Small Indigenous Fish Species of Jhenidah-South Western Bangladesh

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Abstract— Fisheries resources are important resources in Bangladesh not only in supply of protein but also the great contribution in poverty elevation, livelihood of the rural inhabitants. Small indigenous fishes played vital role in the rural economy of the country. But these resources are declining at present due to impact of human population on land, water and air. The aquatic bodies receives large amount of industrial effluents, domestic wastes, pesticides and fertilizers altered the physiochemical properties of water .Beside these, water abstraction, siltation, flow modification and habitat degradation affect the growth ,abundance and reproduction of small indigenous fishes. Attempts were made to construct the diversity of Small indigenous fishes which will helpful for baseline information in future researches.

Key words: Small indigenous fishes, diversity, Jhenidah, Bangladesh

I. Introduction

Bangladesh is a land of rivers; more than 400 hundred rivers are passing throughout the country of which 43 rivers are international(DoF,2005). Numerous water bodies such as canals, lakes,ponds. Haor ,baor are the habitat of small indigenous species which have economic importance in national level..260 fresh water fish species were available in the country of which 154 species were recorded as SIS. Fishes(Amin etal, 2010).

SIS fishes are generally locally available fishes which attains a length of 25 centimeters or 9 inches(Felts etal,1996,Hossain and Afroze,1991 and Kostori etal 2011).. But some are above the length also treated as SIS.SIS fishes are very tasty and have strong link with the culture with feeding habit.

These fishes have high nutritional value wth sufficient amount of vitamins, minerals, iron and zinc it has a contribution in eradication of mal nutrition and night blindness(Thilsted etal 1997,Hossain and Afroze,1991). The diversity of fishes are declining dute to various anthropogenic activities by human reducing the growth and number of fishes..The livelihood of people of the adjacent water bodies suffers greately due to this shortage of production.

The productivity of water body depends on the sound health of water. if the physiochemical properties of water altered, fish and other biota felt stress ultimately kills fauna and flora. Pesticides coming from agricultural fields by runoff and aerosol coming from drifts passively carried by winds find their destination in aquatic environments. Effluents from mills, factories, pharmaceuticals were also do harm to the natural water. Household wastes were also create dangerous problems in aquatic ecosystems..

Many work s have been done on small indigenous fishes of Bangladesh but yet no work has been done in south western part of Bangladesh, Attempts were made to illustrate the facts and figures of SIS diversity of jhenidah district and identified possible causes for depletion of fish production This findings will help for others for base line information.

II. Material And Methods

The study was carried out from June 2011 to July 2012. Survey was done on the main rivers, baor and beels and ponds, Some of the important water bodies were listed in table 1.

Serial no	name	Nature of water bodies
01	Nabaganga	river
02	Kumar	river
03	Kaliganga	river
04	Gorai	river
05	Ichamoti	river
06	Chitra	river
07	Joydea	baor
08	marjot	baor
09	Harinakundu bil	beel

Table: 1

Collection of fish samples: Fish samples were collected by the help of fishermen or villagers and identified on the spot. those fishes which were difficult to identify on the spot, preserved with 10% formaldehyde and brought to the laboratory and identification was done with the help of taxonomic keys viz Rahman,Talwar and Jhingran,Bhyuian.Beside these, local fish market visits(urban and Semiurban) were also done to know the actual status of fishes. Conversation were done to age old people to know the present and past condition of fisheries resources. some important fish markets are listed in table 2

Serial no	Name of the market	location	Upazila/District	
01	hat	Seikh para	sailkupa	
02	hat	langolband	sailkupa	
03	Vatoi bazar	vatoi	sailkupa	
04	Fish market	jhenidah	jhenidah	
05	Fish market	Hatgopalpur	jhenidah	
06	beel	kaligonj	Kaligong	
07	Baor bolohor	kotchandpur	Kotchandpur	
08	baor	moheshpur	Moheshpur	
09	baor	barobazar	Jhenidah	

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10	baor	harinakundu	Jhenidah	

Table: 2

A. Result and discussion

The small indigenous fishes were identified during the investigation period from June 2011 to July 2012. 61 SIS fishes were identified (table 3) but some of them were in critical situation shown in table 2.

List of identified threatened species are presented in table 2

Common name	**Scientific name**	**status**
Bheda/Roina	Nandus nandus	endangered
Sarputi	Puntius sarana	endangered
Garua	Clupisoma garua	endangered
Foli	Notopterus notopterus	vulnerable
Tarabaim	Macrognathus aculiatus	endangered
Rani	Botia Dario	endangered
Chela	Chela lauboca	endangered
Bata	Labeo bata	endangered
Golshe tangra	Mysts cavasis	vlnerable

Table: 3

List of identified species during the investigation period table 3.

Serial no	**Local name**	**Scientific name**	**abundance**
01	Bata	*Labeo bata*	common
02	Rayak bata	*Cirrrhinus reba*	Most common
03	Tit puti	*Puntius ticto*	Mont common
04	Shor puti	*Puntius sarana*	Very rare
05	Jat puti	*Puntius sophore*	common
06	Chep chela	*Chela cachius*	common
07	Khoira	*Chela lauboca*	common
08	Foli	*Notopters Notopters*	common
09	Darikana	*Esomus danricus*	common
10	Ranga Darika	*Daio reno*	common
11	Rani	*Botia Dario*	common
12	Gutum	*Lepidocephalicthyes guntea*	rare
13	Mola	*Amblypharyngodon mola*	common
16	Gonia	*Labeo gonius*	rare
17	Bhangoon bata	*Labeo boga*	rare
18	Chola puti	*Puntius chola*	common
19	Shavon	*Nemacheilus botia*	common
20	Kakle	*Xenotodon cancilla*	common
21	Taki	*Channa punctatus*	Very common
22	Cheng	*Channa orientalis*	common
23	Tara baim	*Macrognathus aculeatus*	common
24	Pankal	*Mustacembelus pancalus*	rare
25	Koi	*Anabus testudineus*	common
24	Lal kholse	*Colisha lalia*	Very common
25	Kholisha	*Colisha fasciata*	Very common
26	Chuno Kholisha	*Colisha sota*	Very common
27	Bele	*Glossobius giuris*	Very common
28	Chanda	*Chanda nema*	Very common
29	Kata chanda	*Chanda baculis*	Very common
30	Lal chanda	*Chanda ranga*	Very common
31	Bheda/meni	*Nandus nandus*	rare
32	Golsha tengra	*Mystus vitatus*	Very common
33	Golsha tengra	*Mystus cavasius*	Very common
34	Chutto tengra	*Mystus bleekeri*	Very common
35	Telchite	*Glypothorax telchita*	common
36	Pabda	*Ompok pabda*	Very common

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37	Kani pabda	*Ompok bimaculatus*	Very common
38	Magur	*Clarius batraghus*	Very common
39	Cheka	*Chaca chaca*	rare
40	Baspata	*Aila coila*	common
41	Kajuli	*Allicthys punctata*	common
42	Bacha	*Eutropichthys vacha*	rare
43	Garua	*Clupisoma garua*	rare
44	Sing	*Heteropneustus fossilis*	Very common
45	Tepa	*Tetrodon patoka*	common
46	Kachki	*Corica Saborna*	common
47	Chapila	*Gudusia Chapra*	Very common
48	Phasa	*Setipinna phassa*	common
49	Khavon	*Nemacheilus savona*	common
50	Moa/moya	*Amblypharyngodon microlepis*	common
51	Peale	*Aspidoporia jaya*	common
52	Dhela	*Ostiobrama cotio*	common
53	Chela	*Salmostoma bacaila*	common
56	Gora chela	*Salmostoma gora*	common
57	Phul chela	*Salmostoma phulo*	common
58	Darika	*Rasbora rajbora*	common
59	Pachchoka	*Apoceilus punchax*	common
60	Silong	*Silonia silondia*	common

Table: 4

60 species of fishes were recorded dring the stdy period. Puntius ticto, Puntius sophore, Heteropneustus fossilis, Channa punctatus,Channa orientalia,Mystus vitatus are commonly available throught the year.Anabus testidineus, H.fossilis, Notopterus notopterus, Colisa sp.were found comparatively large amount in winter season. Chanda sp.,esomus danricus, mystus sp., Puntius sp.were found in monsoon season.the main reason for declying of SISfishes is overfishing, use of small neshed nets were responsible for killing of bood fishes and fingerlings. The prime obstacles to the productivity of the river were huge abstraction of water from the river for agriculture. In winter the rivers were almost dried up and in some places river bed were used for cultivation.SIS fishes were caught largely at that period. Lack of shelter, cut off migratory routes and absence of water flow made the situation worsen. uses of excessive fertilizer and pesticides in cro cultivation by the river side ultimately find their destination in water bodies by aerosol carried by wind or rnoff (Syed etal 2012). These harmful subs tances were main agents for killing of eggs of fishes and juvenile also(Niaji etal 2012).In order to save the natural assets of the country , resorvor or sanctuary should be set up to secure some rare specis for their existence.Kostori etal(2011) identified 82 species of SISfishes in Chalan beel in Bangladesh and also to identify the similar reason of fish decltning such as overfishing,use of meshed nets and pesticides and fertilizer also.Amin etal(2010) reported 61 species of SISfishes in north western part of Bangladesh and some threatened species were dected and available in Dinajpur district.our findings finds similar with the observation of IUCN RECORDS(2001).Nandus nandus, Clupisoma garua,Silonia silondia found at were at stake.

III. Conclusion

Some protective measures should be taken immediately to stop overfishing, establish fish sanctuary and avoid catching brood fishes. Restoration of habitat,appropriate management strategies and sustainable development plan to save valuable resources.

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