally). **DATA DEFICIENT (Globally).** - **Criteria based on:** B1, 2c (Restricted distribution, severely fragmented, continuing decline observed in extent of occurrence, area of occupancy and/or quality of habitat). - **CITES:** No. - **IWPA (1972;91):** No. - **RDB, National (1994):** No. - **RDB, International (1996):** No. **Recommendations - Research management:** Survey; Monitoring. - **PHVA:** No. **Captive breeding Recommendations - Captive breeding:** No. - **Level of difficulty:** Not known. **Existing Captive Programs:** None. - **Names of facilities:** —. **Sources (Refer Appendix):** 68, 106. **Compilers:** A.K. Karmakar, W. Vishwanath, S.P. Biswas, P.C. Mahanta, R. Dayal, . B.A. Daniel.

223. *Parambassis dayi* (Bleeker, 1874) — EN (B1, 2c) . (*Ambassis nalua* (Day, 1865)). Family: Chandidae. **Taxonomic status:** Species. **Habit:** Fresh water. **Habitat:** Lotoc waters and Estuaries. **Global Distribution:** ENDEMIC to India. **Current Regional Distribution:** Central Kerala. - **Elevation:** 25 m. - **Range (Sq. km):** < 5,000. - **Area Occupied (Sq. km):** < 500. - **Number of location:** 1 (Vembanad lake); Continuous distribution. **Population Trends - % change - % Decline:** 20% . - **Time / Rate (Yrs or gens):** 10 yrs. - **No of Mature Individuals:** Not known. **Global Population:** Continuing decline observed. **Data Quality:** Reliable census; General field study. **Recent Field Studies:** A. Gopalakrishnan, 1997 in Pallam, Meenachil river basin; B.M. Kurup, 1987 - 91 in Vembanad lake. **Threats:** Dynamite and other destructive fishing; Human interference; Pesticides; Poisoning; Trade. **Trade:** Local; Domestic; Commercial. **Other Comments:** . . **Status - IUCN:** ENDANGERED. - **Criteria based on:** B1, 2c (Restricted distribution, single location, continuing decline observed in extent of occurrence, area of occupancy and/or quality of habitat). - **CITES:** No. - **IWPA (1972;91):** No. - **RDB, National (1994):** No. - **RDB, International (1996):** No. **Recommendations - Research management:** Survey; Monitoring; Habitat management. - **PHVA:** Yes. **Captive breeding Recommendations - Captive breeding:** Level 3. - **Level of difficulty:** Very difficult. **Existing Captive Programs:** None. - **Names of facilities:** —. **Sources (Refer Appendix):** 85, 202. **Compilers:** M. Arunachalam, A. Gopalakrishnan, M. Manimekalan, T.V. Annamercy, . B.M. Kurup, O. Alphonse, C.P. Shaji, P. Subramanian.

224. *Parambassis thomassi* (Day, 1870) — VU (A1a, 1b, 1c, 1d, 2c, 2d) . (*Ambassis thomassi* (Day, 1870)). Family: Chandidae. **Taxonomic status:** Species. **Habit:** Fresh water. **Habitat:** Lakes and streams. **Global Distribution:** ENDEMIC to India. **Current Regional Distribution:** Central Kerala and Karnataka. - **Elevation:** 0 - 50 m. - **Range (Sq. km):** < 20,000. - **Area Occupied (Sq. km):** < 2,000. - **Number of location:** Many (Southern part of Vembanad lake, Chalyar river, Chalakudy river); Fragmented. **Population Trends - % change - % Decline:** 40 - 50% . - **Time / Rate (Yrs or gens):** 20 yrs. - **No of Mature Individuals:** 400. **Global Population:** Not known. **Data Quality:** General field study. **Recent Field Studies:** B.M. Kurup & C.P. Shaji, 1994; B.M. Kurup, 1978 - 91; C.P. Shaji, 1994, KFRI. **Threats:** Dynamite and other destructive fishing; Fishing; Human interference; Loss of habitat; Overexploitation; Poisoning; Pollution. **Trade:** No. **Other Comments:** —. **Status - IUCN:** VULNERABLE. - **Criteria based on:** A1a, 1b, 1c, 1d, 2c, 2d (Observed population reduction due to abundance, decline in extent of occurrence, area of occupancy, quality of habitat, and actual or potential

levels of exploitation and predicted decline due to extent of occurrence, area of occupancy and/or quality of habitat and actual of potential levels of exploitation). - **CITES:** No. - **IWPA (1972;91):** No. - **RDB, National (1994):** No. - **RDB, International (1996):** No. **Recommendations - Research management:** Taxonomic and morphological genetic studies; Translocations; Survey; Monitoring; Habitat management; Life history studies. - **PHVA:** Yes. **Captive breeding Recommendations - Captive breeding:** Level 3. - **Level of difficulty:** Very difficult. Existing Captive Programs. - **Names of facilities:** None. **Sources (Refer Appendix):** 110. **Compilers:** M. Arunachalam, A. Gopalakrishnan, M. Manimekalan, T.V. Annameray, B.M. Kurup, O. Alphonse, C.P. Shaji, P. Subramanian.

225. *Parluciosoma daniconius* (Hamilton - Buchanan, 1822) — LRnt/N. (*Rasbora daniconius* Day, 1878). **Family:** Cyprinidae. **Taxonomic status:** Species. **Habit:** Larvivorous surface feeder. **Habitat:** Ponds, pools, ditches of streams. **Global Distribution:** India, Pakistan, Bangladesh, Sri Lanka, Myanmar. **Current Regional Distribution:** Throughout India. - **Elevation:** 100 - 700 m. - **Range (Sq. km):** > 20,000. - **Area Occupied (Sq. km):** > 2,000. - **Number of location:** Many. **Population Trends - % change - % Decline:** 20% . - **Time / Rate (Yrs or gens):** 30 yrs. - **No of Mature Individuals:** Not known . **Global Population:** Not known . **Regional Population:** Continuing gradual decline observed. **Data Quality:** General field study (Srivastava, 1968, 1981; Srivastava *et al.* 1970); Indirect informations; Museums/collections/records. **Recent Field Studies:** Menon, 1997; Husain, 1997 in Fauna of Delhi; Khan, 1997; G.P. Dubey, 1995 - 96 in Narmadha; Suganan & Yadav, 1997 in Hirakud. **Threats:** Fishing; Pollution; Trade. **Trade:** Local; Domestic. **Other Comments:** No fishery value. . **Status - IUCN: LOWER RISK - NEAR THREATENED (Nationally).** **DATA DEFICIENT (Globally).** - **Criteria based on:** —. - **CITES:** No. - **IWPA (1972;91):** No. - **RDB, National (1994):** No. - **RDB, International (1996):** No. **Recommendations - Research management:** Survey; Monitoring; Genetic management; Habitat management. - **PHVA:** No. **Captive breeding Recommendations - Captive breeding:** No. - **Level of difficulty:** Least difficult. **Existing Captive Programs:** None. - **Names of facilities:** —. **Sources (Refer Appendix):** 78, 103, 202, 231 (v). **Compilers:** U.K. Sarkar, A.K. Singh, A. Husain, A.K. Pandey, A.C. Pandey, G.P. Dubey., S.V. Sharma, N. More, V.S. Basheer, J.K. Jena, A. Apte, K.W. Dhamge.

226. *Periophthalmus weberi* Eggert — CR (B1, 2c). **Family:** Gobiidae. **Taxonomic status:** Species. **Habit:** Carnivorous. **Habitat:** Gangetic delta, ponds and rivers. **Global Distribution:** India, New Guinea. **Current Regional Distribution:** Rupnarayan river of West Bengal. - **Elevation:** < 20 m. - **Range (Sq. km):** < 100. - **Area Occupied (Sq. km):** < 10. - **Number of location:** One. **Population Trends - % change - % Decline:** 50 % . - **Time / Rate (Yrs or gens):** 20 Yrs. - **No of Mature Individuals:** Not known . **Global Population:** Not known . **Regional Population:** Not known . **Data Quality:** General field study; Museums/collections/records. **Recent Field Studies:** Chatterjee & Siddique, 1976 Rupnarayan river . **Threats:** Fishing; Human interference; Poisoning; Pollution; Trade. **Trade:** Local. **Other Comments:** Rare in Indian region (Talwar & Jhingran, 1991). **Status - IUCN: CRITICALLY ENDANGERED.** - **Criteria based on:** B1, 2c (Restricted distribution, single location, continuing decline observed in extent of occurrence, area of occupancy and/or quality of habitat). - **CITES:** No. - **IWPA (1972;91):** No. - **RDB, National (1994):** No. - **RDB, International (1996):** No. **Recommendations - Research management:** Not known . - **PHVA:** Not known. **Captive breeding Recommendations - Captive breeding:** Not known. - **Level of difficulty:** No. **Existing Captive Programs:** None. - **Names of facilities:** —. **Sources (Refer Appendix):** 28. **Compilers:** A.K. Singh, U.K. Sarkar, A.K. Pandey, A. Husain, A.C. Pandey.

227. *Pinniwallago kanpurensis* Gupta, Jayaram and Hajela, 1981 — CR (B1, 2c). **Family:** Siluridae. **Taxonomic status:** Species. **Habit:** Carnivorous. **Habitat:** Ganga river at Kanpur. **Global Distribution:** ENDEMIC to India. **Current Regional Distribution:** Madhya Pradesh, Uttar Pradesh. - **Elevation:** 150 m. - **Range (Sq. km):** < 100. - **Area Occupied (Sq. km):** < 10. - **Number of location:** 1 (Kanpur). **Population Trends - % change - % Decline:** 80% . - **Time / Rate (Yrs or gens):** 16 Years. - **No of Mature Individuals:** Not known . **Global Population:** Not known . **Data Quality:** General field study; Museums/collections/records. **Recent Field Studies:** Nil. **Threats:** Human interference; Pollution; Trade. **Trade:** Local . **Other Comments:** The species appears to be a deformed specimen of *Walago attu* and as one has not been recognised by Menon, 1996; M. A. Khan, There is no mention of this Genus in Nelson, 1995. **Status - IUCN: CRITICALLY ENDANGERED.** - **Criteria based on:** B1, 2c (Restricted distribution, single location, continuing decline observed in extent of occurrence, area of occupancy and/or quality of habitat). - **CITES:** No. - **IWPA (1972;91):** No. - **RDB, National (1994):** No. - **RDB, International (1996):** No. **Recommendations - Research management:** Taxonomic and morphological genetic studies; Survey; Monitoring; Genetic management; Limiting factor research. - **PHVA:** Yes. **Captive breeding Recommendations - Captive breeding:** Level 1. - **Level of difficulty:** Least difficult. **Existing Captive Programs:** Nil. - **Names of facilities:** —. **Sources (Refer Appendix):** 202. **Compilers:** A. Husain, A.C. Pandey, A.K. Pandey, A.K. Singh, U.K. Sarkar

228. *Pristolepis marginata* Jerdon, 1849 — VU (A1a, 1b, 1c, 1d, 1e, 2c, 2d). (*Pristolepis malabarica* Day). **Family:** Nandidae. **Taxonomic status:** Species. **Habit:** Freshwater. **Habitat:** Riverine. **Global Distribution:** ENDEMIC to India. **Current Regional Distribution:** Western Ghats (Central Kerala rivers). - **Elevation:** 10 - 150 m. - **Range (Sq. km):** < 20,000. - **Area Occupied (Sq. km):** < 2,000. - **Number of location:** Many (Kerala, Kudamurthy tributary of Cauvery (Kurup to provide); Fragmented. . **Population Trends - % change - % Decline:** Not known . - **Time / Rate (Yrs or gens):** Not known . - **No of Mature Individuals:** Not known . **Global Population:** Not known . **Data Quality:** General field study (Kurup 1987 - 89 in Kerala). **Recent Field Studies:** Natarajan 1994 in Kudamurthy - Cauvery; Kurup, 1994 in Central Kerala rivers. **Threats:** Dynamite and other destructive fishing; Trade; Fishing; Loss of habitat; Overexploitation; Poisoning; Pollution. **Trade:** Local . **Other Comments:** —. **Status - IUCN: VULNERABLE.** - **Criteria based on:** A1a, 1b, 1c, 1d, 1e, 2c, 2d (Observed population reduction due to decline in extent of occurrence, area of occupancy and/or quality of habitat, abundance and actual or potential levels of exploitation and predicted decline due to extent of occurrence, area of occupancy and/or quality of habitat and actual or potential levels of exploitation). - **CITES:** No. - **IWPA (1972;91):** No. - **RDB, National (1994):** No. - **RDB, International (1996):** No. **Recommendations - Research management:** Taxonomic and morphological genetic studies; Translocations, Monitoring; Survey. - **PHVA:** Yes. **Captive breeding Recommendations - Captive breeding:** Level 1. - **Level of difficulty:** Very difficult. **Existing Captive Programs:** No. - **Names of facilities:** —.

Sources (Refer Appendix): 27 (cxxiv), 110, 112. **Compilers:** M. Arunachalam, A. Gopalakrishnan, M. Manimekalan, T.V. Annamercy, . B.M. Kurup, O. Alphonse, C.P. Shaji, P. Subramanian.

229. *Proeutropiichthys taakree* (Sykes) — CR (A1a, 1d, 2d). Family: Schilbeidae. **Taxonomic status:** Species. **Habit:** Omnivore. **Habitat:** Riverine. **Global Distribution:** ENDEMIC to India. **Current Regional Distribution:** Karnataka, Madhya Pradesh. - **Elevation:** < 500 m. - **Range (Sq. km):** < 100. - **Area Occupied (Sq. km):** < 500. - **Number of location:** 4; Krishna rivers, Kauvery, Bheema river. **Population Trends - % change - % Decline:** 80% . - **Time / Rate (Yrs or gens):** 10 yrs. - **No of Mature Individuals:** Not known . **Global Population:** Not known. **Data Quality:** General field study (Sharma, 1976 in Krishna river); Indirect information; Museums/collections/records. **Recent Field Studies:** Personal observation by Sharma. **Threats:** Fishing; Trade. **Trade:** Local. **Other Comments:** Endemic due to Restricted distribution in river Krishna water shed. Reported by. Hora. Later collected in 1976 from lower Kroshua (Sharma). **Status - IUCN:** **CRITICALLY ENDANGERED.** - **Criteria based on:** A1a, 1d, 2d (Observed population reduction due to actual or potential levels of exploitation and predicted decline due to actual or potential levels of exploitation). - **CITES:** No. - **IWPA (1972;91):** No. - **RDB, National (1994):** No. - **RDB, International (1996):** No. **Recommendations - Research management:** Survey. - **PHVA:** Yes. **Captive breeding Recommendations - Captive breeding:** Level 3. - **Level of difficulty:** Very difficult. **Existing Captive Programs:** None. - **Names of facilities:** —. **Sources (Refer Appendix):** 195, 196. **Compilers:** S.V. Sharma, G.P. Dubey, N. More, V.S. Basheer, J.K. Jena, A. Apte, . K.W. Dhamge.

230. *Proeutropiichthys taakree taakree* (Sykes, 1839) — VU (D2). Family: Schilbeidae. **Taxonomic status:** Sub - species. **Habit:** Freshwater. **Habitat:** Streams, river. **Global Distribution:** ENDEMIC to Peninsular India. **Current Regional Distribution:** Tamil Nadu, Kerala. - **Elevation:** 80 - 150 m. - **Range (Sq. km):** < 20,000. - **Area Occupied (Sq. km):** > 2,000. - **Number of location:** 2 (Cauvery river, Achankoil river). **Population Trends - % change - % Decline:** Not known . - **Time / Rate (Yrs or gens):** Not known . - **No of Mature Individuals:** Not known . **Global Population:** Not known . **Data Quality:** Reliable census; General field study. **Recent Field Studies:** M. Arunachalam, 1996. **Threats:** Not known . **Trade:** No. **Other Comments:** None. **Status - IUCN:** **VULNERABLE.** - **Criteria based on:** D2 (Restricted population in < 5 locations). - **CITES:** No. - **IWPA (1972;91):** No. - **RDB, National (1994):** No. - **RDB, International (1996):** No. **Recommendations - Research management:** Survey. - **PHVA:** No. **Captive breeding Recommendations - Captive breeding:** No. - **Level of difficulty:** Least difficult. **Existing Captive Programs:** None. - **Names of facilities:** —. **Sources (Refer Appendix):** 11 (xliv), 27 (cxxv), 196, 203. **Compilers:** M. Arunachalam, A. Gopalakrishnan, M. Manimekalan, T.V. Annamercy, . B.M. Kurup, O. Alphonse, C.P. Shaji, P. Subramanian

231. *Pseudecheneis sulcatus* (McClelland) — VU/N (B1, 2c) . (*Glyptosternon sulcatus* McClelland). Family: Sisoridae. **Taxonomic status:** Species. **Habit:** Carnivorous. **Habitat:** Hill Streams. **Global Distribution:** India, Nepal, Bangladesh. **Current Regional Distribution:** Doon valley, Khasi hills. - **Elevation:** 1500 m. - **Range (Sq. km):** > 20,000. - **Area Occupied (Sq. km):** < 2,000. - **Number of location:** Many; Fragmented. **Population Trends - % change - % Decline:** 10 % . - **Time / Rate (Yrs or gens):** 20 Yrs. - **No of Mature Individuals:** 10 % . **Global Population:** Not known . **Regional Population:** 7 % . **Data Quality:** General field study; Informal field sightings. **Recent Field Studies:** Dobrial *et al.* **Threats:** Fishing; Human interference; Loss of habitat; Trade. **Trade:** Local. **Other Comments:** None. **Status - IUCN:** **VULNERABLE (Nationally).** **DATA DEFICIENT (Globally).** - **Criteria based on:** B1, 2c (Restricted distribution, severely fragmented, continuing decline observed in extent of occurrence, area of occupancy and/or quality of habitat). - **CITES:** No. - **IWPA (1972;91):** No. - **RDB, National (1994):** No. - **RDB, International (1996):** No. **Recommendations - Research management:** Survey; Monitoring. - **PHVA:** Yes. **Captive breeding Recommendations - Captive breeding:** Pending. - **Level of difficulty:** Moderate difficulty. **Existing Captive Programs:** None. - **Names of facilities:** Pending. **Sources (Refer Appendix):** 202. **Compilers:** C.S. Singh, C.B. Joshi, S.K. Srivastava, S.M. Srivastava, R.S. Patiyal, A.K. Singh, S.K. Paul.

232. *Pseudeutropius atherinoides* (Bloch, 1794) — EN/N (A1a, 1c, 1d). Family: Schilbeidae. **Taxonomic status:** Species. **Habit:** Carnivorous. **Habitat:** River systems. **Global Distribution:** India (not below Cauvery river system), Nepal, Bangladesh, Myanmar. **Current Regional Distribution:** Ganges, Bhrmaputra, Indus, East coast, West coast river systems of India, Fresh and Tidal waters. - **Elevation:** 100 - 300 m. - **Range (Sq. km):** > 20,000. - **Area Occupied (Sq. km):** > 2,000. - **Number of location:** Several. **Population Trends - % change - % Decline:** > 50 % . - **Time / Rate (Yrs or gens):** 10 Yrs. - **No of Mature Individuals:** Not known. **Global Population:** Not known . **Regional Population:** Not known . **Data Quality:** General field studies; Museum/collection/records. **Recent Field Studies:** Ravish Chandra & Y.S. Yadav, 1994; Talwar & Jhingran, 1991. **Threats:** Fishing; Loss of habitat; Pollution; Trade. **Trade:** Local; Domestic. **Other Comments:** Minor fishery importance. **Status - IUCN:** **ENDANGERED (Nationally).** **DATA DEFICIENT (Globally).** - **Criteria based on:** A1a, 1c, 1d (Observed population reduction due to decline in extent of occurrence, area of occupancy and/or quality of habitat and actual or potential levels of exploitation). - **CITES:** No. - **IWPA (1972;91):** No. - **RDB, National (1994):** No. - **RDB, International (1996):** No. **Recommendations - Research management:** Survey; Monitoring; Limiting factor research; Limiting factor management. - **PHVA:** Yes. **Captive breeding Recommendations - Captive breeding:** Level 1. - **Level of difficulty:** Least difficult. **Existing Captive Programs:** None. - **Names of facilities:** —. **Sources (Refer Appendix):** 62, 63, 103, 200, 202. **Compilers:** A.C. Pandey, A. Husain, A.K. Pandey, U.K. Sarkar, A.K. Singh

233. *Pseudeutropius mitchelli* Gunther, 1864 — DD. Family: Schilbeidae. **Taxonomic status:** Species. **Habit:** Not known. **Habitat:** Streams, Freshwater. **Global Distribution:** ENDEMIC to India. **Current Regional Distribution:** Kerala. - **Elevation:** < 5 m. - **Range (Sq. km):** Not known . - **Area Occupied (Sq. km):** Not known . - **Number of location:** Not known . **Population Trends - % change - % Decline:** Not known . - **Time / Rate (Yrs or gens):** Not known . - **No of Mature Individuals:** Not known . **Global Population:** Not known. **Data Quality:** Only from the type description, no subsequent information available. **Recent Field Studies:** —. **Threats:** Not known . **Trade:** No. **Other Comments:** —. **Status - IUCN:** **DATA DEFICIENT.** - **Criteria based on:** —. - **CITES:** No. - **IWPA (1972;91):** No. - **RDB, National (1994):** No. - **RDB, International (1996):** No. **Recommendations - Research management:** Not known. - **PHVA:** Not known . **Captive**

breeding Recommendations - Captive breeding: Not known . - **Level of difficulty:** Not known . **Existing Captive Programs:** None. - **Names of facilities:** —. **Sources (Refer Appendix):** —. **Compilers:** M. Arunachalam, A. Gopalakrishnan, A. Manimekalan, T.V. Annameray, . B.M. Kurup, O. Alphonse, C.P. Shaji, P. Subramanian

234. *Psilorhynchus homalophera* Hora & Mukherji, 1935 — VU (A1a, 1c, 2c). Family: Psilorhynchidae. **Taxonomic status:** Species. **Habit:** Bottom dweller, Omnivorous. **Habitat:** Hill stream. **Global Distribution:** ENDEMIC to India. **Current Regional Distribution:** Assam, Nagaland and Jiri river (Manipur), Brahmaputra drainage. - **Elevation:** 200 - 1000 m. - **Range (Sq. km):** > 20,000. - **Area Occupied (Sq. km):** < 2,000. - **Number of location:** Many, Fragmented. **Population Trends - % change - % Decline:** > 20 % . - **Time / Rate (Yrs or gens):** 5 Yrs. - **No of Mature Individuals:** Not known . **Global Population:** Not known . **Data Quality:** General field studies (S.L. Hora, & D.D. Mukherji, 1935 in Emilomi Nagaland;. Vishwanath, W. & W. Manoj Kumar, 1986 in Jiri river). **Recent Field Studies:** S.P. Biswas, 1997 in Bhrmaputra river near Dhansirimukh. **Threats:** Dynamite and other destructive fishing; Poisoning. **Trade:** No. **Other Comments:** —. **Status - IUCN:** VULNERABLE. - **Criteria based on:** A1a, 1c, 2c (Observed population reduction due to decline in extent of occurrence area of occupancy and/or quality of habitat and predicted decline due to extent of occurrence, area of occupancy and/or quality of habitat). - **CITES:** No. - **IWPA (1972;91):** No. - **RDB, National (1994):** No. - **RDB, International (1996):** No. **Recommendations - Research management:** Survey; Montoring. - **PHVA:** Pending. **Captive breeding Recommendations - Captive breeding:** No. - **Level of difficulty:** Not known . **Existing Captive Programs:** None. - **Names of facilities:** —. **Sources (Refer Appendix):** 23, 76, 230. (Refer Appendix) . **Compilers:** W. Vishwanath, A. K Karmakar, S.P. Biswas, P.C. Mahanta, R. Dayal, B.A. Daniel.

235. *Psilorhynchus microphthalmus* Vishwanath & Manoj Kumar, 1995 — CR (B1, 2c). Family: Psilorhynchidae. **Taxonomic status:** Species. **Habit:** Omnivorous, Bottom dwelling. **Habitat:** Hill stream. **Global Distribution:** ENDEMIC to India. **Current Regional Distribution:** Manipur. - **Elevation:** 800 - 1000 m. - **Range (Sq. km):** < 100. - **Area Occupied (Sq. km):** < 10. - **Number of location:** 1 (Chakpi stream - Chindwin drainage). **Population Trends - % change - % Decline:** 10 % . - **Time / Rate (Yrs or gens):** 10 Yrs. - **No of Mature Individuals:** Not known . **Global Population:** Not known . **Data Quality:** General field studies. **Recent Field Studies:** W. Vishwanath & W. Manoj kumar, 1992 at Chakpistream. **Threats:** Dynamite and other destructive fishing; Poisoning. **Trade:** No. **Other Comments:** Restricted to Chakpi stream; More survey required for its range of distribution. **Status - IUCN:** CRITICALLY ENDANGERED. - **Criteria based on:** B1, 2c (Restricted distribution, single location, continuing decline observed in extent of occurrence, area of occupancy and/or quality of habitat). - **CITES:** No. - **IWPA (1972;91):** No. - **RDB, National (1994):** No. - **RDB, International (1996):** No. **Recommendations - Research management:** No. - **PHVA:** No. **Captive breeding Recommendations - Captive breeding:** No. - **Level of difficulty:** Not known . **Existing Captive Programs:** None. - **Names of facilities:** —. **Sources (Refer Appendix):** 230. **Compilers:** W. Vishwanath, A.K. Karmakar, S.P. Biswas, P.C. Mahanta, R. Dayal, B.A. Daniel.

236. *Psilorhynchus sucatio nudithoracicus* Tilak & Husain, 1980 — EN (A1a; B1, 2c). Family: Psilorhynchidae. **Taxonomic status:** Sub - species. **Habit:** Bottom dweller, Insectivorous, Omnivorous. **Habitat:** Slow moving submountainous streams. **Global Distribution:** ENDEMIC to India. **Current Regional Distribution:** Uttar Pradesh. - **Elevation:** <300m. - **Range (Sq. km):** < 5,000. - **Area Occupied (Sq. km):** < 500. - **Number of location:** 3 (Saharanpur, Muballabad). **Population Trends - % change - % Decline:** Not known . - **Time / Rate (Yrs or gens):** Not known. - **No of Mature Individuals:** Not known . **Global Population:** Not known . **Data Quality:** General field studies (Tilak and Husain, 1980 Bilsanda, West Uttar Pradesh) Museum/collection/records . **Recent Field Studies:** Nil. **Threats:** Loss of habitat; Pollution. **Trade:** No. **Other Comments:** Small bottom dweller of no fishing values. **Status - IUCN:** ENDANGERED. - **Criteria based on:** A1a (Population reduction observed); B1, 2c (Restricted distribution, limited locations, continuing decline observed in extent of occurrence, area of occupancy and/or quality of habitat) . - **CITES:** No. - **IWPA (1972;91):** No. - **RDB, National (1994):** No. - **RDB, International (1996):** No. **Recommendations - Research management:** Survey; Monitoring; Habitat management; Limiting factor research. - **PHVA:** Yes. **Captive breeding Recommendations - Captive breeding:** Level 1. - **Level of difficulty:** Least difficult. **Existing Captive Programs:** Nil. - **Names of facilities:** —. **Sources (Refer Appendix):** 215. **Compilers:** A. Husain, A.K. Pandey, A.C. Pandey, U.K. Sarkar, A. K. , Singh

237. *Puntius (=Barbus) Chrysopterus* (McClelland, 1822) — LRlc. Family: Cyprinidae. **Taxonomic status:** Species. **Habit:** Planktonophagous and Herbivorous. **Habitat:** Ponds and lakes (abundant in lentic water) also found in reservoirs and small streams. **Global Distribution:** Region covered by India and Pakistan (Plains of Northern Indian Subcontinent). **Current Regional Distribution:** Uttar Pradesh, Bihar, Assam, Punjab, Sindh, West Bengal, Tamil Nadu, . - **Elevation:** < 500 MSL. - **Range (Sq. km):** > 20,000. - **Area Occupied (Sq. km):** > 2,000. - **Number of location:** Many, contiguous distribution. **Population Trends - % change - % Decline:** Stable . - **Time / Rate (Yrs or gens):** Not known . - **No of Mature Individuals:** Numerous. **Global Population:** Numerous. **Regional Population:** Numerous. **Data Quality:** General field studies; Informal field sightings; Museum/collection/records. **Recent Field Studies:** None. **Threats:** Trade. **Trade:** Commercial. **Other Comments:** Of no commercial importance. **Status - IUCN:** LOWER RISK - LEAST CONCERN. - **Criteria based on:** —. - **CITES:** No. - **IWPA (1972;91):** No. - **RDB, National (1994):** No. - **RDB, International (1996):** No. **Recommendations - Research management:** Monitoring; Survey. - **PHVA:** No. **Captive breeding Recommendations - Captive breeding:** No. - **Level of difficulty:** Not known . **Existing Captive Programs:** None. - **Names of facilities:** —. **Sources (Refer Appendix):** 200, 202. **Compilers:** D.N. Saksena, A. Mishra, P. Das, R. Abidi

238. *Puntius (=Barbus, =Cyprinus) phutunio* (Hamilton - Buchanan, 1822) — LRlc/N. Family: Cyprinidae. **Taxonomic status:** Species. **Habit:** Planktonophagous and Herbivorous. **Habitat:** Clear streams and rivers, also in ponds and lentic waters. **Global Distribution:** India, Pakistan, Bangladesh, Myanmar. **Current Regional Distribution:** Orissa, West Bengal, Assam, Eastern Uttar Pradesh, Goa. - **Elevation:** < 500 m. - **Range (Sq. km):** > 20,000. - **Area Occupied (Sq. km):** > 2,000. - **Number of location:** Many, with contiguous distribution. **Population Trends - % change - % Decline:** Stable . - **Time / Rate (Yrs or gens):** Not known . - **No of Mature Individuals:** Numerous. **Global**

Population: Numerous. **Regional Population:** Numerous. **Data Quality:** Informal field sighting; Museum/collection/records. **Recent Field Studies:** No. **Threats:** Trade. **Trade:** Commercial. **Other Comments:** One of the smallest barbs reported as charming. **Status - IUCN:** LOWER RISK - LEAST CONCERN (Nationally). **DATA DEFICIENT (Globally).** - **Criteria based on:** —. - **CITES:** No. - **IWPA (1972;91):** No. - **RDB, National (1994):** No. - **RDB, International (1996):** No. **Recommendations - Research management:** Monitoring; Survey. - **PHVA:** No. **Captive breeding Recommendations - Captive breeding:** No. - **Level of difficulty:** Not known. **Existing Captive Programs:** None. - **Names of facilities:** —. **Sources (Refer Appendix):** 200, 202. **Compilers:** A. Mishra, P. Das, D.N. Saksena, R. Abidi.

239. *Puntius arulius* (Jerdon, 1849) — EN (A1a, 1c, 1d, 2c, 2d; B1, 2c). Family: Cyprinidae. **Taxonomic status:** Species. **Habit:** Freshwater. **Habitat:** Streams. **Global Distribution:** ENDEMIC to India. **Current Regional Distribution:** Kerala, Tamil Nadu. - **Elevation:** 100 - 500 m. - **Range (Sq. km):** < 5,000. - **Area Occupied (Sq. km):** < 500. - **Number of location:** Many (Nilgiri Biosphere of Kerala and Tamilnadu, Wynaad, Moyar river of Cauvery, Tambaraparani); Fragmented. **Population Trends - % change - % Decline:** 50%. - **Time / Rate (Yrs or gens):** 10 Years. - **No of Mature Individuals:** Not known. **Global Population:** Not known. **Data Quality:** Reliable census; General field study. **Recent Field Studies:** M. Arunachalam, 1996; A. Manimekalan, 1996. Ongoing research projects. **Threats:** Damming; Fishing; Pollution; Predation; Trade. **Trade:** Local; Commercial. **Other Comments:** This a good aquarium fish. **Status - IUCN:** ENDANGERED. - **Criteria based on:** A1a, 1c, 1d, 2c, 2d (Observed population reduction due to decline in extent of occurrence, area of occupancy and/or quality of habitat and actual or potential levels of exploitation and predicted decline due to extent of occurrence, area of occupancy and/or quality of habitat and actual or potential levels of exploitation); **B1, 2c** (Restricted distribution, severely fragmented, continuing decline observed in extent of occurrence, area of occupancy and/or quality of habitat). - **CITES:** No. - **IWPA (1972;91):** No. - **RDB, National (1994):** No. - **RDB, International (1996):** No. **Recommendations - Research management:** Taxonomic and morphological genetic studies; Survey; Monitoring;. - **PHVA:** Yes. **Captive breeding Recommendations - Captive breeding:** Level 3. - **Level of difficulty:** Moderate difficult. **Existing Captive Programs:** Nil. - **Names of facilities:** —. **Sources (Refer Appendix):** 9, 11 (xlv), 27 (cxxvii), 53. **Compilers:** M. Arunachalam, A. Gopalakrishnan, M. Manimekalan, T.V. Annamercy, . B.M. Kurup, O. Alphonse, C.P. Shaji, P. Subramanian

240. *Puntius arulius tambraparniei* (Silas, 1953) — CR (B1, 2c). Family: Cyprinidae. **Taxonomic status:** Species. **Habit:** Fresh water. **Habitat:** Streams, lowland river. **Global Distribution:** ENDEMIC to India. **Current Regional Distribution:** Tamil Nadu. - **Elevation:** 100 - 400 m. - **Range (Sq. km):** < 100. - **Area Occupied (Sq. km):** < 10. - **Number of location:** 15 (All tributaries of Tambraparani river - Manimuthar, Servalar, Eadana); Fragmented. **Population Trends - % change - % Decline:** Declining. - **Time / Rate (Yrs or gens):** Not known. - **No of Mature Individuals:** 100. **Global Population:** Not known. **Data Quality:** Reliable census; General field study. **Recent Field Studies:** —. **Threats:** Dynamite and other destructive fishing; Fishing; Genetic problem; Loss of habitat; Trade. **Trade:** Local. **Other Comments:** It is a highly endemic one to Tambraparani river basin. **Status - IUCN:** CRITICALLY ENDANGERED. - **Criteria based on:** B1, 2c (Restricted distribution, severely fragmented, continuing decline observed in extent of occurrence, area of occupancy and/or quality of habitat). - **CITES:** No. - **IWPA (1972;91):** No. - **RDB, National (1994):** No. - **RDB, International (1996):** No. **Recommendations - Research management:** Taxonomic and morphological genetic studies; Genetic management; Life history studies. - **PHVA:** Yes. **Captive breeding Recommendations - Captive breeding:** Level 2. - **Level of difficulty:** Moderate difficulty. **Existing Captive Programs:** None. - **Names of facilities:** —. **Sources (Refer Appendix):** 9, 10. **Compilers:** M. Arunachalam, M. Manimekalan; A. Gopalakrishnan, T.V. Annamercy, . B.M. Kurup, O. Alphonse, C.P. Shaji, P. Subramanian

241. *Puntius bovanicus* (Day) — CR (B1, 2c) . (*Barbus bovanicus* Day; *Barbodes bovanicus* (Day)). Family: Cyprinidae. **Taxonomic status:** Species. **Habit:** Riverine. **Habitat:** Streams of Western Ghats. **Global Distribution:** ENDEMIC to India. **Current Regional Distribution:** Bhavani river at Nilgiri hill base alone. - **Elevation:** 100 - 300 m. MSL. - **Range (Sq. km):** < 100. - **Area Occupied (Sq. km):** < 10. - **Number of location:** 1 (Foot hill of Nilgiri, Bhavani river). **Population Trends - % change - % Decline:** 60 - 70%. - **Time / Rate (Yrs or gens):** 5 Yrs. - **No of Mature Individuals:** Not known. **Global Population:** Continuing decline observed. **Data Quality:** General field study (Jayaram, *et al.*, 1982); Museum/collections/records. **Recent Field Studies:** A.G.K. Menon, Fresh water fishes of Peninsular India (In Press); Arunachalam, M., 1996, ICAR Ongoing project. **Threats:** Damming; Dynamite and other destructive fishing; Fishing; Human interference; Loss of habitat; Pesticides; Pollution; Siltation; Trade. **Trade:** Local. **Other Comments:** None. **Status - IUCN:** CRITICALLY ENDANGERED. - **Criteria based on:** B1, 2c (Restricted distribution, single location, continuing decline observed in extent of occurrence, area of occupancy and quality of habitat). - **CITES:** No. - **IWPA (1972;91):** No. - **RDB, National (1994):** No. - **RDB, International (1996):** No. **Recommendations - Research management:** Survey; Life history studies; Genetic management; Husbandry research; . Monitoring. - **PHVA:** Yes. **Captive breeding Recommendations - Captive breeding:** Level 1; Level 3. - **Level of difficulty:** Very difficult. **Existing Captive Programs:** None. - **Names of facilities:** —. **Sources (Refer Appendix):** 27 (cxxix), 89, 135a, 202. **Compilers:** T.V. Annamercy, M. Arunachalam, A. Gopalakrishnan, B.M. Kurup, . A. Manimekalan, O. Alphonse, P. Subramanian, C.P. Shaji.

242. *Puntius carnaticus* (Jerdon, 1849) — LRnt . (*Barbus carnaticus* (Jerdon, 1849)). Family: Cyprinidae. **Taxonomic status:** Species. **Habit:** Freshwater. **Habitat:** Rivers and streams. **Global Distribution:** ENDEMIC to India. **Current Regional Distribution:** Wester Ghats (Kerala and Karnataka: Cauvery and Krishna rivers). - **Elevation:** Up to 800m. - **Range (Sq. km):** > 20,000. - **Area Occupied (Sq. km):** < 2,000. - **Number of location:** Many (Nilgiri, Wynaad, CanaralHills and Kolli Hills; Kahini river (EG); Kaveri river basin, Mettur reservoir and Ooty lake); Fragmented. **Population Trends - % change - % Decline:** 5% per years; Considerable decline (Talwar & Jhingran, 1991). - **Time / Rate (Yrs or gens):** 10 Years. - **No of Mature Individuals:** 1000. **Global Population:** Not known. **Data Quality:** Reliable Census; General field studies. **Recent Field Studies:** M. Arunachalam, 1994 at Kolli hills of Eastern Ghats. **Threats:** Dynamite and other destructive fishing; Fishing; Loss of habitat; Poisoning; Trade. **Trade:** Local. **Other Comments:** So far recorded from Nilgiri Biosphere of TamilNadu and Kerala but for the first time Dr. M. Arunachalam recorded from Kolli hills of Eastern Ghats. It grows in big size hence conservation is necessary. **Status - IUCN:** LOWER RISK - NEAR THREATENED. - **Criteria based on:** —. - **CITES:**

No. - IWPA (1972;91): No. - RDB, National (1994): No. - RDB, International (1996): No. Recommendations - Research management: Survey; Genetic management. - PHVA: Pending. Captive breeding Recommendations - Captive breeding: No. - Level of difficulty: Not known. Existing Captive Programs: Nil. - Names of facilities: —. Sources (Refer Appendix): 9, 27 (cxxx), 119. Compilers: M. Arunachalam, A. Gopalakrishnan, M. Manimekalan, T.V. Annamercy, B.M. Kurup, O. Alphonse, C.P. Shaji, P. Subramanian

243. *Puntius cauveriensis* (Hora, 1937) — DD . (*Barbus cauveriensis* (Hora, 1937)). Family: Cyprinidae. Taxonomic status: Species. Habit: Omnivorous. Habitat: Riverine. Global Distribution: ENDEMIC to India. Current Regional Distribution: Karnataka. - Elevation: 300 m. - Range (Sq. km): < 5,000. - Area Occupied (Sq. km): < 500. - Number of location: Few (Cauvery river). Population Trends - % change - % Decline: Not known. - Time / Rate (Yrs or gens): Not known. - No of Mature Individuals: Not known. Global Population: Not known. Data Quality: Indirect information; Museum/collectio/records. Recent Field Studies: Not known. Threats: Trade. Trade: Local. Other Comments: Endemic to only cauvery river of Karnataka. Requires stringent conservation steps. Status - IUCN: DATA DEFICIENT. - Criteria based on: —. - CITES: No. - IWPA (1972;91): No. - RDB, National (1994): No. - RDB, International (1996): No. Recommendations - Research management: Survey; Monitoring. - PHVA: No. Captive breeding Recommendations - Captive breeding: No. - Level of difficulty: Not known. Existing Captive Programs: None. - Names of facilities: —. Sources (Refer Appendix): 27 (cxxxi), 89, 202. Compilers: S.V. Sharma, N. More, G.P. Dubey, V.S. Basheer, J.K. Jena, A. Apte, K.W. Dhamge

244. *Puntius chilinoides* (McClelland, 1839) — EN (A1a, 1c, 1d). Family: Cyprinidae. Taxonomic status: Species. Habit: Planktonophagous. Habitat: Rivers and Lakes. Global Distribution: ENDEMIC to India. Current Regional Distribution: Northern India, Himalaya. - Elevation: < 1000 m. - Range (Sq. km): > 20,000. - Area Occupied (Sq. km): > 2,000. - Number of location: < 10 (Himalayan foot hills, Ganga system, Loktak lake). Population Trends - % change - % Decline: 50%. - Time / Rate (Yrs or gens): 10 yrs. - No of Mature Individuals: Not known. Global Population: Not known. Data Quality: General infomation studies. Recent Field Studies: A.G.K. Menon, 1990 - 95. Threats: Dynamite and other destructive fishing; Human interference; Loss of habitat;. Pollution; Siltation; Trade. Trade: Local. Other Comments: Insufficiently known fish, status definitely known as Critically Endangered in Loktak lake. Status - IUCN: ENDANGERED. - Criteria based on: A1a, 1c, 1d (Observed population reduction due to decline in extent of occurrence, area of occupancy and/or quality of habitat and actual or potential levels of exploitation). - CITES: No. - IWPA (1972;91): No. - RDB, National (1994): No. - RDB, International (1996): No. Recommendations - Research management: Taxonomic and morphological genetic studies; Survey; Monitoring; Habitat management; Limiting factor management; Limiting factor research; Life history studies. - PHVA: No. Captive breeding Recommendations - Captive breeding: Level 1. - Level of difficulty: Very difficult. Existing Captive Programs: None. - Names of facilities: —. Sources (Refer Appendix): 85. Compilers: C.S. Singh, C.B. Joshi, S.K. Srivastava, R.S. Patiyal, S.M. Srivastava, A.K. Singh, S.K. Paul.

245. *Puntius chola* (Hamilton - Buchanan, 1822) — VU (A1a, 1c, 1d). Family: Cyprinidae. Taxonomic status: Species. Habit: Omnivorous, Column feeder. Habitat: Ponds, ditches, lakes, rivers, nullahs. Global Distribution: India, Pakistan, Nepal, Bangladesh, Sri Lanka and Myanmar. Current Regional Distribution Kerala, Tamil Nadu, Northeastern parts of Bengal. - Elevation: 100 - 700 m. - Range (Sq. km): > 20,000. - Area Occupied (Sq. km): > 2,000. - Number of location: Many. Population Trends - % change - % Decline: 20%. - Time / Rate (Yrs or gens): 10 Yrs. / 20%. - No of Mature Individuals: Not known. Global Population: Not known. Regional Population: Not known. Data Quality: General field studies (Shaw & Shebbeare, 1937 Northeastern Bengal); Museum/ collection/records. Recent Field Studies: Not known. Threats: Human interference; Pollution; Trade. Trade: Local. Other Comments: Aquarium fish, Larvivorus, used as food by local people; Of no fishing value. Status - IUCN: VULNERABLE (Nationally). DATA DEFICIENT (Globally). - Criteria based on: A1a, 1c, 1d (Observed population reduction due to decline in extent of occurrence, area of occupancy and/or quality of habitat and actual or potential levels of exploitation). - CITES: No. - IWPA (1972;91): No. - RDB, National (1994): No. - RDB, International (1996): No. Recommendations - Research management: Survey; Monitoring. - PHVA: Yes. Captive breeding Recommendations - Captive breeding: Level 1. - Level of difficulty: Least difficult. Existing Captive Programs: None. - Names of facilities: —. Sources (Refer Appendix): 27 (cxxxii), 197, 200. Compilers: A. Husain, U.K. Sarkar, A.K. Pandey, A.C. Pandey, A.K. Singh.

246. *Puntius clavatus* (McClelland, 1845) — EN/N (B1, 2c) . (*Barbus compressus* Boulenger, 1893). Family: Cyprinidae. Taxonomic status: Species. Habit: Herbivorous. Habitat: Hill stream. Global Distribution: India, (East Himalayan drainages), Myanmar. Current Regional Distribution: East Himalayan draingae. - Elevation: 1500 m. - Range (Sq. km): < 5,000. - Area Occupied (Sq. km): < 500. - Number of location: Few (East Himalayan drainages), Fragmented. Population Trends - % change - % Decline: 10 % Approx. - Time / Rate (Yrs or gens): 20 Yrs. - No of Mature Individuals: Not known. Global Population: Not known. Regional Population: Not known. Data Quality: General field studies. Recent Field Studies: None. Threats: Damming; Human interference; Loss of habitat; Siltation; Trade. Trade: Local. Other Comments: —. Status - IUCN: ENDANGERED (Nationally). DATA DEFICIENT (Globally). - Criteria based on: B1, 2c (Restricted distribution, limited locations, severely fragmented, continuing decline observed in extent of occurrence, area of occupancy and/or quality of habitat). - CITES: No. - IWPA (1972;91): No. - RDB, National (1994): No. - RDB, International (1996): No. Recommendations - Research management: Habitat management; Limiting factor research; Survey. - PHVA: Yes. Captive breeding Recommendations - Captive breeding: Pending. - Level of difficulty: Moderate difficult. Existing Captive Programs: None. - Names of facilities: —. Sources (Refer Appendix): 20, 21, 187, 202. Compilers: C.S. Singh, C.B. Joshi, D. Kapoor, S.K. Srivastava, S.M. Srivastava, R.S. Patiyal, S.K. Paul, A.K. Singh

247. *Puntius clavatus clavatus* (McClelland) — EN (A1a, 1c; B1, 2c). Family: Cyprinidae. Taxonomic status: Sub - species. Habit: Omnivorous. Habitat: Riverine - particularly in clear waters. Global Distribution: ENDEMIC to India. Current Regional Distribution: Meghalaya, Manipur. - Elevation: 300 - 500 m. - Range (Sq. km): < 20,000. - Area Occupied (Sq. km): < 500. - Number of location: 3 (Simsang river - Garo hills, Barak basin, Brahmaputra basin);

Fragmented. **Population Trends - % change - % Decline:** > 50 % . - **Time / Rate (Yrs or gens):** 15 Yrs. - **No of Mature Individuals:** Not known . **Global Population:** Not known. **Data Quality:** General field study (S. L. Hora, 1920 in Barak river in Manipur; S.P. Biswas, 1982 in Meghalaya). **Recent Field Studies:** S.C. Dey, 1992 in Assam; W. Vishwanath, 1997 in Barak river in Manipur. **Threats:** Dynamite and other destructive fishing; Trade; Fishing; Human interference; Poisoning. **Trade:** Local; Domestic. **Other Comments:** Not found in Karong from where Hora (1920) reported - revealed by field collections. Observed decline in population in Assam - S.P. Biswas, S.C. Dey. **Status - IUCN: ENDANGERED.** - **Criteria based on: A1a, 1c** (Observed population reduction due to decline in extent of occurrence, area of occupancy and quality of habitat); **B1, 2c** (Restricted distribution, limited locations, severely fragmented, continuing decline observed in extent of occurrence, area of occupancy and/or quality of habitat). - **CITES:** No. - **IWPA (1972;91):** No. - **RDB, National (1994):** No. - **RDB, International (1996):** No. **Recommendations - Research management:** Survey; Monitoring. - **PHVA:** No. **Captive breeding Recommendations - Captive breeding:** No. - **Level of difficulty:** Not known . **Existing Captive Programs:** None. - **Names of facilities:** —. **Sources (Refer Appendix):** 22, 69, 226. **Compilers:** W. Vishwanath, A.K. Karmakar, S.P. Biswas, P.C. Mahanta, R. Dayal, . B.A. Daniel.

248. *Puntius conchonius* (Hamilton - Buchanan, 1822) — VU/N (B1, 2c) . (*Cyprinus conchonius*).
Family: Cyprinidae. **Taxonomic status:** Species. **Habit:** Omnivorous. **Habitat:** Lakes and Streams in hills. **Global Distribution:** India, Pakistan, Afghanistan, Nepal, Bangladesh. **Current Regional Distribution:** Jammu & Kashmir, Himachal Pradesh, Uttar Pradesh, Sikkim, Arunachal Pradesh, Bihar, Northeastern Bengal. - **Elevation:** 1500 m. - **Range (Sq. km):** > 20,000. - **Area Occupied (Sq. km):** 1000. - **Number of location:** Many, Fragmented. **Population Trends - % change - % Decline:** Declining . - **Time / Rate (Yrs or gens):** Not known . - **No of Mature Individuals:** Not known . **Global Population:** Not known . **Regional Population:** Declining. **Data Quality:** General field studies. **Recent Field Studies:** Joshi, C.B. & S.S. Pathani, 1996 in Kumaon hills. **Threats:** Edaphic factors; Loss of habitat; Poisoning; Siltation; Trade. **Trade:** Local . **Other Comments:** —. **Status - IUCN: VULNERABLE (Nationally). DATA DEFICIENT (Globally).** - **Criteria based on: B1, 2c** (Restricted distribution, severely fragmented, continuing decline observed in extent of occurrence, area of occupancy and/or quality of habitat). - **CITES:** No. - **IWPA (1972;91):** No. - **RDB, National (1994):** No. - **RDB, International (1996):** No. **Recommendations - Research management:** Life history studies; Habitat management; Monitoring. - **PHVA:** Yes. **Captive breeding Recommendations - Captive breeding:** Pending. - **Level of difficulty:** Not known . **Existing Captive Programs:** None. - **Names of facilities:** —. **Sources (Refer Appendix):** 11 (xlviii), 27 (cxxxiii), 184, 200, 202. **Compilers:** C.S. Singh, C.B. Joshi, S.K. Srivastava, R.S. Patiyal, S.M. Srivastava, . A.K. Singh, S.K. Paul

249. *Puntius deccanensis* Yazdani & Babu Rao, 1978 — CR (B1, 2c). **Family:** Cyprinidae.
Taxonomic status: Species. **Habit:** Omnivorous. **Habitat:** Riverine. **Global Distribution:** ENDEMIC to India. **Current Regional Distribution:** Tributaries of Krishna near Poona, Maharashtra. - **Elevation:** Up to 500 m. - **Range (Sq. km):** < 5,000. - **Area Occupied (Sq. km):** < 10. - **Number of location:** 4 (Bhima, Mula, Mutha). **Population Trends - % change - % Decline:** Not known . - **Time / Rate (Yrs or gens):** Not known . - **No of Mature Individuals:** Not known. **Global Population:** Not known . **Regional Population:** Not known . **Data Quality:** Indirect information; Museum/collection/records. **Recent Field Studies:** None. **Threats:** Trade. **Trade:** Local. **Other Comments:** Very small fish of little fishery interest although it is endemic. **Status - IUCN: CRITICALLY ENDANGERED.** - **Criteria based on: B1, 2c** (Restricted distribution, limited locations, continuing decline observed in extent of occurrence, area of occupancy and/or quality of habitat). - **CITES:** Not known. - **IWPA (1972;91):** Not known. - **RDB, National (1994):** Not known. - **RDB, International (1996):** Not known. **Recommendations - Research management:** Survey; Monitoring. - **PHVA:** No. **Captive breeding Recommendations - Captive breeding:** No. - **Level of difficulty:** Not known . **Existing Captive Programs:** None. - **Names of facilities:** —. **Sources (Refer Appendix):** 202, 234. **Compilers:** S.V. Sharma, N. More, G.P. Dubey, V.S. Basheer, J.K. Jena, A. Apte, . K.W. Dhamge.

250. *Puntius denisonii* (Day, 1865) — EN (B1, 2c). **Family:** Cyprinidae. **Taxonomic status:** Species. **Habit:** Freshwater. **Habitat:** Riverine. **Global Distribution:** ENDEMIC to India. **Current Regional Distribution:** Kerala. - **Elevation:** 300 - 500 m. - **Range (Sq. km):** < 5,000. - **Area Occupied (Sq. km):** < 500. - **Number of location:** 4 (Cheenkannipuzha, Achankovil, Chaliyar, Mundakayam). **Population Trends - % change - % Decline:** Not known . - **Time / Rate (Yrs or gens):** Not known. - **No of Mature Individuals:** Not known. **Global Population:** Not known. **Data Quality:** Reliable Census; General field studies. **Recent Field Studies:** Easa, P. S. , Nilgiri Biosphere reserve; Shaji, C.P. Personal collection. **Threats:** Loss of habitat; Poisoning; Pollution; Trade. **Trade:** Local . **Other Comments:** —. **Status - IUCN: ENDANGERED.** - **Criteria based on: B1, 2c** (Restricted distribution, limited locations, continuing decline observed in extent of occurrence, area of occupancy and/or quality of habitat). - **CITES:** No. - **IWPA (1972;91):** No. - **RDB, National (1994):** No. - **RDB, International (1996):** No. **Recommendations - Research management:** Survey; Monitoring. - **PHVA:** Pending. **Captive breeding Recommendations - Captive breeding:** No. - **Level of difficulty:** Not known. **Existing Captive Programs:** None. - **Names of facilities:** —. **Sources (Refer Appendix):** 40, 53, 85, 202. **Compilers:** M. Arunachalam, A. Gopalakrishnan, M. Manimekalan, T.V. Annamercy, . B.M. Kurup, O. Alphonse, C.P. Shaji, P. Subramanian

251. *Puntius dorsalis* (Jerdon, 1849) — EN/N (B1, 2c) . (*Systemus dorsalis, Barbus dorsalis*). **Family:** Cyprinidae. **Taxonomic status:** Species. **Habit:** Omnivorous. **Habitat:** Riverine, Streams, Ponds, lakes. **Global Distribution:** India, Sri Lanka. **Current Regional Distribution:** Cauvery and Krishna river system. - **Elevation:** Up to 300 m. MSL. - **Range (Sq. km):** < 20,000. - **Area Occupied (Sq. km):** < 500. - **Number of location:** Not known . **Population Trends - % change - % Decline:** Not known . - **Time / Rate (Yrs or gens):** Not known . - **No of Mature Individuals:** Not known . **Global Population:** Not known . **Regional Population:** Not known . **Data Quality:** Indirect information; Museum/collection/records. **Recent Field Studies:** None. **Threats:** Fishing; Poisoning; Trade. **Trade:** Local; Commercial. **Other Comments:** —. **Status - IUCN: ENDANGERED (Nationally). DATA DEFICIENT (Globally).** - **Criteria based on: B1, 2c** (Restricted distribution, continuing decline observed in extent of occurrence, area of occupancy and/or quality of habitat). - **CITES:** No. - **IWPA (1972;91):** No. - **RDB, National (1994):** No. - **RDB, International (1996):** No. **Recommendations - Research management:** Survey; Monitoring. - **PHVA:** Not known. **Captive breeding Recommendations - Captive**

breeding: No. - **Level of difficulty:** Not known. - **Existing Captive Programs:** None. - **Names of facilities:** —. **Sources (Refer Appendix):** 11 (xlix), 27 (cxxxiv), 85, 202. **Compilers:** S.V. Sharma, N. More, G.P. Dubey, V.S. Basheer, J.K. Jena, A. Apte, K.W. Dhamge.

252. *Puntius fasciatus* (Jerdon, 1849) — EN (B1, 2c). Family: Cyprinidae. **Taxonomic status:** Species. **Habit:** Freshwater. **Habitat:** Streams. **Global Distribution:** ENDEMIC to India. **Current Regional Distribution:** South Kerala, South Tamil Nadu. - **Elevation:** 600 - 800 m. - **Range (Sq. km):** < 5,000. - **Area Occupied (Sq. km):** < 500. - **Number of location:** Many (Southern Parts of Western Ghats, Kalladay river, Tambraparani river, Karnataka); Fragmented. **Population Trends - % change - % Decline:** Not known. - **Time / Rate (Yrs or gens):** Not known. - **No of Mature Individuals:** Not known. **Global Population:** Not known. **Data Quality:** Reliable census, General field studies. **Recent Field Studies:** M. Arunachalam, 1995 ongoing Project. **Threats:** Human interference; Loss of habitat; Pollution. **Trade:** No. **Other Comments:** —. **Status - IUCN:** ENDANGERED. - **Criteria based on:** B1, 2c (Restricted distribution, severely fragmented, continuing decline observed in extent of occurrence, area of occupancy and/or quality of habitat). - **CITES:** No. - **IWPA (1972;91):** No. - **RDB, National (1994):** No. - **RDB, International (1996):** No. **Recommendations - Research management:** Taxonomic and morphological genetic studies. - **PHVA:** No. **Captive breeding Recommendations - Captive breeding:** No. - **Level of difficulty:** Least difficult. **Existing Captive Programs:** None. - **Names of facilities:** —. **Sources (Refer Appendix):** 9, 11 (l), 27 (cxxxv). **Compilers:** M. Arunachalam, A. Gopalakrishnan, M. Manimekalan, T.V. Annamercy, B.M. Kurup, O. Alphonse, C.P. Shaji, P. Subramanian

253. *Puntius guganio* (Hamilton - Buchanan) — LRnt. (*Cyprims guganio*). Family: Cyprinidae. **Taxonomic status:** Species. **Habit:** Herbivorous. **Habitat:** Cold water and Fresh water. **Global Distribution:** ENDEMIC to India. **Current Regional Distribution:** Ganges and Brahmaputra river systems, Assam, Orissa, Andhra Pradesh, Tamil Nadu. - **Elevation:** Up to 1000 m. - **Range (Sq. km):** > 20,000. - **Area Occupied (Sq. km):** > 2,000. - **Number of location:** Many (Brahmaputra, Ganga river); Fragmented. **Population Trends - % change - % Decline:** Not known. - **Time / Rate (Yrs or gens):** Not known. - **No of Mature Individuals:** Not known. **Global Population:** Not known. **Data Quality:** General field studies; Museum/collection/records. **Recent Field Studies:** None. **Threats:** Damming; Fishing; Human interference; Loss of habitat; Over exploitation; Poisoning; Pollution; Trade. **Trade:** Local. **Other Comments:** —. **Status - IUCN:** LOWER RISK - NEAR THREATENED. - **Criteria based on:** —. - **CITES:** No. - **IWPA (1972;91):** No. - **RDB, National (1994):** No. - **RDB, International (1996):** No. **Recommendations - Research management:** Not known. - **PHVA:** Yes. **Captive breeding Recommendations - Captive breeding:** Pending. - **Level of difficulty:** Moderate difficulty. **Existing Captive Programs:** None. - **Names of facilities:** —. **Sources (Refer Appendix):** 27 (cxxxvii), 187, 202. **Compilers:** C.S. Singh, C.B. Joshi, D. Kapoor, S.K. Srivastava, S.M. Srivastava, R.S. Patiyl, A.K. Singh, S.K. Paul.

254. *Puntius hexastichus* (McClelland) — VU/N (B1, 2c). Family: Cyprinidae. **Taxonomic status:** Species. **Habit:** Herbivorous. **Habitat:** Foothill rivers of Kashmir, Sikkim, Assam, Uttar Pradesh. **Global Distribution:** India, Nepal, Pakistan. **Current Regional Distribution:** Foot hills of Kashmir, Sikkim and Assam. - **Elevation:** 1500 m. - **Range (Sq. km):** > 20,000. - **Area Occupied (Sq. km):** < 2,000. - **Number of location:** Many; Fragmented. - **Population Trends - % change - % Decline:** 10 % . - **Time / Rate (Yrs or gens):** 20 Yrs. - **No of Mature Individuals:** Not known. **Global Population:** Not known. **Regional Population:** Not known. **Data Quality:** General field studies; Indirect information. **Recent Field Studies:** None. **Threats:** Dynamite and other destructive fishing; Loss of habitat; Poisoning; Siltation; Trade. **Trade:** Local. **Other Comments:** None. **Status - IUCN:** VULNERABLE (Nationally). **DATA DEFICIENT (Globally).** - **Criteria based on:** B1, 2c (Restricted distribution, severely fragmented, continuing decline observed in extent of occurrence, area of occupancy and/or quality of habitat). - **CITES:** No. - **IWPA (1972;91):** No. - **RDB, National (1994):** No. - **RDB, International (1996):** No. **Recommendations - Research management:** Habitat management; Life history studies. - **PHVA:** Yes. **Captive breeding Recommendations - Captive breeding:** Level 1. - **Level of difficulty:** Moderate difficult. **Existing Captive Programs:** None. - **Names of facilities:** —. **Sources (Refer Appendix):** 85. **Compilers:** C.S. Singh, C.B. Joshi, S.K. Srivastava, R.S. Patiyl, A.K. Singh, S.K. Paul.

255. *Puntius jayarami* Vishwanath & Tombi, 1986 — EN (A1a, 1c; B1, 2c). Family: Cyprinidae. **Taxonomic status:** Species. **Habit:** Omnivorous. **Habitat:** Riverine (clear stream). **Global Distribution:** ENDEMIC to India. **Current Regional Distribution:** Manipur. - **Elevation:** 500 - 800 m. - **Range (Sq. km):** < 5,000. - **Area Occupied (Sq. km):** < 500. - **Number of location:** 3 (Chakpi river, Manipur river, Lokchao river, Chindwin drainage N. F.). **Population Trends - % change - % Decline:** > 20 % in Chakpi. - **Time / Rate (Yrs or gens):** 10 Yrs. - **No of Mature Individuals:** Not known. **Global Population:** Not known. **Data Quality:** General field studies (W. Vishwanath & H. Tombi in 1986 from Manipur). **Recent Field Studies:** W. Vishwanath, 1991 in Lokchao river, Chakpi river (Chindwin); Jayaram, K. C. 1991 from Manipur. **Threats:** Dynamite and other destructive fishing; Human interference; Poisoning; Trade. **Trade:** Local; Domestic. **Other Comments:** Observed rare in Chakpi river, Used locally as food fish - Fresh & smoked. **Status - IUCN:** ENDANGERED. - **Criteria based on:** A1a, 1c (Observed population reduction due to decline in extent of occurrence, area of occupancy and/or quality of habitat); B1, 2c (Restricted distribution, limited locations, continuing decline observed in extent of occurrence, area of occupancy and/or quality of habitat). - **CITES:** No. - **IWPA (1972;91):** No. - **RDB, National (1994):** No. - **RDB, International (1996):** No. **Recommendations - Research management:** Monitoring; Survey. - **PHVA:** No. **Captive breeding Recommendations - Captive breeding:** No. - **Level of difficulty:** Not known. **Existing Captive Programs:** None. - **Names of facilities:** —. **Sources (Refer Appendix):** 86, 227. **Compilers:** W. Vishwanath, A.K. Karmakar, S.P. Biswas, P.C. Mahanta, R. Dayal, B.A. Daniel

256. *Puntius melanampyx* Day — LRlc. Family: Cyprinidae. **Taxonomic status:** Species. **Habit:** Fresh water. **Habitat:** Rivers and streams. **Global Distribution:** ENDEMIC to India. **Current Regional Distribution:** Southern western Ghats (Kerala, Wyanaad, Nilgiri, Cauvery river). - **Elevation:** 100 - 900 m. - **Range (Sq. km):** < 5,000. - **Area Occupied (Sq. km):** < 2,000. - **Number of location:** 16 (Rivers of Kerala, Goa); Fragmented. **Population Trends - % change - % Decline:** No Deline. - **Time / Rate (Yrs or gens):** 15 yrs. - **No of Mature Individuals:** Not known. **Global Population:** Not known.

Data Quality: Reliable census; General field studies. **Recent Field Studies:** M. Arunachalam, 1995 onwards - Western Ghats; B.M. Kurup; D. Easa, 1993 - 95. **Threats:** No. **Trade:** No. **Other Comments:** —. **Status - IUCN:** LOWER RISK - LEAST CONCERN. - **Criteria based on:** —. - **CITES:** No. - **IWPA (1972;91):** No. - **RDB, National (1994):** No. - **RDB, International (1996):** No. **Recommendations - Research management:** Not known. - **PHVA:** No. **Captive breeding Recommendations - Captive breeding:** Not known. - **Level of difficulty:** Not known. **Existing Captive Programs:** None. - **Names of facilities:** —. **Sources (Refer Appendix):** 9, 53, 114. **Compilers:** M. Arunachalam, A. Gopalakrishnan, M. Manimekalan, T.V. Annamercy, . B.M. Kurup, O. Alphonse, C.P. Shaji, P. Subramanian

257. *Puntius melanostigma* (Day, 1878) — EN (B1, 2c). Family: Cyprinidae. **Taxonomic status:** Species. **Habit:** Freshwater. **Habitat:** Rivers, streams. **Global Distribution:** ENDEMIC to India. **Current Regional Distribution:** Nilgiri Biosphere Reserve, Bhavani river. - **Elevation:** 400 - 600 m. MSL. - **Range (Sq. km):** < 20,000. - **Area Occupied (Sq. km):** < 500. - **Number of location:** < 10 (Wyanad, Base at Bhavani River); Fragmented. **Population Trends - % change - % Decline:** Not known. - **Time / Rate (Yrs or gens):** Not known. - **No of Mature Individuals:** Not known. **Global Population:** Not known. **Data Quality:** Reliable Census; General field studies. **Recent Field Studies:** Arunachalam, M. & C.P. Shaji, 1994,1995,1996. **Threats:** Loss of habitat; Poisoning. **Trade:** No. **Other Comments:** —. **Status - IUCN:** ENDANGERED. - **Criteria based on:** B1, 2c (Restricted distribution, severely fragmented, continuing decline observed in extent of occurrence, area of occupancy and/or quality of habitat). - **CITES:** No. - **IWPA (1972;91):** No. - **RDB, National (1994):** No. - **RDB, International (1996):** No. **Recommendations - Research management:** Survey; Habitat management; Monitoring. - **PHVA:** Yes. **Captive breeding Recommendations - Captive breeding:** Level 3. - **Level of difficulty:** Very difficult. **Existing Captive Programs:** None. - **Names of facilities:** —. **Sources (Refer Appendix):** 27 (cxxxviii). **Compilers:** M. Arunachalam, A. Gopalakrishnan, M. Manimekalan, T.V. Annamercy, . B.M. Kurup, O. Alphonse, C.P. Shaji, P. Subramanian.

258. *Puntius mudumalaiensis* Menon — CR (B1, 2b, 2c; D2). Family: Cyprinidae. **Taxonomic status:** Species. **Habit:** Fresh water. **Habitat:** Streams and rivers. **Global Distribution:** ENDEMIC to India. **Current Regional Distribution:** Tamil Nadu. - **Elevation:** 600 - 800 m. - **Range (Sq. km):** < 100. - **Area Occupied (Sq. km):** < 10. - **Number of location:** 1 (Mudumalai). **Population Trends - % change - % Decline:** 10% . - **Time / Rate (Yrs or gens):** 2 yrs. - **No of Mature Individuals:** 20. **Global Population:** 20. **Regional Population:** 20. **Data Quality:** Reliable Census; General field studies. **Recent Field Studies:** DoEn Project, 1995; Manimekalan, 1994 onwards in Mudumalai. **Threats:** Dynamite and other destructive fishing; Fishing; Loss of habitat; Poisoning. **Trade:** No. **Other Comments:** Recently described this species as new to science. **Status - IUCN:** CRITICALLY ENDANGERED. - **Criteria based on:** B1, 2b, 2c (Restricted distribution, single location, continuing decline observed in extent of occurrence, area of occupancy and quality of habitat); D2 (Restricted population in single location and/or < 100 Sq. km area). - **CITES:** No. - **IWPA (1972;91):** No. - **RDB, National (1994):** No. - **RDB, International (1996):** No. **Recommendations - Research management:** Survey; Habitat management. - **PHVA:** Pending. **Captive breeding Recommendations - Captive breeding:** No. - **Level of difficulty:** Not known. **Existing Captive Programs:** None. - **Names of facilities:** —. **Sources (Refer Appendix):** 119. **Compilers:** M. Arunachalam, A. Manimekalan, O. Alphonse, A. Gopalakrishnan, B.M. Kurup, . T. V. Anna Mercy, C.P. Shaji, P. Subramanian

259. *Puntius narayani* (Hora, 1937) — CR (B1, 2c). Family: Cyprinidae. **Taxonomic status:** Species. **Habit:** Freshwater. **Habitat:** Clear water streams. **Global Distribution:** ENDEMIC to India. **Current Regional Distribution:** Karnataka part of Western Ghats, Aghrashini river (U. Kannada), Cauvery river. - **Elevation:** 500 - 800 m. - **Range (Sq. km):** < 100. - **Area Occupied (Sq. km):** < 10. - **Number of location:** 10; Fragmented. **Population Trends - % change - % Decline:** Not known. - **Time / Rate (Yrs or gens):** Not known. - **No of Mature Individuals:** Not known. **Global Population:** Not known. **Data Quality:** Reliable Census; General field studies. **Recent Field Studies:** Arunachalam, M., 1995 to date in Karnataka part of Western Ghats. **Threats:** Dynamite and other destructive fishing; Loss of habitat; Pollution. **Trade:** No. **Other Comments:** . **Status - IUCN:** CRITICALLY ENDANGERED. - **Criteria based on:** B1, 2c (Restricted distribution, severely fragmented, continuing decline observed in extent of occurrence, area of occupancy and/or quality of habitat). - **CITES:** No. - **IWPA (1972;91):** No. - **RDB, National (1994):** No. - **RDB, International (1996):** No. **Recommendations - Research management:** Taxonomic and morphological genetic studies; Survey; Genetic management. - **PHVA:** Yes. **Captive breeding Recommendations - Captive breeding:** Level 2. - **Level of difficulty:** Moderate difficult. **Existing Captive Programs:** None. - **Names of facilities:** —. **Sources (Refer Appendix):** 9, 11 (lv), 27 (cxxxix). **Compilers:** M. Arunachalam, A. Gopalakrishnan, M. Manimekalan, T.V. Annamercy, . B.M. Kurup, O. Alphonse, C.P. Shaji, P. Subramanian

260. *Puntius ophicephalus* (Raj, 1941) — EN (B1, 2c, 2d). Family: Cyprinidae. **Taxonomic status:** Species. **Habit:** Fresh water. **Habitat:** Riverine habitat. **Global Distribution:** ENDEMIC to India. **Current Regional Distribution:** Kerala, Pambiyar river. - **Elevation:** 900 m. - **Range (Sq. km):** < 5,000. - **Area Occupied (Sq. km):** < 500. - **Number of location:** 2 (Periyar and Kallar). **Population Trends - % change - % Decline:** 20% . - **Time / Rate (Yrs or gens):** 5 yrs. - **No of Mature Individuals:** Not known. **Global Population:** Not known. **Data Quality:** Reliable Census; General field studies; Informal field sightings. **Recent Field Studies:** L.K. Arun, 1993 - 95 in Periyar lake valley system; V. J. Zacharia, 1992 - 96 in Periyar lake; C.P. Shaji, 1992 - 97 in Periyar. **Threats:** Loss of habitat; Siltation. **Trade:** No. **Other Comments:** —. **Status - IUCN:** ENDANGERED. - **Criteria based on:** B1, 2c, 2d (Restricted distribution, limited locations, continuing decline observed in extent of occurrence, area of occupancy and/or quality of habitat and number of locations or subpopulations). - **CITES:** No. - **IWPA (1972;91):** No. - **RDB, National (1994):** No. - **RDB, International (1996):** No. **Recommendations - Research management:** Translocations; Husbandry research; Monitoring; Survey. - **PHVA:** Yes. **Captive breeding Recommendations - Captive breeding:** Level 3. - **Level of difficulty:** Very difficult. **Existing Captive Programs:** None. - **Names of facilities:** —. **Sources (Refer Appendix):** 7, 236. **Compilers:** M. Arunachalam, A. Gopalakrishnan, M. Manimekalan, T.V. Annamercy, . B.M. Kurup, O. Alphonse, C.P. Shaji, P. Subramanian

261. *Puntius parrah* (Day, 1865) — EN (B1, 2c). Family: Cyprinidae. **Taxonomic status:** species. **Habit:** Freshwater. **Habitat:** Streams and rivers. **Global Distribution:** ENDEMIC to India. **Current Regional Distribution:** Kerala, Karnataka, Tamil Nadu. - **Elevation:** 100 - 200 m. - **Range (Sq. km):** < 5,000. - **Area Occupied (Sq. km):** < 500. - **Number of location:** 3 (Western Ghats, Karuvannur River, Trichur). **Population Trends - % change - % Decline:** Not known. - **Time / Rate (Yrs or gens):** Not known. - **No of Mature Individuals:** Not known. **Global Population:** Not known. **Data Quality:** Indirect information. **Recent Field Studies:** C.P. Shaji, 1994 - 1995 Trichur (Collections). **Threats:** Dynamite and other destructive fishing; Poisoning; Pollution; Trade. **Trade:** Local. **Other Comments:** —. **Status - IUCN:** ENDANGERED. - **Criteria based on:** B1, 2c (Restricted distribution, limited locations, continuing decline observed in extent of occurrence, area of occupancy and/or quality of habitat). - **CITES:** No. - **IWPA (1972;91):** No. - **RDB, National (1994):** No. - **RDB, International (1996):** No. **Recommendations - Research management:** Survey; Monitoring. - **PHVA:** Pending further data. **Captive breeding Recommendations - Captive breeding:** No. - **Level of difficulty:** Not known. **Existing Captive Programs:** Nil. - **Names of facilities:** —. **Sources (Refer Appendix):** 27 (cxl), 87, 202, 203. **Compilers:** M. Arunachalam, A. Gopalakrishnan, M. Manimekalan, T.V. Annamerly, . B.M. Kurup, O. Alphonse, C.P. Shaji, P. Subramanian

262. *Puntius sarana sarana* (Hamilton - Buchanan, 1822) — VU/N (A1a, 1c, 1d). Family: Cyprinidae. **Taxonomic status:** Species. **Habit:** Omnivorous, Column feeder. **Habitat:** Rivers, Rivulets, Lakes, Ditches. **Global Distribution:** India, Pakistan, Bangladesh, Myanmar, Afghanistan, Bhutan. **Current Regional Distribution:** Throughout India except Peninsular. - **Elevation:** 100 m. - **Range (Sq. km):** > 20,000. - **Area Occupied (Sq. km):** > 2,000. - **Number of location:** Several; Fragmented. **Population Trends - % change - % Decline:** 30 % . - **Time / Rate (Yrs or gens):** 10 Yrs. - **No of Mature Individuals:** Not known. **Global Population:** Not known. **Regional Population:** Not known. **Data Quality:** General field studies; Museum/collection/records . **Recent Field Studies:** Husain, 1996; Johal, 1996. **Threats:** Fishing; Human interference; Loss of habitat; Trade. **Trade:** Local; Domestic. **Other Comments:** Average size, 3 cms. used as feed, minor commercially importance. **Status - IUCN:** VULNERABLE (Nationally). **DATA DEFICIENT (Globally).** - **Criteria based on:** A1a, 1c, 1d (Observed population reduction due to decline in extent of occurrence, area of occupancy, quality of habitat and actual or potential levels of exploitation). - **CITES:** No. - **IWPA (1972;91):** No. - **RDB, National (1994):** No. - **RDB, International (1996):** No. **Recommendations - Research management:** Survey; Monitoring; Limiting factor research. - **PHVA:** Yes. **Captive breeding Recommendations - Captive breeding:** Level 1; Level 2. - **Level of difficulty:** Least difficult. **Existing Captive Programs:** None. - **Names of facilities:** —. **Sources (Refer Appendix):** 11 (lix), 27 (cxliv), 78, 85, 93, 128, 200. **Compilers:** A.C. Pandey, A. Husain, A.K. Pandey, U.K. Sarkar, A.K. Singh.

263. *Puntius shalynius* Yazdani & Talukdar, 1975 — VU (B1, 2c). Family: Cyprinidae. **Taxonomic status:** Species. **Habit:** Omnivorous. **Habitat:** Streams and lakes. **Global Distribution:** ENDEMIC to India. **Current Regional Distribution:** Meghalaya, Assam, Manipur . - **Elevation:** 500 - 1000 m. - **Range (Sq. km):** < 20,000. - **Area Occupied (Sq. km):** < 2,000. - **Number of location:** Many (Brahmaputra drainage, Chindwin drainage); Fragmented. **Population Trends - % change - % Decline:** Not known. - **Time / Rate (Yrs or gens):** Not known. - **No of Mature Individuals:** Not known. **Global Population:** Not known. **Data Quality:** General field study (G.M. Yazdani & S.K. Talukdar, 1975 in Barapani lake, near Shillong, Meghalaya). **Recent Field Studies:** Karmakar, 1993 Chakpi river (Chindwin drainage, Manipur). **Threats:** Dynamite and other destructive fishing; Human interference; Poisoning; Trade. **Trade:** Local. **Other Comments:** Restricted to the Northeast India; Survey required for population status. **Status - IUCN:** VULNERABLE. - **Criteria based on:** B1, 2c (Restricted distribution, severely fragmented, continuing decline observed in extent of occurrence, area of occupancy and/or quality of habitat). - **CITES:** No. - **IWPA (1972;91):** No. - **RDB, National (1994):** No. - **RDB, International (1996):** No. **Recommendations - Research management:** Survey; Monitoring. - **PHVA:** No. **Captive breeding Recommendations - Captive breeding:** No. - **Level of difficulty:** Not known. **Existing Captive Programs:** None. - **Names of facilities:** —. **Sources (Refer Appendix):** 86, 233. **Compilers:** W. Vishwanathan, A.K. Karmakar, S.P. Biswas, P.C. Mahanta, R. Dayal, . B.A. Daniel

264. *Puntius sophore* (Hamilton - Buchanan, 1822) — LRnt/N. (*Barbus stigma*) Family: Cyprinidae. **Taxonomic status:** Species. **Habit:** Planktonophagous, Herbivorous, Carnivorous. **Habitat:** Ponds, nullahs, rivers, reservoirs. **Global Distribution:** India, Pakistan and Myanmar. **Current Regional Distribution:** Uttar Pradesh, Bihar, Harayana, Madhya Pradesh, Delhi. - **Elevation:** < 700. - **Range (Sq. km):** > 20,000. - **Area Occupied (Sq. km):** > 2,000. - **Number of location:** Many; Contiguous over distribution. **Population Trends - % change - % Decline:** 20% . - **Time / Rate (Yrs or gens):** 20 Yrs. - **No of Mature Individuals:** Many. **Global Population:** Many. **Regional Population:** Continuing gradual decline observed. **Data Quality:** General field studies (Srivastava, 1981); Informal field sightings; Museum/collection/records . **Recent Field Studies:** Husain, 1997 in Delhi; Husain, 1995 in W. Himalaya; Khan, 1997 in Uttar Pradesh. **Threats:** Fishing; Pollution; Trade. **Trade:** Local; Domestic; Commercial. **Other Comments:** Aquarium fish, Carnivorous, used as food fish. **Status - IUCN:** LOWER RISK - NEAR THREATENED (Nationally). **DATA DEFICIENT (Globally).** - **Criteria based on:** —. - **CITES:** No. - **IWPA (1972;91):** No. - **RDB, National (1994):** No. - **RDB, International (1996):** No. **Recommendations - Research management:** Monitoring; Survey; Habitat management. - **PHVA:** No. **Captive breeding Recommendations - Captive breeding:** No. - **Level of difficulty:** No. **Existing Captive Programs:** None. - **Names of facilities:** —. **Sources (Refer Appendix):** 11 (lxii), 27 (cxlv), 63, 78, 85, 93, 104, 158, 200, 202. **Compilers:** A. Mishra, D.N. Saksena, R. Abidi, P. Das, A.C. Pandey, A.K. Pandey, A.K. Singh, A. Husain, U.K. Sarkar.

265. *Puntius terio* (Hamilton - Buchanan, 1822) — LRnt/N. Family: Cyprinidae. **Taxonomic status:** Species. **Habit:** Omnivorous and Column dweller. **Habitat:** Ponds, ditches, nullahs. **Global Distribution:** India, Pakistan, Bangladesh. **Current Regional Distribution:** Delhi, Northeastern Bengal. - **Elevation:** > 150 m. Up to 600 m. - **Range (Sq. km):** < 5,000. - **Area Occupied (Sq. km):** < 500. - **Number of location:** Many. **Population Trends - % change - % Decline:** Not known. - **Time / Rate (Yrs or gens):** 15 Yrs. - **No of Mature Individuals:** Not known. **Global Population:** Not known. **Regional Population:** Not known. **Data Quality:** General field study (Jayaram, 1981); Museum/collections/records. **Recent Field Studies:** Husain, 1997 in Delhi Fauna; Talwar & Jhingran, 1991 in Northeastern Bengal. **Threats:** Fishing; Human interference; Loss of habitat; Pollution; Trade. **Trade:** Local. **Other Comments:** An aquarium fish, also locally

consumed along with other small species. **Status - IUCN: LOWER RISK - NEAR THREATENED (Nationally).** **DATA DEFICIENT (Globally).** - **Criteria based on:** —. - **CITES:** No. - **IWPA (1972;91):** No. - **RDB, National (1994):** No. - **RDB, International (1996):** No. **Recommendations - Research management:** Survey; Monitoring. - **PHVA:** Yes. **Captive breeding Recommendations - Captive breeding:** Level 1. - **Level of difficulty:** Least difficult. **Existing Captive Programs:** None. - **Names of facilities:** —. **Sources (Refer Appendix):** 78, 85, 202, 203. **Compilers:** A. Husain, R. K. Tyagi, A.C. Pandey, A.K. Pandey, A.K. Singh & U.K. Sarkar.

266. *Puntius ticto* (Hamilton - Buchanan, 1822) — LRnt/N. (*Cyprinus ticto*, *Puntius punctatus*, *Barbus ticto*). **Family:** Cyprinidae. **Taxonomic status:** Species. **Habit:** Omnivorous, breeds throughout the year. **Habitat:** Riverine, Lacushine, wetlands. **Global Distribution:** Pakistan, India, Sri Lanka, Bangladesh, Myanmar, Thailand. **Current Regional Distribution:** Western Ghats of Tamil Nadu, M. S. Karnataka, Orissa. - **Elevation:** Up to 500 m. MSL. - **Range (Sq. km):** > 20,000. - **Area Occupied (Sq. km):** < 2,000. - **Number of location:** Many (Narmada, Krishna, Mahanadhi). **Population Trends - % change - % Decline:** 20 % . - **Time / Rate (Yrs or gens):** 20 Yrs. - **No of Mature Individuals:** Not known. **Global Population:** Not known. **Regional Population:** Not known. **Data Quality:** General field studies (Jayraj & Sharma, 1989 in River Tambraparani, Andhra Pradesh); Informal field sightings; Museum/collection/records . **Recent Field Studies:** M. Arunachalam, 1997 in Maharashtra, Karnataka, Tamil Nadu; A.C. Pandey & S. P. Singh, 1990 - 91 in Mizoram. **Threats:** Fishing; Loss of habitat; Trade. **Trade:** Local . **Other Comments:** —. **Status - IUCN: LOWER RISK - NEAR THREATENED (Nationally).** **DATA DEFICIENT (Globally).** - **Criteria based on:** —. - **CITES:** No. - **IWPA (1972;91):** No. - **RDB, National (1994):** No. - **RDB, International (1996):** No. **Recommendations - Research management:** Habitat management. - **PHVA:** No. **Captive breeding Recommendations - Captive breeding:** No. - **Level of difficulty:** Least difficult. **Existing Captive Programs:** None. - **Names of facilities:** —. **Sources (Refer Appendix):** 9, 27 (cxlvi), 81, 172, 200, 202, 203. **Compilers:** G.P. Dubey, S.V. Sharma, N. More, V.S. Basheer, J.K. Jena, A. Apte, K.W. Dhamge

267. *Puntius ticto punctatus* (Day) — EN (B1, 2c). **Family:** Cyprinidae. **Taxonomic status:** Sub - species. **Habit:** Freshwater. **Habitat:** Lower reaches of river and riverine wetlands. **Global Distribution:** ENDEMIC to India. **Current Regional Distribution:** Tamil Nadu. - **Elevation:** 10 - 30 m. - **Range (Sq. km):** < 100. - **Area Occupied (Sq. km):** < 10. - **Number of location:** 10 (Riverine wetland of Tambraparani basin); Fragmented. **Population Trends - % change - % Decline:** Not known . - **Time / Rate (Yrs or gens):** Not known. - **No of Mature Individuals:** Not known. **Global Population:** Not known. **Data Quality:** Reliable Census; General field studies . **Recent Field Studies:** M. Arunachalam, 1995 - 96 in Tambraparani basin. **Threats:** Fishing; Genetic problem; Overexploitation; Trade. **Trade:** Local. **Other Comments:** —. **Status - IUCN: CRITICALLY ENDANGERED.** - **Criteria based on:** B1, 2c (Restricted distribution, severely fragmented, continuing decline observed in extent of occurrence, area of occupancy and/or quality of habitat). - **CITES:** No. - **IWPA (1972;91):** No. - **RDB, National (1994):** No. - **RDB, International (1996):** No. **Recommendations - Research management:** Taxonomic and morphological genetic studies; Survey; Monitoring; Habitat management. - **PHVA:** Yes. **Captive breeding Recommendations - Captive breeding:** Level 2. - **Level of difficulty:** Very difficult. **Existing Captive Programs:** None. - **Names of facilities:** —. **Sources (Refer Appendix):** 10. **Compilers:** M. Arunachalam, A. Gopalakrishnan, M. Manimekalan, T.V. Annamercy, . B.M. Kurup, O. Alphonse, C.P. Shaji, P. Subramanian

268. *Puntius vittatus* Day 1865 — VU/N (A1a, 1c, 1d). (*Muzatfarpurensis* (Srivastava, Sharma, Verma), *Coorgensis* (Jayaram)). **Family:** Cyprinidae. **Taxonomic status:** Species. **Habit:** Surface feeder, macrophyte feeder. **Habitat:** Slow running streams with vegetation, ponds and lakes. **Global Distribution:** India, Pakistan, Sri Lanka. **Current Regional Distribution:** Goa, Karnataka, Kerala, Tamil Nadu, Gujarat (Kutch), Bihar, Rajasthan, Eastern Uttar Pradesh. - **Elevation:** < 500 m. - **Range (Sq. km):** > 20,000. - **Area Occupied (Sq. km):** > 2,000. - **Number of location:** Many, Fragmented. **Population Trends - % change - % Decline:** 20 % . - **Time / Rate (Yrs or gens):** 10 Yrs. - **No of Mature Individuals:** Not known. **Global Population:** Not known. **Regional Population:** Not known. **Data Quality:** Informal field sightings; Indirect information; Museum/collection/records . **Recent Field Studies:** A. Mishra, 1996 in East Uttar Pradesh. **Threats:** Fishing; Human interference; Loss of habitat; Over exploitation; Pollution; Trade. **Trade:** Commercial. **Other Comments:** *Puntius* is heavily exploited commercially in dry fish trade. *Puntius vittatus* is likely to be included in this trade. **Status - IUCN: VULNERABLE (Nationally).** **DATA DEFICIENT (Globally).** - **Criteria based on:** A1a, 1c, 1d (Observed population reduction due to decline in extent of occurrence, area of occupancy and/or quality of habitat and actual or potential levels of exploitation). - **CITES:** No. - **IWPA (1972;91):** No. - **RDB, National (1994):** No. - **RDB, International (1996):** No. **Recommendations - Research management:** Survey; Monitoring; Taxonomic and morphological genetic studies. - **PHVA:** No. **Captive breeding Recommendations - Captive breeding:** No. - **Level of difficulty:** Least difficult. **Existing Captive Programs:** None. - **Names of facilities:** —. **Sources (Refer Appendix):** 11 (lxiv), 27 (cxlvii), 202, 203. **Compilers:** D.N. Saksena, P. Das, R. Abidi, D. Basu, A. Mishra.

269. *Raiamas bola* (Hamilton - Buchanan, 1822) — VU/N (A1a, 1C). (*Gypius bola*, *Barilius bola*). **Family:** Cyprinidae. **Taxonomic status:** Species. **Habit:** Carnivorous. **Habitat:** Riverine, Lake. **Global Distribution:** India, Bangladesh, Nepal, Myanmar. **Current Regional Distribution:** Chambal river, Kunwari of Gangetic River system, Assam. - **Elevation:** Up to 500 m MSL. - **Range (Sq. km):** > 20,000. - **Area Occupied (Sq. km):** < 2,000. - **Number of location:** Many. **Population Trends - % change - % Decline:** about 60 % . - **Time / Rate (Yrs or gens):** 30 Years. - **No of Mature Individuals:** Not known . **Global Population:** Not known. **Regional Population:** Not known. **Data Quality:** General field studies (Dr. G.P. Dubey, Manas River, Assam, 1976; Saxena and Shrivastava, 1989; Menon, A.G.K. 1988); Museum/collection/records . **Recent Field Studies:** . V.R. Desai 1994; Biswas & Michael, 1992 from Brahmaputra (Assam). **Threats:** Over exploitation; Trade. **Trade:** Local . **Other Comments:** This fish needs conservation. Breeding has already been done and should be intensified. Game fish. **Status - IUCN: VULNERABLE (Nationally).** **DATA DEFICIENT (Globally).** - **Criteria based on:** A1a, 1c (Observed population reduction due to decline in extent of occurrence, area of occupancy and quality of habitat). - **CITES:** No. - **IWPA (1972;91):** No. - **RDB, National (1994):** No. - **RDB, International (1996):** No. **Recommendations - Research management:** Husbandary research. - **PHVA:** Yes. **Captive breeding Recommendations - Captive breeding:** Level 3. - **Level of difficulty:** Moderate difficult. **Existing Captive Programs:** . -

Names of facilities: —. **Sources (Refer Appendix):** 24 (vi), 46, 79 (ii), 183, 189 (viii). **Compilers:** G.P. Dubey, S.V. Sharma, N. More, J.K. Jena, A. Apte, K.W. Dhamge

270. *Raiamas guttatus* (Day, 1870) — EN/N (B1, 2c). (*Barilius guttatus* (Day, 1870)). **Family:** Cyprinidae. **Taxonomic status:** Species. **Habit:** Carnivorous. **Habitat:** Riverine. **Global Distribution:** India, Myanmar. **Current Regional Distribution:** Manipur. - **Elevation:** 500 - 800 m. - **Range (Sq. km):** < 5,000. - **Area Occupied (Sq. km):** < 500. - **Number of location:** Many (Chindwin drainage); Fragmented. **Population Trends - % change - % Decline:** 30% . - **Time / Rate (Yrs or gens):** 10 yrs. - **No of Mature Individuals:** Not known. **Global Population:** Not known. **Regional Population:** Not known. **Data Quality:** General field studies (M.A.S. Menon, 1950 in Manipur Valley; W. Vishwanath, 1980 - 85 in Chindwin drainage in Manipur). **Recent Field Studies:** A.K. Karmakar, 1993 in Chindwin drainage in Manipur. **Threats:** Damming; Dynamite and other destructive fishing; Human interference; Poisoning; Trade. **Trade:** Local; Domestic. **Other Comments:** Hill stream fish of good food value in Manipur; Very rare presently. **Status - IUCN: ENDANGERED (Nationally).** **DATA DEFICIENT (Globally).** - **Criteria based on: B1, 2c** (Restricted distribution, severely fragmented, continuing decline observed in extent of occurrence, area of occupancy and/or quality of habitat). - **CITES:** No. - **IWPA (1972;91):** No. - **RDB, National (1994):** No. - **RDB, International (1996):** No. **Recommendations - Research management:** Survey; Monitoring. **PHVA:** No. **Captive breeding Recommendations - Captive breeding:** No. - **Level of difficulty:** Not known. **Existing Captive Programs:** None. - **Names of facilities:** —. **Sources (Refer Appendix):** 100, 138, 228. **Compilers:** A.K. Karmakar, W. Vishwanath, S.P. Biswas, P.C. Mahanta, R. Dayal, B.A. Daniel.

271. *Rhinomugil corsula* (Hamilton - Buchanan, 1822) — VU/N (A1a, 1c, 1d). (*Mugil corsula* (Hamilton - Buchanan, 1822)). **Family:** Mugilidae. **Taxonomic status:** Species. **Habit:** Omnivorous, Annual breeder. **Habitat:** Riverine and Estuarine. **Global Distribution:** India, Nepal, Bangladesh, Myanmar. **Current Regional Distribution:** Gangetic basin, Hoogli Matiah Estuary; Mahanadi, Narmada, Cauvery. - **Elevation:** Up to 200 m MSL. - **Range (Sq. km):** > 20,000. - **Area Occupied (Sq. km):** > 2,000. - **Number of location:** Many (Mahanadi, Ganga, Narmada). **Population Trends - % change - % Decline:** 40% . - **Time / Rate (Yrs or gens):** 20 yrs. - **No of Mature Individuals:** Not known . **Global Population:** Not known . **Regional Population:** Not known . **Data Quality:** General field studies; Indirect information; Museum/collection/records . **Recent Field Studies:** Rao, 1991 in Narmada River; Desai, 1994 in Narmada; Sugunan and Yadav 1992 in Mahanadi. **Threats:** Fishing; Loss of habitat; Over exploitation; Trade. **Trade:** Domestic. **Other Comments:** —. **Status - IUCN: VULNERABLE (Nationally).** **DATA DEFICIENT (Globally).** - **Criteria based on: A1a, 1c, 1d** (Observed population reduction due to decline in extent of occurrence, area of occupancy, quality of habitat and actual or potential levels of exploitation). - **CITES:** No. - **IWPA (1972;91):** No. - **RDB, National (1994):** No. - **RDB, International (1996):** No. **Recommendations - Research management:** Husbandry research; Monitoring; Limiting factor research. - **PHVA:** Pending . **Captive breeding Recommendations - Captive breeding:** Level 3. - **Level of difficulty:** Very difficult. **Existing Captive Programs:** Nil. - **Names of facilities:** —. **Sources (Refer Appendix):** 27 (cl), 46, 183, 202, 203. **Compilers:** G.P. Dubey, S.V. Sharma, N. More, V.S. Basheer, J.K. Jena, A. Apte

272. *Rita chrysea* (Day, 1877) — EN (B1, 2c). **Family:** Bagridae. **Taxonomic status:** Species. **Habit:** Carnivorous, Annual riverine breeder. **Habitat:** Riverine. **Global Distribution:** ENDEMIC to India. **Current Regional Distribution:** Orissa, Madhya Pradesh. - **Elevation:** Up to 100 m. - **Range (Sq. km):** < 5,000. - **Area Occupied (Sq. km):** < 500. - **Number of location:** 4 to 5 (Mahanadi river). **Population Trends - % change - % Decline:** 20% . - **Time / Rate (Yrs or gens):** 20 Years. - **No of Mature Individuals:** Not assessed. **Global Population:** Not known . **Data Quality:** General field studies; Indirect information; Hearsay/popular belief. **Recent Field Studies:** Sugunan and Yadav, 1992 in Mahanadi. **Threats:** Fishing; Over exploitation; Trade. **Trade:** Local. **Other Comments:** —. **Status - IUCN: ENDANGERED.** - **Criteria based on: B1, 2c** (Restricted distribution, limited locations, continuing decline observed in extent of occurrence, area of occupancy and/or quality of habitat). - **CITES:** No. - **IWPA (1972;91):** No. - **RDB, National (1994):** No. - **RDB, International (1996):** No. **Recommendations - Research management:** Survey; Monitoring; Limiting factor research. - **PHVA:** Pending. **Captive breeding Recommendations - Captive breeding:** Pending. - **Level of difficulty:** Moderate difficult. **Existing Captive Programs:** Nil. - **Names of facilities:** —. **Sources (Refer Appendix):** 140. **Compilers:** G.P. Dubey, S.V. Sharma, N. More, V.S. Basheer, J.K. Jena, A. Apte, K.W. Dhamge.

273. *Rita kuturnee* (Sykes, 1839) — LRnt . (*Phractocephalus kuturnee* (Sykes, 1839)). **Family:** Bagridae. **Taxonomic status:** Species. **Habit:** Carnivorous, Riverine breeder. Annual breeders. **Habitat:** Riverine. **Global Distribution:** ENDEMIC to India. **Current Regional Distribution:** Andhra Pradesh, Karnataka, Maharashtra. - **Elevation:** upto 200 m MSL. - **Range (Sq. km):** > 20,000. - **Area Occupied (Sq. km):** < 500. - **Number of location:** Many - Krishna, Godavari, Tapti, Bheema. **Population Trends - % change - % Decline:** 30% . - **Time / Rate (Yrs or gens):** 20 yrs. - **No of Mature Individuals:** Not known. **Global Population:** Not known. **Data Quality:** Indirect information, Museum/collection/records . **Recent Field Studies:** None. **Threats:** Fishing; Loss of habitat; Trade. **Trade:** Local. **Other Comments:** —. **Status - IUCN: LOWER RISK - NEAR THREATENED.** - **Criteria based on: —.** - **CITES:** No. - **IWPA (1972;91):** No. - **RDB, National (1994):** No. - **RDB, International (1996):** No. **Recommendations - Research management:** Survey; Monitoring; Life history studies. - **PHVA:** Pending further data. **Captive breeding Recommendations - Captive breeding:** Pending. - **Level of difficulty:** Not known. **Existing Captive Programs:** None. - **Names of facilities:** —. **Sources (Refer Appendix):** 27 (clii), 195, 202, 203. **Compilers:** G.P. Dubey, S.V. Sharma, N. More, V.S. Basheer, J.K. Jena, A. Apte, K.W. Dhamge

274. *Rita pavementatus* (Valenciennes, 1840) — EN (B1, 2c). (*Arius pavementatus; Rita gogra* (Sykes, 1839)). **Family:** Bagridae. **Taxonomic status:** Species. **Habit:** Carnivorous. **Habitat:** Riverine. **Global Distribution:** ENDEMIC to India. **Current Regional Distribution:** Narmada, Krishna river. - **Elevation:** Up to 300 m. - **Range (Sq. km):** > 20,000. - **Area Occupied (Sq. km):** < 500. - **Number of location:** Many; Fragmented. **Population Trends - % change - % Decline:** 30% . - **Time / Rate (Yrs or gens):** 10 Yrs. - **No of Mature Individuals:** about 50% of the total Population. **Global Population:** Not known . **Data Quality:** Reliable Census; General field studies (Sharma, 1976 in river Krishna); Indirect

information; Museum/collection/records . **Recent Field Studies:** Dubey and Chatterjee, 1995 - 1996 in Narmada. **Threats:** Over exploitation; Trade for the live animal market or medicine; Trade. **Trade:** Domestic . **Other Comments:** It is observed that large number of youngones are caught by Hook and Long in Narmada. **Status - IUCN: ENDANGERED.** - **Criteria based on: B1, 2c** (Restricted distribution, severely fragmented, continuing decline observed in extent of occurrence, area of occupancy and/or quality of habitat). - **CITES:** No. - **IWPA (1972;91):** No. - **RDB, National (1994):** No. - **RDB, International (1996):** No. **Recommendations - Research management:** Survey; Monitoring. - **PHVA:** Yes. **Captive breeding Recommendations - Captive breeding:** Level 3. - **Level of difficulty:** Moderate difficulty. **Existing Captive Programs:** Nil. - **Names of facilities:** —. **Sources (Refer Appendix):** 27 (cliii), 98, 195. **Compilers:** G.P. Dubey, S.V. Sharma, N. More, V.S. Basheer, J.K. Jena, A. Apte

275. Rita rita (Hamilton - Buchanan, 1822) — LRnt/N. (*Rita ritoides* (Valenciennes); *Pimelodus rita* (Hamilton - Buchanan, 1822)). **Family:** Bagridae. **Taxonomic status:** Species. **Habit:** Carnivorous, Riverine annual breeder. **Habitat:** Riverine. **Global Distribution:** India, Pakistan, Afghanistan, Nepal, Bangladesh. **Current Regional Distribution:** Gangetic plain, Indus river system. - **Elevation:** Up to 300 m. - **Range (Sq. km):** > 20,000. - **Area Occupied (Sq. km):** > 2,000. - **Number of location:** Many (Ganga, Chambal). **Population Trends - % change - % Decline:** 40% . - **Time / Rate (Yrs or gens):** 30 yrs. - **No of Mature Individuals:** Not known. **Global Population:** Not known. **Regional Population:** Not known. **Data Quality:** General field studies; Museum/collection/records . **Recent Field Studies:** Dubey, 1994 in Chambal river; Rao *et al* 1991 in Narmada basin; Desai, 1994 in Chambal; Dubey, 1996 in Ganga (Chambal river). **Threats:** Fishing; Loss of habitat; Over exploitation; Trade. **Trade:** Domestic. **Other Comments:** Fishery regulation for exploitation. **Status - IUCN: LOWER RISK - NEAR THREATENED (Nationally).** **DATA DEFICIENT (Globally).** - **Criteria based on: —.** - **CITES:** No. - **IWPA (1972;91):** No. - **RDB, National (1994):** No. - **RDB, International (1996):** No. **Recommendations - Research management:** Habitat management; Monitoring; Limiting factor management. - **PHVA:** Yes. **Captive breeding Recommendations - Captive breeding:** Level 3. - **Level of difficulty:** Moderate difficulty. **Existing Captive Programs:** None. - **Names of facilities:** —. **Sources (Refer Appendix):** 24 (vii), 46, 200. **Compilers:** G.P. Dubey, S.V. Sharma, N. More, V. S. Bhasheer, J.K. Jena, A. Apte, . K.W. Dhamge.

276. Rohtee ogilbii Sykes 1839 — LRnt. (*Mystacoleucus ogilbii* Hora 1937). **Family:** Cyprinidae. **Taxonomic status:** Species. **Habit:** Ominivorous. **Habitat:** Riverine. **Global Distribution:** ENDEMIC to India. **Current Regional Distribution:** Western Ghats. - **Elevation:** Up to 3000 m MSL. - **Range (Sq. km):** > 20,000. - **Area Occupied (Sq. km):** > 2,000. - **Number of location:** Many (Krishna and Godavari Rivers). **Population Trends - % change - % Decline:** Not known. - **Time / Rate (Yrs or gens):** Not known . - **No of Mature Individuals:** Not known . **Global Population:** Not known. **Data Quality:** Indirect information; Museum/collection/records . **Recent Field Studies:** Not known. **Threats:** Loss of habitat; Pollution; Trade. **Trade:** Local. **Other Comments:** Not recorded from western Ghat rivers in Kerala. **Status - IUCN: LOWER RISK - NEAR THREATENED.** - **Criteria based on: —.** - **CITES:** No. - **IWPA (1972;91):** No. - **RDB, National (1994):** No. - **RDB, International (1996):** No. **Recommendations - Research management:** Genetic management; Husbandry research; Habitat management. - **PHVA:** No. **Captive breeding Recommendations - Captive breeding:** No. - **Level of difficulty:** Not known . **Existing Captive Programs:** Nil. - **Names of facilities:** —. **Sources (Refer Appendix):** 27 (cli), 202, 203. **Compilers:** G.P. Dubey, S.V. Sharma, N. More, V. S. Bashir, J.K. Jena, A. S. Apte

277. Salmostoma bacaila (Hamilton - Buchanan, 1822) — LRlc/N. (*Cyprinus bacaila* Hamilton - Buchanan; *Oxygaster bacaila*; *Chela bacaila* Day). **Family:** Cyprinidae. **Taxonomic status:** Species. **Habit:** Omnivorous, Breed in slagnant ponds. **Habitat:** Riverine, Lacustrine. **Global Distribution:** India, Bangladesh, Nepal, Pakistan. **Current Regional Distribution:** Madhya Pradesh, Rajasthan, Northern India. - **Elevation:** Up to 500 m. - **Range (Sq. km):** > 20,000. - **Area Occupied (Sq. km):** < 2,000. - **Number of location:** Many (Mahanadi, Kuanri river, Chambal river, Ganges, Brahmaputra and Indus drainage). : . **Population Trends - % change - % Decline:** Stable . - **Time / Rate (Yrs or gens):** Not known. - **No of Mature Individuals:** Not known. **Global Population:** Not known. **Regional Population:** Not known. **Data Quality:** General field studies (Saksena and Srivastava 1981 in Kuanri rivers); Indirect information; Museum/collection/records. **Recent Field Studies:** V. V. Suganan & Y. S. Yadava, 1992 in Mahanadi river; Jahal, 1997 in Rajasthan. **Threats:** Trade. **Trade:** Local. **Other Comments:** —. **Status - IUCN: LOWER RISK - LEAST CONCERN (Nationally).** **DATA DEFICIENT (Globally).** - **Criteria based on: —.** - **CITES:** No. - **IWPA (1972;91):** No. - **RDB, National (1994):** No. - **RDB, International (1996):** No. **Recommendations - Research management:** Life history studies; Monitoring; Survey. - **PHVA:** No. **Captive breeding Recommendations - Captive breeding:** No. - **Level of difficulty:** Not known. **Existing Captive Programs:** None. - **Names of facilities:** —. **Sources (Refer Appendix):** 183, 202, 203, 231 (vii). **Compilers:** G.P. Dubey, S.V. Sharma, N. More, V.S. Basheer, J.K. Jena, A. Apte, . K.W. Dhamge.

278. Salmostoma clupeioides (Bloch, 1795) — LRlc/N. (*Cyprinus clupeioides* Bloch; *Chela clupeioides* Day, 1878) . **Family:** Cyprinidae. **Taxonomic status:** Species. **Habit:** Planktophagous, Breeds in ponds. **Habitat:** Pond, Lacucsterine (Lentic). **Global Distribution:** India, Myanmar, Bangladesh. **Current Regional Distribution:** Eastern and western Ghats, Maharastra, Madhya Pradesh, Gujarat. - **Elevation:** Up to 200 m. - **Range (Sq. km):** > 20,000. - **Area Occupied (Sq. km):** > 2,000. - **Number of location:** Many (Narmada, Tapti, Chambal). **Population Trends - % change - % Decline:** Stable . - **Time / Rate (Yrs or gens):** Not known. - **No of Mature Individuals:** Not assessed but abundant. **Global Population:** Not known. **Regional Population:** Not known. **Data Quality:** Indirect information; Museum/collection/records . **Recent Field Studies:** Dubey, 1994 in Narmada, Tapti; Desai, 1994 in Chausal river in Madhya Pradesh. **Threats:** Trade. **Trade:** Local. **Other Comments:** —. **Status - IUCN: LOWER RISK - LEAST CONCERN (Nationally).** **DATA DEFICIENT (Globally).** - **Criteria based on: —.** - **CITES:** No. - **IWPA (1972;91):** No. - **RDB, National (1994):** No. - **RDB, International (1996):** No. **Recommendations - Research management:** Survey; Monitoring. - **PHVA:** No. **Captive breeding Recommendations - Captive breeding:** No. - **Level of difficulty:** Not known. **Existing Captive Programs:** None. - **Names of facilities:** —. **Sources (Refer Appendix):** 27 (clvi), 46, 50. **Compilers:** G.P. Dubey, S.V. Sharma, N. More, V.S. Basheer, J.K. Jena, A. Apte, . K.W. Dhamge.

279. *Salmostoma novacula* (Valenciennes, 1844) — LRnt. Family: Cyprinidae. Taxonomic status: Species. **Habit:** Freshwater. **Habitat:** Streams and Rivers. **Global Distribution:** ENDEMIC to India (Peninsular India). **Current Regional Distribution:** Tamil Nadu, Upper Godavari, Upper Krishna, Poona and Western Ghats. - **Elevation:** 100 - 400 m. - **Range (Sq. km):** < 20,000. - **Area Occupied (Sq. km):** < 500. - **Number of location:** Many. **Population Trends - % change - % Decline:** Not known. - **Time / Rate (Yrs or gens):** Not known. - **No of Mature Individuals:** Not known. **Global Population:** Not known. **Data Quality:** Reliable Census; General field studies. **Recent Field Studies:** Not known. **Threats:** Edaphic factors; Poisoning; Predation; Trade. **Trade:** Local. **Other Comments:** —. **Status - IUCN: LOWER RISK - NEAR THREATENED.** - **Criteria based on:** —. - **CITES:** No. - **IWPA (1972;91):** No. - **RDB, National (1994):** No. - **RDB, International (1996):** No. **Recommendations - Research management:** Survey. - **PHVA:** Pending further data. **Captive breeding Recommendations - Captive breeding:** Level 3. - **Level of difficulty:** Moderate difficult. **Existing Captive Programs:** Not known. - **Names of facilities:** —. **Sources (Refer Appendix):** 9, 11 (lxviii), 119. **Compilers:** M. Arunachalam, A. Manimekalan, A. Gopalakrishnan, T.V. Annamercy, B.M. Kurup, O. Alphones, C.P. Shaji, P. Subramanian.

280. *Salmostoma orissaensis* Banarescur, 1968 — EN (B1, 2c). (*Chela phulo* Day). Family: Cyprinidae. Taxonomic status: Species. **Habit:** Planktivorous, Pond breeders. **Habitat:** Ponds, Streams. **Global Distribution:** ENDEMIC to India. **Current Regional Distribution:** Orissa and Tamil Nadu. - **Elevation:** Up to 200 m. - **Range (Sq. km):** < 20,000. - **Area Occupied (Sq. km):** < 500. - **Number of location:** 4 (Lava, Mahanadi, Cuttack). **Population Trends - % change - % Decline:** Not known. - **Time / Rate (Yrs or gens):** Not known. - **No of Mature Individuals:** Not known. **Global Population:** Not known. **Data Quality:** Museum/collection/records. **Recent Field Studies:** Not known. **Threats:** Trade for the live animal market or medicine. **Trade:** Local. **Other Comments:** —. **Status - IUCN: ENDANGERED.** - **Criteria based on:** B1, 2c (Restricted distribution, limited locations, continuing decline observed in extent of occurrence, area of occupancy and/or quality of habitat). - **CITES:** No. - **IWPA (1972;91):** No. - **RDB, National (1994):** No. - **RDB, International (1996):** No. **Recommendations - Research management:** Survey; Monitoring. - **PHVA:** No. **Captive breeding Recommendations - Captive breeding:** No. - **Level of difficulty:** Not known. **Existing Captive Programs:** Nil. - **Names of facilities:** —. **Sources (Refer Appendix):** 202, 203. **Compilers:** G.P. Dubey, S.V. Sharma, N. More, V.S. Basheer, J.K. Jena, A. Apte,

281. *Schistura arunachalensis* (Menon, 1987) — EN/N (B1, 2c). (*Nemacheilus arunachalensis* (Menon, 1987)). Family: Homalopteridae. Taxonomic status: Species. **Habit:** Omnivorous. **Habitat:** Hillstream. **Global Distribution:** India and Myanmar. **Current Regional Distribution:** Riwa river, Tirap district (Arunachal Pradesh). - **Elevation:** 500 - 100 m. - **Range (Sq. km):** < 5,000. - **Area Occupied (Sq. km):** < 500. - **Number of location:** 1 (Riwa river, Brahmaputra basin). **Population Trends - % change - % Decline:** Not known. - **Time / Rate (Yrs or gens):** Not known. - **No of Mature Individuals:** Not known. **Global Population:** Not known. **Data Quality:** General field studies (A.G.K. Menon, 1987 in Riwa River). **Recent Field Studies:** None. **Threats:** Dynamite and other destructive fishing; Pollution. **Trade:** No. **Other Comments:** Detail survey is necessary for this species. **Status - IUCN: ENDANGERED (Nationally). DATA DEFICIENT (Globally).** - **Criteria based on:** B1, 2c (Restricted distribution, single location, continuing decline observed in extent of occurrence, area of occupancy and/or quality of habitat). - **CITES:** No. - **IWPA (1972;91):** No. - **RDB, National (1994):** No. - **RDB, International (1996):** No. **Recommendations - Research management:** Survey; Monitoring. - **PHVA:** No. **Captive breeding Recommendations - Captive breeding:** No. - **Level of difficulty:** No. **Existing Captive Programs:** Nil. - **Names of facilities:** —. **Sources (Refer Appendix):** 131. **Compilers:** W. Vishwanath, A.K. Karmakar, S.P. Biswas, P.C. Mahanta, R. Dayal, B.A. Daniel.

282. *Schistura devdevi* (Hora, 1935) — EN (B1, 2c). (*Nemacheilus devdevi* Hora, 1935; *Nemacheilus montanus* Day, 1889). Family: Homalopteridae. Taxonomic status: Species. **Habit:** Bottom feeder, Omnivorous. **Habitat:** Hill stream. **Global Distribution:** ENDEMIC to India. **Current Regional Distribution:** Sikkim, Darjeeling. - **Elevation:** 1000 - 2000 m. - **Range (Sq. km):** < 5,000. - **Area Occupied (Sq. km):** < 500. - **Number of location:** 2 (Teesta drainage). **Population Trends - % change - % Decline:** Not known. - **Time / Rate (Yrs or gens):** Not known. - **No of Mature Individuals:** Not known. **Global Population:** Not known. **Data Quality:** General field study (Hora, S. L., 1935 Eastern Himalayas below Darjeeling and Sikkim; Menon, A. G.K, 1985 from Teesta drainage); Museum/collection/records. **Recent Field Studies:** Nil. **Threats:** Dynamite and other destructive fishing; Human interference. **Trade:** No. **Other Comments:** Restricted distribution in Darjeeling Himalayas. **Status - IUCN: ENDANGERED.** - **Criteria based on:** B1, 2c (Restricted distribution, limited locations, continuing decline observed in extent of occurrence, area of occupancy and/or quality of habitat). - **CITES:** No. - **IWPA (1972;91):** No. - **RDB, National (1994):** No. - **RDB, International (1996):** No. **Recommendations - Research management:** Survey; Monitoring. - **PHVA:** No. **Captive breeding Recommendations - Captive breeding:** No. - **Level of difficulty:** Not known. **Existing Captive Programs:** Nil. - **Names of facilities:** —. **Sources (Refer Appendix):** 73, 131, 202, 203. **Compilers:** A.K. Karmakar, W. Viswanath, S.P. Biswas, P.C. Mahanta, R. Dayal, B.A. Daniel.

283. *Schistura elongatus* (Sen & Nalbant, 1981) — EN (B1, 2c). (*Noemacheilus barapaniensis*, Menon, 1987). Family: Homalopteridae. Taxonomic status: Species. **Habit:** Bottom dweller, Omnivorous. **Habitat:** Hill stream. **Global Distribution:** ENDEMIC to India. **Current Regional Distribution:** Meghalaya. - **Elevation:** 800 - 1000m. - **Range (Sq. km):** < 5,000. - **Area Occupied (Sq. km):** < 500. - **Number of location:** 1 (Barapani near Shillong - Brahmaputra basin). **Population Trends - % change - % Decline:** Not known. - **Time / Rate (Yrs or gens):** Not known. - **No of Mature Individuals:** Not known. **Global Population:** Not known. **Data Quality:** General field study (N. Sen, and T. Nalbant, 1981 in Barapani near Shillong, Meghalaya; Menon, A.G.K. 1987 from Chindwin drainage system, Manipur); Museum/collection/records. **Recent Field Studies:** None. **Threats:** Human interference. **Trade:** No. **Other Comments:** Restricted to Barapani, Meghalaya. **Status - IUCN: ENDANGERED.** - **Criteria based on:** B1, 2c (Restricted distribution, single location, continuing decline observed in extent of occurrence, area of occupancy and/or quality of habitat). - **CITES:** No. - **IWPA (1972;91):** No. - **RDB, National (1994):** No. - **RDB, International (1996):** No. **Recommendations - Research**

management: Survey; Monitoring. - **PHVA:** No. **Captive breeding Recommendations - Captive breeding:** No. - **Level of difficulty:** Not known. **Existing Captive Programs:** Nil. - **Names of facilities:** —. **Sources (Refer Appendix):** 131, 190, 202, 203. **Compilers:** W. Vishwanath, A.K. Karmakar, S.P. Biswas, P.C. Mahanta, R. Dayal, B.A. Daniel

284. *Schistura kangjupkhulensis* (Hora, 1921) — VU (A1c; B1, 2c). (*Nemacheilus kangjupkhulensis* Hora, 1921). **Family:** Homalopteridae. **Taxonomic status:** Species. **Habit:** Bottom dwelling, Omnivorous. **Habitat:** Hill stream. **Global Distribution:** India, Myanmar. **Current Regional Distribution:** Manipur, Nagaland. - **Elevation:** 800 - 1200 m. - **Range (Sq. km):** < 20,000. - **Area Occupied (Sq. km):** < 2,000. - **Number of location:** Many (Both Barak and Chindwin basin); Fragmented. **Population Trends - % change - % Decline:** 30 % (approx.). - **Time / Rate (Yrs or gens):** 10 years. - **No of Mature Individuals:** Not known. **Global Population:** Not known. **Regional Population:** Not known. **Data Quality:** General field studies (S.L. Hora, 1920 in Manipur streams; A.G.K. Menon, 1950 in Manipur streams). **Recent Field Studies:** T. Vishwanath, L. Manojkumar, 1992 in Sekai river, Chindwin basin. **Threats:** Dynamite and other destructive fishing; Human interference; Poisoning. **Trade:** No. **Other Comments:** Colourful fish, may be used for aquarium. **Status - IUCN:** VULNERABLE (Nationally). **DATA DEFICIENT (Globally).** - **Criteria based on:** A1c (Population reduction due to decline in area of occupancy, extent of occurrence and/or quality of habitat); B1, 2c (Restricted distribution, severely fragmented, continuing decline observed in extent of occurrence, area of occupancy and/or quality of habitat). - **CITES:** No. - **IWPA (1972;91):** No. - **RDB, National (1994):** No. - **RDB, International (1996):** No. **Recommendations - Research management:** Survey; Monitoring. - **PHVA:** No. **Captive breeding Recommendations - Captive breeding:** No. - **Level of difficulty:** Not known. **Existing Captive Programs:** Nil. - **Names of facilities:** —. **Sources (Refer Appendix):** 69, 131. **Compilers:** W. Vishwanath, A.K. Karmakar, S.P. Biswas, P.C. Mahanta, R. Dayal, B.A. Daniel

285. *Schistura manipurensis* (Chaudhuri, 1912) — VU (A1a, 1c). (*Nemacheilus manipurensis* Chaudhuri, 1912). **Family:** Homalopteridae. **Taxonomic status:** Species. **Habit:** Bottom dweller Omnivorous. **Habitat:** Hill stream. **Global Distribution:** ENDEMIC to India. **Current Regional Distribution:** Manipur and Nagaland. - **Elevation:** 800 - 1500 m. - **Range (Sq. km):** < 5,000. - **Area Occupied (Sq. km):** < 500. - **Number of location:** Many (Prith Bark and Chindwin basins); Fragmented. **Population Trends - % change - % Decline:** 20% . - **Time / Rate (Yrs or gens):** 10 Years. - **No of Mature Individuals:** Not known. **Global Population:** Not known. **Data Quality:** General field studies; (Chaudhuri, B. , 1912 in Manipur). **Recent Field Studies:** Karmakar, A. K. , 1993 in Manipur; Hill stream; W. Vishwanath, 1995 in Manipur hillstream. **Threats:** Dynamite and other destructive fishing; Human interference; Poisoning. **Trade:** No. **Other Comments:** This is an aquarium fish. **Status - IUCN:** VULNERABLE. - **Criteria based on:** A1a, 1c (Observed population reduction due to decline in extent of occurrence, area of occupancy and/or quality of habitat). - **CITES:** No. - **IWPA (1972;91):** No. - **RDB, National (1994):** No. - **RDB, International (1996):** No. **Recommendations - Research management:** Survey; Monitoring; Habitat management. - **PHVA:** No. **Captive breeding Recommendations - Captive breeding:** No. - **Level of difficulty:** Not known. **Existing Captive Programs:** Nil. - **Names of facilities:** —. **Sources (Refer Appendix):** 13, 131. **Compilers:** W. Vishwanath, A.K. Karmakar, S.P. Biswas, P.C. Mahanta, R. Dayal, B.A. Daniel

286. *Schistura multifasciatus* (Day, 1878) — VU/N (D2). (*Noemacheilus fasciatus*, Menon, 1987). **Family:** Homalopteridae. **Taxonomic status:** Species. **Habit:** Bottom dwelling, Omnivorous. **Habitat:** Hill stream. **Global Distribution:** India, Nepal. **Current Regional Distribution:** Eastern Himalayas, Assam, Darjeeling. - **Elevation:** 500 - 1500 m. - **Range (Sq. km):** < 20,000. - **Area Occupied (Sq. km):** < 500. - **Number of location:** 3 (Brahmaputra drainage, Teesta drainage); Fragmented. **Population Trends - % change - % Decline:** Not known. - **Time / Rate (Yrs or gens):** Not known. - **No of Mature Individuals:** Not known. **Global Population:** Not known. **Regional Population:** Not known. **Data Quality:** General field studies (F. Day, 1878 in Darjeeling, Teesta drainage, Assam, Brahmaputra drainage). **Recent Field Studies:** None. **Threats:** No. **Trade:** No. **Other Comments:** Not reported from Darjeeling and Assam since its discovery according to Talwar & Jhingran, 1991. **Status - IUCN:** VULNERABLE (Nationally). **DATA DEFICIENT (Globally).** - **Criteria based on:** D2 (Restricted population in < 5 locations). - **CITES:** No. - **IWPA (1972;91):** No. - **RDB, National (1994):** No. - **RDB, International (1996):** No. **Recommendations - Research management:** Survey; Monitoring. - **PHVA:** No. **Captive breeding Recommendations - Captive breeding:** No. - **Level of difficulty:** Not known. **Existing Captive Programs:** Nil. - **Names of facilities:** —. **Sources (Refer Appendix):** 202, 203. **Compilers:** W. Vishwanath, A.K. Karmakar. S.P. Biswas, P.C. Mahanta, R. Dayal, B.A. Daniel

287. *Schistura nagaensis* (Menon, 1987) — EN (B1, 2a, 2c). (*Noemacheilus nagaensis*, Menon, 1987). **Family:** Homalopteridae. **Taxonomic status:** Species. **Habit:** Bottom dwelling, Omnivorous. **Habitat:** Hill stream. **Global Distribution:** ENDEMIC to India. **Current Regional Distribution:** Nagaland (Barhmaputra Basin), Manipur (Chindwin basin). - **Elevation:** 1000 - 1500m. - **Range (Sq. km):** < 5,000. - **Area Occupied (Sq. km):** < 500. - **Number of location:** Many, Fragmented. **Population Trends - % change - % Decline:** 20% . - **Time / Rate (Yrs or gens):** 10 Years. - **No of Mature Individuals:** Not known. **Global Population:** Not known. **Data Quality:** General Field studies (Menon, A.G.K. , 1987 in Naga hills, Nagaland and Chindwin drainage system). **Recent Field Studies:** Vishwanath, W. , 1994 - 96 Chingai River of Manipur and Nagaland. **Threats:** Dynamite and other destructive fishing; Human interference; Poisoning. **Trade:** No. **Other Comments:** May be used as aquarium/ornamental fish. **Status - IUCN:** ENDANGERED. - **Criteria based on:** B1, 2a, 2c (Restricted distribution, severely fragmented, continuing decline observed in extent of occurrence, area of occupancy and quality of habitat). - **CITES:** No. - **IWPA (1972;91):** No. - **RDB, National (1994):** No. - **RDB, International (1996):** No. **Recommendations - Research management:** Survey; Monitoring. - **PHVA:** No. **Captive breeding Recommendations - Captive breeding:** No. - **Level of difficulty:** Not known. **Existing Captive Programs:** Nil. - **Names of facilities:** —. **Sources (Refer Appendix):** 131, 202, 203. **Compilers:** W. Vishwanath, A.K. Karmakar, S.P. Biswas, P.C. Mahanta, R. Dayal, B.A. Daniel

288. *Schistura pavonaceus* (McClelland, 1839) — EN (B1, 2c). (*Cobitis pavonacea* McClelland, 1839; *Nemacheilus pavonaceus* Day 1878). **Family:** Homalopteridae. **Taxonomic status:** Species. **Habit:** Bottom dwelling Omnivorous. **Habitat:** Hill stream. **Global Distribution:** ENDEMIC to India. **Current Regional Distribution:** Assam. -

Elevation: 500 - 1000m. - **Range (Sq. km):** > 20,000. - **Area Occupied (Sq. km):** < 500. - **Number of location:** 1 (Brahmaputra Basin). - **Population Trends - % change - % Decline:** Not known. - **Time / Rate (Yrs or gens):** Not known. - **No of Mature Individuals:** Not known. **Global Population:** Not known. **Data Quality:** General field study (McClelland. J. , 1839 from Brahmaputra drainage system, Assam. **Recent Field Studies:** None. **Threats:** Dynamite and other destructive fishing; Human interference; Loss of habitat. **Trade:** No. **Other Comments:** —. **Status - IUCN: ENDANGERED.** - **Criteria based on: B1, 2c** (Restricted distribution, single location, continuing decline observed in extent of occurrence, area of occupancy and/or quality of habitat). - **CITES:** No. - **IWPA (1972;91):** No. - **RDB, National (1994):** No. - **RDB, International (1996):** No. **Recommendations - Research management:** Survey; Habitat management. - **PHVA:** No. **Captive breeding Recommendations - Captive breeding:** No. - **Level of difficulty:** Not known. **Existing Captive Programs:** Nil. - **Names of facilities:** —. **Sources (Refer Appendix):** 121, 131, 189 (vi), 202, 203. **Compilers:** W. Vishwanath, A.K. Karmakar, S.P. Biswas, P.C. Mahanta, R. Dayal, B.A. Daniel

289. *Schistura peguensis* (Hora, 1929) — EN/N (B1, 2a, 2b) . (*Nemacheilus peguensis* Hora, 1929). **Family:** Homalopteridae. **Taxonomic status:** Species. **Habit:** Bottom dwelling, omnivorous. **Habitat:** Hill stream. **Global Distribution:** India, Myanmar. **Current Regional Distribution:** Manipur. - **Elevation:** 800 - 1000 m. - **Range (Sq. km):** < 5,000. - **Area Occupied (Sq. km):** < 500. - **Number of location:** 2 (Chindwin drainage). **Population Trends - % change - % Decline:** Not known. - **Time / Rate (Yrs or gens):** Not known. - **No of Mature Individuals:** Not known. **Global Population:** Not known. **Regional Population:** Not known. **Data Quality:** General field studies (Hora. S.L. 1929 in Peguyoma, Myanmar; A.G.K. Menon, 1987 in Chindwin drainage in Manipur). **Recent Field Studies:** None. **Threats:** Dynamite and other destructive fishing; Human interference; Poisoning. **Trade:** No. **Other Comments:** First time from Manipur on 1. iv. 53 from Kanga river, 5 miles south of Moirang (Menon, 1977). **Status - IUCN: ENDANGERED (Nationally). DATA DEFICIENT (Globally).** - **Criteria based on: B1, 2a, 2b** (Restricted distribution, limited locations, continuing decline observed in extent of occurrence and area of occupancy). - **CITES:** No. - **IWPA (1972;91):** No. - **RDB, National (1994):** No. - **RDB, International (1996):** No. **Recommendations - Research management:** Survey; Monitoring. - **PHVA:** No. **Captive breeding Recommendations - Captive breeding:** No. - **Level of difficulty:** Not known. **Existing Captive Programs:** None. - **Names of facilities:** —. **Sources (Refer Appendix):** 131. **Compilers:** W. Vishwanath, A.K. Karmakar, S.P. Biswas, P.C. Mahanta, R. Dayal, B.A. Daniel

290. *Schistura prashari* (Hora, 1921) — VU (A1a, 1c, 1d) . (*Nemacheilus prashadi*, Hora, 1921). **Family:** Homalopteridae. **Taxonomic status:** Species. **Habit:** Bottom dwelling, Omnivorous. **Habitat:** Hill stream. **Global Distribution:** ENDEMIC to India. **Current Regional Distribution:** Manipur. - **Elevation:** 800 - 1500m. - **Range (Sq. km):** < 5,000. - **Area Occupied (Sq. km):** < 500. - **Number of location:** Many; Chindwin basin (Central and east flowing streams). **Population Trends - % change - % Decline:** 20% . - **Time / Rate (Yrs or gens):** 10 yrs. - **No of Mature Individuals:** Not known. **Global Population:** Not known. **Data Quality:** General field studies (Hora, S.L. 1921 from Yarabuk, Manipur; Vishwanath, W and Tombi, H.1987); Indirect information. **Recent Field Studies:** A.K. Karmakar, 1993 in Chindwin basin of Manipur; W. Vishwanath, 1994 in Chindwin drainage of Manipur. **Threats:** Dynamite and other destructive fishing; Human interference; Loss of habitat;. Poisoning. **Trade:** No. **Other Comments:** May be used as ornamental fish. Decline in population in areas near Manipur valley due to Human interference. **Status - IUCN: VULNERABLE.** - **Criteria based on: A1a, 1c, 1d** (Observed population reduction due to decline in extent of occurrence, area of occupancy, quality of habitat and actual or potential levels of exploitation). - **CITES:** No. - **IWPA (1972;91):** No. - **RDB, National (1994):** No. - **RDB, International (1996):** No. **Recommendations - Research management:** Life history studies; Monitoring. - **PHVA:** No. **Captive breeding Recommendations - Captive breeding:** No. - **Level of difficulty:** Not known. **Existing Captive Programs:** Nil. - **Names of facilities:** —. **Sources (Refer Appendix):** 69, 131, 202, 203, 228. **Compilers:** W. Vishwanath, A.K. Karmakar, S.P. Biswas, P.C. Mahanta, R. Dayal, B.A. Daniel.

291. *Schistura sikmaiensis* Hora, 1921 — EN/N (B1, 2c). (*Nemacheilus sikmaiensis* Hora, 1921). **Family:** Homalopteridae. **Taxonomic status:** Species. **Habit:** Bottom dwelling, omnivorous. **Habitat:** Hill streams. **Global Distribution:** India, Myanmar. **Current Regional Distribution:** Manipur. - **Elevation:** 500 - 1000 m. - **Range (Sq. km):** < 5,000. - **Area Occupied (Sq. km):** < 500. - **Number of location:** 2; Fragmented (Chindwin and Barak drainage, Brahmaputra basin in Meghalaya). **Population Trends - % change - % Decline:** > 30% . - **Time / Rate (Yrs or gens):** 10 yrs. - **No of Mature Individuals:** Not known. **Global Population:** Not known. **Regional Population:** Not known. **Data Quality:** General field studies (S. L. Hora, 1920 in Chindwin drainage, Manipur). **Recent Field Studies:** W. Vishwanath, 1990 - 95, Manipur. **Threats:** Dynamite and other destructive fishing; Human interference; Poisoning. **Trade:** No. **Other Comments:** May be used on good aquarium fish. **Status - IUCN: ENDANGERED (Nationally). DATA DEFICIENT (Globally).** - **Criteria based on: B1, 2c** (Restricted distribution, limited locations, severely fragmented, continuing decline observed in extent of occurrence, area of occupancy and/or quality of habitat). - **CITES:** No. - **IWPA (1972;91):** No. - **RDB, National (1994):** No. - **RDB, International (1996):** No. **Recommendations - Research management:** Survey; Monitoring. - **PHVA:** No. **Captive breeding Recommendations - Captive breeding:** No. - **Level of difficulty:** Not known. **Existing Captive Programs:** None. - **Names of facilities:** —. **Sources (Refer Appendix):** 69, 225. **Compilers:** A.K. Karmakar, W. Vishwanath, S.P. Biswas, P.C. Mahanta, R. Dayal, B.A. Daniel.

292. *Schistura singhi* (Menon, 1987) — CR (B1, 2a, 2c) . (*Noemacheilus singhi*, Menon, 1989). **Family:** Homalopteridae. **Taxonomic status:** Species. **Habit:** Bottom dwelling, Omnivorous. **Habitat:** Hill stream. **Global Distribution:** ENDEMIC to India. **Current Regional Distribution:** Kiphire, Nagaland. - **Elevation:** 500 - 1200 m. - **Range (Sq. km):** < 100. - **Area Occupied (Sq. km):** < 10. - **Number of location:** 1 (Brahmaputra basin). **Population Trends - % change - % Decline:** Not known. - **Time / Rate (Yrs or gens):** Not known. - **No of Mature Individuals:** Not known. **Global Population:** Not known. **Data Quality:** General field studies (Menon, A. G. K. , 1987 from Kiphire, Nagaland). **Recent Field Studies:** None. **Threats:** Dynamite and other destructive fishing; Human interference; Poisoning. **Trade:** No. **Other Comments:** 1. No further information available after Menon's description; 2. Restricted distribution; 3. Further survey necessary. **Status - IUCN: CRITICALLY ENDANGERED.** - **Criteria based on: B1, 2a, 2c** (Restricted distribution, single

location, continuing decline observed in extent of occurrence, area of occupancy and quality of habitat). - **CITES**: No. - **IWPA (1972;91)**: No. - **RDB, National (1994)**: No. - **RDB, International (1996)**: No. **Recommendations - Research management**: Survey; Monitoring; Life history studies. - **PHVA**: Pending. **Captive breeding Recommendations - Captive breeding**: No. - **Level of difficulty**: Not known. **Existing Captive Programs**: Nil. - **Names of facilities**: —. **Sources (Refer Appendix)**: 131, 202, 203. **Compilers**: W. Vishwanath, A.K. Karmakar, S.P. Biswas, P.C. Mahanta, R. Dayal, B.A. Daniel

293. *Schistura vinciguerrae* (Hora, 1935) — EN/N (B1, 2c). (*Nemacheilus putaensis* Rendahl, 1940). **Family**: Homalopteridae. **Taxonomic status**: Species. **Habit**: Bottom dwelling, omnivorous. **Habitat**: Hill streams. **Global Distribution**: India, Myanmar. **Current Regional Distribution**: Manipur. - **Elevation**: 500 - 800 m. - **Range (Sq. km)**: < 5,000. - **Area Occupied (Sq. km)**: < 500. - **Number of location**: 1 (Chindwin drainage, Manipur). . . **Population Trends - % change - % Decline**: Not known. - **Time / Rate (Yrs or gens)**: Not known. - **No of Mature Individuals**: Not known. **Global Population**: Not known. **Regional Population**: Not known. **Data Quality**: General field studies (A.G.K. Menon, 1987 in Chindwin drainage in Manipur). **Recent Field Studies**: W. Vishwanath, 1995, river Lokehao in Chindwin drainage in Manipur. **Threats**: Dynamite and other destructive fishing; Human interference; Loss of habitat;. Over exploitation; Poisoning. **Trade**: No. **Other Comments**: Increasing urbanization in Lokehar are because of Indo - myanmar trade. **Status - IUCN**: **ENDANGERED (Nationally)**. **DATA DEFICIENT (Globally)**. - **Criteria based on**: **B1, 2c** (Restricted distribution, single location, continuing decline observed in extent of occurrence, area of occupancy and/or quality of habitat). - **CITES**: No. - **IWPA (1972;91)**: No. - **RDB, National (1994)**: No. - **RDB, International (1996)**: No. **Recommendations - Research management**: Survey; Monitoring. - **PHVA**: No. **Captive breeding Recommendations - Captive breeding**: No. - **Level of difficulty**: Not known. **Existing Captive Programs**: None. - **Names of facilities**: —. **Sources (Refer Appendix)**: 131, 225. **Compilers**: W. Vishwanath, A.K. Karmakar, S.P. Biswas, P.C. Mahanta, R. Dayal, B.A. Daniel.

294. *Schizothorachthys hugelii* (Heckel) — LRnt. **Family**: Cyprinidae. **Taxonomic status**: Species. **Habit**: Omnivorous. **Habitat**: Hill stream. **Global Distribution**: ENDEMIC to India. **Current Regional Distribution**: Kashmir valley river. - **Elevation**: 1500m. - **Range (Sq. km)**: < 5,000. - **Area Occupied (Sq. km)**: < 500. - **Number of location**: Few. . . **Population Trends - % change - % Decline**: 15% . - **Time / Rate (Yrs or gens)**: 20 Yrs. - **No of Mature Individuals**: Not known. **Global Population**: Not known. **Data Quality**: General field studies. **Recent Field Studies**: Nil. **Threats**: Damming; Human interference; Loss of habitat; Poisoning; Trade. **Trade**: Local. **Other Comments**: —. **Status - IUCN**: **LOWER RISK - NEAR THREATENED**. - **Criteria based on**: —. - **CITES**: No. - **IWPA (1972;91)**: No. - **RDB, National (1994)**: No. - **RDB, International (1996)**: No. **Recommendations - Research management**: Survey; Habitat Management. - **PHVA**: Yes. **Captive breeding Recommendations - Captive breeding**: Pending. - **Level of difficulty**: Moderate difficult. **Existing Captive Programs**: Nil. - **Names of facilities**: —. **Sources (Refer Appendix)**: 202, 203, 207. **Compilers**: C.S. Singh, C.B. Joshi, D. Kapoor, S.K. Srivastava, S.M. Srivastava, R.S. Patiyal, A.K. Singh, S.K. Paul

295. *Schizothorax curvifrons* Heckel, 1838 — VU (B1, 2c). (*Schizothorax curvifrons*). **Family**: Cyprinidae. **Taxonomic status**: Species. **Habit**: Herbivorous. **Habitat**: Hill streams of Jammu & Kashmir and Gharwal. **Global Distribution**: ENDEMIC to India. **Current Regional Distribution**: Kashmir, Gharwal. - **Elevation**: 2000 m. - **Range (Sq. km)**: < 20,000. - **Area Occupied (Sq. km)**: < 2,000. - **Number of location**: Few (Indus system, Gangetic system); Fragmented. **Population Trends - % change - % Decline**: 20% . - **Time / Rate (Yrs or gens)**: 20 Yrs. - **No of Mature Individuals**: Not known. **Global Population**: Not known. **Data Quality**: General field studies. **Recent Field Studies**: Dobriyal, *et. al* (1994) Gharwal; Sundar, *et. al.*, (1992) Gharwal. **Threats**: Damming; Dynamite and other destructive fishing; Human interference; Loss of habitat; Over exploitation; Pesticides; Siltation; Trade. **Trade**: Domestic. **Other Comments**: Occurrence in Gharwal Himalaya needs to be confirmed. **Status - IUCN**: **VULNERABLE**. - **Criteria based on**: **B1, 2c** (Restricted distribution, limited locations, severely fragmented, continuing decline observed in extent of occurrence, area of occupancy and/or quality of habitat). - **CITES**: No. - **IWPA (1972;91)**: No. - **RDB, National (1994)**: No. - **RDB, International (1996)**: No. **Recommendations - Research management**: Survey; Monitoring; Genetic management; Habitat management. - **PHVA**: Yes. **Captive breeding Recommendations - Captive breeding**: Pending. - **Level of difficulty**: Moderate difficult. **Existing Captive Programs**: Nil. - **Names of facilities**: —. **Sources (Refer Appendix)**: 202, 203, 207. **Compilers**: C.S. Singh, C.B. Joshi, R.S. Patiyal, S.K. Paul, A.K. Singh, S.M. Srivastava

296. *Schizothorax esocinus* (Heckel, 1838) — LRnt/N. (*Schizothorax punctatus* Day). **Family**: Cyprinidae. **Taxonomic status**: Species. **Habit**: Omnivorous. **Habitat**: Hill streams, cold water. **Global Distribution**: India, Afghanistan. **Current Regional Distribution**: Indus rivers and tributaries, Ladak and Krishna valley. - **Elevation**: 2000m. - **Range (Sq. km)**: < 5,000. - **Area Occupied (Sq. km)**: < 2,000. - **Number of location**: Many. **Population Trends - % change - % Decline**: 20% . - **Time / Rate (Yrs or gens)**: 25 yrs. - **No of Mature Individuals**: Not known. **Global Population**: Not known. **Regional Population**: Not known. **Data Quality**: General field studies; Informal field sightings. **Recent Field Studies**: None. **Threats**: Fishing; Human interference, persecution or disturbance; Loss of habitat because of exotic animal; Over exploitation; Trade. **Trade**: Local. **Other Comments**: —. **Status - IUCN**: **LOWER RISK - NEAR THREATENED (Nationally)**. **DATA DEFICIENT (Globally)**. - **Criteria based on**: —. - **CITES**: No. - **IWPA (1972;91)**: No. - **RDB, National (1994)**: No. - **RDB, International (1996)**: No. **Recommendations - Research management**: Survey; Monitoring; Habitat management. - **PHVA**: Yes. **Captive breeding Recommendations - Captive breeding**: Pending. - **Level of difficulty**: Least difficult. **Existing Captive Programs**: Nil. - **Names of facilities**: —. **Sources (Refer Appendix)**: 202, 203. **Compilers**: C.S. Singh, C.B. Joshi, S.K. Srivastava, S.M. Srivastava, R. Patiyal.

297. *Schizothorax kumaonensis* (Menon, 1971) — LRnt/N. **Family**: Cyprinidae. **Taxonomic status**: Species. **Habit**: Omnivorous. **Habitat**: Upland streams. **Global Distribution**: ENDEMIC to India. **Current Regional Distribution**: Kumaon Himalayan streams (Uttar Pradesh). - **Elevation**: 1500m. - **Range (Sq. km)**: < 5,000. - **Area Occupied (Sq. km)**: < 500. - **Number of location**: Few. . . **Population Trends - % change - % Decline**: Not known. - **Time / Rate (Yrs or gens)**: Not known. - **No of Mature Individuals**: Not known. **Global Population**: Not known. **Data**

Quality: General field studies . **Recent Field Studies:** Joshi and Sounder 1996; Pathuri, S.S (1994). **Threats:** Human interference; Loss of habitat; Over exploitation; Siltation; Trade. **Trade:** Local. **Other Comments:** —. **Status - IUCN:** LOWER RISK - NEAR THREATENED. - **Criteria based on:** —. - **CITES:** No. - **IWPA (1972;91):** No. - **RDB, National (1994):** No. - **RDB, International (1996):** No. **Recommendations - Research management:** Taxonomic and morphological genetic studies; Survey. - **PHVA:** Yes. **Captive breeding Recommendations - Captive breeding:** Pending. - **Level of difficulty:** Not known . **Existing Captive Programs:** Nil. - **Names of facilities:** —. **Sources (Refer Appendix):** 202, 203. **Compilers:** C.S. Singh, C.B. Joshi, S.K. Srivastava, S.M. Srivastava, R.S. Patiyal, A. K. Sing and S.K. Paul

298. *Schizothorax labiatus* (McClelland, 1842) — EN/N (B1, 2c) . (*Racoma labiatus*). **Family:** Cyprinidae. **Taxonomic status:** Species. **Habit:** Omnivorous. **Habitat:** Hill streams. **Global Distribution:** India, Pakistan, Afghanistan, Nepal. **Current Regional Distribution:** Rivers of Ladakah, Indus rivers. - **Elevation:** 2000 m. - **Range (Sq. km):** < 5,000. - **Area Occupied (Sq. km):** < 500. - **Number of location:** Few, Fragmented. **Population Trends - % change - % Decline:** 15 % . - **Time / Rate (Yrs or gens):** 10 Yrs. - **No of Mature Individuals:** Not known. **Global Population:** Not known . **Regional Population:** Not known. **Data Quality:** General field studies; Informal field sightings . **Recent Field Studies:** None. **Threats:** Human interference; Loss of habitat; Over exploitation; Siltation; Trade. **Trade:** Local. **Other Comments:** —. **Status - IUCN:** ENDANGERED (Nationally). **DATA DEFICIENT (Globally)**. - **Criteria based on:** B1, 2c (Restricted distribution, limited locations, severely fragmented, continuing decline observed in extent of occurrence, area of occupancy and/or quality of habitat). - **CITES:** No. - **IWPA (1972;91):** No. - **RDB, National (1994):** No. - **RDB, International (1996):** No. **Recommendations - Research management:** Survey; Habitat management. - **PHVA:** Pending. **Captive breeding Recommendations - Captive breeding:** Pending. - **Level of difficulty:** Moderate difficult. **Existing Captive Programs:** Nil. - **Names of facilities:** —. **Sources (Refer Appendix):** 202, 203. **Compilers:** C.S. Singh, D. Kapoor, C.B. Joshi, S.K. Srivastava, S.M. Srivastava, A.K. Singh,. S.K. Paul

299. *Schizothorax nasus* (Heckel, 1838) — LRnt . (*Schizothorax intromedius*). **Family:** Cyprinidae. **Taxonomic status:** Species. **Habit:** Omnivorous. **Habitat:** Hill streams. **Global Distribution:** ENDEMIC to India. **Current Regional Distribution:** Kashmir valley. - **Elevation:** 1500 m. - **Range (Sq. km):** < 5,000. - **Area Occupied (Sq. km):** < 10. - **Number of location:** Few; Fragmented. : . **Population Trends - % change - % Decline:** 15% . - **Time / Rate (Yrs or gens):** 20 Years. - **No of Mature Individuals:** Not known . **Global Population:** Not known . **Data Quality:** General field studies. **Recent Field Studies:** No. **Threats:** Human interference; Loss of habitat; Poisoning; Trade. **Trade:** Local. **Other Comments:** —. **Status - IUCN:** LOWER RISK - NEAR THREATENED. - **Criteria based on:** —. - **CITES:** No. - **IWPA (1972;91):** No. - **RDB, National (1994):** No. - **RDB, International (1996):** No. **Recommendations - Research management:** Survey; Habitat management. - **PHVA:** Yes. **Captive breeding Recommendations - Captive breeding:** Pending. - **Level of difficulty:** Moderate difficulty. **Existing Captive Programs:** Nil. - **Names of facilities:** —. **Sources (Refer Appendix):** 203. **Compilers:** C.S. Singh, C.B. Joshi, D. Kapoor, S.K. Srivastava, S.M. Srivastava, R.S. Patiyal

300. *Schizothorax niger* (Heckel, 1838) — VU (B1, 2c) . (*Schizothoraichtys niger*). **Family:** Cyprinidae. **Taxonomic status:** Species. **Habit:** Herbivorous. **Habitat:** Hill streams. **Global Distribution:** ENDEMIC to India. **Current Regional Distribution:** Garhwal region and Jammu & Kashmir rivers. - **Elevation:** Up to 2000m. - **Range (Sq. km):** < 20,000. - **Area Occupied (Sq. km):** < 2,000. - **Number of location:** Few. **Population Trends - % change - % Decline:** 25% . - **Time / Rate (Yrs or gens):** 20 Yrs. - **No of Mature Individuals:** Not known . **Global Population:** Not known. **Data Quality:** General field studies. **Recent Field Studies:** Dobriyal *et. al.* , 1994 at Garhwal hill; Sundar *et al.*, 1992. **Threats:** Damming; Dynamite and other destructive fishing; Human interference; Loss of habitat; Over exploitation; Pesticides; Siltation; Trade. **Trade:** Domestic. **Other Comments:** Occurrence in Garhwal doubtful. **Status - IUCN:** VULNERABLE. - **Criteria based on:** B1, 2c (Restricted distribution, limited locations, continuing decline observed in extent of occurrence, area of occupancy and/or quality of habitat) . - **CITES:** No. - **IWPA (1972;91):** No. - **RDB, National (1994):** No. - **RDB, International (1996):** No. **Recommendations - Research management:** Survey; Monitoring; Genetic management; Habitat management; Limiting factor research. - **PHVA:** yes. **Captive breeding Recommendations - Captive breeding:** Pending. - **Level of difficulty:** Moderate difficult. **Existing Captive Programs:** Nil. - **Names of facilities:** —. **Sources (Refer Appendix):** 202, 203. **Compilers:** C.S. Singh, C.B. Joshi, R.S. Patiyal, S.K. Srivastava, S.M. Srivastava, A.K. Singh, S.K. Paul

301. *Schizothorax progastus* (McClelland, 1839) — LRnt/N . (*Oreinus progastus*). **Family:** Cyprinidae. **Taxonomic status:** Species. **Habit:** Omnivorous. **Habitat:** All along the foot hills of Himalayas. **Global Distribution:** India, Pakistan, Nepal, Bhutan, Myanmar upland coasts. **Current Regional Distribution:** Jammu and Kashmir, Sikkim, Arunachal Pradesh and Meghalaya. - **Elevation:** 3000 m. - **Range (Sq. km):** > 20,000. - **Area Occupied (Sq. km):** < 2,000. - **Number of location:** Many (Ganga river system, Brahmaputra - in Sikkim). **Population Trends - % change - % Decline:** Not known . - **Time / Rate (Yrs or gens):** Not known . - **No of Mature Individuals:** 15 - 20%. **Global Population:** Not known . **Regional Population:** Not known . **Data Quality:** General field studies; Museum/collection/records . **Recent Field Studies:** Uphills, Jammu & Kashmir. **Threats:** Damming; Drought; Dynamite and other destructive fishing; Fishing; Human interference; Loss of habitat; Over exploitation; Siltation. **Trade:** No. **Other Comments:** NGO'S to be incorporated for conservation. **Status - IUCN:** LOWER RISK - NEAR THREATENED (Nationally). **DATA DEFICIENT (Globally)**. - **Criteria based on:** —. - **CITES:** No. - **IWPA (1972;91):** No. - **RDB, National (1994):** No. - **RDB, International (1996):** No. **Recommendations - Research management:** Survey; Monitoring; Habitat management; Limiting factor management. - **PHVA:** Yes. **Captive breeding Recommendations - Captive breeding:** Level 1. - **Level of difficulty:** Moderate difficult. **Existing Captive Programs:** Nil. - **Names of facilities:** —. **Sources (Refer Appendix):** 79 (iii), 202, 203. **Compilers:** A.K. Karmakar, S.P. Biswas, W. Vishwanath, P.C. Mahanta, R. Dayal, . B.A. Daniel.

302. *Schizothorax richardsonii* (Gray, 1832) — VU (A1c, 2c, 2d) . (*Cyprinib richardsonni* 1832 Gray). **Family:** Cyprinidae. **Taxonomic status:** Species. **Habit:** Bottom feeder. **Habitat:** Upland Hills and streams, prefers to live among rocks. **Global Distribution:** India , Nepal, Pakistan, Afghanistan, Myanmar. **Current Regional Distribution:** Indus

Ganga, Brahmaputra. - **Elevation:** Up to 3000 m. - **Range (Sq. km):** > 20,000. - **Area Occupied (Sq. km):** > 2,000. - **Number of location:** Plenty. **Population Trends - % change - % Decline:** 30% . - **Time / Rate (Yrs or gens):** 10 Yrs. - **No of Mature Individuals:** Not known. **Global Population:** Not known. **Regional Population:** Not known. **Data Quality:** General field studies; Informal field sightings; Museum/ collection/records . **Recent Field Studies:** None. **Threats:** Damming; Drowning; Dynamite and other destructive fishing; Fishing; Human interference; Hunting/Harvest; Loss of habitat; Over exploitation; Powerlines; Siltation; Trade. **Trade:** Domestic; Local. **Other Comments:** NGO'S to be included for conservation. **Status - IUCN:** **VULNERABLE (Nationally)**. **DATA DEFICIENT (Globally)**. - **Criteria based on:** **A1c, 2c, 2d** (Population reduction due to decline in extent of occurrence, area of occupancy and/or quality of habitat and predicted decline due to extent of occurrence, area of occupancy and/or quality of habitat and actual or potential levels of exploitation). - **CITES:** No. - **IWPA (1972;91):** No. - **RDB, National (1994):** No. - **RDB, International (1996):** No. **Recommendations - Research management:** Survey; Monitoring; Habitat Management; Limiting factor Management. - **PHVA:** Yes. **Captive breeding Recommendations - Captive breeding:** Level 1. - **Level of difficulty:** Moderate difficult. **Existing Captive Programs:** Nil. - **Names of facilities:** —. **Sources (Refer Appendix):** —. **Compilers:** C.S. Singh, C.B. Joshi, S.K. Srivastava, R.S. Patiyal, S.M. Srivastava, A. Singh and S.K. Paul

303. *Schizothorax sinuatus* (Heckel, 1838) — LRnt. **Family:** Cyprinidae. **Taxonomic status:** Species. **Habit:** Ominivorous. **Habitat:** Hill stream. **Global Distribution:** Afghanistan. **Current Regional Distribution:** West Himalayan rivers. - **Elevation:** 2000 m. - **Range (Sq. km):** < 20,000. - **Area Occupied (Sq. km):** < 2,000. - **Number of location:** Many. **Population Trends - % change - % Decline:** 10% . - **Time / Rate (Yrs or gens):** 20 Yrs. - **No of Mature Individuals:** Not known. **Global Population:** Not known . **Regional Population:** Not known . **Data Quality:** Records. **Recent Field Studies:** Gabriel *et. al.* **Threats:** Loss of habitat; Trade. **Trade:** Local. **Other Comments:** —. **Status - IUCN:** **LOWER RISK - NEAR THREATENED** . - **Criteria based on:** —. - **CITES:** No. - **IWPA (1972;91):** No. - **RDB, National (1994):** No. - **RDB, International (1996):** No. **Recommendations - Research management:** Survey; Habitat management; Life history studies. - **PHVA:** Yes. **Captive breeding Recommendations - Captive breeding:** Pending. - **Level of difficulty:** Moderate difficult. **Existing Captive Programs:** Nil. - **Names of facilities:** —. **Sources (Refer Appendix):** —. **Compilers:** C.S. Singh, C. B. , Joshi, S.K. Srivastava, S.M. Srivastava, A.K. Singh, S.K. Paul

304. *Semiplotus modestus* Day, 1870 — EN/N (B1, 2b, 2c, 2d) . (*Cyprinion modestum* Day). **Family:** Cyprinidae. **Taxonomic status:** Species. **Habit:** Ominivorous. **Habitat:** Riverine. **Global Distribution:** India, Myanmar. **Current Regional Distribution:** Mizoram. - **Elevation:** 500 m. - **Range (Sq. km):** < 5,000. - **Area Occupied (Sq. km):** < 500. - **Number of location:** 1(Koladyne river). **Population Trends - % change - % Decline:** Not known . - **Time / Rate (Yrs or gens):** Not known. - **No of Mature Individuals:** Not known. **Global Population:** Not known. **Regional Population:** Not known. **Data Quality:** General field studies; Museum/collection/records . **Recent Field Studies:** None. **Threats:** Dynamite and other destructive fishing; Over exploitation; Trade. **Trade:** Local; Domestic. **Other Comments:** This is a very tasty fish hence called as King fish. It was recorded in India for the first time in 1988. **Status - IUCN:** **ENDANGERED (Nationally)**. **DATA DEFICIENT (Globally)**. - **Criteria based on:** **B1, 2b, 2c, 2d** (Restricted distribution, single location, continuing decline observed in extent of occurrence, area of occupancy and/or quality of habitat and actual or potential levels of exploitation). - **CITES:** No. - **IWPA (1972;91):** No. - **RDB, National (1994):** No. - **RDB, International (1996):** No. **Recommendations - Research management:** Survey; Monitoring; Life history studies; Limiting factor research. - **PHVA:** Pending further data. **Captive breeding Recommendations - Captive breeding:** No. - **Level of difficulty:** Not known. **Existing Captive Programs:** Nil. - **Names of facilities:** —. **Sources (Refer Appendix):** 14, 18. **Compilers:** A.K. Karmakar, S. P. Bishwas, W. Vishwanath, P.C. Mahanta, R. Dayal, . B.A. Daniel.

305. *Semiplotus semiplotus* (McClelland, 1839) — VU/N (A1c; B1, 2a, 2b). (*Cypainion semiplotus*, Howes, 1982; Assamese kingfish). **Family:** Cyprinidae. **Taxonomic status:** Species. **Habit:** Ominivorous. **Habitat:** Riverine. **Global Distribution:** India, Nepal, Myanmar. **Current Regional Distribution:** Assam, Arunachal Pradesh, Meghalaya and North Bengal. - **Elevation:** < 500 m. - **Range (Sq. km):** < 20,000. - **Area Occupied (Sq. km):** < 2,000. - **Number of location:** Many, Fragmented (Brahmaputra, Teesta). **Population Trends - % change - % Decline:** 50% . - **Time / Rate (Yrs or gens):** 20 Yrs. - **No of Mature Individuals:** Not known. **Global Population:** Not known. **Regional Population:** Not known. **Data Quality:** General field studies (McClelland, 1939; Show and Shebbeare, 1937); Museum/collection/records . **Recent Field Studies:** W. Viswanath, 1995 in Dibrugarh, Brahmaputra river. **Threats:** Human interference; Over exploitation; Trade. **Trade:** Local; Domestic; Commercial . **Other Comments:** —. **Status - IUCN:** **VULNERABLE (Nationally)**. **DATA DEFICIENT (Globally)**. - **Criteria based on:** **A1c** (Population reduction due to decline in extent of occurrence, area of occupancy and/or quality of habitat); **B1, 2a, 2b** (Restricted distribution, severely fragmented, continuing decline observed in extent of occurrence and area of occupancy). - **CITES:** No. - **IWPA (1972;91):** No. - **RDB, National (1994):** No. - **RDB, International (1996):** No. **Recommendations - Research management:** Survey; Monitoring; Life history studies; Limiting factor research. - **PHVA:** Pending . **Captive breeding Recommendations - Captive breeding:** No. - **Level of difficulty:** Not known . **Existing Captive Programs:** Nil. - **Names of facilities:** —. **Sources (Refer Appendix):** 14, 24 (viii), 202, 203. **Compilers:** W. Vishwanath, A.K. Karmakar, S.P. Biswas, P.C. Mahanta, R. Dayal, . B.A. Daniel

306. *Sicamugil cascasia* (Hamilton - Buchanan) — VU/N (A1a, 1c, 1d). (*Mugil cascasia* (Hamilton - Buchanan, 1822)). **Family:** Mugilidae. **Taxonomic status:** Species. **Habit:** Omnivore. **Habitat:** Riverine. **Global Distribution:** India, Pakistan and Myanmar. **Current Regional Distribution:** Northern part of India (Bihar and Eastern Uttar Pradesh). - **Elevation:** < 500 m. - **Range (Sq. km):** > 20,000. - **Area Occupied (Sq. km):** < 2,000. - **Number of location:** Many. **Population Trends - % change - % Decline:** 30% . - **Time / Rate (Yrs or gens):** 10 yrs. - **No of Mature Individuals:** Not known . **Global Population:** Not known . **Regional Population:** Not known . **Data Quality:** Informal field sightings; Museum/collection/records . **Recent Field Studies:** A. Gopalakrishnan 1992; Mishra, A., 1997. **Threats:** Damming; Hunting; Loss of habitat; Trade. **Trade:** Domestic. **Other Comments:** One of the very few Mulletts found in Fresh water showing declining trend. **Status - IUCN:** **VULNERABLE (Nationally)**. **DATA DEFICIENT (Globally)**. - **Criteria based on:** **A1a, 1c, 1d** (Observed population reduction due to decline in extent of occurrence, area of occupancy and/or quality of habitat and actual

or potential levels of exploitation). - **CITES:** No. - **IWPA (1972;91):** No. - **RDB, National (1994):** No. - **RDB, International (1996):** No. **Recommendations - Research management:** Life history studies; Survey; Monitoring; Genetic management. - **PHVA:** No. **Captive breeding Recommendations - Captive breeding:** Level 3. - **Level of difficulty:** Very difficult. **Existing Captive Programs:** Nil. - **Names of facilities:** —. **Sources (Refer Appendix):** 66. **Compilers:** A. Gopalakrishnan, P. Das, R. Abidi, D.N. Saksena, A. Mishra

307. *Silonia childreni* (Sykes, 1839) — EN (B1, 2c) . (*Ageneiosus childreni* Sykes; *Silonopangasius childreni* Hora). **Family:** Silinidae. **Taxonomic status:** Species. **Habit:** Carnivorous. **Habitat:** Riverine. **Global Distribution:** ENDEMIC to India . **Current Regional Distribution:** Krishna, Godavari and Cauvery (Peninsular India). - **Elevation:** Up to 300 m. - **Range (Sq. km):** > 20,000. - **Area Occupied (Sq. km):** > 2,000. - **Number of location:** 8 to 10. . **Population Trends - % change - % Decline:** 20% . - **Time / Rate (Yrs or gens):** 20 Yrs. - **No of Mature Individuals:** Not known. **Global Population:** Not known. **Data Quality:** General field studies (Sharma , 1976 in Krishna river; Menon, 1988 in Peninsular rivers); Museum/collection/records . **Recent Field Studies:** Desai, 1994 at Rivers of Madhya Pradesh. **Threats:** Damming; Loss of habitat; Trade. **Trade:** Local. **Other Comments:** Needs conservation. **Status - IUCN:** ENDANGERED. - **Criteria based on:** B1, 2c (Restricted distribution, continuing decline observed in extent of occurrence, area of occupancy and/or quality of habitat). - **CITES:** No. - **IWPA (1972;91):** No. - **RDB, National (1994):** No. - **RDB, International (1996):** No. **Recommendations - Research management:** Survey; Habitat management. - **PHVA:** Yes. **Captive breeding Recommendations - Captive breeding:** Level 3. - **Level of difficulty:** Moderate difficult. **Existing Captive Programs:** Nil. - **Names of facilities:** —. **Sources (Refer Appendix):** 27 (clxii), 46. **Compilers:** G.P. Dubey, S.V. Sharma, N. More, V.S. Basheer, J.K. Jena , A. Apte, . K.W. Dhamge

308. *Silonia silondia* (Hamilton - Buchanan, 1822) — LRnt/N . (*Pimelodus silonida* Hamilton - Buchanan, 1822). **Family:** Silinidae. **Taxonomic status:** Species. **Habit:** Carnivorous, Riverine breeder. **Habitat:** Rivers, Lakes. **Global Distribution:** India, Bangladesh, Pakistan, Nepal, Myanmar. **Current Regional Distribution:** Freshwaters of Eastern Punjab, Harayana, very common in Gangetic Estuary, Bihar, West Bengal, Darjeeling. - **Elevation:** Up to 500 m. MSL. - **Range (Sq. km):** > 20,000. - **Area Occupied (Sq. km):** < 2,000. - **Number of location:** Many (Chambal, Ganga, Mahanadi). **Population Trends - % change - % Decline:** 20 % . - **Time / Rate (Yrs or gens):** 20 Yrs. - **No of Mature Individuals:** Not known. **Global Population:** Not known. **Regional Population:** Not known. **Data Quality:** General field studies; Indirect information; Museum/collection/ records . **Recent Field Studies:** Rao, *et al* 1991 in Narmada; Sugunan & Yadav, 1992 in Mahanadi; Desai, 1994 in Chambal. **Threats:** Fishing; Pollution; Trade. **Trade:** Domestic. **Other Comments:** —. **Status - IUCN:** LOWER RISK - NEAR THREATENED (Nationally). **DATA DEFICIENT (Globally)**. - **Criteria based on:** . - **CITES:** No. - **IWPA (1972;91):** No. - **RDB, National (1994):** No. - **RDB, International (1996):** No. **Recommendations - Research management:** Survey; Monitoring; Habitat management. - **PHVA:** No. **Captive breeding Recommendations - Captive breeding:** Level 3. - **Level of difficulty:** Moderate difficult. **Existing Captive Programs:** None. - **Names of facilities:** —. **Sources (Refer Appendix):** 24 (ix), 46, 66. **Compilers:** G.P. Dubey, S.V. Sharma, N. More, V.S. Basheer, J.K. Jena, A. Apte, K.W. Dhamge

309. *Silurus afghana* Gunther, 1875 — EN/N (B1, 2c). **Family:** Siluridae. **Taxonomic status:** Species. **Habit:** Carnivorous. **Habitat:** Upland streams. **Global Distribution:** India, Pakistan, Afghanistan. **Current Regional Distribution:** Arunachal Pradesh, Assam. - **Elevation:** 200 - 2000 m. - **Range (Sq. km):** < 5,000. - **Area Occupied (Sq. km):** < 500. - **Number of location:** 3 (River Subansiri, River Dikrong and River Siang - Brahmaputra drainage system). **Population Trends - % change - % Decline:** > 20% . - **Time / Rate (Yrs or gens):** 10 yrs. - **No of Mature Individuals:** Not known. **Global Population:** Not known. **Regional Population:** Extremely sparse. **Data Quality:** General field studies (Gunther, 1864 in Assam). **Recent Field Studies:** P. Nath, 1996 in three rivers of Arunachal Pradesh. **Threats:** Dynamite and other destructive fishing; Loss of habitat; Poisoning. **Trade:** No. **Other Comments:** No records from Assam in recent years. **Status - IUCN:** ENDANGERED (Nationally). **DATA DEFICIENT (Globally)**. - **Criteria based on:** B1, 2c (Restricted distribution, limited locations, continuing decline observed in extent of occurrence, area of occupancy and/or quality of habitat). - **CITES:** No. - **IWPA (1972;91):** No. - **RDB, National (1994):** No. - **RDB, International (1996):** No. **Recommendations - Research management:** Survey; Monitoring. - **PHVA:** No. **Captive breeding Recommendations - Captive breeding:** Level 3. - **Level of difficulty:** Moderately difficult. **Existing Captive Programs:** None. - **Names of facilities:** —. **Sources (Refer Appendix):** 60. **Compilers:** S.P. Biswas, W. Vishwanath, A.K. Karmakar, P.C. Mahanta, R. Dayal, B.A. Daniel.

310. *Silurus wynaadensis* Day, 1873 — CR (B1, 2c). **Family:** Siluridae. **Taxonomic status:** Species. **Habit:** Freshwater. **Habitat:** Riverine habitat. **Global Distribution:** ENDEMIC to India . **Current Regional Distribution:** Kerala . - **Elevation:** 500 MSL. - **Range (Sq. km):** < 100. - **Area Occupied (Sq. km):** < 500. - **Number of location:** 2 (Thirunellii river, Kasaragod, Wynad - Kabani riversystem and Kasargod); Fragmented. **Population Trends - % change - % Decline:** Not known . - **Time / Rate (Yrs or gens):** Not known . - **No of Mature Individuals:** Not known . **Global Population:** Not known . **Data Quality:** General field study; Popular belief/Hearsay . **Recent Field Studies:** C.P. Shaji and P.S. Easa 1993 - 1997; Manimekalan DBT Project; Arunachalam 1995 - ongoing. **Threats:** Damming; Disease; Dynamite and other destructive fishing; Pesticides; Poisoning. **Trade:** Not known. **Other Comments:** K. C. Gopi, 1996 reported this fish from west flowing river of Kasargod. **Status - IUCN:** CRITICALLY ENDANGERED. - **Criteria based on:** B1, 2c (Restricted distribution, limited locations, continuing decline observed in extent of occurrence, area of occupancy and/or quality of habitat). - **CITES:** No. - **IWPA (1972;91):** No. - **RDB, National (1994):** No. - **RDB, International (1996):** No. **Recommendations - Research management:** Survey; Monitoring. - **PHVA:** Yes. **Captive breeding Recommendations - Captive breeding:** Level 3. - **Level of difficulty:** Very difficult. **Existing Captive Programs:** Nil. - **Names of facilities:** —. **Sources (Refer Appendix):** 9, 11 (lxx), 59. **Compilers:** A.K. Karmakar, S.P. Biswas, W. Vishwanath, P.C. Mahanta, R. Dayal, . B.A. Daniel, M. Arunachalam, A. Gopalakrishnan, A. Manimekalan, . T.V. Annamercy, B.M. Kurup, O. Alphonse, C.P. Shaji, P. Subramanian.

311. *Sisor rhabdophorus* Hamilton - Buchanan, 1822 — EN/N (B1, 2c). Family: Sisoridae.
Taxonomic status: Species. **Habit:** Carnivorous. **Habitat:** Streams. **Global Distribution:** India, Bangladesh, Pakistan.
Current Regional Distribution: Assam, Arunachal Pradesh, Certain tributaries in the Himalayan region, Ganga, Yamuna. -
Elevation: 200 - 1000 m. - **Range (Sq. km):** > 20,000. - **Area Occupied (Sq. km):** < 500. - **Number of location:** Few;
 Fragmented. . . **Population Trends - % change - % Decline:** > 20% . - **Time / Rate (Yrs or gens):** 10 yrs. - **No of Mature
 Individuals:** Not known. **Global Population:** Not known. **Regional Population:** Restricted only a few tributaries of the
 Brahmaputra river. **Data Quality:** General field studies (Hamilton, 1822 from North Bengal and Bihar; P. Nath & S.C. Dey,
 1985 in Nadihing river in Arunachal Pradesh). **Recent Field Studies:** S.P. Biswas, 1996 from the Brahmaputra drainage.
Threats: Dynamite and other destructive fishing. **Trade:** No. **Other Comments:** Rarely encountered in the Brahmaputra
 system, can be used as an aquarium species. **Status - IUCN:** ENDANGERED (Nationally). **DATA DEFICIENT (Globally).**
 - **Criteria based on:** B1, 2c (Restricted distribution, limited locations, severely fragmented, continuing decline observed in
 extent of occurrence, area of occupancy and/or quality of habitat). - **CITES:** No. - **IWPA (1972;91):** No. - **RDB, National
 (1994):** No. - **RDB, International (1996):** No. **Recommendations - Research management:** Survey; Monitoring. - **PHVA:**
 No. **Captive breeding Recommendations - Captive breeding:** No. - **Level of difficulty:** Not known. **Existing Captive
 Programs:** None. - **Names of facilities:** —. **Sources (Refer Appendix):** 23, 66. **Compilers:** S.P. Biswas, A.K. Karmakar,
 W. Vishwanath, P.C. Mahanta, B.A. Daniel, R. Dayal

**312. *Somileptes gongota* (Hamilton - Buchanan, 1822) — LRnt/N. (*Cobitis gongota* (Hamilton -
 Buchanan, 1822)). Family:** Cobitidae. **Taxonomic status:** Species. **Habit:** Ominivorous. **Habitat:** Rivers. **Global
 Distribution:** India, Bangladesh. **Current Regional Distribution:** North Bengal, Uttar Pradesh, Meghalaya, Assam . -
Elevation: 200 - 500 m. - **Range (Sq. km):** < 20,000. - **Area Occupied (Sq. km):** < 2,000. - **Number of location:** Many
 (Gangetic system, Brahmaputra drainage). **Population Trends - % change - % Decline:** Not known . - **Time / Rate (Yrs or
 gens):** Not known . - **No of Mature Individuals:** Not known . **Global Population:** Not known . **Regional Population:** Not
 known . **Data Quality:** General field studies (F.B. Hamilton, 1822 in Gangetic basin; A.G.K. Menon, 1985 in Jalpaiguri district,
 West Bengal and south of Goalpara, Assam) . **Recent Field Studies:** S.P. Biswas, 1996 from the Upper stretches of the
 Brahmaputra. **Threats:** Loss of habitat. **Trade:** No. **Other Comments:** —. **Status - IUCN:** LOWER RISK - NEAR
 THREATENED (Nationally). **DATA DEFICIENT (Globally).** - **Criteria based on:** —. - **CITES:** No. - **IWPA (1972;91):** No. -
RDB, National (1994): No. - **RDB, International (1996):** No. **Recommendations - Research management:** Survey;
 Monitoring. - **PHVA:** No. **Captive breeding Recommendations - Captive breeding:** No. - **Level of difficulty:** Not known .
Existing Captive Programs: Nil. - **Names of facilities:** —. **Sources (Refer Appendix):** 132, 202, 203. **Compilers:** A.K.
 Karmakar, W. Vishwanath, S.P. Biswas, P.C. Mahanta, R. Dayal, B.A. Daniel

313. *Stenogobius malabaricus* (Day) — CR (B1, 2c). (*Gobius malabaricus* Day). Family: Gobiidae.
Taxonomic status: Species. **Habit:** Freshwater (Crevices of streams and rivers). **Habitat:** Streams and rivers. **Global
 Distribution:** ENDEMIC to India. **Current Regional Distribution:** Kerala, Travancore region, Lower reaches of river Paufa,
 Tamil Nadu coast. - **Elevation:** Up to 20 m. - **Range (Sq. km):** < 100. - **Area Occupied (Sq. km):** < 10. - **Number of
 location:** 1. . . **Population Trends - % change - % Decline:** Not known . - **Time / Rate (Yrs or gens):** Not known. - **No of
 Mature Individuals:** Very Few. **Global Population:** Not known. **Data Quality:** General field studies . **Recent Field
 Studies:** Fish faunistic surveys conducted at central Kerala during 1987 - 91 by B.M. Kurup as part of different sponsored
 research projects. **Threats:** Dynamite and other destructive fishing; Fishing; Loss of habitat; Overexploitation; Siltation; Trade.
Trade: Local . **Other Comments:** Its availability is in very sporadic numbers. A detailed survey of its population is urgently
 required. **Status - IUCN:** CRITICALLY ENDANGERED. - **Criteria based on:** B1, 2c (Restricted distribution, single location,
 continuing decline observed in extent of occurrence, area of occupancy and/or quality of habitat). - **CITES:** No. - **IWPA
 (1972;91):** No. - **RDB, National (1994):** No. - **RDB, International (1996):** No. **Recommendations - Research
 management:** Taxonomic and morphological genetic studies; Survey; Monitoring; Habitat Management. - **PHVA:** Yes.
Captive breeding Recommendations - Captive breeding: Level 3. - **Level of difficulty:** Very difficult. **Existing Captive
 Programs:** Nil. - **Names of facilities:** —. **Sources (Refer Appendix):** 110. **Compilers:** M. Arunachalam, A.
 Gopalakrishnan, M. Manimekalan, T.V. Annamercy, B.M. Kurup, O. Alphonse, C.P. Shaji, P. Subramanian

**314. *Tetraodon cutcutia* Hamilton - Buchanan, 1822 — LRnt/N. (*Tetraodon caria* Hamilton - Buchanan,
 1822). Family:** Tetraodontidae. **Taxonomic status:** Species. **Habit:** Carnivorous. **Habitat:** Riverine. **Global Distribution:**
 India, Bangladesh, Myanmar, Sri Lanka, Malaya Archipelago. **Current Regional Distribution:** Uttar Pradesh, Bihar, Orissa,
 West Bengal, Assam, Ganga - Allahabad and Gomti. - **Elevation:** < 500 m. - **Range (Sq. km):** > 20,000. - **Area Occupied
 (Sq. km):** > 2,000. - **Number of location:** Many. **Population Trends - % change - % Decline:** Not known . - **Time / Rate
 (Yrs or gens):** Not known . - **No of Mature Individuals:** Not known . **Global Population:** Not known . **Regional
 Population:** Not known. **Data Quality:** Museum/collection/ records . **Recent Field Studies:** Biswas *et al.* , 1996 from the
 Brahmaputra river system. **Threats:** Human interference; Loss of habitat; Pollution. **Trade:** No. **Other Comments:** Of no
 commercial value, Little known about the species. **Status - IUCN:** LOWER RISK - NEAR THREATENED (Nationally). **DATA
 DEFICIENT (Globally).** - **Criteria based on:** —. - **CITES:** No. - **IWPA (1972;91):** No. - **RDB, National (1994):** No. - **RDB,
 International (1996):** No. **Recommendations - Research management:** Survey; Monitoring; Life history studies. - **PHVA:**
 No. **Captive breeding Recommendations - Captive breeding:** Level 3. - **Level of difficulty:** Very difficult. **Existing
 Captive Programs:** Nil. - **Names of facilities:** —. **Sources (Refer Appendix):** 19, 66, 202, 203, 221 (ii). **Compilers:** P.
 Das, N. Saxena, A. Mishra, R. Abidi, D. Basu

315. *Tetraodon travancoricus* Hora and Nair, 1941 — EN (B1, 2a, 2b). Family: Tetraodontidae.
Taxonomic status: Species. **Habit:** Freshwater. **Habitat:** Lowland and Riverine habitats. **Global Distribution:** ENDEMIC to
 India. **Current Regional Distribution:** Kerala. - **Elevation:** 50 - 150m. - **Range (Sq. km):** < 5,000. - **Area Occupied (Sq.
 km):** < 500. - **Number of location:** 4 (Chaliyar , Trichur, Pudukad, Pamba); Fragmented. **Population Trends - % change -
 % Decline:** Not known . - **Time / Rate (Yrs or gens):** Not known . - **No of Mature Individuals:** Not known . **Global
 Population:** Not known. **Data Quality:** Reliable Census; General field studies. **Recent Field Studies:** N. D. Inasu, 1993

Pudukkad Central Trichur; Easa, P.S, 1995. **Threats:** Human interference; Loss of habitat; Pesticides; Poisoning. **Trade:** No. **Other Comments:** —. **Status - IUCN:** ENDANGERED. - **Criteria based on:** B1, 2a, 2b (Restricted distribution, limited locations, severely fragmented, continuing decline observed in extent of occurrence and area of occupancy). - **CITES:** No. - **IWPA (1972;91):** No. - **RDB, National (1994):** No. - **RDB, International (1996):** No. **Recommendations - Research management:** Survey; Habitat management; Monitoring. - **PHVA:** Yes. **Captive breeding Recommendations - Captive breeding:** Level 3. - **Level of difficulty:** Very difficult. **Existing Captive Programs:** Nil. - **Names of facilities:** —. **Sources (Refer Appendix):** 54, 80, 202, 203. **Compilers:** M. Arunachalam, A. Gopalakrishnan, M. Manimekalan, T.V. Annamercy, B.M. Kurup, O. Alphonse, C.P. Shaji, P. Subramanian

316. *Tor khudree* (Sykes, 1839) — VU (A1a, 1b, 1c, 1d). (*Barbus neilli*, *Tor mosal mahanadicus*, *Barbus* (*Tor*) *Khudree*). **Family:** Cyprinidae. **Taxonomic status:** Species. **Habit:** Freshwater. **Habitat:** Hill stream. **Global Distribution:** ENDEMIC to India. **Current Regional Distribution:** Southern Western Ghats. - **Elevation:** 100 - 900m. - **Range (Sq. km):** > 20,000. - **Area Occupied (Sq. km):** > 2,000. - **Number of location:** Many (almost all the streams Tapti, Mahanadi, Chhota Tawa). . . **Population Trends - % change - % Decline:** 60 to 70% . - **Time / Rate (Yrs or gens):** 20 yrs. - **No of Mature Individuals:** Not known . **Global Population:** Not known . **Data Quality:** Reliable census or population monitoring; General field study; Indirect information; Museum/ collectio/records. **Recent Field Studies:** B.M. Kurup, 1987 - 1991; P.S. Easa , Shaji, C. P, 1993 - 1997; A. Manimekalan, M. Arunachalam, 1993 - 1997. **Threats:** Damming; Dynamite and other destructive fishing; Human interference; Hunting/ Harvest; Over exploitation; Poisoning; Siltation; Trade. **Trade:** Local; Domestic . **Other Comments:** 1. Brood stock development induced breeding and larval rearing and rivers ranching; 2. Cryopreservation of gametes. **Status - IUCN:** VULNERABLE. - **Criteria based on:** A1a, 1b, 1c, 1d (Observed population reduction due to decline in abundance, extent of occurrence, area of occupancy and/or quality of habitat and actual or potential levels of exploitation). - **CITES:** No. - **IWPA (1972;91):** No. - **RDB, National (1994):** No. - **RDB, International (1996):** No. **Recommendations - Research management:** Taxonomic and morphological genetic studies; Translocation; Survey; Monitoring; Genetic management; Habitat management; Life history studies; Captive breeding. - **PHVA:** Yes. **Captive breeding Recommendations - Captive breeding:** Level 1. - **Level of difficulty:** Very difficult. **Existing Captive Programs:** 1. Indo - German Reservoir fisheries conducting Captive breeding programmes at Malampuzha 2. Lonavala. - **Names of facilities:** . **Sources (Refer Appendix):** 9, 11 (lxxiii), 27 (clxvi), 52, 88 (xi), 114, 147. **Compilers:** B.M. Kurup, M. Arunachalam, A. Manimekalan, C.P. Shaji, P. Subramanian, A. Gopalakrishnan, T.V. Annamercy, O. Alphonse.

317. *Tor khudree malabaricus* (Jerdon) — CR (A1a, 1c; B1, 2c). **Family:** Cyprinidae. **Taxonomic status:** Species. **Habit:** Freshwater. **Habitat:** Riverine. **Global Distribution:** ENDEMIC to India. **Current Regional Distribution:** Western Ghats of SouthTamil Nadu (Travancore Hills), Tambraparani river system and Southe Kerala. - **Elevation:** 100 - 200 m. - **Range (Sq. km):** < 100. - **Area Occupied (Sq. km):** < 10. - **Number of location:** 7 Fragmented. . . **Population Trends - % change - % Decline:** 70 - 80% . - **Time / Rate (Yrs or gens):** 10 Yrs. - **No of Mature Individuals:** Not known . **Global Population:** Not known . **Data Quality:** Reliable Census, General field studies . **Recent Field Studies:** 1995 to date M. Arunachalam. **Threats:** Damming; Dynamite and other destructive fishing; Edaphic factors; Fishing; Genetic proplem; Loss of habitat; Pollution; Trade. **Trade:** Domestic. **Other Comments:** It grows into big - size. Dr. Menon, 1996 in freshwater fishes of India synonymized this species wit *Tor khudree*. But the specimens collected by Dr. Arunachalam donot show any similarity with *Tor* sp. The taxonomic ambiguity is yet tobe solved. Karnataka and Kerala populations have taxonomic uncertainties. **Status - IUCN:** CRITICALLY ENDANGERED. - **Criteria based on:** A1a, 1c (Population reduction due to decline in extent of occurrence, area of occupancy and/or quality of habitat); B1, 2c (Restricted distribution, severely fragmented, continuing decline observed in extent of occurrence, area of occupancy and/or quality of habitat). - **CITES:** No. - **IWPA (1972;91):** No. - **RDB, National (1994):** No. - **RDB, International (1996):** No. **Recommendations - Research management:** Taxonomic and morphological genetic studies; Translocation; Survey; Genetic management; Monitoring; Habitat management; Life history studies. - **PHVA:** Yes. **Captive breeding Recommendations - Captive breeding:** Level 1. - **Level of difficulty:** Very difficult. **Existing Captive Programs:** Nil. - **Names of facilities:** —. **Sources (Refer Appendix):** 9, 33, 49. **Compilers:** M. Arunachalam, A. Gopalakrishnan, M. Manimekalan, T.V. Annamercy, B.M. Kurup, O. Alphonse, C.P. Shaji, P. Subramanian.

318. *Tor kulkarni* Menon — DD. **Family:** Cyprinidae. **Taxonomic status:** Species. **Habit:** Freshwater. **Habitat:** Streams/Rivers. **Global Distribution:** ENDEMIC to India. **Current Regional Distribution:** Maharastra (river not known). - **Elevation:** Not known. - **Range (Sq. km):** < 5,000. - **Area Occupied (Sq. km):** < 500. - **Number of location:** 20. . . **Population Trends - % change - % Decline:** Not known . - **Time / Rate (Yrs or gens):** Not known . - **No of Mature Individuals:** Not known . **Global Population:** Not known . **Data Quality:** Not known. **Recent Field Studies:** Not known. **Threats:** Not known . **Trade:** Not known . **Other Comments:** Newly described as a new species by A.G.K. Menon. **Status - IUCN:** DATA DEFICIENT. - **Criteria based on:** —. - **CITES:** No. - **IWPA (1972;91):** No. - **RDB, National (1994):** No. - **RDB, International (1996):** No. **Recommendations - Research management:** Taxonomic and morphological genetic studies; Genetic management;. - **PHVA:** Not known. **Captive breeding Recommendations - Captive breeding:** Level 1. - **Level of difficulty:** Very difficult. **Existing Captive Programs:** Nil. - **Names of facilities:** —. **Sources (Refer Appendix):** 134. **Compilers:** M. Arunachalam, A. Gopalakrishnan, A. Manimekalan, T.V. Annamercy, B.M. Kurup, O. Alphonse, C.P. Shaji, P. Subramanian

319. *Tor mosal* (Hamilton - Buchanan) — EN/N (A1a, 1c, 1d; B1, 2c) . (*Cyprineus mosal*; *Barbus* (*Tor*) *Mosa*). **Family:** Cyprinidae. **Taxonomic status:** Species. **Habit:** Omnivorous. **Habitat:** Riverine. **Global Distribution:** India and Myanmar. **Current Regional Distribution:** Rivers of Himalaya, Mahanadi. - **Elevation:** 100 to 500 m. - **Range (Sq. km):** < 20,000. - **Area Occupied (Sq. km):** < 500. - **Number of location:** 2 - 3 (Mahanadi - Hirakud reservoir). **Population Trends - % change - % Decline:** 80% . - **Time / Rate (Yrs or gens):** 20 yrs. - **No of Mature Individuals:** Not known . **Global Population:** Not known. **Regional Population:** Not known . **Data Quality:** General field studies, Indirect information, Museum/collection/records . **Recent Field Studies:** Suganan & Yadav, 1992 in Hirakud reservoir; Ogale, S.M, 1994 Lonavala M.S. **Threats:** Fishing; Human interference; Loss of Habitat; Over exploitation; Pollution; Trade. **Trade:** Local.

Other Comments: —. **Status - IUCN:** ENDANGERED (Nationally). **DATA DEFICIENT (Globally).** - **Criteria based on:** **A1a, 1c, 1d** (Observed population reduction due to decline in extent of occurrence, area of occupancy and/or quality of habitat and actual or potential levels of exploitation); **B1, 2c** (Restricted distribution, limited locations, continuing decline observed in extent of occurrence, area of occupancy and/or quality of habitat). - **CITES:** No. - **IWPA (1972;91):** No. - **RDB, National (1994):** No. - **RDB, International (1996):** No. **Recommendations - Research management:** Survey; Monitoring; Husbandry research; Habitat management; Limiting factor management; Limiting factor research. - **PHVA:** Yes. **Captive breeding Recommendations - Captive breeding:** Level 1. - **Level of difficulty:** Moderate difficult. **Existing Captive Programs:** Nil. - **Names of facilities:** —. **Sources (Refer Appendix):** —. **Compilers:** G.P. Dubey, S.V. Sharma, N. More, V.S. Basheer, J.K. Jena, A. Apte

320. *Tor mussullah* (Sykes) — CR (A1a, 1c, 1d). (*Hyseleobarbus mussalah; Barbus mussallah*). **Family:** Cyprinidae. **Taxonomic status:** Species. **Habit:** Freshwater. **Habitat:** Hill stream. **Global Distribution:** ENDEMIC to India. **Current Regional Distribution:** Karnataka, Kerala (Cauvery, Bhavani, Poonaiyar, Krishna and Godavari rivers). - **Elevation:** above 1500 m. - **Range (Sq. km):** > 20,000. - **Area Occupied (Sq. km):** < 500. - **Number of location:** Many ((Chaliyar River, Nilambur, Shringeri - Tunga river); Fragmented. **Population Trends - % change - % Decline:** > 80% . - **Time / Rate (Yrs or gens):** 10 Yrs. - **No of Mature Individuals:** Not known. **Global Population:** Not known. **Regional Population:** 50. **Data Quality:** General field study. **Recent Field Studies:** —. **Threats:** Damming; Dynamite and other destructive fishing; Fishing; Poisoning; Pollution; Siltation. **Trade:** No. **Other Comments:** Only a small population is available in Moyar river and Chaliyar rivers and these areas should be declared as a sanctuary of musallah. **Status - IUCN:** CRITICALLY ENDANGERED. - **Criteria based on:** **A1a, 1c, 1d** (Observed population reduction due to decline in extent of occurrence, area of occupancy and/or quality of habitat and actual or potential levels of exploitation). - **CITES:** No. - **IWPA (1972;91):** No. - **RDB, National (1994):** No. - **RDB, International (1996):** No. **Recommendations - Research management:** Taxonomic and morphological genetic studies; Translocation; Monitoring; Genetic management; Habitat management; Limiting factor management; Limiting factor research; Life history studies. - **PHVA:** Yes. **Captive breeding Recommendations - Captive breeding:** Level 3. - **Level of difficulty:** Very difficult. **Existing Captive Programs:** Nil. - **Names of facilities:** —. **Sources (Refer Appendix):** 9, 27 (clxvii), 53, 88 (viii). **Compilers:** M. Arunachalam, A. Gopalakrishnan, M. Manimekalan, T.V. Annamercy, B.M. Kurup, O. Alphonse, C.P. Shaji, P. Subramanian.

321. *Tor progeneius* (McClelland, 1839) — DD. (*Barbus (Tor) progeneius*, Hora, 1941). **Family:** Cyprinidae. **Taxonomic status:** Species. **Habit:** Omnivorous. **Habitat:** Riverine fish. **Global Distribution:** ENDEMIC to India. **Current Regional Distribution:** Assam and Northeastern Himalaya. - **Elevation:** 500 - 1500 m. - **Range (Sq. km):** > 20,000. - **Area Occupied (Sq. km):** < 2,000. - **Number of location:** Not known (Brahmaputra drainage). **Population Trends - % change - % Decline:** Not known. - **Time / Rate (Yrs or gens):** Not known. - **No of Mature Individuals:** Not known. **Global Population:** Not known. **Data Quality:** Museum/collection/records. **Recent Field Studies:** Pandey & Singh 1990 - 91 in Mizoram; P.K. Talwar and A.G. Jingran, 1991 Assam. **Threats:** Human interference; Loss of habitat; Trade. **Trade:** Local; Domestic. **Other Comments:** Importance of the fish is presently unknown because of its uncertain taxonomic position (Talwar and Jingran, 1991). **Status - IUCN:** DATA DEFICIENT. - **Criteria based on:** —. - **CITES:** No. - **IWPA (1972;91):** No. - **RDB, National (1994):** No. - **RDB, International (1996):** No. **Recommendations - Research management:** Taxonomic and morphological genetic studies. - **PHVA:** No. **Captive breeding Recommendations - Captive breeding:** No. - **Level of difficulty:** No. **Existing Captive Programs:** Nil. - **Names of facilities:** —. **Sources (Refer Appendix):** 172, 202, 203. **Compilers:** W. Vishwanath, A.K. Karmakar, S.P. Biswas, P.C. Mahanta, R. Dayal, B.A. Daniel

322. *Tor putitora* (Hamilton - Buchanan, 1822) — EN/N (A1a, 1c, 1d). (*Cyprinus putitora* Hamilton - Buchanan). **Family:** Cyprinidae. **Taxonomic status:** Species. **Habit:** Omnivorous. **Habitat:** All along the foot hills of Himalayas. **Global Distribution:** India, Pakistan, Nepal, Afghanistan, Myanmar, Bangladesh. **Current Regional Distribution:** Indus system, Ganga system, Brahmaputra systems (Jirelune, Byar, Ravi, Chanab, Survey Sutlej). - **Elevation:** Up to 2000m. - **Range (Sq. km):** > 20,000. - **Area Occupied (Sq. km):** > 2,000. - **Number of location:** Plenty. **Population Trends - % change - % Decline:** 50% . - **Time / Rate (Yrs or gens):** 10 yrs. - **No of Mature Individuals:** Not known. **Global Population:** Not known. **Regional Population:** Not known. **Data Quality:** General field studies; Informal field sightings; Museum/collection/records. **Recent Field Studies:** Pandey & Singh, 1990 - 91 in Mizoram. **Threats:** Damming; Drowning; Dynamite and other destructive fishing; Fishing; Human interference; Hunting; Loss of habitat; Over exploitation; Powerlines; Trade Siltation. **Trade:** Local; Domestic. **Other Comments:** NGO's to be incorporated for conservation. **Status - IUCN:** ENDANGERED (Nationally). **DATA DEFICIENT (Globally).** - **Criteria based on:** **A1a, 1c, 1d** (Observed population reduction due to decline in extent of occurrence, area of occupancy and/or quality of habitat and actual or potential levels of exploitation). - **CITES:** No. - **IWPA (1972;91):** No. - **RDB, National (1994):** No. - **RDB, International (1996):** No. **Recommendations - Research management:** Survey; Monitoring; Habitat management; Limiting factor management. - **PHVA:** Yes. **Captive breeding Recommendations - Captive breeding:** Level 1. - **Level of difficulty:** Moderate difficulty. **Existing Captive Programs:** . - **Names of facilities:** 1000 spawners. **Sources (Refer Appendix):** 24 (x), 47 (i), 79 (iv), 96, 117, 172, 202, 203. **Compilers:** R.S. Patiyal, S.M. Srivastava, A.K. Singh, S.K. Paul, S.K. Srivastava, C.S. Singh, C.B. Joshi.

323. *Tor tor* (Hamilton - Buchanan, 1822) — EN/N (A1a, 1c, 1d). (*Cyprinus tor* Hamilton - Buchanan). **Family:** Cyprinidae. **Taxonomic status:** Species. **Habit:** Omnivorous, Column feeder. **Habitat:** Hill streams and plains to some extent. **Global Distribution:** India, Bangladesh, Pakistan, Nepal, Myanmar. **Current Regional Distribution:** Himalaya, Jammu & Kashmir, Delhi, Punjab, Himachal Pradesh, Karnataka, Uttar Pradesh, Madhya Pradesh, Sikkim, Bihar, North Bengal, Assam, Nagaland. - **Elevation:** 150 - 1000m. - **Range (Sq. km):** > 20,000. - **Area Occupied (Sq. km):** > 2,000. - **Number of location:** Many (Ganga, Narmada, Tapi, Mahanadi, Indus). **Population Trends - % change - % Decline:** 60% . - **Time / Rate (Yrs or gens):** 10 Yrs. - **No of Mature Individuals:** Not known. **Global Population:** Not known. **Regional Population:** Not known. **Data Quality:** General field studies (Majumdar, 1958 in Delhi; Hora and Mukarjee, 1939 in Doon Valleys; Motwari and David, 1957 in Sane River; Nataraj). **Recent Field Studies:** Khan, 1997;

Menon, 1994; Husain, 1997; Husain, 1995 in West Himalaya; K. D. Tandey, 1994; P. Das, 1994,95,96; A.K. Singh, 1994, 1995; A.C. Pandey & S.P. Singh, 1990 - 91 in Mizoram. **Threats:** Damming; Dynamite and other destructive fishing; Fishing; Human interference; Human interference, persecution, or disturbed; Loss of habitat; Poisoning; Pollution; Trade. **Trade:** Local; Domestic; Commercial. **Other Comments:** Large sized commercially important and from arguing point of view. But its population has been declined greatly during the past on an average. **Status - IUCN: ENDANGERED (Nationally). DATA DEFICIENT (Globally).** - **Criteria based on: A1a, 1c, 1d** (Observed population reduction due to decline in extent of occurrence, area of occupancy and/or quality of habitat and actual or potential levels of exploitation). - **CITES:** No. - **IWPA (1972;91):** No. - **RDB, National (1994):** No. - **RDB, International (1996):** No. **Recommendations - Research management:** Survey; Monitoring; Genetic management; Habitat management; Limiting factor management; Limiting factor research. - **PHVA:** Yes. **Captive breeding Recommendations - Captive breeding:** Level 4. - **Level of difficulty:** Least difficult. **Existing Captive Programs:** . - **Names of facilities:** NRC on cold water fishes, Halwani, NBFGR, and UP state Fisheries, Lucknow. **Sources (Refer Appendix):** 24 (xi), 51 (ii), 65, 79 (v), 172. **Compilers:** A. Husain, U.K. Sarkar, A.K. Singh, A.C. Pandey, A.K. Pandey.

324. *Travancoria elongata* Pethiyagoda and Kottelat — CR (B1, 2c). Family: Balitoridae. **Taxonomic status:** Species. **Habit:** Freshwater. **Habitat:** Torrential streams. **Global Distribution:** ENDEMIC to India. **Current Regional Distribution:** Kerala . - **Elevation:** 300 m. - **Range (Sq. km):** < 100. - **Area Occupied (Sq. km):** < 10. - **Number of location:** 1 (Chalakydy river). **Population Trends - % change - % Decline:** Not known . - **Time / Rate (Yrs or gens):** Not known. - **No of Mature Individuals:** Not known. **Global Population:** Not known. **Data Quality:** Museum/collection/records. **Recent Field Studies:** Pethiyagoda and Kottelat, 1994 in Chalakydy river. **Threats:** Dynamite and other destructive fishing; Pesticides; Pollution. **Trade:** No. **Other Comments:** This species is newly described one. Nothing is known about its status and distribution. **Status - IUCN: CRITICALLY ENDANGERED.** - **Criteria based on: B1, 2c** (Restricted distribution, single location, continuing decline observed in extent of occurrence, area of occupancy and/or quality of habitat). - **CITES:** No. - **IWPA (1972;91):** No. - **RDB, National (1994):** No. - **RDB, International (1996):** No. **Recommendations - Research management:** Survey. - **PHVA:** No. **Captive breeding Recommendations - Captive breeding:** No. - **Level of difficulty:** Not known . **Existing Captive Programs:** None. - **Names of facilities:** —. **Sources (Refer Appendix):** 173. **Compilers:** A.K. Karmakar, W. Viswanatha, P. K. Mahanta, S.P. Biswas, R. Dayal, B.A. Daniel

325. *Travancoria jonesi* Hora, 1941 — EN (B1, 2c). Family: Balitoridae (Homalopteridae). **Taxonomic status:** Species. **Habit:** Freshwater. **Habitat:** Torrential streams. **Global Distribution:** ENDEMIC to India. **Current Regional Distribution:** Kerala parts of Western Ghats rivers of Travancore. - **Elevation:** 500 m. - **Range (Sq. km):** < 5,000. - **Area Occupied (Sq. km):** < 500. - **Number of location:** 2 (Periyar, Pamba). **Population Trends - % change - % Decline:** Not known . - **Time / Rate (Yrs or gens):** Not known. - **No of Mature Individuals:** Not known. **Global Population:** Not known. **Regional Population:** Not known. **Data Quality:** . **Recent Field Studies:** L.K. Arun, 1993 - 1995 in Periyar Lake valley systems; C.P. Shaji, 1993 - 1997 in PTR and adjacent areas. **Threats:** Siltation. **Trade:** No. **Other Comments:** —. **Status - IUCN: ENDANGERED.** - **Criteria based on: B1, 2c** (Restricted distribution, limited locations, continuing decline observed in extent of occurrence, area of occupancy and/or quality of habitat). - **CITES:** No. - **IWPA (1972;91):** No. - **RDB, National (1994):** No. - **RDB, International (1996):** No. **Recommendations - Research management:** Survey; Monitoring; Life history studies. - **PHVA:** Yes. **Captive breeding Recommendations - Captive breeding:** Level 3. - **Level of difficulty:** Very difficult. **Existing Captive Programs:** Nil. - **Names of facilities:** —. **Sources (Refer Appendix):** —. **Compilers:** A. Gopalakrishnan, T.V. Annamercy, O. Alphonse, M. Arunachlam, A. Manimekalan, P. Subramanian, C.P. Shaji, B.M. Kurup.

326. *Wallago attu* (Schneider, 1801) — LRnt/N . Family: Siluridae. **Taxonomic status:** Species. **Habit:** Carnivorous. **Habitat:** Rivers, Lakes, Reservoirs. **Global Distribution:** India, Pakistan, Sri Lanka, Nepal, Bangladesh, Myanmar, Cambodia, Thailand . **Current Regional Distribution:** . - **Elevation:** 100 to 250 m. - **Range (Sq. km):** > 20,000. - **Area Occupied (Sq. km):** > 2,000. - **Number of location:** Many. **Population Trends - % change - % Decline:** < 20% . - **Time / Rate (Yrs or gens):** 20 Yrs. - **No of Mature Individuals:** Not known . **Global Population:** Not known . **Regional Population:** Not known . **Data Quality:** General field studies (Panday, 1988; Jayaram, 1981; Srivastava 1981); Museum/ collection/records . **Recent Field Studies:** Talwar and Jingran, 1991; Panday, 1996 in Varanasi, Sultanpur, Farizabad; Singh, et. al., 1994; Pandey and Awasti, 1994; Husain, 1997; Biswas, 1997 from the Brahmaputra drainage. Pandey & Singh, 1990 - 97 in Mizoram. **Threats:** Decline in prey species; Hunting for food; Poisoning; Siltation; Trade. **Trade:** Local; Domestic; Commercial. **Other Comments:** Sport fish, predatory in habit, Rich in Oil content. **Status - IUCN: LOWER RISK - NEAR THREATENED (Nationally). DATA DEFICIENT (Globally).** - **Criteria based on: —.** - **CITES:** No. - **IWPA (1972;91):** No. - **RDB, National (1994):** No. - **RDB, International (1996):** No. **Recommendations - Research management:** Survey; Husbandry research; Habitat management. - **PHVA:** Yes. **Captive breeding Recommendations - Captive breeding:** Level 4. - **Level of difficulty:** Least difficult. **Existing Captive Programs:** . - **Names of facilities:** Induced breeding known - cultured in some carp ponds. **Sources (Refer Appendix):** 23, 27 (clxviii), 85, 172, 200, 202, 203. **Compilers:** A.K. Pandey, U.K. Sarkar, A. Husain, A.C. Pandey.

327. *Xenentodon cancila* (Hamilton - Buchanan, 1822) — LRnt/N . (*Esox cancila*; *Belone cancila*). Family: Belonidae. **Taxonomic status:** Species. **Habit:** Omnivorous , Riverine. **Habitat:** Riverine lake. **Global Distribution:** India, Pakistan, Bangladesh, Sri Lanka, Myanmar, Thailand. **Current Regional Distribution:** Ganga, Brahmaputra river system, Madhya Pradesh, Orissa , Rajasthan. - **Elevation:** Up to 200 m. - **Range (Sq. km):** > 20,000. - **Area Occupied (Sq. km):** > 2,000. - **Number of location:** Many (Narmada, Chambal). **Population Trends - % change - % Decline:** 30% . - **Time / Rate (Yrs or gens):** 20 yrs. - **No of Mature Individuals:** Not known. **Global Population:** Not known. **Regional Population:** Not known. **Data Quality:** General field studies; Indirect information; Museum/collection/records . **Recent Field Studies:** Johal, 1997 (Personal communication) in Rajasthan; Rao, 1991 in Narmada; Dubey, 1994 in M. P (Chambal, Narmadha); Joshi, 1994; Pandey & Singh, 1990 - 91 in Mizoram; Pandey, 1996 - 97 in Farizabad, Sultanpur, Uttar Pradesh. **Threats:** Fishing; Pollution; Trade. **Trade:** Domestic. **Other Comments:** —. **Status - IUCN: LOWER RISK - NEAR THREATENED (Nationally). DATA DEFICIENT (Globally).** - **Criteria based on: —.** -

CITES: No. - **IWPA (1972;91):** No. - **RDB, National (1994):** No. - **RDB, International (1996):** No. **Recommendations - Research management:** Survey; Monitoring; Limiting factor research. - **PHVA:** Yes. **Captive breeding Recommendations - Captive breeding:** Level 3. - **Level of difficulty:** Very difficult. **Existing Captive Programs:** None. - **Names of facilities:** —. **Sources (Refer Appendix):** 27 (clxix), 50, 96, 172, 200, 202, 203, 221 (iii). **Compilers:** G.P. Dubey, S.V. Sharma, N. More, V.S. Basheer, J.K. Jena, A. Apte

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