CHAPTER 5 EXISTING ENVIRONMENTAL CONDITION OF ALGAR CHAR GRAM IN CHAR AREA

5.1 Natural Conditions

(1) General Description

The physiographic unit falls under Agro Ecological Zone 6a and active Brahmaputra-Jamuna Flood plain (Ba). This sub unit, which underlines Agro Ecological Region 7, comprises young, stratified, alluvial land within and adjoining the shifting channels of the Brahmaputra and Jamuna rivers, the old Brahmaputra River and the Dhaleswari-Kaliganga River. The land formations are liable to change shape each year as river banks are eroded, new alluvium is deposited within/alongside channels, and older deposits are buried by layers of new alluvium. The relief varies from smooth to irregular, with differences in elevation of 2-3 meters or more between adjoining ridges and depressions. The depth of flooding varies from shallow to deep on different sites and the maximum depth may vary by a meter or more from year to year.

Fulchari Upazila covers Tista Meander Estuarine Flood Plain and Active Brahmaputra-Jamuna Flood Plain and the areas are 75.18 sq. km and 241.18 sq. km, respectively. The deposits comprise alternating layers of sand and silt. Extensive areas of sand often are deposited in high flood years, especially in the north, whereas silty material is more extensive in years of lower floods and in the south. Brahmaputra sediments are grayer in color than Ganges sediments. They are rich in weather able minerals, especially micas, and are neutral or moderately alkaline in reaction, but not calcareous.

(2) Surface Water Quality

JICA Study Team collected the three water samples for surface water quality analysis. The sampling was done on random basis consisting two samples from pond, one from the river Bramaputra within the Study Area. The Table data indicates that pH varies from 6.91 to 7.54, Electrical conductivity, EC varied between 326 to 356 μs/cm and total dissolved solids, TDS between 153 to 167 mg/l. The surface water quality is within Bangladesh and WHO guide line values and suitable for irrigation.

Surface Water Quality in Algar Char Gram

Water Quality Parameters	Unit	Bangladesh Standard	WHO Standard	Algar Char		
				Location -1	Location –2	Location -3
				Brahmaputra River Middle-west Algar Char	Open pond Md. Rafiqul Islam North Algar char	Open pond Md. Hasen Khalifa East Algar char
PH		6.5-8.5		7.54	7.41	6.91
EC	µ s/cm			325	356	326
TDS	mg/l	1000	1000	153	167	156
Chloride (Cl)	mg/l	600	250	1.5	14.0	1.5
Nitrate ($NO_{3)}$	mg/l	10	50	0.9	7.9	0.9

Source: JICA Study Team

(3) Ground Water Quality

The sampling was done on random basis consisting two samples from hand tube well and one from shallow tube well within the Study Area. The Table data indicates that pH varies between 7.05 to 7.99, EC varies between 326 to 818 µs/cm, Arsenic contents 0.00 to 0.06 mg/l, Iron contents between 0.78 to 12.8 mg/l, Sulphate contents 0.3 to 5.0 mg/l and Phosphate contents between 0.0 to 5.0 mg/l in the Algar Char Gram. The data indicate that Arsenic and Iron content in one tube-well, are higher than Bangladesh and WHO guide line values for drinking purposes.

Ground Water Quality in Algar Char Gram

Water Quality Parameters	Unit	Bangladesh Standard for Drinking Water	WHO Standard for Drinking water	Algar Char		
				Location-1	Location-2	Location-3
				Md. Jahirul Islam East Algar Char, Depth: 17m', Hand Tubewell	Md. Azgar Munshi Middle Algar Char, Depth: 26m', Shallow Tubewell	A. Samad Mondal North Algar Char, Depth: 14m', Hand Tubewell
PH		6.5-8.5		7.99	7.5	7.05
EC	µ s/cm			818	584	326
Iron (Fe)	mg/l	0.3-1.0	0.3	12.8	0.78	5.4
Arsenic (As)	mg/l	0.05	0.01	0.06	0	0.008
Chloride (Cl)	mg/l	600	250	40.0	13.0	50.0
Manganese (Mn)	mg/l	0.1	0.1	0.0	0.0	0.0
Sulphate (SO_4)	mg/l	400	250	0.0	0.3	5.0
Phosphate (PO_4)	mg/l	6		0.5	0.0	0.0
Nitrate ($NO_{3)}$	mg/l	10	50	0.0	0.0	1.8

Source: JICA Study Team

(4) Soil Resources

Complex mixtures of sandy and silty alluvium occupy most char lands, but there are some developed gray silty soils on older areas of alluvium, especially along the eastern side of the

Fulchari Upazila. The proportions of sandy and silty alluvium vary from place to place and from year to year. Over all, silty deposits are more extensive than sandy deposits, especially in the south and on relatively older land. However, large areas of sand may be deposited in high flood years, especially in the northern part. The parent alluvium is in weather able minerals, especially Biotite, low in organic matter and neutral to moderately alkaline in reaction, but not calcareous.

5.2 Ecological Conditions

Wetland Flora

The Study Area supports two types of wetland e.g., a) Permanent wetland and b) Seasonal wetland. The permanent wetland includes rivers, canals, beels, perennial water bodies and fishponds. The permanent wetland provides refuge and shelter for the most of the aquatic flora and fauna, the seasonal wetland serves as the grazing ground for fish and other aquatic animals like fresh water turtles. The changes in the physical characteristics of wetland have a direct impact on its dependent flora and fauna. The fluctuation or changes in the population dynamics of the bio-diversity define the biomass productivity of the wetland.

The natural vegetation in chars prevents soil erosion from wind and channel cutting. These chars support growing of paddy field and dry season vegetables. The char land vegetation exhibits zonations into pioneer, closed herbaceous, middle mixed are bushy zones. The open pioneer zones the first in the supratidal region. In this, the vegetation is rather sparse with a few plants like Paspalum vaginatum, Panicum repens, Zoysia matrella. A herbaceous zone where the vegetation attains little more density with some mat formation herbs such as Fimbristylis chaeteria, Eragrostis coarctata, succeeds this zone (refer to Table 5.1 to 5.4).

Aquatic Flora

Aquatic flora in the project area can be divided into communities based on a set of environmental conditions. The communities are as follows: i) Free-floating plants, ii) Sub merged floating plants, iii) Rooted floating plants, iv) Sedges and meadows, and v) Marginal vegetation.

The free-floating plant community is common in the Study area. This type of vegetation floats freely in the water. These are the plants remain in contact with water and air, but not soil. It is abundant in the perennial water bodies. Kachuripana (*Eichhornia crasipes*) is the single most dominant species followed by Indurkunipana (*Salvinia cuculata*) and Khudipana (*Lemna perpusilla*), Topapana (*Pistia strateotes*). Many fishponds also support this type of vegetation.

The submerged plant community is one of the prevalent plant types in the Area. These are the plants in contact with only water, being completely submerged and not rooted in the mud. Their stems are long and leaves generally small. It is found in both permanent and seasonal wetland. Almost all these plants are monocotyledons from closely related families like Aponogetonnaceae, Hydrocharitaceae, Potamogetonaceae and Najadaceae. These plants begin their growth period with the rise of the water level and persist as long as water is present. The species composition of the community differs between the permanent and the seasonal wetlands. Janjhi (Hydrilla *verticillata*), Patajanjhi (*Vallisneria spirallis*), Goisa (*Najas indica*) and *Naja falcinata* are the most common in perennials water bodies while Ghenchu (*Aponogeton natans*) is dominant on the seasonal wetland.

The rooted floating community is a dominant plant type in some wetlands and its deeply flooded seasonal wetlands, which is also in the Area. The short growth period in shallow seasonal wetlands renders them scarce in this habitat. There roots are fixed in mud, but leaves have long petioles which keep them floating on the water surface. The remaining plants except leaves remain in water. Dominant families are Nymphaeaceae and Gentianaceae. At the present level *Nymphaea nouchali*, *Nymphaea rubra and Nymphaea stellate* are the most abundant and common.

Sedges and meadows are ecotones consisting of amphibian plants. Some of them are terrestrial, some are aquatic and others are amphibian in nature. The community has the highest species diversity among all the wetland plant communities in the Area. The dominant families in this community are Cyperaceae and Gramineae. At the species level, Mutha (*Cyperus rotundus*), and Chrisra (*Scirpus erectus*) are common in the seasonal floodplains. In some wetlands, Dhol kalmi (*Ipomoea fistulosa*) and Sarkachu (*Monochoria vaginalis*), *Ludwigia* sp., *Persicaria hydropiper*, *Enhydra fluctuans*, *Eclipta alba*, *Clinogyne dichotoma* are also very common. Generally, this vegetation type occupies the water margins and moves with water level fluctuation.

Marginal plants are not defined as a community. They are composition of both wetland plants and small dry land herbs occupying surrounding saturated soil. The composition of the marginal plants depends on the degree of water logging and the flood tolerance of each species. Cyperaceae are the dominant family followed by many unrelated plant families ranging from Amaranthaceae to Gramineae.

Most of the wetland plant species are sensitive to and governed by seasonal water level fluctuations. Most of the channels in the Area are without vegetation in monsoon. After the recession of the water level, plants begin to surface.

Due to the lack of adequate wetland plant products, human use of aquatic plant products remains very low. Wetland products are minimally used for food, medicine, fuel, fodder and thatching materials. Wetland plant products, currently used by humans are grouped as follows:

i) Starch food, ii) Other vegetables, iii) Fodder and forage, iv) Medicine, v) Thatching and mat, vi) making, vii) Fuel, viii) Fisheries habitat, and ix) Bio-fertilizer.

Terrestrial Flora

The terrestrial flora can be divided into two categories: natural vegetation and human influenced vegetation. Natural vegetation includes wooden areas, grassland and other natural habitats. Human influenced vegetation includes homestead gardens, plantation, cropland and other planned or cultivated habitat. The major habitat patterns in the project area are homestead vegetation, bamboo orchard, crop field vegetation, grassland vegetation and roadside vegetation. They are covered by natural vegetation.

Most of the 20-25 principal families of the plants are found in the present Study Area e.g.,

Gramineae, Leguminosae, Anacardiaceae, Moraceae, Myrtaceae, Cyperaceae, Euphorbiaceae, Annonaceae, Rutaceae, Cucurbitaceae, Ebenaceae, Solanaceae, Lythraceae, Labiatae, Lauraceae, Rubiaceae, Malvaceae, Apocynaceae, Compositae, Combretaceae, etc.

Wetland Fauna

The Study Area is quite different from Haor area but rich in biodiversity. It supports faunal habitat and also play an important role for fish breeding ground during the rainy season. The areas have very few or no trees but bushes and the ground soil act sometime as a habitat for some amphibia, reptile, birds and mammals. Some endangered wildlife is identified (refer to Table 5.5).

Terrestrial Fauna

The Study Area is a suitable habitat for some terrestrial wildlife. It also supports two types of wildlife in two different seasons as the area inundates for six months of the year. In rainy season, some local migratory birds come here, stay for some months to breed, and then backed. Some endangered wildlife is identified (refer to Table 5.6).

Endangered Wildlife and Fishes

The Study Areas in Char and Haor support a variety of critically endangered, endangered and vulnerable wildlife and fish species. During survey, two amphibian species have been identified as a vulnerable species. In reptile group, two critically endangered and two endangered turtle, one vulnerable lizard and five vulnerable snake species have been identified. In past, these species are common in these Areas. Now they are occasionally seen. In aves group, three critically endangered, three endangered and one vulnerable bird species have been identified. The population of these bird species is declining due to various reasons. In mammalian group, two endangered and one vulnerable mammalian species have been identified in the Areas. Four critically endangered, eleven endangered and nine vulnerable fish species have been identified in the project area during the survey (refer to Table 5.7).

5.3 Socio-Economic Profile

Population Increase

The population of the locality is largely sedentary. There is slightly higher percentage of sedentary population in sampled Char village compared to Haor ones. There are about 7.3% shifting cultivators in haor compared to only 1.3% in char sampled village.

Percentage Distribution of Types of Household Heads by Village

Types of Household Heads	Gram		Total N=300
	Gurai N=150	Algar Char N=150	
Sedentary	92.7	98.7	95.7
Shifting cultivator	7.3	1.3	4.3
Total	100.0	100.0	100.0

The key-informants opine that the shifting cultivation here is not like shifting cultivation of tribal areas where tribal people cultivate in some areas of hills for few years and than move to another suitable area. Here poor people move to new area during rainy season or economically lean period to work on other's land as agriculture labor or share cropper i.e. they cultivate land in locations than their own area. They all again return to their own home during farming season. Therefore they are not shifting cultivators in traditional sense.

Nearly all-household heads are married. The remaining household heads are unmarried, divorcee, separated, and widower. The average and median age of the household heads are around 44, and 42 years respectively. This means most of the household heads are middle aged. There is very little difference between the mean ages of household heads of both Areas (refer to Table in next page).

The family size does not seem to be large in Areas. On an average the family size is 6.05 in both sampled villages with average 3.22 numbers of children in each family. It may be noted here that the household heads are middle aged (Mean=44 years) and are left with many more years of active reproductive life because their wives are likely to be much younger to them. Therefore, the completed family size is likely to be much higher than what is needed to keep the population under control. In addition to this high natural growth there is a possibility of influx of immigrants to the locality in the wake of development activities.

The family structure appears to have gone through a transition because only 1.3 couples live in each household. This figure indicates that a significant numbers of families are nuclear. Each household has nearly 1.5 income earners. In other words each family member has to support 4 members including himself/herself. The above data amply show that there will be a high natural population growth in the area.

According to key-informants about 15% to 20% population of the area seasonally migrate to towns in search of livelihoods and return to village in the post rainy session when employment is available in farmlands. Key-informants of both char and haor areas also opine that population will increase through in-migration immediately in the post implementation of the project. If opportunities are available the population, which migrate during rainy session, will settle permanently in the locality.

Percentage Distribution of Age of the Household Heads by Village

Age	Gram		Total N=300
	Gurai N=150	Algar Char N=150	
15-30	9.3	16.7	13.0
31-40	26.7	36.0	31.3
41-50	32.7	25.3	29.0
51-60	20.7	12.0	16.3
61+	10.7	10.0	10.3
Total	100.0	100.0	100.0
Mean	46.0	42.0	44.0

However, the key-informants of both areas seem to have a clear vision about the long-term impact of flood proofing activities. They believe, if flood proofing can bring change in the economic life of people, the fertility will decline as development may provide opportunity to women to go to school, which in turn will make them conscious of benefit of small family. However, it is likely that the new settlers to the area will be of working class who will migrate here to avail the employment opportunity here.

Drastic Change in Population Composition

Theoretically migrants are young who move from place to place for better life. Therefore, it is unlikely that children or older people will come in bulk to settle to project areas. The key-informants of both areas assert that young male and young couples are the potential settlers. There will be children with young couples but their family size will not be big because of their shorter marital life. It is also likely that the young migrant families will be nuclear. Therefore, if project is successful key-informants anticipate proportionately more young people in the locality than older age group.

Outbreak and Spread of Endemic Diseases

The vast majority of the sampled respondents (73%) think some kind of endemic disease may breakout in the post project period. Only about 10% of them, however, anticipate high rate of it.

Percentage Distribution Of Opinions of Household Heads on the Possibility of Spread of Endemic Diseases

Possible Endemic Disease	Gram		Total N=300
	Gurai N=150	Algar Char N=150	
Low	89.2	63.3	73.2
Medium	10.8	20.0	16.5
High	0.0	16.7	10.3
Total	100.0	100.0	100.0

Key-informants of both areas opine that not many diseases will breakout due to development activities. The key-informants of haor anticipate some waterborne diseases while char key-informants anticipate diseases from air pollution, as road communication will develop in the area. People in general are not scared of diseases, which may breakout due to development activities. They believe that economic development as a result of the project will provide enough resources to cope with the outbreak of diseases. The present common diseases the survey respondents report are diarrhoea (97%), malnutrition (87%), skin disease (42%), fever (26%), jaundice (21%), and cough/cold (13%). The key-informants also have reported similar diseases. It is observed that the key-informants of Haor area have mentioned occurrence of more water borne diseases than those of Char area.

There is no qualified doctor in proposed project villages. People depend on village doctor (trained for few months) or quacks. In haor there is a Family Welfare Center with a lady health visitor.

Table 5.1 Wetland Flora of Feasibility Study Area in Char and Haor Area

Family	Scientific Name	Local Name	Habitat	Micro Habitats				Sites	
				CL	IR	AQ	O	A	B
Alismataceae	*Sagittaria sagittifolia*	Chhotokut	Herb	•	•		•		•
Amaranthaceae	*Alternanthera sesilis*	Chanchi	Herb	•	•		•	•	•
Amaranthaceae	*Amaranthes spinosus*	Katanote	Herb		•		•	•	•
Amaranthaceae	*Amaranthus viridis*	Ban note	Herb				•		•
Aponogetonnaceae	*Aponogeton natans*	Ghenchu	Herb				•		•
Araceae	*Colocasia esculenta*	Kachu	Herb	•	•		•	•	•
Araceae	*Pistia strateotes*	Topapana	Herb			•		•	•
Boraginaceae	*Heliotropium indicum*	Hatishore	Herb	•	•		•	•	•
Capparidaceae	*Crataeva nurvala*	Barun	Tree		•		•	•	•
Ceratophyllaceae	*Ceratophyllum dumersum*	Jhanjhi	Herb			•	•		•
Compositae	*Blumea lacera*	kukurshinga	Herb				•	•	•
Compositae	*Centipida minima*	Hachuti	Herb		•		•		•
Compositae	*Eclipta alba*	Kesuti	Herb		•		•	•	•
Compositae	*Enhydra fluctuans*	Helencha	Herb	•	•		•	•	•
Convolvulaceae	*Ipomoea aquatica*	Kalmi	Herb			•		•	•
Convolvulaceae	*Ipomoea fistulosa*	Dholkalmi	Herb	•	•	•	•	•	•
Cyperaceae	*Cyperus difformis*	Belua	Herb		•		•	•	•
Cyperaceae	*Cyperus iria*	Barachancha	Herb	•	•			•	•
Cyperaceae	*Cyperus rotundus*	Mutha	Herb	•	•		•	•	•
Cyperaceae	*Fimbristylis miliacea*	Bara javani	Herb				•	•	•
Cyperaceae	*Scirpus articulatus*	Chechra	Herb		•		•		•
Cyperaceae	*Scirpus erectus*	-	Herb		•		•		•
Euphorbiaceae	*Croton bonplandianum*	Bon croton	Herb		•		•	•	•
Euphorbiaceae	*Phyllanthus amarus*	Bhui amla	Herb		•		•		•
Euphorbiaceae	*Trewia polycarpa*	Latim, pitali	Tree				•		•
Gentiaceae	*Erythraea roxburghii*	Gima	Herb		•		•	•	•
Gentianaceae	*Nymphoides indica*	Panchuli	Herb			•	•		•
Gramineae	*Chrysopogon aciculatus*	Chorekanta	Herb		•		•	•	•
Gramineae	*Cynodon dactylon*	Durba, Dubla	Herb	•	•		•	•	•
Gramineae	*Panicum paludosum*	-	Herb				•		•
Gramineae	*Paspalum scrobiculatum*	Goicha	Herb				•	•	•
Gramineae	*Phragmites karka*	Nal, Khagra	Herb	•	•		•	•	•
Hydrocharitaceae	*Hydrilla verticillata*	Janjhi, Kurcli	Herb			•	•	•	•
Hydrocharitaceae	*Vallisneria spiralis*	Patajhanji	Herb			•	•	•	•
Lamiaceae	*Leucas lavandulifolia*	Shetadrun	Herb		•		•	•	•
Lecythidaceae	*Barringtonia acutangula*	Hijal	Tree	•	•		•	•	•
Limnaceae	*Lemna perpusilla*	Khudipana	Herb			•	•	•	•
Lythraceae	*Ammania baccifera*	Dadmari	Herb				•		•
Lythraceae	*Rotala rotundifolia*		Herb			•	•	•	•
Malvaceae	*Rosa involucrata*	Bon golap	Shrub		•		•	•	•
Marsileaceae	*Marsilea quadrifolia*	Shusnisak	Herb			•	•	•	•
Najadaceae	*Najas falciculata*		Herb			•	•	•	•
Najadaceae	*Najas indica*		Herb			•	•	•	•
Nymphaceae	*Nelumbo nucifera*	Poddo	Herb			•	•		•
Nymphaeaceae	*Nymphaea rubra*	Lal shapa	Herb			•	•	•	•
Nymphaeaceae	*Nymphaea stellate*	Nilshapla	Herb			•	•		•
Onagraceae	*Jussiaea repens*	Kesardam	Herb			•	•	•	•
Onagraceae	*Ludwigia octovalis*	-	Herb			•	•	•	•
Oxalidaceae	*Oxalis corniculata*	Amboli	Herb			•	•	•	•
Polygonaceae	*Persicaria hydropiper*	Biskhatali	Herb	•	•	•	•	•	•
Polygonaceae	*Persicaria orientale*	Barapanimarich	Herb	•	•	•	•	•	•
Pontederiaceae	*Eichhornia crassipes*	Kachuripana	Herb			•	•	•	•
Pontederiaceae	*Monochoria vaginalis*	Sarkachu	Herb				•	•	•
Rubiaceae	*Hedyotis corymbosa*	Khetpapra	Herb		•		•	•	•
Rubiaceae	*Dentella serphylifolia*	Bhuipat	Herb				•		•
Salviniaceae	*Salvinia cuculata*	Indurkanipana	Herb			•	•		•
Scrophulariaceae	*Limnophila gratiloides*	Karpur	Herb		•		•		•
Scrophulariaceae	*Lindernia antipoda*	-	Herb		•		•		•
Scrophulariaceae	*Lindernia hyssopioides*	-	Herb		•		•	•	•
Scrophulariaceae	*Lindernia rotundifolia*	-	Herb		•		•	•	•
Nymphaceae	*Nymphaea nouchali*	Shapla	Herb			•	•	•	•
Trapaceae	*Trapa maximowiczii*	Singra	Herb			•	•		•
Umbelliferae	*Centella asiatica*	Thankuni	Herb		•		•	•	•
Utriculariaceae	*Utricularia aurea*	Jhangi	Herb				•		•
	Pongamia pinnata	Koroch	Tree				•		•

Legend: A= Char area, B= Haor area, CL= Cultivated land, IR= Island of rice field, AQ= Aquatic, O= Others

Table 5.2 Homestead flora of Feasibility Study Area in Char and Haor Area

Family	Scientific name	Native name	Habitat	Micro habitats				Sites	
				FL	G	J	O	A	B
Acanthaceae	*Jusuticia ganderusa*	Jagatmadan	Shrub		•		•	•	•
Amaraanthaceae	*Amaranthus spinosus*	Kantanotey	Herb	•			•	•	•
Amaranthaceae	*Achyranthus aspera*	Apang	Herb	•			•		•
Amaranthaceae	*Alternanthera sessilis*	Haicha	Herb	•			•	•	•
Anacardaceae	*Anacardium occidentale*	Kajubadam	Tree				•	•	•
Anacardiaceae	*Lannea coromandelica*	Jiga, Jiol	Tree			•	•	•	•
Anacardiaceae	*Mangifera indica*	Am	Tree				•	•	•
Annonaceae	*Annona reticulata*	Nona, Atafal	Tree				•	•	•
Annonaceae	*Annona squamosa*	Sharifa	Tree	•			•	•	•
Annonaceae	*Polyalthia longifolia*	Debdaru	Tree	•			•	•	•
Anocardiaceae	*Spondias dulcis*	Belati amra	Tree		•			•	•
Apocynaceae	*Alstonia scholaris*	Chatim	Tree				•	•	
Apocynaceae	*Holarrhena pubescens*	Kurchi	Tree				•	•	
Araceae	*Colocasia esculenta*	Katchu	Herb		•		•	•	•
Asclepiadiaceae	*Calotropis gigantea*	Akond	Shrub	•			•	•	•
Asclepiadiaceae	*Calotropis procera*	Swet akond	Shrub	•			•	•	•
Bombacaceae	*Bombax ceiba*	Simul	Tree			•	•	•	•
Boraginaceae	*Heliotropium indicum*	Hatisur	Herb	•				•	•
Caricaceae	*Carica papaya*	Papey	Shrub	•	•			•	•
Casuarinaceae	*Casuarina equisetifolia*	Jhau	Tree	•				•	•
Combretaceae	*Terminalia arjuna*	Arjun	Tree	•			•	•	
Combretaceae	*Terminalia bellirica*	Bohera	Tree	•			•	•	
Combretaceae	*Terminalia catappa*	Katbadam	Tree	•			•	•	
Compositae	*Blumea lacera*	Shealmutra	Herb	•			•	•	•
Compositae	*Eclipta prostrata*	Kala keshi	Herb	•			•	•	•
Compositae	*Lippia nodiflora*	Bhuiorkra	Herb	•			•	•	•
Compositae	*Mikania cordata*	Assamlata, Taralata	Herb			•		•	•
Compositae	*Xanthium indicum*	Ghagra	Shrub	•			•	•	
Convolvulaceae	*Ipomoea fistulosa*	Dholkalmi	Herb	•			•	•	•
Cucurbitaceae	*Coccinia indica*	Telakucha	Climber				•	•	•
Cyperaceae	*Kyllingia monocephala*	Muthaghas	Herb				•	•	•
Dilleniaceae	*Dillenia indica*	Chalta	Tree		•		•	•	•
Dioscoreaceae	*Dioscroca alata*	Chuprialu	Herb				•	•	•
Ebenaceae	*Diospyros discolor*	Gab	Tree		•		•	•	•
Ebenaceae	*Diospyros peregrina*	Desigab	Tree				•	•	•
Euphorbiaceae	*Cicca acida*	Arborai	Tree		•		•	•	•
Euphorbiaceae	*Codiaeum variegata*	Patabahar	Shrub	•			•	•	
Euphorbiaceae	*Croton bonplandianum*	Croton	Herb	•			•	•	•
Euphorbiaceae	*Jatropha curcus*	Baghverenda	Shrub	•			•		•
Euphorbiaceae	*Jatropha gossypifolia*	Lal verenda	Shrub		•		•	•	•
Euphorbiaceae	*Phyllanthus emblica*	Amlokhi	Tree	•			•	•	•
Euphorbiaceae	*Phyllanthus reticulatus*	Chitki	Shrub	•			•	•	•
Euphorbiaceae	*Ricinus communis*	Reri, Bherenda	Shrub				•	•	•
Euphorbiaceae	*Trewia nudiflora*	Gota gamar	Tree				•		•
Euphorbiaceae	*Trewia polycarpa*	Latin	Tree				•		•
Flacourtiaceae	*Flacourtia indica*	Beuchi	Shrub				•	•	•
Gramineae	*Axonopus compresus*	Trufghas	Herb	•			•	•	•
Gramineae	*Bambusa balcooa*	Balku bans	Tree			•	•	•	•
Gramineae	*Bambusa bambos*	Beora bans	Tree			•		•	•
Gramineae	*Bambusa cacharensis*	Bethua	Tree			•			•
Gramineae	*Bambusa jaintiana*	Tetua bans	Tree			•		•	•
Gramineae	*Bambusa tulda*	Talla bans	Tree			•		•	•
Gramineae	*Bambusa vulgaris*	Baria bans	Tree			•		•	•
Gramineae	*Chrysopogon aciculata*	Chore kanta	Herb	•			•	•	•
Gramineae	*Cynodon dactylon*	Durbaghas	Herb	•			•	•	•
Gramineae	*Vetiveria zizanioides*	Benna	Herb	•				•	•
Hydrocotyleaceae	*Centella asiatica*	Than kuni	Herb	•			•	•	•
Labiatae	*Hyptis suaveolens*	Tokma	Herb	•			•	•	•
Labiatae	*Leucas aspera*		Herb	•			•	•	•

Labiatae	*Leucas lavendulifolia*	Swetadran	Herb				•	•	•
Labiatae	*Ocimum sanctum*	Tulsi	Herb				•	•	•
Lauraceae	*Litsea glutinosa*	Kukurchita	Shrub				•	•	•
Lauraceae	*Litsea monopetala*	Kharajora, Mendi	Shrub			•	•	•	•
Lecythidaceae	*Barringtonia acutangula*	Hijal	Tree				•	•	•
Leeaceae	*Leea crispa*	Bonchalita	Shrub				•	•	•
Leguminosae	*Acacia mangium*	Mangium	Tree				•	•	•
Leguminosae	*Acacia nilotica*	Babla, Kikar	Tree				•	•	
Leguminosae	*Albizia lebbeck*	Siris	Tree				•	•	•
Leguminosae	*Albizia procera*	Koroi	Tree				•	•	•
Leguminosae	*Butea monosperma*	Polash	Tree				•	•	•
Leguminosae	*Caesalpinia bonduc*	Nata	Shrub			•	•	•	
Leguminosae	*Cajanus cajan*	Arhar	Shrub				•	•	•
Leguminosae	*Cassia alata*	Dadmardan	Shrub			•	•	•	•
Leguminosae	*Cassia fistula*	Bandar lathi, sonalu	Tree				•	•	•
Leguminosae	*Cassia occidentalies*	Barakalkesunda	Shrub				•	•	•
Leguminosae	*Cassia siama*	Minjuri	Tree				•	•	•
Leguminosae	*Cassia tora*	Chakunda	Herb	•			•	•	•
Leguminosae	*Cassisa sophera*	Chotto kalkesunda	Shrub	•			•	•	•
Leguminosae	*Dalbergia sissoo*	Siso	Tree				•	•	•
Leguminosae	*Delonix regia*	Krishnachura	Tree		•		•	•	•
Leguminosae	*Erythrina fusca*	Painya mandar	Tree			•	•	•	•
Leguminosae	*Erythrina variegata*	Madar	Tree			•	•	•	•
Leguminosae	*Samanea saman*	Rendi, Raintree	Tree				•	•	•
Leguminosae	*Saraca asoka*	Asok	Tree				•	•	•
Leguminosae	*Sesbania grandiflora*	Bokphul	Tree				•	•	•
Leguminosae	*Tamarindus indica*	Tetul	Tree				•	•	•
Legunimosae	*Acacia auriculiformis*	Akashmoni	Tree				•	•	•
Libiatae	*Leonurus sibiricus*	Raktadrone	Herb				•	•	•
Lythidaceae	*Lagerstroemia speciosa*	Jarul	Tree				•	•	
Lythraceae	*Lawsania speciosa*	Henna plant	Tree				•	•	•
Malvaceae	*Hibiscus rosa-sinensis*	Jaba	Shrub				•	•	•
Malvaceae	*Sida acuta*	Kureta	Herb				•	•	•
Malvaceae	*Sida cordifolia*	Berela, kureta, cola	Herb				•	•	
Malvaceae	*Urena lobata*	Banokra, Jangli	Herb				•	•	•
Melastomaceae	*Melastoma malabathricum*	Datranga	Shrub				•	•	•
Meliaceae	*Azadirachta indica*	Neem	Tree				•	•	•
Meliaceae	*Melia azaderachta*	Ghora nim	Tree				•	•	•
Meliaceae	*Swietenia mahagoni*	Mehagini	Tree				•	•	•
Moraceae	*Artocarpus heterophyllus*	Kathal	Tree		•		•	•	•
Moraceae	*Artocarpus lacucha*	Barta, Dewa	Tree		•		•	•	•
Moraceae	*Ficus benghalensis*	Bot	Tree		•		•	•	•
Moraceae	*Ficus glomoreta*	Jagadumur	Shrub				•	•	•
Moraceae	*Ficus hispida*	Kakdumur	Shrub				•	•	•
Moraceae	*Ficus. hispida*	Kakdumur	Shrub				•	•	•
Moraceae	*Ficus religiosa*	Assawath, Panbot	Tree				•	•	•
Moringaceae	*Moringa oleifera*	Sajna	Tree				•	•	•
Musaceae	*Musa paradisica*	Kacha kola	Shrub	•	•		•	•	•
Musaceae	*Musa sapientum*	Kala	Shrub	•	•		•	•	•
Myrtaceae	*Psidium guajava*	Payara	Tree	•			•	•	•
Myrtaceae	*Syzygium cumini*	Jam	Tree				•	•	•
Myrtaceae	*Syzygium fruticosum*	Khudijam	Shrub				•	•	•
Myrtaceae	*Eucalyptus citriodora*	Eucalyptus	Tree				•	•	
Olaceae	*Jasminum sambac*	Beli	shrub				•	•	•
Oxalidaceae	*Averrhoa bilimbi*	Kamranga	Shrub				•	•	•
Palmae	*Areca catehu*	Supari, gua	Tree				•	•	•
Palmae	*Borassus fiabellifer*	Tal	Tree	•			•	•	•
Palmae	*Cocos nucicera*	Narikel	Tree		•		•	•	•
Palmae	*Phoenix sylvestris*	Khejur	Tree	•	•		•	•	•
Papaveraceae	*Argemone mexicana*	Shelkanta	Herb	•			•	•	•
Polygonaceae	*Persacaria orientale*	Barapanimarich	Herb	•			•	•	•
Polygonaceae	*Persicaria hydropiper*	Biskhatali	Herb	•			•	•	•
Pteridophyte	*Pteris sp*		Herb	•			•	•	•
Puniaceae	*Punica granatum*	Dalim	Tree				•	•	•

Ranunculaceae	*Clematis gouriana*	Chagalbati	Herb				•	•	
Rhamnaceae	*Zizypus mauritiana*	Kul, Boroi	Tree		•		•	•	•
Rutaceae	*Aegle marmelos*	Bel	Tree		•		•	•	•
Rutaceae	*Citrus aruntifolia*	Kagzi lebu	Shrub		•		•	•	•
Rutaceae	*Citrus grandis*	Jambura	Tree		•		•	•	•
Rutaceae	*Feronia limonia*	Kothbel	Tree				•	•	•
Rutaceae	*Glycosmis arborea*	Matmati, Datmajan	Shrub/Herb					•	•
Rutaceae	*Zanthoxylum rhetsa*	Bazna	Tree					•	•
Sapotaceae	*Mimusops elongi*	Bakul	Tree		•			•	•
Scrophulariaceae	*Scoparia dulcis*	Bondhoney	Herb				•	•	•
Solanaceae	*Physalis minina*	Tepari	Herb				•	•	
Solanaceae	*Solanum indicum*	Titbegun	Shrub	•			•	•	•
Solanaceae	*Solanum nigrum*	Phutibegun	Herb	•				•	•
Solonaceae	*Datura metel*	Dhutra	Herb	•				•	•
Sterculiaceae	*Abroma augusta*	Ulatkambal	Shrub	•				•	•
Tiliaceae	*Grewia microcos*	Patka	Tree/ Shrub	•				•	•
Ulmaceae	*Trema orientalis*	Jiban	Tree				•	•	•
Verbenaceae	*Duranta repens*	Kanta mehedi	Shrub		•		•	•	•
Verbenaceae	*Gmelina arborea*	Gamar	Tree	•			•	•	•
Verbenaceae	*Lippia alba*	Bhoikra	Shrub		•		•	•	•
Verbenaceae	*Tectona grandis*	Shegun	Tree		•		•	•	•
Verbinaceae	*Clerodendrum viscosum*	Bhant	Herb	•	•	•		•	•
Verbinaceae	*Lantana camera*	Lantana	Herb		•			•	•

Legend: A= Char area, B= Haor area. FL= Fallow land, G= Garden, J= Jungles, O= Others

Table 5.3 Roadside Flora of Feasibility Study Area in Char and Haor Area

Family	Scientific name	Local name	Habitat	Micro habitats				Sites	
				MR	MU	RS	O	A	B
Amaranthaceae	*Achyranthus aspera*	Apang	Herb		•			•	
Amaranthaceae	*Alternanthera sesilis*	Haicha	Herb	•	•		•	•	•
Amaranthaceae	*Amaranthus spinosus*	Kantanotey	Herb		•		•	•	•
Anacardiaceae	*Lannea coromandelica*	Jiga, Jiol	Tree				•		•
Apocynaceae	*Alstonia scholaris*	Chatim	Tree				•	•	
Araceae	*Colocasia esculenta*	Katchu	Herb		•	•		•	•
Asclepiadiaceae	*Calotropis procera*	Swet akanal	Shrub		•			•	•
Bombacaceae	*Bombax ceiba*	Simul	Tree		•		•	•	•
Boraginaceae	*Heliotropium indicum*	Hatisur	Herb		•	•		•	•
Caricaceae	*Carica papaya*	Papey	Shrub				•	•	
Chenopodiaceae	*Chenopodium ambrosioides*	Chandonbeto	Herb	•	•	•	•	•	•
Commelinaceae	*Commelina benghalensis*	Kanchira	Herb				•	•	•
Compositae	*Ageratum conyzoides*	Fulkuri	Herb				•	•	•
Compositae	*Blumea lacera*	Shealmutra	Herb		•	•		•	•
Compositae	*Eclipta prostrata*	Kala keshi	Herb				•	•	•
Compositae	*Lippia nodiflora*	Bhuiorkra	Herb			•		•	
Compositae	*Mikania cordata*	Assamlata, Taralata	Tree				•	•	•
Compositae	*Spilanthes acmella*	Marhatitiga	Herb				•		•
Compositae	*Xanthium indicum*	Ghagra	Herb/ Shrub				•	•	•
Convolvulaceae	*Evolvulus numularis*	Bhuiokra	Herb				•	•	•
Convolvulaceae	*Ipomoea fistulosa*	Dholkalmi	Herb				•	•	•
Cruciferae	*Rorippa indica*	Bonsarisha	Herb			•	•	•	•
Cucurbitaceae	*Coccinia indica*	Telakuch	Herb			•	•	•	•
Cyperaceae	*Cyperus spp*		Herb				•	•	•
Cyperaceae	*Fimbristylis sp*		Herb				•	•	•
Cyperaceae	*Kyllingia monocephala*	Muthaghas	Herb				•	•	•
Dioscoreaceae	*Dioscroca alata*	Chuprialu	Climber		•	•		•	•
Euphorbiaceae	*Croton bonplandianum*	Croton	Herb				•	•	•
Euphorbiaceae	*Phyllanthus emblica*	Amlokhi	Tree				•	•	•
Euphorbiaceae	*Phyllanthus reticulatus*	Chitki	Herb				•	•	•
Euphorbiaceae	*Ricinus communis*	Reri, Bherenda	Shrub				•	•	•
Gramineae	*Axonopus compresus*	Trufghas	Herb			•		•	•
Gramineae	*Chrysopogon aciculata*	Chore kanta	Herb		•	•	•	•	•
Gramineae	*Cynodon dactylon*	Durbaghas	Herb		•		•	•	•
Gramineae	*Phragmites karka*	Khagra, Nal	Shrub				•	•	
Gramineae	*Setaria glauca*		Herb				•	•	•
Gramineae	*Vetiveria ziznioides*	Benna	Herb					•	•
Hydrocotyleaceae	*Centella asiatica*	Than kuni	Herb		•	•	•	•	•
Labiatae	*Hyptis suaveolens*	Tokma	Herb		•			•	•
Labiatae	*Leucas aspera*		Herb		•		•	•	•
Labiatae	*Leucas lavendulifolia*	Swetadran	Herb		•		•	•	•
Labiatae	*Ocimum sanctum*	Tulsi	Herb					•	
Leguminosae	*Albizia procera*	Koroi	Tree					•	•
Leguminosae	*Cassia fistula*	Bandar lathi, sonalu	Tree				•	•	•
Leguminosae	*Cassia occidentalies*	Barakalkesunda	Shrub				•	•	•
Leguminosae	*Cassia siama*	Minjuri	Tree				•	•	•
Leguminosae	*Cassia sophera*	Chotto kalkesunda	Herb			•	•	•	•
Leguminosae	*Cassia tora*	Chakunda	Shrub				•	•	•
Leguminosae	*Crotalaria juncea*	Shonpat	Herb		•		•	•	•
Leguminosae	*Dalbergia sissoo*	Sisso	Tree				•	•	•
Leguminosae	*Delonix regia*	Krishnachura	Tree				•	•	•
Leguminosae	*Erythrina variegata*	Madar	Tree				•	•	•

Table 5.4 Charland Flora of Feasibility Study Area in Char

Family Name	Scientific Name	Local Name	Habitat	Micro habitats			
				HS	CM	BC	O
Amaranthaceae	*Alternanthera sesilis*	Haicha	Herb		•	•	
Amaranthaceae	*Amaranthus spinosus*	Katanotey	Herb	•	•		
Araceae	*Colocasia esculenta*	Kanchu	Herb		•	•	•
Boraginaceae	*Heliotropiun indica*	Hatisur	Herb		•	•	
Chenopodiaceae	*Chenopodium ambrosioides*	Chandonbeto	Herb		•	•	
Commelinaceae	*Commelina benghalensis*	Kanchira	Herb		•	•	
Compositae	*Blumea lacera*	Shealmutra	Herb		•	•	
Compositae	*Eclipta prostrata*	Kolakeshi			•	•	•
Compositae	*Mikania cordata*	Assanlata	Herb		•	•	
Compositae	*Spilanthes aemella*	Marhatiga	Herb	•	•	•	
Compositae	*Vernonia cinerea*	Kalojira	Herb			•	
Compositae	*Xanthium indicum*	Ghagra	Herb		•	•	
Convalvulaceae	*Ipomoea fistulosa*	Dholkalmi	Herb	•	•	•	•
Cyperaceae	*Fimbristytlis sp*		Herb		•	•	•
Cyperaceae	*Kyllinga monocephala*	Muthaghas	Herb		•	•	
Euphorbiaceae	*Croton bonplandianum*	Croton	Herb		•	•	
Graminace	*Saccharum spontaneum*	Kash	Herb	•	•	•	•
Gramineae	*Axonopus compresus*	Turf ghas	Tree	•	•	•	
Gramineae	*Chrysopogon aciculata*	Chore kanta	Herb		•		
Gramineae	*Cynodon dactylon*	Durbaghas	Herb		•	•	
Gramineae	*Dactyloctenium aegepticum*	Makra	Herb			•	•
Gramineae	*Vetiveria zizanioides*	Benna	Tree	•	•	•	
Labiatae	*Leucas lavendulifolia*	Swetadran	Herb		•	•	
Labiatae	*Ocimum sanctum*	Tulsi	Herb			•	
Leguminosae	*Cassia tora*	Chalkasunda	Herb			•	•
Leguminosae	*Desmodium tritolium*	Kodaliya	Herb			•	
Cyperaceae	*Fimbristylis chaeteria*		Herb			•	•
Gramineae	*Paspalum vaginatum*		Herb		•		•
Gramineae	*Panicum repens*		Herb			•	
Gramineae	*Zoysia matrella*		Herb			•	•
Malvaceae	*Sida acuta*	Kureta	Herb			•	
Malvaceae	*Urena lobata*	Banokra	Herb			•	
Papaveraceae	*Argemone mexicana*	Shealkanta	Herb	•		•	•
Polygonaceae	*Polygonum hydropiper*	Biskhatali	Herb			•	
Rhamnaceae	*Zizypus mauritiana*	Kul, Borai	Herb			•	
Scrophulariaceae	*Scoparia dulcis*	Bandhuni	Herb			•	
Solanaceae	*Datura metel*	Dhutra	Herb			•	
Solanaceae	*Physalis minima*	Tepari	Herb			•	

Legend: HS= High sandy soil, CM= Cultivated with moderate soil, BC= Besides char land, O= Others.

Leguminosae	*Samanea saman*	Rendi, Raintree	Tree		•		•	•	•
Leguminosae	*Tamarindus indica*	Tetul	Tree				•	•	
Malvaceae	*Sida acuta*	Kureta	Herb				•	•	•
Malvaceae	*Sida cordifolia*	Berela, kureta, cola	Herb		•		•	•	•
Malvaceae	*Urena lobata*	Banokra, Jangli	Herb				•	•	•
Marsileaceae	*Marsilea quadrifolia*	Sushnishek	Herb		•		•	•	•
Meliaceae	*Azadirachta indica*	Neem	Tree				•	•	•
Meliaceae	*Melia azaderachta*	Ghora nim	Tree				•	•	•
Moraceae	*Artocarpus heterophyllus*	Kathal	Tree				•	•	•
Moraceae	*Ficus benghalensis*	Bot	Tree				•	•	•
Moraceae	*Ficus glomoreta*	Jagadumur	Shrub				•	•	•
Moraceae	*Ficus hispida*	Kakdumur	Shrub		•		•	•	•
Musaceae	*Musa paradisica*	Kacha kola	Shrub				•	•	•
Musaceae	*Musa sapientum*	Kala	Shrub				•	•	•
Myrtaceae	*Syzygium cumini*	Jam	Tree				•	•	•
Myrtaceae	*Eucalyptus citriodora*	Eucalyptus	Tree				•	•	
Palmae	*Areca catehu*	Supari	Tree				•	•	
Palmae	*Phoenix sylvestris*	Khejur	Tree				•	•	•
Papaveraceae	*Argemone mexicana*	Shelkanta	Herb		•		•	•	•
Polygonaceae	*Persicaria hydropiper*	Biskhatali	Tree		•			•	•
Polygonaceae	*Persicaria orientale*	Barapanimarich	Herb		•		•	•	•
Pteridophyte	*Pteris sp*		Herb		•		•	•	•
Rhamnaceae	*Zizypus mauritiana*	Kul, Boroi	Tree				•	•	•
Rutaceae	*Glycosmis arborea*	Matmati	Shrub/Herb				•	•	•
Scrophulariaceae	*Lindernia procumbens*	Bakpuspa	Herb				•	•	•
Scrophulariaceae	*Lindernia sp*		Herb				•		•
Scrophulariaceae	*Scoparia dulcis*	Bondhoney	Herb		•		•	•	•
Solanaceae	*Physalis minina*	Tepari	Herb		•			•	•
Solanaceae	*Solanum indicum*	Titbegun	Shrub		•			•	•
Solanaceae	*Solanum nigrum*	Phutibegun	Herb		•			•	•
Solonaceae	*Datura metel*	Dhutra	Shrub		•		•	•	
Verbenaceae	*Duranta repens*	Kanta mehedi	Shrub				•	•	
Verbinaceae	*Clerodendrum viscosum*	Bhant	Herb				•	•	•
Verbinaceae	*Lantana camera*	Lantana	Herb				•	•	•

Legend: A= Char area, B= Haor area, MR= Semi-metalled roadside, MU= Muddy roadside, RS= Roadside slope, O= Others.

Table 5. 5 List of Identified Wetland Wildlife and Fish Fauna in Algar Char Gram of Fulchari Upazila, and Gurai Gram of Nikli Upazila

LIFE FORM	CLASS	FAMILY	ENGLISH NAME	SCIENTIFIC NAME	O	P	L	VC	CO	CE	E	V	R	CT	REMARK
	Amphibia														
		Ranidae													
A			Skipper frog	*Euphlyctis cyanophlyctis**	+			+							A, G
	Reptilia														
		Bataguridae*													
R			Common Batagur	*Batagur baska*			+			+				+	A, G
R			Indian Roofed Turtle	*Kachuga tecta*			+		+						A
R			Median Roofed Turtle	*Kachuga tentoria*			+				+			+	A, G
R			Brahmini River Turtle	*Hardella thurji*			+				+			+	A, G
		Trionychidae													
R			Ganges Soft Shell	*Aspideretes gangeticus**			+			+				+	A
		Homalopsidae													
R			Common Smooth Water Snake	*Enhydris enhydris*			+		+						A, G
		Natricidae													
R			Checkered Keelback	*Xenochrophis piscator*			+		+						A, G
	Aves														
		Dendrocygnidae													
B			Lesser Whistling-duck*	*Dendrocygna javanica*			+		+						A, G
B			Falcated Teal	*Anas falcata*			+		+						A
B			Mallard	*Anas platyrhynchos*			+						+		
B			Garganey	*Anas querquedula*			+		+						A, G
		Podicipedidae*													
B			Little Grebe	*Tachybaptus ruficollis**			+		+						A, G
		Phalacrocoracidae*													
B			Indian Cormorant*	*Phalacrocorax fuscicollis*			+								G
B			Little Cormorant	*Phalacrocorax niger*	+			+							A, G
		Anatidae													
B			Common Teal	*Anas crecca*			+		+						G, MB

LIFE FORM	CLASS	FAMILY	ENGLISH NAME	SCIENTIFIC NAME	O	P	L	VC	CO	CE	E	V	R	CT	REMARK
		Rallidae													
B			Watercock	*Gallicrex cinerea*			+	+							A, G
B			Water Rail	*Rallus aquaticus*			+							+	A, B, MB
B			Brown Crake	*Amaurornis akool*			+		+						G
B			White-breasted Waterhen	*Amaurornis phoenicurus*			+	+							A, G
B			Common Coot*	*Fulica atra*			+								A, G, MB
B			Common Moorhen*	*Gallinula chloropus*			+		+						A, G
B			Purple Swamphen	*Porphyrio porphyrio*			+		+						A
	Mammalia														
		Platanistidae													
M			Ganges River Dolphin	*Platanista gangetica*			+				+				A, G
	Osteichthyes														
		Cyprinidae													
F			Rohu	*Labeo rohita*	+				+						A, G
F			Flying Barb	*Esomus danricus*			+								A, G
F			Blackline Rasbora	*Parluciosoma daniconius**			+								A, G
F			Black Rohu	*Labeo calbausa*			+				+				A, G
F			Reba Carp	*Cirrhinus reba*			+					+			A
F			Mrigal	*Cirrhinus mrigala*			+								A, G
F			Olive Barb	*Puntius sarana*			+			+					A, G
F			Ticto / Firefin Barb	*Puntius ticto*	+							+			A, G
F			Swamp Barb	*Puntius chola**			+		+						A, G
F			Cotio	*Osteobrama cotio**			+				+				A, G
F			Large Razorbelly	*Salmostoma bacaila*			+		+						A, G
F			Catla	*Catla catla*			+		+						A, G
		Cobitidae													
F			Gongata Loach	*Somileptes gongota*			+		+						A
		Claridae													
F			Magur	*Clarius batrachus*	+				+						A, G
		Heteropneustidae													
F			Stinging Catfish	*Heteropneustes fossilis*	+				+						A, G
		Siluridae													
F			Freshwater Shark	*Wallago attu*	+				+						A, G
F			Pabda Catfish	*Ompok pabda*			+				+				A, G
F			Indian Butter-catfish	*Ompok bimaculatus*			+				+				A, G
F			Pabo Catfish	*Ompok pabo*			+				+				A, G

LIFE FORM	CLASS	FAMILY	ENGLISH NAME	SCIENTIFIC NAME	O	P	L	VC	CO	CE	E	V	R	CT	REMARK
		Chacidae													
F			Indian Chaca	*Chaca chaca*			+				+				A, G
		Bagridae													
F			Tengra Mystus	*Mystus tengara*	+				+						A, G
F			Striped Dwarf Catfish	*Mystus vittatus*			+		+						A, G
F			Menoda Catfish	*Mystus menoda*			+								A
F			Gangetic Mystus	*Mystus cavasius*			+					+			A, G
F			Tista Batasuio	*Batasio batasio*			+		+						A
F			Long-whiskered Catfish	*Aorichthys aor**			+					+			A, G
		Schibeidae													
F			Indian Potasi	*Pseudotropius atherinoides*			+		+						A
F			Gangetic Ailia	*Ailia colia*			+		+						A
F			Silondia Vacha	*Silonia silondia*			+				+				A, G
F			Jamuna Ailia	*Ailia punctata**			+					+			A, G
F			Garua Bacha	*Clupisoma garua*			+			+					A, G
		Ariidae*													
F			Gagora catfish	*Arius gagora**			+								A, G
F			Soldier Catfish	*Osteogeneiosus militaris*			+								A, G
		Pangasidae*													
F			Pangus	*Pangasius pangasius*	+					+					A, G
		Belonidae													
F			Freshwater Garfish	*Xenentodon cancila*	+			+							A
		Channidae													
F			Asiatic Snakehead	*Channa orientalis**			+					+			A, G
F			Spotted Snakehead	*Channa punctatus*			+		+						A, G
		Centropomidae													
F			--	*Chanda baculis*											A, G
F			--	*Chanda ranga*											A
		Mastacembelidae													
F			Striped Spinyeel	*Mastacembelus pancalus*	+				+						A, G
F			Tire-trak Spinyeel	*Mastacembelus armatus*			+				+				A, G
F			One-stripe Spinyeel	*Macrognathus aculeatus*			+					+			A, G
		Anabantidae													
F			Climbing Perch	*Anabas testudineus*	+				+						A, G
		Pristolepidae													
F			Dwarf Chameleon fish	*Badis badis*			+				+				A, G
		Nandidae													
F			Mud Perch / Mottled Nandus	*Nandus nandus*			+					+			A,G

LIFE FORM	CLASS	FAMILY	ENGLISH NAME	SCIENTIFIC NAME	O	P	L	VC	CO	CE	E	V	R	CT	REMARK
		Toxotidae													
F			Spotted Chatareus	*Toxotes chararеus*			+								A, G
		Polynemidae													
F			Indian Threadfish	*Polydactylus indicus**			+		+						A, G
		Belontiidae													
F			Sunset Gourami	*Colisa sota*	+			+							A, G
F			Giant Gourami	*Colisa fasciatus**			+		+						A
F			Dwarf Gourami	*Colisa lalia**	+				+						A
		Eleotridae													
F			Duckbill Sleeper	*Butis butis*			+								A, G
		Gobiidae													
F			---	*Pseudopocryptes lanceolatus**											A, G
F			Tank Goby	*Glossogobius giuris*			+		+						A, G
F			--	*Awaous gutum**			+		+						
F			--	*Awaous grammepomus*			+		+						A, G
F			Bumblebee Goby	*Brachygobius nunas*			+								A, G
F			--	*Periophthalmus keolreuteri*			+								A
		Csiaenidae													
F			Coitor Croaker	*Johnius coitor*			+		+						A, G
		Tetradontidae													
F			Green Pufferfish	*Chelodon fluviatilis**	+				+						A, G
F			Gangetic Pufferfish	*Chelonodon potoca**			+		+						A, G
		Notopteridae													
F			Humped Featherback	*Notopterus chitala*			+				+				A, G
F			Grey Featherback	*Notopterus notopterus*			+					+			A
		Clupeidae													
F			Hilsa	*Tenualosa ilisha**			+		+						A, G
F			Ganga River-Sprat	*Corica soborna*	+				+						A, G
F			Burmese River Shad	*Gudusia varigata*			+								A
F			Indian River Shad	*Gudusia chapra*			+		+						A
F			Indian Pellona	*Pellona ditchela*			+								A, G
		Engraulididae													
F			Gangetic Haitfin Anchovy	*Setipinna phasa*			+		+						A, G

Legend: A= Amphibia, B= Bird, M= Mammal, R= Reptile, F= Fish, O= Observed, P= Previous record, L= Local information, VC= Very common, CO= Common, CE= Critically endangered, E= Endangered, V= Vulnerable, R= Rare, CT= Commercially threatened. MB= Migratory Bird, A= Algar Char Gram, G= Gurai Gram, * = new name followed.

Table 5.6 List of Identified Terrestrial Wildlife in Algar Char Gram of Fulchari Upazila and Gurai Gram of Nikli Upazila

LIFE FORM	CLASS	FAMILY	ENGLISH NAME	SCIENTIFIC NAME	O	P	L	VC	CO	CE	E	V	R	CT	REMARK
	Amphibia														
		Ranidae													
A			Bull frog	Hoplobatrachus tigerinus*	+			+						+	A, G
A			Cricket frog	Limnonectes limnocharis*	+			+							A, G
A			Boulenger's Frog	Rana alticola	+							+			A, G
		Bufonidae													
A			Common Toad	Bufo melanostictus	+			+							A, G
		Microhylidae													
A			Ornate Microhylid	Microhyla ornata	+							+			A
		Rhacophoridae													
A			Maculated Tree frog	Polypedates maculatus*	+				+						A, G
	Reptilia														
		Gekkonidae													
R			Common House Lizard	Hemidactylus brooki			+		+						A, G
R			House Lizard	Hemidactylus bowringii			+								A, G
R			Common House Lizard	Hemidactylus flaviviridis	+			+							A, G
		Agamidae													
R			Common Garden Lizard	Calotes versicolor			+		+						A, G
		Scincidae													
R			Snake Shink	Riopa punctats											A
R			Common Skink	Mabuya carinata			+		+						A, G
		Varanidae													
R			Bengal/Grey Monitor Lizard	Varanus bengalensis			+					+		+	A, G
R			Yellow Monitor / Common Lizard	Varanus salvator							+			+	A
		Dipsadidae													
R			Common Wolf Snake	Lycodon aulicus			+					+			A, G
R			Yellowspeckled Wolf Snake	Lycodon jara			+					+			
		Colubridae													
R			Rat Snake	Coluber mucosus*			+					+			A, G
R			Shortnosed Vine Snake	Ahaetulla nasutus			+					+			A, G
		Typhlopidae													A, G
R			Common Worm Snake	Ramphotyplops bramina*			+		+						A, G

LIFE FORM	CLASS	FAMILY	ENGLISH NAME	SCIENTIFIC NAME	O	P	L	VC	CO	CE	E	V	R	CT	REMARK
	Aves														
		Alcedinidae													
B			Common Kingfisher	Alcedo atthis	+			+							A, G
B			White-throated Kingfisher*	Halcyon smyrnensis	+				+						G, K
		Cerylidae*													
B			Pied Kingfisher*	Ceryle radis	+				+						
		Upupidae													
B			Common Hoopoe	Upupa epops			+		+						A
		Megalaimidae													
B			Lineated Barbet	Megalaima lineata	+				+						A, G
		Picidae													
B			Black-rumped Flamback*	Dinopium benghalense			+		+						A, G
		Phasianidae													
B			Swamp Francolin*	Francolinus gularis			+			+			+	+	A
B			Grey Francolin*	Francolinus pondicerianus			+							+	G
		Meropidae													
B			Green Bee Eater	Merops orientalis			+		+						A, G
		Centropodidae													
B			Greater Coucal*	Centropus sinensis	+				+						A
B			Indian Cuckoo	Cuculus micropterus	+				+						A, G
		Psittacidae													
B			Roseringed Parakeet	Psittacula krameri	+				+						A, G
		Apodidae													
B			House swift	Apus affinis	+			+							A
B			Asian Palm Swift*	Cypsiurus balasiensis*	+			+							A, G
		Tytonidae													
B			Barn Owl	Tyto alba			+		+						A, G
		Strigidae													
B			Spotted Owl	Athene brama			+		+						A
B			Brown Fish Owl	Ketupa zeylonensis*			+					+			A, G
B			Tyne Fish Owl	Ketupa flavipes			+				+				A, G
		Caprimulgidae													
B			Indian Nightjar	Caprimulgus asiaticus			+						+		A, G
		Columbidae													
B			Rock Pigeon*	Columba livia	+				+						A, G
B			Spotted Dove	Streptopelia chinensis	+				+						A, G
		Rostratulidae													

LIFE FORM	CLASS	FAMILY	ENGLISH NAME	SCIENTIFIC NAME	O	P	L	VC	CO	CE	E	V	R	CT	REMARK
B			Greater Painted-Snipe*	Rostratula bengalensis			+								A, G
		Jacanidae													
B			Pheasant-tail Jacana	Hydrophasianus chirurgus			+		+						A
B			Bronze-winged Jacana	Metopidius indicus			+	+							A, G
		Scolopacidae													
B			Common Sandpiper	Actitis hypoleucos*			+		+						A, G, MB
B			Curlew Sandpiper	Calidris ferruginea			+		+						A, G, MB
B			Fantail Snipe*	Gallinago gallinago											A, MB
B			Eurasian Curlew*	Numenius arquata			+						+		A, G, MB
B			Ruff*	Philomachus pugnax			+								A, G, MB
B			Marsh Sandpiper	Tringa stagnatilis			+		+						A, G, MB
B			Common Redshank	Tringa totanus			+								A, G, MB
		Charadriidae													
B			River Lapwing*	Vanellus duvaucelli			+				+				A
B			Red-wettled Lapwing	Vanellus indicus			+		+						G
		Glareolidae													
B			Small Pratincole*	Glareola lactea			+		+						A, MB
		Laridae													
B			Gull-billed Tern	Gelochelidon nilotica			+		+						A, G
B			Indian Skimmer	Rynchops albicollis			+				+				A
B			Little Tern	Sterna albifrons			+			+					A, G
B			River tern*	Sterna aurantia	+			+							A, G
B			Whiskered Tern	Chlidonias hybridus			+		+						A, G, MB
B			Common Tern	Sterna hirunda			+		+						A, G, MB
		Glareolidae													
B			Little Ringed Plover	Charadrius dubius			+		+						A, G, MB
B		Accipitridae*													
B			White-rumped Vulture*	Gyps bengalensis	+				+						A, G
B			Pallas's Fish Eagle*	Haliaeetus leucoryphus	+					+					A, G
B			Brahminy Kite	Haliastur indus	+			+							A, G
B			Lesser Spotted Eagle	Aquila pomarina	+										A, MB
B			Eurasian Marsh Harrier*	Circus aeruginosus			+								G, MB
B			Black Kite*	Milvus migrans	+				+						A
B			Grey-headed Fish Eagle	Ichthyophaga ichthyaetus	+				+						A, G
B			Osprey	Pandion haliaetus			+							+	A, MB
		Ardeidae													
B			Indian Pond heron*	Ardeola grayii	+			+							A, G
B			Cattle Egret	Bubulcus ibis	+			+							A, G

LIFE FORM	CLASS	FAMILY	ENGLISH NAME	SCIENTIFIC NAME	O	P	L	VC	CO	CE	E	V	R	CT	REMARK
B			Great Egret*	Casmerodius albus*			+		+						A, G
B			Little Egret	Egretta garzetta	+			+							A, G
B			Cinnamon Bittern*	Ixobrychus cinnamomeus			+		+						A, G
B			Little Bittern	Ixobrychus minutus			+								G
B			Intermidiate Egret*	Mesophoyx intermedia*	+				+						A, G
		Coconiidae													
B			Asian Openbill*	Anastomus oscitans			+		+						A
		Threskiornithidae													
B			Glossy Ibis	Plegadis papillosa			+								G
		Irenidae													
B			Golden-fronted Leafbird	Chloropsis aurifrons			+		+						A, G
		Laniidae													
B			Long-tailed Shrike*	Lanius schach	+				+						A
		Corvidae													
B			Jungle Crow	Corvus macrorhynchos	+			+							A, G
B			House crow	Corvus splendens	+			+							A, G
B			Rufous Tree Pie*	Dendrocitta vagabunda	+				+						A, G
		Oriolidae													
B			Black-headed Oriole	Oriolus xanthornus	+				+						A, G
		Irenidae													
B			Common Iora	Aegithina tiphia			+		+						A, G
		Artamidae													
B			Ashy Woodswallow*	Artamus fuscus			+		+						A, G
		Dicruridae													A, G
B			Black Drongo	Dicrurus macrocercus*	+			+							A, G
B			Bronzed Drongo	Dicrurus aeneus	+				+						A, G
		Campephagidae													
B			Large Cuckooshrike	Coracina macei*			+		+						A, G
B			Small Minivet	Pericrocotus cinnamomeus			+		+						A
B			Common Woodshrike	Tephrodornis pondicerianus			+		+						A, G
		Muscicapidae													
B			White-throated Fantail*	Rhipidura albicollis	+				+						A, G
B			Oriental Magpie Robin*	Copsychus saularis	+			+							A, G
B			Pied Bushchat	Saxicola caprata			+								A
		Sturnidae													
B			Common Myna	Acridotheres tristis	+			+							A, G
B			Bank Myna	Acridotheres ginginianus	+			+							A
B			Asian Pied Starling*	Sturnus contra	+			+							A, G

LIFE FORM	CLASS	FAMILY	ENGLISH NAME	SCIENTIFIC NAME	O	P	L	VC	CO	CE	E	V	R	CT	REMARK
B			Chestnut-tailed Starling*	Sturnus malabaricus	+			+							A, G
		Paridae													
B			Great Tit*	Parus major	+				+						A, G
		Pycnonotidae													
B			Red-vented Bulbul	Pycnonotus cafer	+			+							A, G
		Cisticolidae													
B			Grey-breasted Prinia*	Prinia hodgsonii	+				+						G, K
		Sulviidae*													
B			Striated Grassbird*	Megaurus palustris	+				+						A, G
B			Common Tailorbird	Orthotomus sutorius	+			+							A, G
B			Common Babbler	Turdoides caudatus			+								A, G
B			Jungle Babbler	Turdoides striatus	+				+						A, G
		Alaudidae													
B			Rufous-winged Bushlark*	Mirafra assamica	+				+						A, G
		Nectariniidae													
B			Purple Sunbird	Nectarinia asiatica	+				+						A, G
B			Purple-rumped Sunbird	Nectarinia sperata			+		+						A, G
B			Little Spiderhunter	Arachnothera longoropstra			+		+						A, G
		Passeridae													
B			Black-headed Munia	Lonchura malacca	+				+						A, G
B			Scally-breasted Munia*	Lonchura punctulata			+		+						A
B			House Sparrow	Passer domisticus	+			+							A, G
B			Baya Weaver*	Ploceus philippinus	+				+						A, G
B			Paddyfield Pipit	Anthus rufulus*	+			+							A, G, MB
		Motacillidae													
B			White browed Wagtail*	Motacilla maderaspatensis	+				+						A, G
B			White Wagtail	Motacilla alba			+		+						A, G, MB
	Mammalia														
		Canidae													
M			Jakal	Canis aureus			+					+			A, G
		Felidae													
M			Fishing cat	Prionailurus bengalensis			+				+				A, G
		Soricidae													
M			Grey Musk Shrew	Suncus murinus			+		+						A, G
		Pteropodidae													
M			Flyintg Fox	Pteropus gigantius	+								+		A, G
		Vespertilionidae													

LIFE FORM	CLASS	FAMILY	ENGLISH NAME	SCIENTIFIC NAME	O	P	L	VC	CO	CE	E	V	R	CT	REMARK
M			Indian Pipistrelle	Pipistrellus coromandra	+				+						A, G
		Herpestidae													
M			Small Indian Mongoose	Hervested auropunctatus			+		+						A, G
		Mustelidae													
M			Common Otter	Lutra lutra			+		+						A, G
		Muridae													
M			Indian mole Rat	Bendicota bengalensis			+	+							A, G
M			Bandicoot Rat	Bandicota indica			+	+							A, G
M			Indian Field Mouse	Mus booduga			+		+						A, G
M			House Mouse	Mus musculus			+	+							A, G
M			Common House Rat	Rattus rattus			+		+						A, G
		Sciuridae													
M			Irrawaddy Squirrel	Callosciurus pygerythrus			+		+						A, G

Legend: A= Amphibia, B= Bird, M= Mammal, R= Reptile, F= Fish, O= Observed, P= Previous record, L= Local information, VC= Very common, CO= Common, CE= Critically endangered, E= Endangered, V= vulnerable, R= Rare, CT= Commercially threatened, A= Algar Char Gram, G= Gurai Gram, K= Insufficiently known, MB= Migratory bird, * = new name followed.

Table 5.7 List of Critically Endangered, Endangered and Vulnerable Wildlife, and Fish Fauna in Char and Haor Area

LIFE FORM	CLASS	FAMILY	ENGLISH NAME	SCIENTIFIC NAME	O	CE	E	V	REMARK
		Microhylidae							
A			Ornate Microhylid	*Microhyla ornata*	+			+	A, G
		Ranidae							
A			Boulenger's Frog	*Rana alticola*	+			+	A, G
	Reptilia								
		Bataguridae*							
R			Brahmini River Turtle	*Hardella thurji*			+		A, G
R			Common Batagur	*Batagur baska*		+			A, G
R			Median Roofed Turtle	*Kachuga tentoria*			+		A, G
		Trionychidae							
R			Ganges Soft Shell	*Aspideretes gangeticus**		+			A, G
		Varanidae							
R			Bengal, Grey Monitor Lizard	*Varanus bengalensis*				+	A, G
R			Yellow Monitor / Common Lizard	*Varanus salvator*			+		A, G
		Dipsadidae							
R			Common Wolf Snake	*Lycodon aulicus*				+	A, G
R			Yellowspeckled Wolf Snake	*Lycodon jara*				+	
		Natricidae							
R			Dark-bellied Marsh Snake	*Xenochrophis cerasogaster*				+	A
		Colubridae							
R			Rat Snake	*Coluber mucosus**				+	A, G
R			Shortnosed Vine Snake	*Ahaetulla nasutus*				+	A, G
	Aves								
		Phasianidae							
B			Swamp Francolin*	*Francolinus gularis*		+			G, K
B			Manipur Bush Quail*	*Perdicula manipurensis*			+		G, K
		Strigidae							

LIFE FORM	CLASS	FAMILY	ENGLISH NAME	SCIENTIFIC NAME	O	CE	E	V	REMARK
B			Spotted Owl	*Athene brama*					G,
B			Brown Fish Owl	*Ketupa zeylonensis**				+	G, K
B			Tyne Fish Owl	*Ketupa flavipes*			+		
		Laridae							
B			Indian Skimmer	*Rynchops albicollis*			+		A
B			Little Tern	*Sterna albifrons*		+			A, G
B		Accipitridae*							
B			Pallas's Fish Eagle*	*Haliaeetus leucoryphus*	+	+			A, G
	Mammalia								
		Canidae							
M			Jakal	*Canis aureus*				+	A, G
		Felidae							
M			Fishing cat	*Prionailurus bengalensis*			+		A, G
		Platanistidae							
M			Ganges River Dolphin	*Platanista gangetica*			+		A, G
	Osteichthyes								
		Cyprinidae							
F			Black Rohu	*Labeo calbausa*			+		G, A
F			Reba Carp	*Cirrhinus reba*				+	A
F			Olive Barb	*Puntius sarana*		+			A, G
F			Ticto / Firefin Barb	*Puntius ticto*	+			+	A, G
F			Cotio	*Osteobrama cotio**			+		A, G
F			Gangetic Latia	*Chrossocheilus latius*			+		A
		Siluridae							
F			Pabda Catfish	*Ompok pabda*			+		A, G
F			Indian Butter-catfish	*Ompok bimaculatus*			+		A, G
F			Pabo Catfish	*Ompok pabo*			+		A, G
		Chacidae							
F			Indian Chaca	*Chaca chaca*			+		A, G
		Bagridae							

LIFE FORM	CLASS	FAMILY	ENGLISH NAME	SCIENTIFIC NAME	O	CE	E	V	REMARK
F			Gangetic Mystus	*Mystus cavasius*				+	A, G
F			Long-whiskered Catfish	*Aorichthys aor**				+	A, G
		Schibeidae							
F			Batchwa Bacha	*Eutropichthus vacha*		+			A
F			Silondia Vacha	*Silonia silondia*			+		A, G
F			Jamuna Ailia	*Ailia punctata**				+	A, G
F			Garua Bacha	*Clupisoma garua*		+			A, G
		Pangasidae*							
F			Pangus	*Pangasius pangasius*	+	+			A, G
		Channidae							
F			Asiatic Snakehead	*Channa orientalis**				+	A, G
		Mastacembelidae							
F			Tire-trak Spinyeel	*Mastacembelus armatus*			+		A, G
F			One-stripe Spinyeel	*Macrognathus aculeatus*				+	A, G
		Pristolepidae							
F			Dwarf Chameleon fish	*Badis badis*			+		A, G
		Nandidae							
F			Mud Perch / Mottled Nandus	*Nandus nandus*				+	A, G
		Notopteridae							
F			Humped Featherback	*Notopterus chitala*			+		A, G
F			Grey Featherback	*Notopterus notopterus*				+	A

Legend: A= Amphibia, B= Bird, M= Mammal, R= Reptile, F= Fish, O= Observed, P= Previous record, L= Local Information, VC= Very common, CO= Common, CE= Critically endangered, E= Endangered, V= vulnerable, R= Rare, CT= Commercially threatened, A= Algar Char Gram, G= Gurai Gram, K= Insufficiently known, MB= Migratory bird, * = new name followed.