



**Profiles of Village Common Forests:
evaluated for candidate OECM**

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Following Village Common Forest (VCF) profiles are part of the Arannayk's initiative in Bangladesh towards identification of potential OECMs (through assessment and verification) as a pioneer for subsequent reporting to the IUCN World Commission on Protected Areas (WCPA) and the World Database on OECM (WD-OECM) of the UNEP-World Conservation Monitoring Center (UNEP-WCMC). An OECM (Other Effective Area based Conservation Measures) is 'a geographically defined area other than a Protected Area, which is governed and managed in ways that achieve positive and sustained long-term outcomes for the in-situ conservation of biodiversity with associated ecosystem functions and services and where applicable, cultural, spiritual, socio-economic, and other locally relevant values (CBD CoP decision 14/8).' The goal of the project was to establish Other Effective Area-based Conservation Measures (OECM) as a mechanism of biodiversity conservation in Bangladesh to contribute to achieving the country's biodiversity conservation targets.

1. Kamalchari Mukh Village Common Forest

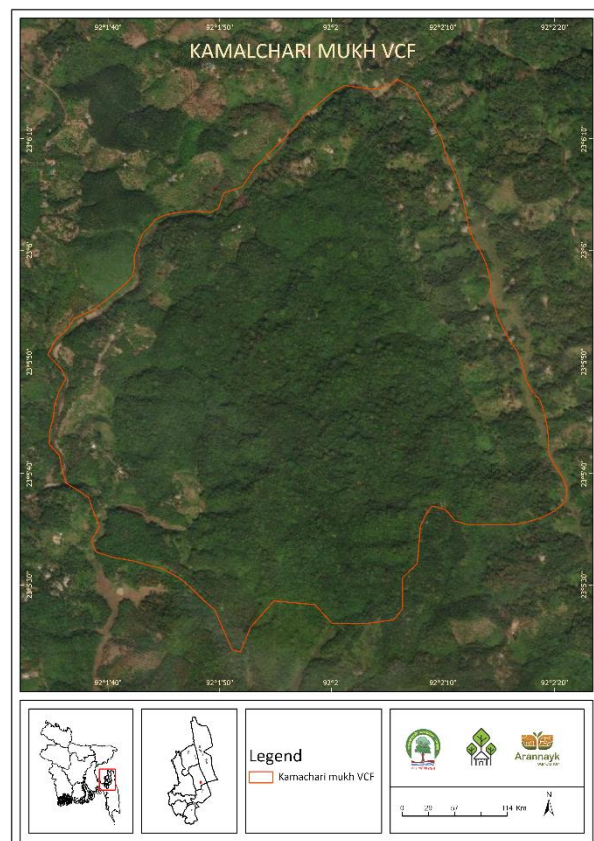
Overview

Kamalchari Mukh Village Common Forest (VCF) is located at 267 no. Bhuachari Mouza in 2 no. Kamal Chori Union of Khagrachari Sadar Upazila in Khagrachari district, at 23.096336° North latitude and 92.031736° East longitude. The site is surrounded by Kamalchari *chara* (canal) on its western and northern sides, Chakra chara on the south, and small hills on the east. The total area of the site is around 316 acres (127.8 ha). The site has a clear boundary demarcated by boundary pillars and stream pathways. The site is representative of tropical hill forest ecosystem and is rich in biodiversity. The site currently does not have any conservation related national or international designation.

Background and Significance

Kamalchari Mukh VCF was established in 1947 by the then Headman of the mouza, Mr. Chandra Kanto Chakma. From the very beginning this site was under the management of a committee of the community representatives with the purpose of conserving the forest to ensure year-round availability of stream water and of non-timber forest products to the community members. As the village (Kamalchari) of the VCF community is located about 2.0 km away from the VCF, people of two other villages adjacent to the VCF used to illicitly extract timber and bamboo from the VCF, causing severe degradation in one-third of its total area. To protect the forest resources of the VCF, the VCF community deployed 11 of their poor households to settle in part of the degraded area of VCF.

While the management committee was struggling to protect and conserve the VCF in this manner, Arannayk Foundation came forward to provide financial and technical support to this VCF community to manage the forest more effectively. In association with a partner NGO (Proshika), Arannayk Foundation implemented a project from 2011 to 2019 to strengthen management capacity of the VCF



management committee through training and accompaniment support. It also provided support for restoration of the degraded areas of the VCF through assisted natural regeneration and enrichment planting and for construction of a multi-purpose community house cum VCF office. The project also promoted alternative income generating activities among the forest dependent households in the VCF community as well as in two other neighboring villages through skills training and establishment of revolving loan fund. These interventions resulted in improved management of the VCF and restoration of forest health. During 2018-2019, the USAID-funded CHT Watershed Co-management Activity (CHT-WCA) under the Strengthening Inclusive Development in Chittagong Hill Tracts (SID-CHT) project of the Ministry of Chittagong Hill Tracts Affairs (MoCHTA), implemented by UNDP in collaboration with the Hill District Council and a local NGO, assisted the community to further strengthen the management of the VCF and alternative income generation activities of the forest dependent households.



The forest contains remarkable diversity of native flora and fauna including several critically endangered, endangered, and vulnerable species of plants and animals.

Governance and Management

As an unclassed state forest (USF) land, the site is legally owned by the Government of Bangladesh and governed by the Deputy Commissioner of the district and the Hill District Council, but it is managed by the local community based on customary rights, by forming a committee named Kamalchari Mukh VCF Management Committee. This management committee has adopted CHT Governance rules (1900) as a baseline along with several community approved laws and regulations for the management and conservation of the site's ecological integrity. The management committee has an 11-member executive body and a general body consisting of all community members. The executive body has a President on the top and several other posts below including one general secretary, one treasurer and eight members.

Biodiversity Values

Flora: Muli bamboo (*Melocanna baccifera*) occupies around one-third of the total area of the VCF. Most of the remaining area of the VCF is densely vegetated with the diverse species of trees, shrubs, herbs, climbers and epiphytes that are common in the tropical semi-evergreen hill forest of south-eastern Bangladesh. Chowdhury, et al. (2018) conducted a detailed survey on the biodiversity of Kamalchari VCF in 2018 and recorded 55 tree species. The most dominant species were Amur (*Aglaia cucullate*) and Kanak (*Schima wallichii*) followed by *Persea bombycina*, Bhadi (*Lannea coromandelica*), Haru lodi/Barochallya (*Tarenna campaniflora*), Batna (*Quercus oxydon*), Jiban (*Trema orientalis*), Jam (*Syzygium cumini*), Dhaki Jam (*Syzygium grande*), Barta (*Artocarpus lacucha*), Minjiri (*Sena siamea*), Sonalu (*Casia fistula*), Burna (*Macaranga denticulate*), Kalagota (*Sapium baccatum*), Moos (*Brownlowia elata*), Chikrassi (*Chukrasia tabularis*), Buddha narikel (*Pterygota alata*), and Kala Batna (*Lithocarpus acuminatus*).

Earlier, Nath (2012) recorded 109 plant species including grass, climbers, herbs, shrubs, saplings, and trees from this VCF, of which 39 species were unknown to the author and also to the locals. Among the 67 species identified, 47 were trees, 2 shrubs, 6 climbers and 12 herbs. The dominant species were Castoma, Bura, Gamar (*Gmelina arborea*), Ramjani (*Maesa indica*), and Nunia (*Portulaca oleracea*).

The common tree species were Jaganna gola (*Ficus racemose*), Jogya dumur (*Ficus semicordata*), Meda (*Litsea monopetala*), Achar gola (*Microcos paniculate*), Barmala (*Callicarpa arborea*), Vadi (*Lannea*



coromandelica), Gutgutya (*Protium serratum*), Horba/Sheora (*Streblus asper*), and Jam (*Syzygium cumini*). There were also Udal (*Sterculia foetida*), Lohakath (*Xylia xylocarpa*), Kanak (*Schima wallichii*), Kao (*Garcinia cowa*), Kala koroi (*Albizia lebbeck*), Sada koroi (*Albizia procera*), Molucana koroi (*Paraserianthes falcataria*), Dakroom (*Mitragyna parvifolia*), Hona gola (*Oxyxylum indicum*), Goda (*Vitex glabrata*), Dharmara (*Stereospermum personatum*), Chensi (*Alternaria sessilis*), Budhha narikel (*Pterygota alata*), Barta (*Artocarpus lacucha*), Bohera (*Terminalia bellerica*), Achar gola (*Microcos paniculata*), Chatian (*Alostonia scholaris*), Elana gota (*Antidesma acidum*), Fuljhumari (*Anogeissus acuminata*), and Shimul (*Bombax ceiba*).

It is notable that, among these species, three (Barta, Moos and Dakroom) are in “threatened” (vulnerable) state and seven (Haru lodi/Barochallya, Kalagota, Chikrassi, Buddha narikel, Kala Batna, Ramjani, and Udal) are in “near-threatened” state in Bangladesh (IUCN 2023). There might be more numbers of threatened and near threatened species among the other existing plants in Kamalchari Mukh VCF.

Fauna: The site harbors diverse species of mammals, reptiles, amphibians, and birds. The mammals include Rhesus Macaque (*Macaca mulatta*), Barking Deer (*Muntiacus muntjak*), Wild Boar (*Sus scrofa*), Jungle cat (*Felis chaus*), Leopard cat (*Prionailurus bengalensis*), Indian Crested Porcupine (*Hystrix indica*), Asiatic long-tailed climbing mouse (*Vandeleuria oleracea*), Irrawaddy Squirrel (*Callosciurus pygerythrus*), Lesser Bamboo Rat (*Cannomys badius*), Indian Flying Fox (*Pteropus giganteus*), Fulvous Fruit Bat (*Rousettus leschenaultii*), Common Pipistrelle (*Pipistrellus pipistrellus*), Small Indian Mongoose (*Herpestes auropunctatus*), and Crab-eating Mongoose (*Herpestes urva*).

The reptiles and amphibians include Monocled Cobra (*Naja kaouthia*), Indian Rat snake (*Ptyas mucosa*), checkered Keelback (*Xenochrophis piscator*), Green pit viper (*Trimeresurus albolabris*), Vine Snake (*Ahaetulla nasuta*), Short-nosed vine snake (*Ahaetulla prasina*), Tawny cat snake (*Boiga ochracea*), Ornate Flying snake (*Chrysopelea ornata*), Common Trinket Snake (*Coelognathus helena*), Painted bronzenack (*Dendrelaphis tristis*), Common Wolf Snake (*Lycodon aulicus*), Forest Crested Lizard (*Calotes emma*), Common Garden Lizard (*Calotes versicolor*), Ayeyarwady Bent-toed Gecko (*Cyrtodactylus ayeyarwadyensis*), Takay Gecko (*Gekko gekko*), Khasi Hills Long-tailed Lizard (*Takydromus khasiensis*), Common Skink (*Eutropis carinata*), Kuno Beng (Asian Common Toad, *Duttaphrynus melanostictus*), Skipper Frog (*Euphlyctis cyanophlyctis*), Indian Bullfrog

(*Hoplobatrachus tigerinus*), Red Microhylid Frog (*Microhyla rubra*), Smith's Litter Frog (*Leptobrachium smithi*), Puddle frog (*Occidozyga lima*), Common Tree Frog (*Polypedates leucomystax*), etc.

The VCF harbors a large number of resident and migratory birds namely, Red Junglefowl (*Gallus gallus*), Kalij Pheasant (*Lophura leucomelanos*), Common Hill Myna (*Gracula religiosa*), Rock Pigeon (*Columba livia*), Greater Coucal (*Centropus bengalensis*), Green-billed Malkoha (*Phaenicophaeus tristis*), Spotted owl (*Athene brama*), Crested serpent eagle (*Spilornis cheela*), Red-breasted Parakeet (*Psittacula alexandri*), Black Drongo (*Dicrurus macrocercus*), Hair-crested Drongo (*Dicrurus hottentottus*), Rufous Treepie (*Dendrocitta vagabunda*), Common Green Magpie (*Cissa chinensis*), Red-whiskered Bulbul (*Pycnonotus jocosus*), Red-vented Bulbul (*Pycnonotus cafer*), Lesser Necklaced Laughingthrush (*Garrulax monileger*), Black-backed Forktail (*Enicurus immaculatus*), Golden-fronted Leafbird (*Chloropsis aurifrons*), Scarlet-backed Flowerpecker (*Dicaeum cruentatum*), Purple Sunbird (*Cinnyris asiaticus*), etc.

This may be note that Barking Deer is now “endangered”; Rhesus Macaque and Kalij Pheasant are “vulnerable”; and Leopard cat and Monocled cobra are “near threatened” in Bangladesh (IUCN, 2015).

This site also provides food and shelter to other wild animals that migrate from the degraded forest areas nearby.

Associated Values

Kamalchari VCF, being protected for decades, works as a source of various provisioning, supporting and regulating ecosystem services to the local communities. Important provisioning services include supply of bamboo as housing material, bamboo shoots and wild vegetables as food, fuel wood, medicinal herbs, and water. The wild vegetables that are available, and that its members can collect from, this VCF are Dheki shak (*Ampelopteris prolifera*), Tara (*Alpinia nigra*), Amlic gach (*Aporosa dioica*), Ozon shak (*Spilanthes calva*), Titgula (*Coccinia grandis*), Sugri alu (*Dioscorea alata*), Shora alu (*D. belophylla*), Danalu (*D. bulbefera*), Dheki shak (*Diplazium esculentum*), Amila (*Hibiscus subdarifa*), Lelang pata (*Premna esculenta*), Bon morich/Tit begun (*Solanum nigrum*), Jogya dumur/Jaganna gula (*Ficus recemosa*), Boro Jogonna gula (*Ficus auriculata*), and several types of mushroom. The supporting and regulating services include nutrient cycling in soil, water purification, carbon sequestration, restoration of soil organic matter, etc.



Shora alu (*D. belophylla*), Danalu (*D. bulbefera*), Dheki shak (*Diplazium esculentum*), Amila (*Hibiscus subdarifa*), Lelang pata (*Premna esculenta*), Bon morich/Tit begun (*Solanum nigrum*), Jogya dumur/Jaganna gula (*Ficus recemosa*), Boro Jogonna gula (*Ficus auriculata*), and several types of mushroom. The supporting and regulating services include nutrient cycling in soil, water purification, carbon sequestration, restoration of soil organic matter, etc.

Management and conservation initiatives

The primary objective of managing the Kamalchari VCF by its Management Committee is to conserve the biodiversity and ensure year-round flow of water in the Kamalchari canal for irrigation in agricultural fields. The management committee has prohibited the following activities in the VCF: (a) cutting of trees and bamboo without the permission of the management committee, (b) hunting of wild animals including birds, (c) setting fire, (d) jhum cultivation, (e) harvesting of bamboo shoots, and (f) application of pesticide in the steams inside the VCF. This notification also mentions that anybody violating these regulations would be punished according to traditional rules. Visitors and researchers are also required to take verbal consent of the site authority and a local guide assigned by the latter to

enter the site for recreational or research purposes. Violation of the administrative regulation by anyone can result in monetary fines or other traditional punishments. The management committee assigns people (committee members and fellow community members) to monitor the forest, who patrol the forest at least once a month but more frequently during the bamboo harvesting season. The management committee organizes harvesting of mature bamboos in three-year intervals and distributes that among the community members as per their needs.

Management Effectiveness and Sustainability

Since 2009, the management committee of Kamalchari VCF has been managing and protecting the site quite effectively and the forest is in good health now. Although previously the site was facing significant disturbances from the people of two neighboring villages, the Arannayk Foundation supported project enabled the VCF management committee to stop the illicit extraction of forest resources from this VCF and restore its degraded areas through assisted natural regeneration and enrichment planting of local tree species. Improved protection of the forest also resulted in successful regeneration of the bamboo groves that died after gregarious flowering during 2006-2007. Thus, the forest has regained its natural form. Now it works as a food source and a habitat for many birds, mammals, reptiles and other wildlife including those that migrate from the degraded forest areas around. The management committee of the site is determined to keep up their good work to maintain the integrity of the site for biodiversity conservation and other ecosystem services for indefinite time in the future.

Key Contact

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2. Itchari Mouza Bon

Overview

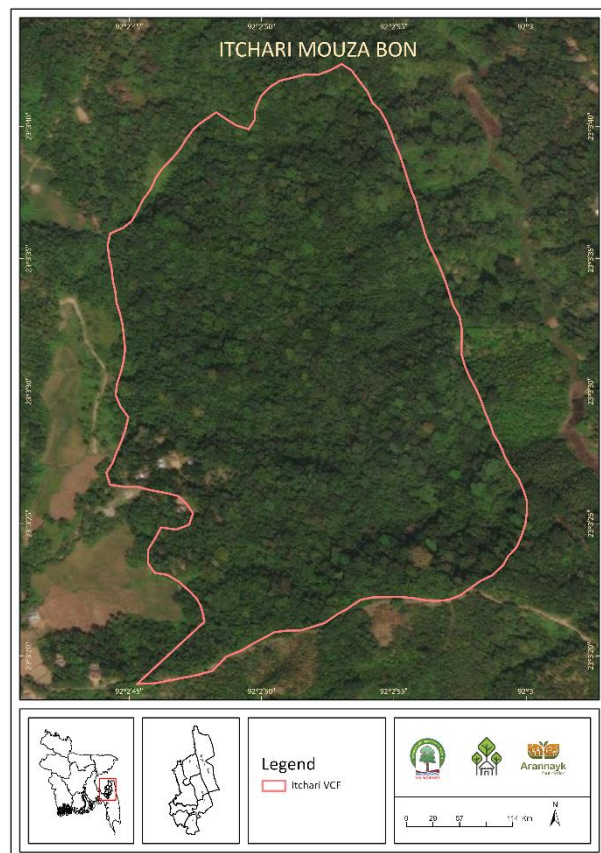
Itchari Mouza Bon (VCF) is located at 260 no. Itchori Mouza in 2 no. Kamachori Union under Khagrachari Sadar Upazila of Khagrachari district. Its approximate mid-point GPS coordinate is 23.096336°N, 92.031736°E. The total area of the site is around 105 acres (42.51 ha). It has a clear boundary demarcated by boundary pillars. There are natural stream pathways on the east, north and west sides and a village road on the south of the VCF. The site is representative of tropical hill ecosystem and holds a remarkable diversity of flora and fauna. The site currently does not have any conservation related national or international designation other than the local recognition as VCF i.e., community conserved area.

Background And Significance

The Itchari VCF was established by the then Headman of the Maouza in 1970 to ensure sustainable access of the local communities to timber, bamboo and non-timber forest products, and perennial flow of water in the streams and canals to meet the communities' need for water, especially for irrigation in crop fields in the valley. A total of 165 households lives in two parts of Itchari village namely, Itchari Modhya Para and Itchari Vitor Para adjacent to the Mouza forest who have been protecting the forest although the household in Itchari Modhya Para are more involved as they live nearer to the forest.

During 2009-2012, Arannayk Foundation endeavored to strengthen the capacity of the VCF community to manage the forest more effectively when it was facing several internal and external problems (deforestation and degradation of the forest due to encroachment by the owners of neighboring hills, unregulated resource collection by the forest dependent households of Intachari village and dying of bamboo groves due to gregarious flowering). In association with a local NGO (BIRAM), Arannayk Foundation strengthened management capacity of the management committee through training and accompaniment support and provided support for establishment of a multi-purpose community house (cum VCF office) and boundary pillars around the Mouza forest. The project also promoted alternative income generating activities among the forest dependent households through skills training and establishment of revolving loan fund and conducted awareness raising meeting with the people of the neighboring Kutukchari village.

During 2018-2019, the SID-CHT (CHT-WCA) project, implemented by UNDP in collaboration with the Hill District Council and a local NGO, assisted the community to further strengthen the management of the VCF livelihood development of the forest dependent households. Now the VCF management committee and the community members are protecting and conserving the biodiversity of the site very effectively.



The Itchari Mauza forest plays a crucial role in conserving the floral and faunal biodiversity of the area as most of the surrounding areas have been deforested and this VCF provides shelter to the affected population aside from in situ conservation of the local plant species.

Governance and Management

The site is legally owned by the Government of Bangladesh and governed by the Deputy Commissioner of the district and the Hill District Council, but it is managed by the local communities for decades based on customary rights, by forming a committee named Itchori Mouza Forest Conservation Committee. This management committee has adopted CHT Governance rules (1900) as a baseline along with several community approved laws and regulations for the management and conservation of the site's ecological integrity. The management committee is composed of 11 community representatives and is headed by an elected President on the top and several other posts below including one General Secretary, one Treasurer and 8 general members.

Biodiversity Values

Flora: In 2009, Jashimuddin (2010) recorded 37 plant species, including 28 tree species, from the Itchari VCF. In the landscape combining the VCF and its surrounding homestead areas, he recorded a total of 69 plant species. The most dominant species of trees of this VCF (as regards relative density) was Segun (*Tectona grandis*) followed by Gamar (*Gmelina arborea*), Kanak (*Schima wallichii*) and Jam (*Syzygium cumini*). The other tree species were: Goda (*Vitex glabrata*), Bohera (*Terminalia bellerica*), Dumur (*Ficus hispida*), Jaganna gola (*Ficus racemosa*), Chatian (*Alostonia scholaris*), Bhadi (*Garuga pinnata*), Buddha narikel (*Pterygota alata*), Chakua koroï (*Albizia chinensis*), Kala koroï (*Albizia lebbek*), Sada koroï (*Albizia procera*), Molacanna koroï (*Paraserianthes falcataria*), Dakroom (*Mitragyna parvifolia*), Dharmara (*Stereospermum personatum*), Elana gola (*Antidesma acidum*), Fuljhumari (*Anogeissus acuminata*), Hona gola (*Oroxylum indicum*), Kao (*Garcinia cowa*), Menda (*Litsea monopetala*), Barmala (*Callicarpa tomentosa*), Pitali (*Trewia nudiflora*), Sani sil gach (Unknown), Shimul (*Bombax ceiba*), Sorbet gola (*Toona ciliata*), Ulot kombol (*Abroma augusta*) and Moida (Unknown). However, bamboo (*Bambusa spp.*) was the most dominant among all the plant species. A shrub with the Marma name, Masmatairum/Koy ing saw (*Melastoma malabathricum*) was designated as the indicator plant species of this VCF.

The major shrubs were Bhat (*Clerodendrum viscosum*) Achar gola (*Microcos paniculate*), Rong gach (*Morinda angustifolia*), Biddri pata, and Ramoni pata. There were some Banana (*Musa sapientum*) plants as well.

The focused group discussions (FGDs) conducted as part of the baseline survey indicated that several economically important tree species namely Garjan (*Dipterocarpus spp.*), Champa (*Michelia champaca*), Dup tree (*Canarium strictum*), Horitaki (*Terminalia chebula*), Tali palm (*Corypha taliera*) and Telsur (*Hopea odorata*) have been lost from the VCF due to unregulated harvesting in the past.



During 2016-2018, Bhattacharjee, et al. (2020) conducted a more detailed plant survey in four VCFs in Khagrachari Sadar Upazila including the Itchari VCF (the other sites being Alutila, Betchari, and Panchara VCFs) and recorded 369 species of vascular plants from these VCFs. The species included 108 species of tree, 150 herbs, 48 shrubs, 47 climbers and 16 epiphytes. The forested areas were dominated by *Melocanna baccifera* bamboo, while two herbs (*Spathoglottis plicata*, *Adiantum flabellaletum*) and one tree species (*Cycas pectinata*) had scanty appearance. The major tree species were more or less the same as reported by Jashimuddin (2010). Out of the total 369 species,

Bhattacharjee, et al. (2020) assessed 304 (82.23%) as 'Common', 61 (16.53%) 'Least Concern', 2 (0.54%) 'Vulnerable', and 2 (0.54%) 'Critically Endangered'.

Further, Under the SID-CHT (CHT-WCA) project, UNDP conducted another study (assessment) on the floral and faunal diversity of the Itchari VCF. This UNDP (2021) study recorded 118 species at the Itchari VCF, including 30 tree species, 48 herbs, 13 shrubs, 26 climbers and one epiphyte. Among the tree species, Amloki (*Phyllanthus emblica*), Jam (*Syzygium cumini*) and Bohera (*Terminalia bellirica*) were abundantly available and Guttiutya was moderately available, while the populations of Chapalish (*Artocarpus chama*), Haritaki (*Terminalia chebula*), Lotkon, Sorbaik, Jogna Gulu (*Ficus recemosa*), Barta Gulu (*Artocarpus lacucha*), Hek Gulu, Cau Gulu (*Garcinia cowa*), Borta (*Artocarpus lacucha*), Amilik Bichi, Parejung, and Jongli Am (*Mangifera sylvestris*) had declined population. Many herbs and shrubs of culinary importance namely Thankuni (*Centella asiatica*), Chiun Sakh, Amila (*Hibiscus subdarifa*), Gondhobadali, Parang Shak, Tita Kochu, Jharbo Kochu, Ozon shak (*Spilanthes calva*), Rani Sing, Kedogi (rare) and Lelang pata (*Premna esculenta*) were also on the decline due to overharvesting. Only one bamboo species, *Melocanna baccifera* (muli bamboo) was abundantly available in this VCF.

Thus, according to the current "Red List" (IUCN, 2023), at least one species (*Cycas picanta*) of Itchari is 'endangered', two (Dakroom, Barta) are vulnerable, one (Buddha narikel) near-threatened and one species (Barmala) is 'data deficient'.

Representatives of the VCF informed the OECM study team that the forest is now conserved, and all of the plant species found in the earlier studies are still existing in their VCF. It was observed that around 50% of the total area of the VCF is covered by Muli bamboo.

Fauna: The UNDP (2021) study recorded a total of 113 species of wild animals in the Itchari VCF. Among them 3 species were crustaceans, 2 mollusks, 5 fishes, 9 amphibians, 18 reptiles (10 lizards, 4 snakes, 4 tortoises), 50 birds and 29 mammals. Phayre's Leaf Monkey (*Trachypithecus phayrei*) was recorded as the indicator (flagship) animal species in the VCF. In the survey 3 crustaceans (Thengua Icha, Goda Chingri and Shadu Panir Kakra), one mollusk (Leja Shamuk), 13 fish species (Darkina, Taki and Balichata) were directly observed in the streams and the local communities reported sustained (undeclined) populations of those species.

In the present study (rapid survey), local people reported the names of the following wild animals to be found species in the Itchari VCF: Chasmapora Hanuman/ Kala Lengur (*Trachypithecus phayrei*), Jungle cat (*Felis chaus*), Leopard cat (*Prionailurus bengalensis*), Wild Boar (*Sus scrofa*), Common Palm Civet (*Paradoxurus hermaphroditus*), Fulvous Fruit Bat (*Rousettus leschenaultii*), Indian Flying Fox (*Pteropus giganteus*), Indian Crested Porcupine (*Hystrix indica*), Lesser Bandicoot Rat (*Bandicota bengalensis*), Irrawaddy Squirrel (*Callosciurus pygerythrus*), Lesser Bamboo Rat (*Cannomys badius*), and Small Indian Mongoose (*Herpestes auropunctatus*) among mammals; and Elongated Tortoise (*Indotestudo elongata*), Bengal Monitor (*Varanus bengalensis*), Forest Crested Lizard (*Calotes emma*), Common Garden Lizard (*Calotes versicolor*), Ayeyarwady Bent-toed Gecko (*Cyrtodactylus ayeyarwadyensis*), Takay Gecko (*Gekko gekko*), Khasi Hills Long-tailed Lizard (*Takydromus khasiensis*), Common Skink (*Eutropis carinata*), Common Trinket Snake (*Coelognathus helena*), Painted bronzenack (*Dendrelaphis tristis*), Indian Rat snake (*Ptyas mucosa*), Common Mock viper (*Psammodynastes pulverulentus*), Checkered Keelback (*Xenochrophis piscator*), Cobra (*Naja kaouthia*), Green pit viper (*Trimeresurus albolabris*), Vine Snake (*Ahaetulla nasuta*); and many species of birds.

The birds include Red Junglefowl (*Gallus gallus*), Rock Pigeon (*Columba livia*), Common Hill Myna (*Gracula religiosa*), Common Kingfisher (*Alcedo atthis*), Lineated Barbet (*Psilopogon lineatus*), Coppersmith Barbet (*Psilopogon haemacephalus*), Black-rumped Flameback (*Dinopium benghalense*), Red-breasted Parakeet (*Psittacula alexandri*), Black Drongo (*Dicrurus macrocercus*), Rufous Treepie (*Dendrocitta vagabunda*), Common Green Magpie (*Cissa chinensis*), Red-whiskered Bulbul

(*Pycnonotus jocosus*), Lesser Necklaced Laughingthrush (*Garrulax monileger*), Black-backed Forktail (*Enicurus immaculatus*), Greater Coucal (*Centropus bengalensis*), Green-billed Malkoha (*Phaenicophaeus tristis*), Spotted owl (*Athene brama*), Black kite (*Milvus migrans*), Golden-fronted Leafbird (*Chloropsis aurifrons*), Scarlet-backed Flowerpecker (*Dicaeum cruentatum*), Purple Sunbird (*Cinnyris asiaticus*), etc. The VCF also harbors Kalij Pheasant (*Lophura leucomelanos*), which is in threatened state in Bangladesh (IUCN, 2015).

The site is important for species aggregation as several wildlife migrate to this site from the nearest degraded forest areas for food and shelter including molting and breeding ground. The UNDP (2021) study found Vernal Hanging Parrot, Black-hooded Oriole and Chestnut Munia to breed in this VCF in the upper, middle and undergrowth areas of the forest during January-April, March-August, and May-November, respectively.

Associated Values

Itchori Mouza Forest, which has been protected for decades, works as a source of various provisioning, supporting and regulating ecosystem services to the local communities. The important provisioning services include supply of bamboo shoots and wild vegetables as food, vines as binding materials, fuel wood, medicinal herbs and water. Several insects such as Urchunga, larvae of wasps and bees, fleshy maggots of flies, and white ants are consumed as food by the locals. The



supporting and regulating services include nutrient cycling in soil, water purification, carbon sequestration, restoration of soil organic matter and enhanced microbial activity in soil, etc.

Management and conservation initiatives

The primary objective of managing the Itchari Mouza Forest by its Management Committee is to ensure sustainable yield of bamboo and other minor forest products (fuel wood, wild vegetables, medicinal herbs, fruits) for subsistence use by the community along with year-round flow of water in Itchari canal for irrigation and other uses. Currently the mouza forest conservation committee is providing protection to the existing plantation area to conserve all the existing species of flora and fauna. Through community meeting and notice in information board, the VCF management committee has prohibited the following activities in the VCF: (a) cutting of trees and bamboo without the permission of the management committee, (b) hunting of wild animals including birds, (c) setting fire, (d) jhum cultivation, (e) harvesting of bamboo shoots, and (f) application of pesticide in the steams inside the VCF. This notification also mentions that anybody violating these regulations would be punished according to traditional rules. Visitors and researchers are also required to take verbal consent of the site authority and a local guide assigned by the latter to enter the site for recreational or research purposes. Violation of these regulations by anyone can result in monetary fine or traditional punishment. The management committee assigns people (committee members and fellow community members) to monitor the forest through frequent patrolling. Local community members are allowed to collect minor forest products such as bamboo shoot, fuel wood and insects upon permission of the management committee. The committee harvests mature bamboo culms usually in three-year rotations and utilizes the sales proceeds from it for VCF management and community development activities.

Management Effectiveness and Sustainability

For the last ten years, the management committee of Itchari mouza forest has been managing and protecting the site effectively. As mentioned earlier, previously the site was facing significant disturbances from the owners of the adjacent hills who used to encroach into the VCF for jhum cultivation and teak plantation, the management committee succeeded to evict the encroachers and restore the deforested/degraded area by planting native tree species with the help of an Arannayk Foundation supported project implemented by a local NGO (BIRAM) during 2009-2012. Improved protection of the forest with the support of this project also resulted in natural restoration of the forest where most of the bamboo groves died after gregarious flowering during 2006-2007. Subsequent support by the SID-CHT (CHT-WCA) project of UNDP during 2018-19 has further strengthened management of the site. As a result, the forest has regained its natural form and improved habitat quality for wildlife. Now it works as a food source and a habitat for many birds, mammals, reptiles and other wildlife. The management committee of the site is determined to keep up their good work to maintain the integrity of the site for biodiversity conservation and other ecosystem services for indefinite time in the future.

Key Contact

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3. Betchari Christian Para Village Common Forest

Overview

Betchari Christian Para Village Common Forest (VCF) is located at 23.084112° North latitude and 92.040285° East longitude in 268 no. Mouza under Kamalchari Union of Khagrachari Sadar Upazila in Khagrachari Hill District. The total area of the VCF is around 120 acres (48.56 ha). The site has a clear boundary demarcated with boundary pillars. The site is representative of tropical hill ecosystem and currently holds a remarkable biodiversity of flora and fauna. The site currently does not have any conservation related national or international designation other than the local recognition as VCF i.e., community conserved area. The site has Bet Chari Canal on its eastern side, small hills on the northern side and farming land of local community members in the western and southern sides. The Bet Chari canal acts as a water source for wildlife.

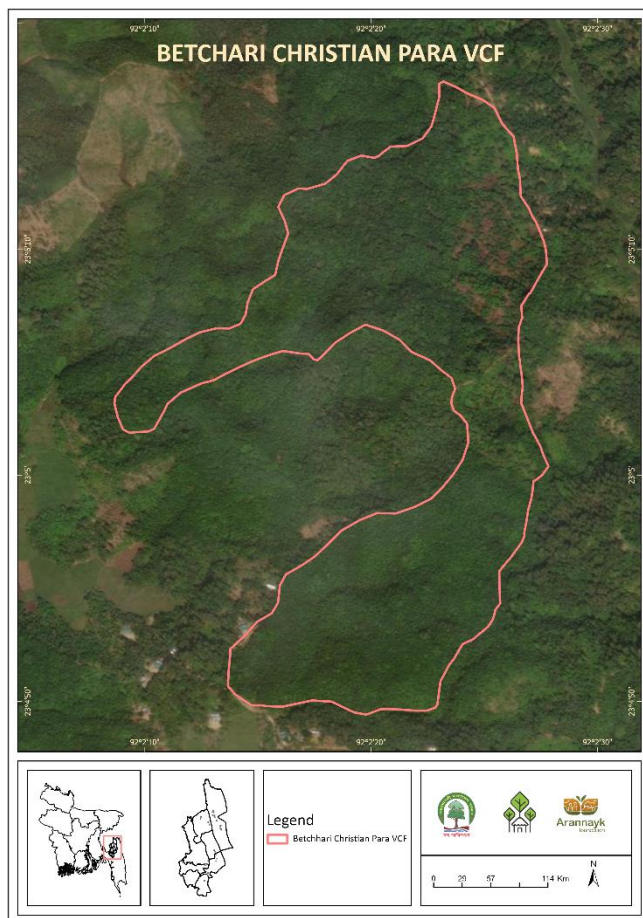
Background And Significance

Betchari Christian Para VCF was established in 1955 by the local community. From the very beginning this site was under the management of a committee headed by the Karbari of the village. During 2018-2019, the SID-CHT (CHT-WCA) project, implemented by UNDP

in collaboration with the Hill District Council and a local NGO, assisted the community to strengthen the management of the VCF including mapping and boundary demarcation of its area by reforming and developing management capacity of the management committee of the VCF. The project also provided alternative livelihood development support to the forest dependent households in the VCF community. Now the VCF management committee and the community members are protecting and conserving the biodiversity of the site very effectively. The site has a natural patch of tropical hill forest along with a small canal and a horticulture plantation section. The natural forest portion of the VCF holds numerous species of trees, shrubs, herbs and vines as well as a rich diversity of wildlife.

Governance and Management

The site is legally owned by the Government of Bangladesh and governed by the Deputy Commissioner of the district and the Hill District Council, but it is managed by the local community group based on customary rights by establishing a committee named Betchari Christian Para VCF Committee for several decades. This management committee has community approved laws and regulations for the management and conservation of the site's ecological integrity. The committee has an executive body consisting of seven elected community representatives and a general body consisting of all the community members. The executive body has a President on the top and several other posts below including one general secretary, one treasurer and four members.



Biodiversity Values

Flora: Bhattacharjee, et al. (2020) recorded 369 species of vascular plants from four VCFs in Khagrachari Sadar Upazila including the Betchari VCF based on a detailed survey conducted from 2016 to 2018. There were 108 species of trees, 150 herbs, 48 shrubs, 47 climbers and 16 epiphytes, Muli bamboo (*Melocanna baccifera*) being the most dominant species. The survey conducted by UNDP (2021) under the SID-CHT (CHT-WCA) project recorded 177 plant species from the Betchari Christian Para VCF alone, which included 53 species of trees, 21 shrubs, 3 bamboos, 70 herbs, 29 climbers, and one epiphyte. Among the trees, Amloki, Jam, Bohera, Gutgutya, Jona Gulu, were abundantly present, while Chapalish, Haritaki, Lotkon, Sorbaik (Dumur), Barta Gulu were present in a declined state. Among the herbs, Dhenki Shak, Kochu, Tita Kochu, Jongli Kochu, Chiun Shak, Ada, Dimi Tide Shak, Nolam Loti, Pobong Loti, Pobak Gulo were abundantly present while Bandor Marfa, Ozon Shak, Lelong Pata, Jongli Tita Begun, Begol Bichi, Moiccha Amili, Chorbi Amili, Pioung Gulo, Totego zil shak, Batbaitta Shak were in declined population. The common shrub Kukur jhibba/Achila gach (*Leea indica*) was considered as the indicator (flagship) species of this VCF. Three species of bamboo namely muli (*Melocanna baccifera*), kanta (*B. bambos*), borak (*Bambusa balcooa*) were also present abundantly.

In the present study, about 50% of the total area of the VCF was found to be covered by Muli bamboo (*Melocanna baccifera*), while the tree species included Kanak (*Schima wallichii*), Chapalish (*Artocarpus chama*), Sada Koroi (*Albizia procera*), Gamar (*Gmelina arborea*), Bhadi/Sil-bhadi (*Garuga pinnata*), Moos (*Brownlowia elata*), Dharmara (*Stereospermum colais*), Lotkon (*Baccaurea ramiflora*), Sorbet gula (*Toona ciliata*), Joggo dumur (*Ficus racemosa*), Garjan (*Dipterocarpus* spp.), Bhola kadam (*Saurauia roxburghii*), Bon jam (*Syzygium fruticosum*), Jiga/Jeol/Bhadi (*Lannea coromandelica*), Chikrassi (*Chukrasia tabularis*), Suruj (*Cerbera odollam*), Bon Boro (*Ziziphus oenoplia*), Kurchi (*Holarrhena antidysenterica*), Shanti shil, Koruk, etc.



According to the current 'Red List' (IUCN 2023), two of the abovementioned tree species (Moos, Suruj) are in 'vulnerable' state and another one (Chickrassi) is 'data deficient'.

Fauna: The site is rich in faunal diversity too. The UNDP (2021) survey under the SID-CHT (CHT-WCA) project recorded 130 species of wild animals (39 mammals, 55 birds, 17 reptiles, 9 amphibians, 5 fish, 2 crustaceans and 2 mollusks) in the Betchari Christian Para VCF. Red jungle fowl was identified as the indicator/flagship species of this forest. In the streams (*chara*) inside the VCF, there were several species of fishes, crustaceans, and mollusks. The fishes were: Darkina, Pati Chela, Taki, Gechua, and Gutum. The crustaceans included small shrimp (Eze/chingri/Thengua Icha) and crabs (Shadu Panir Kakra/Chara Hangara). The mollusks included two species of snails – Poba Shamuk and Leja Shamuk.

In the present survey, local people mentioned the names of the following mammals to be found in this VCF: Jungle cat (*Felis chaus*), Barking Deer (*Muntiacus muntjak*), Wild Boar (*Sus scrofa*), Common Palm Civet (*Paradoxurus hermaphroditus*), Indian Crested Porcupine (*Hystrix indica*), Rhesus Macaque (*Macaca mulatta*), Irrawaddy Squirrel (*Callosciurus pygerythrus*), Lesser Bamboo Rat (*Cannomys badius*), Indian Flying Fox (*Pteropus giganteus*), Fulvous Fruit Bat (*Rousettus leschenaultii*), Small Indian Mongoose (*Herpestes auropunctatus*), and Crab-eating Mongoose (*Herpestes urva*). The reptiles reported to be present in this site include Elongated Tortoise (*Indotestudo*

elongata), Burmese Python (*Python bivittatus*), Monocellate cobra (*Naja kaouthia*), Common Mock Viper snake (*Psammodynastes pulverulentus*), Green pit viper (*Trimeresurus albolabris*), checkered Keelback (*Xenochrophis piscator*), Vine Snake (*Ahaetulla nasuta*), Indian Rat snake (*Ptyas mucosa*), Forest Crested Lizard (*Calotes emma*), Takay Gecko (*Gekko gekko*), and possibly many others. Most of the common frogs of the hill forests of CHT such Asian Common Toad (*Duttaphrynus melanostictus*), Indian Bullfrog (*Hoplobatrachus tigerinus*), Red Microhylid Frog (*Microhyla rubra*), Chittagong Microhylid Frog (*Microhyla mukhlesuri*), Ornate Microhylid Frog (*Microhyla ornata*), Smith's Litter Frog (*Leptobrachium smithi*), Puddle frog (*Occidozyga lima*), and Common Tree Frog (*Polypedates leucomystax*) are also there.

The site harbors/support numerous species of birds such as Red Junglefowl (*Gallus gallus*), Kalij Pheasant (*Lophura leucomelanos*), Great Hornbill (*Buceros bicornis*), Common Kingfisher (*Alcedo atthis*), Rock Pigeon (*Columba livia*), Greater Coucal (*Centropus bengalensis*), Spotted owl (*Athene brama*), Black kite (*Milvus migrans*), Asian green bee-eater (*Merops orientalis*), Chestnut headed Bee-eater (*Merops leschenaulti*), Common Hill Myna (*Gracula religiosa*), Black-backed Forktail (*Enicurus immaculatus*), Golden-fronted Leafbird (*Chloropsis aurifrons*), Scarlet-backed Flowerpecker (*Dicaeum cruentatum*), Purple Sunbird (*Cinnyris asiaticus*), and possibly many others.

The site is important for species aggregation as several species of wildlife migrate to this site from the nearest degraded forest areas for food, shelter, and breeding. The UNDP (2021) study found Hair-crested Drongo, Common Emerald Dove and Tricolored to breed in this VCF in the upper, middle and undergrowth areas of the forest during January-April, throughout the year, and during May-November, respectively.

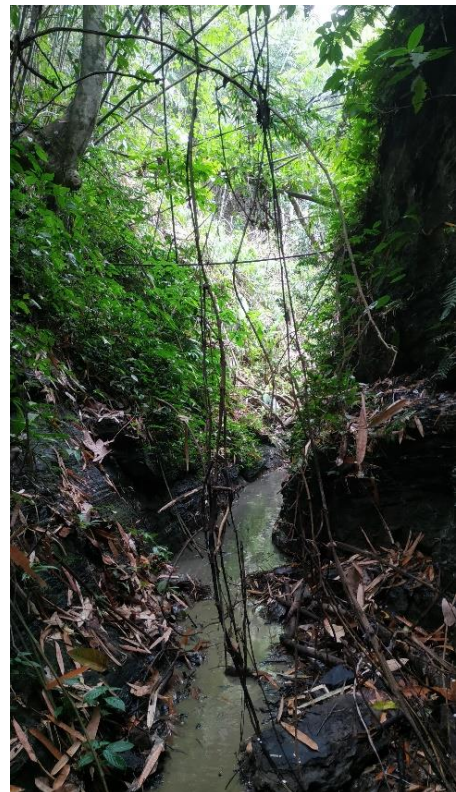
Associated Values

Betchari Christian para VCF being protected for decades works as a source of various provisioning, supporting and regulating ecosystem service to the local communities. The important provisioning service includes supply of bamboo shoots, wild vegetables, fishes, crustaceans and mollusks as food, vines as binding materials, fuel wood, medicinal herbs and water. The supporting and regulating services include nutrient cycling in soil, water purification, carbon sequestration, restoration of soil organic matter and enhanced microbial activity in soil, etc.

Management and conservation initiatives

The primary objective of managing the Betchari Christian Para VCF by its Management Committee is to ensure sustainable yield of bamboo, wild vegetables and fruits, medicinal herbs, etc. along with continuous water supply for the agricultural lands of the local communities. Currently the VCF committee is active in protecting the forest to conserve all the existing species of flora and fauna. The management committee has prohibited the following activities in the VCF: (a) cutting of trees and bamboo without the permission of the management committee, (b) hunting of wild animals including birds, (c) setting fire, (d) jhum cultivation, (e) harvesting of bamboo shoots, and (f) application of pesticide in the streams inside the VCF. Visitors

and researchers are also needed to take verbal consent of the site authority, and one person assigned by the authority as a guide, to enter the site for recreational or research purposes. Violation of these regulations by anyone can result in monetary fines or other traditional punishments. The site is patrolled by local community members regularly during the bamboo harvesting season and occasionally during



other seasons. The committee harvests and sells mature bamboo culms usually in three-year rotations and utilizes the sales proceeds for VCF management and community development activities.

Management Effectiveness and Sustainability

The management committee of the VCF has been able to sustainably manage the site for decades, maintaining its natural state with diverse flora and fauna. The site works as a food source and a major habitat for many birds, mammals, reptiles, and other wildlife. Though previously nearby hilly areas had good forest cover, gradual degradation of those areas and their conversion to horticultural plantations have hampered the natural habitats of many wildlife species. Therefore, this site is now the only hope for conserving the wildlife and native flora of the area. Although once the site used to face considerable disturbances as sometimes local habitants used to illegally infiltrate into it and collect forest resources without permission, now such disturbances have reduced significantly due to strengthening of monitoring by the VCF management committee.

Key Contact

Mr. Air Chakma (President, Bet Chori Cristian Para VCF Committee)

Tel: 01878337651

4. Goyaichari Akhbari Para Village Common Forest

Overview

Goyaichari Akhbari Para Village Common Forest is located at 216 no. Goyaichari Mouza under Sinduk Chari Union in Guimara Upazila of Khagrachari district at 22.880416° North latitude and 91.977818° East longitude. The total area of the site is around 500 acres (202.34 ha). Its boundary is clearly demarcated with boundary pillars and stream pathways. The surroundings of the site include Akbari Para village on the west and southern sides, Dulochori on the east, and Tinduk Chori on the north. The site is representative of tropical hill ecosystem and holds a rich biodiversity of native flora and fauna. It is managed by the local Marma and Chakma communities and does not have any conservation related national or international designation other than the local recognition as Village Common Forest (VCF) i.e., community conserved area.

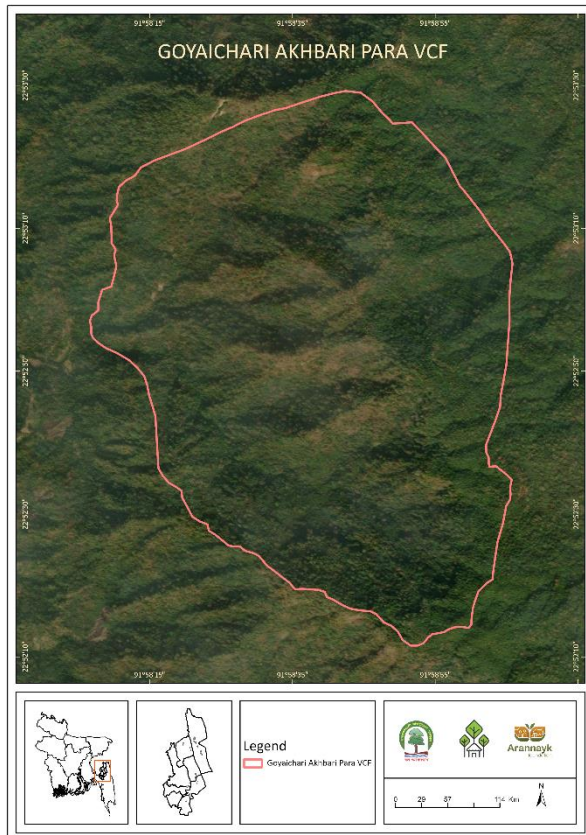
Background and Significance

The management of this VCF was first initiated by the local community during 1982-83 to conserve its biodiversity and hydrological function (streamflow) to ensure both continuous supply of water for agricultural land and sustainable use of non-timber forest products by the community. From the very beginning, this site has been managed by the local community by forming a management committee for it. Around 20 families live adjacent to the VCF who are dependent on this forest and are more or less actively involved in the management of this forest. They play a major role in protecting the forest to maintain its natural state. The site has a natural patch of tropical hill forest along with a network of several small streams.

During 2018-2019, the SID-CHT/CHT-WC project, implemented by UNDP in collaboration with the Hill District Council and a local NGO, assisted the community to further strengthen the management of the VCF livelihood development of the forest dependent households. Now the VCF management committee and the community members are protecting and conserving the biodiversity of the site very effectively.

Governance and Management

The site is legally owned by the Government of Bangladesh and governed by the Deputy Commissioner of the district and the Hill District Council, but it is managed by the local community group based on customary rights by establishing a committee named Goyaichari Akhbari Para VCF Management Committee. This management committee has adopted CHT Governance rules (1900) as a baseline along with several community approved rules and regulations for the management and conservation of the site's ecological integrity. The management committee consists of a general body formed by all the general members (one representative from each household) and a 9-member executive body consisting of a President on the top and several other posts below including one Vice-President, one General Secretary, one Treasurer and five general members.



Biodiversity Values

Flora: The site is densely vegetated with diverse plant species native to the tropical semi-evergreen hill forests of south-eastern Bangladesh. From the rapid survey for this study, which relied mostly on the information provided by the local community members, the site was found to contain most of the common tree species of CHT namely, Teli Garjan (*Dipterocarpus turbinatus*), Kata Garjan (*Dipterocarpus tuberculatus*), Duli Garjan (*Dipterocarpus gracilis*), Pitraj (*Aphamixis polystachya*), Goda (*Vitex peduncularis*), Phul Jhumari (*Anogeisus lanceolata*), Loma Udal (*Sterculia foetida*), Kala batna (*Lithocarpus acuminatus*), Dumur (*Ficus hispida*), Lata dumur (*Ficus pumila*), Keli Kadam (*Mitragyna parvifolia*), Bhola kadam (*Saurauia roxburghii*), Chikan/Jibon (*Trema orientalis*), Asar/Asor-gota (*Grewia nervosa*), Dhaki jam (*Syzygium grande*), Barta (*Artocarpus lacucha*), Modon mosta (*Actinodaphne angustifolia*), Bhadi (*Lannea coromandelica*), Chakua koroï (*Albizia chinensis*), Sada koroï (*Albizia procera*), Kalo koroï (*Albizia odoratissima*), Mandar (*Erythrina variegata*), Boro Mandar (*Erythrina arborescence*), Bormala (*Callicarpus arborea*), Bohera (*Terminalia bellirica*), Champa (*Michelia champaca*), Kanak (*Schima wallichii*), Chatim (*Alstonia scholaris*), Gamar (*Gmelina arborea*), Uri am (*Bouea oppositifolia*), Jongoler am (*Mangifera sylvestris*), Assawath (*Ficus religiosa*), Bot (*Ficus benghalensis*), Chapalish (*Artocarpus chama*), Haldu (*Haldina cordifolia*), Kurchi (*Holarrhena antidysenterica*), Latkan (*Bixa orellana*), Bandorhola (*Duabanga grandiflora*), Chalta (*Dillenia indica*), Dharmara (*Stereospermum colais*), Civit (*Swintonia floribunda*), Jam (*Syzygium cumini*), Shimul (*Bombax ceiba*), Arjun (*Terminalia arjuna*), Amloki (*Phyllanthus emblica*), Suruj (*Cerbera odollam*), Gutguita (*Brusera serrata*), and Chalmugra (*Hydnocarpus wightianus*), Sheora (*Streblus asper*), and Bon Boroï (*Ziziphus oenoplia*). There are several species of bamboo namely, Muli (*Melocanna baccifera*), Mitinga (*Bambusa tulda*), Borak bash (*Bambusa balcooa*), and Pharua (*Bambusa polymorpha*), as well as many other species of shrubs, herbs, vines and epiphytes.

The major understorey shrubs and vines are Bhat (*Clerodendrum visosum*), Lantana (*Lantana camara*), Bon tejpatha (*Melastoma malabathricum*), Kukurjhibba (*Leea indica*), Argoja (*Trevegia palmata*), Ramjoni (*Maesa indica*), Dadmardon (*Senna alata*), Tagar (*Tabernaemontana divericata*), Kakra (*Tarenna camoaniflora*), Telakhochu (*Coccinia grandis*), Chui jhal (*Piper chaba*), and Gila lata (*Entada rheedii*). Jharu phul (*Thysanolaena maxima*) and Sun grass (*Saccharum spontaneum*) are also abundant in the open and degraded patches. There are many herbaceous plants of culinary and medicinal use namely, Ban okra (*Triumfetta rhomboidei*), Tit begun (*Solanum torvum*), Ram kola (*Musa ornata*), Bhui amla (*Phyllanthus urinaria*), Tokma (*Hyptis suaveolens*), Bon methi (*Sida acuta*), Ban nate (*Amaranthus viridis*), Jongli ol (*Amorphophallus bulbifer*), Jongli ada (*Alpinia nigra*), Ghechu (*Aponogeton echinatus*), Bon holud (*Curcuma aromatica*), Thankuni (*Centella asiatica*), Kachu (*Colocasia esculenta*), Bhimraj (*Eclipta alba*), Hatisur (*Heliotropium indicum*), Bon begun (*Solanum indicum*), Ban alu (*Dioscorea bulbifera*), Shora alu (*Dioscorea belophylla*), Jum alu (*Dioscorea pentaphylla*), and Anantamul (*Hemidesmus indicus*), etc.

According to the current 'Red List' (IUCN 2023), Duli Garjan, Barta, Uri am, and Suruj are in 'threatened', and Loma Udal, Kala batna, Civit and Ramjoni are in 'near threatened' state, while Kata Garjan and is a 'data deficient' species.

Fauna: The site harbors diverse species of Mammals, Reptiles and Birds including several threatened species. Local people claim that the VCF also harbors Asian Elephant (*Elephas maximus*) and Asiatic Black Bear (*Ursus thibetanus*). The other species reported by the locals are: Barking deer (*Muntiacus muntjac*), Capped Langur (*Trachypithecus pileatus*), Rhesus Macaque (*Macaca mulatta*), Indian Crested Porcupine (*Hystrix indica*), Lesser Bandicoot Rat (*Bandicota bengalensis*), Asiatic long-tailed climbing mouse (*Vandeleuria oleracea*), Irrawaddy Squirrel (*Callosciurus pygerythrus*), Lesser Bamboo Rat (*Cannomys badius*), Indian Flying Fox (*Pteropus giganteus*), Common Pipistrelle (*Pipistrellus pipistrellus*), and Jungle cat (*Felis chaus*) among mammals, and Burmese Python (*Python bivittatus*), Common Trinket Snake (*Coelognathus helena*), Painted bronzeback (*Dendrelaphis tristis*), Common Wolf Snake (*Lycodon aulicus*), Indian Rat snake (*Ptyas mucosa*), Common Mock viper

(*Psammodynastes pulverulentus*), Checkered Keelback (*Xenochrophis piscator*), Monocled cobra (*Naja kaouthia*), Binocellate Cobra (*Naja naja*), Green pit viper (*Trimeresurus albolabris*), Khasi Hills Long-tailed Lizard (*Takydromus khasiensis*), and Common Skink (*Eutropis carinata*) among reptiles.

The Birds that can be found in this VCF are Kalij Pheasant (*Lophura leucomelanos*), Red Junglefowl (*Gallus gallus*), Rock Pigeon (*Columba livia*), Yellow footed green pigeon (*Treron phoenicopterus*), Greater Coucal (*Centropus bengalensis*), Green-billed Malkoha (*Phaenicophaeus tristis*), Red-breasted Parakeet (*Psittacula alexandri*), Black Drongo (*Dicrurus macrocercus*), Hair-crested Drongo (*Dicrurus hottentottus*), Rufous Treepie (*Dendrocitta vagabunda*), Common Green Magpie (*Cissa chinensis*), Red-whiskered Bulbul (*Pycnonotus jocosus*), Red-vented Bulbul (*Pycnonotus cafer*), Lesser Necklaced Laughingthrush (*Garrulax monileger*), Common Hill Myna (*Gracula religiosa*), Black-backed Forktail (*Enicurus immaculatus*), Golden-fronted Leafbird (*Chloropsis aurifrons*), Scarlet-backed Flowerpecker (*Dicaeum cruentatum*), Purple Sunbird (*Cinnyris asiaticus*), etc.

It may be noted that Asian Elephant and Asiatic Black Bear are now 'critically endangered'; Barking deer and Capped Langur are 'endangered'; and Rhesus Macaque, Burmese Python and Kalij Pheasant are 'vulnerable' in Bangladesh (IUCN, 2015).

The site is important for its species aggregation role. Several species of wildlife seasonally migrate to this site from the nearest degraded forest areas for food and shelter. Some of those species use this site as their molting and breeding ground too.

Associated Values

Akbari Para VCF, being protected for decades, works as a source of various provisioning, supporting and regulating ecosystem services to the local community. The important provisioning service includes supply of bamboo shoots and wild vegetables as food, vines as binding materials, fuel wood, and water. The supporting and regulating services include nutrient cycling in soil, water purification, carbon sequestration, restoration of soil organic matter and enhanced microbial activity in soil, etc. The site also holds cultural and spiritual value to the locals and visitors as the site has historic past and extraordinary scenic beauty.

Management and conservation initiatives

The primary objective of managing the Goyaichari Akbari Para Village Common Forest by its Management Committee is to ensure sustainable yield of bamboo and medicinal herbs and fruits along with continuous supply of stream water for the agricultural land. Currently the VCF Management Committee is providing protection to the forest to conserve all the existing species of flora and fauna. Through community meeting and notice in information board, the VCF management committee has prohibited the following activities in the VCF: (a) cutting of trees and bamboo without the permission of the management committee, (b) hunting of wild animals including birds, (c) setting fire, (d) jhum cultivation, (e) harvesting of bamboo shoots, and (f) application of pesticide in the steams inside the VCF. Visitors or researchers are also needed to take one member of the executive committee as a guide along with verbal consent of the site authority to enter the site for recreational or research purposes. The executive committee members along with some other general members of the community patrol the VCF area at least once a quarter, but more frequently during the bamboo harvesting season. Anybody found violating the regulation is subjected to monetary fine or other traditional punishment.

Management Effectiveness and Sustainability

The VCF management committee has been able to sustainably manage the site for decades, maintaining its natural state with diverse flora and fauna. The site works as a food source and habitat for many birds, mammals, snakes, lizards, frogs and birds. As much of the nearby hilly areas have lost natural forest cover due to shifting cultivation and conversion into horticultural orchards, the VCF has been playing

a very crucial role in providing shelter to the wildlife population of the surrounding area too. In the past, the VCF used to face considerable disturbances as sometimes local habitants used to illegally infiltrate into it and collect resources without permission, and visitors with recreational targets used to cause plastic waste and sound pollution in the forest, but now such disturbances have reduced significantly due to the strengthened management initiatives of the management committee.

Key Contact

Mr. Hola U Prue Chowdhury (Headman, 216 no. Goyaichari Mouza, on be-half of Aungojai Marma President, Goyaichari Akhbari Para VCF)

Tel: 01829019410

5. Tindukchari Para Bon

Overview

Tindukchari Para Bon (VCF) is located at 223 no. Tinduk Chori Mouza in Sinduk Chori Union under Guimara Upazila of Khagrachari district. Its approximate mid-point GPS coordinate is 22.893960°N, 91.975622°E. It is surrounded by the Aamchara stream on its eastern side, a small stream on the west, Akbari Para VCF on the north and Kegung Chari on the south. The total area of the site is around 200 acres (81 ha). The site has a clear boundary, demarcated by boundary pillars. The site is representative of tropical hill ecosystem and currently holds a remarkable variety of flora and fauna. Currently, it does not have any conservation related national or international designation other than the local recognition as VCF i.e., community conserved area.

Background and Significance

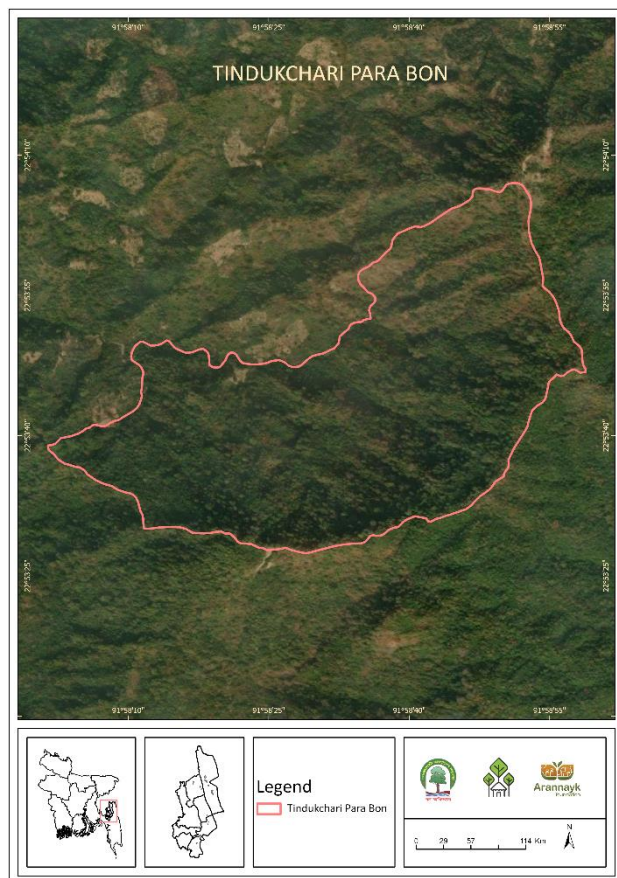
The Tindukchari VCF was established in 1903 by the then Headman of the mouza to conserve the forest for sustainable access of the local community to timber, bamboo, and other non-timber forest products for their subsistence. From the beginning this site was under the

management of committee formed by the Headman involving other representatives of the community. Later, from 2017, the USAID-funded Chittagong Hill Tracts Watershed Co-Management Activity (CHT-WCA) under the SID-CHT project, implemented by UNDP in collaboration with the Hill District Council and a local NGO, assisted the community to strengthen the management of the VCF including mapping and boundary demarcation of its area by reforming and developing management capacity of the management committee. The project also provided alternative livelihood development support to the forest dependent households in the VCF community. Currently a formal committee comprised of the traditional leaders and general members of the community manages the site involving the other community members. A total of 62 families lives near the VCF who are dependent on this forest and are also actively involved in the protection and management of this forest.

The site includes patches of tropical hill forest along with a network of several small streams. The forest contains remarkable diversity of native flora and fauna including several threatened species of plants and animals.

Governance and Management

As an unclassified state forest (USF) land, the site is legally owned by the Government of Bangladesh and governed by the Deputy Commissioner of the district and the Hill District Council, but it is managed by the local community based on customary rights, by forming a committee named Tindukchari VCF Conservation Committee. This management committee has adopted CHT Governance rules (1900) as a baseline along with several community approved laws and regulations for the management and conservation of the site's ecological integrity. The management committee consists of 11 community



representatives headed by a President. The other committee members include one General Secretary, one Treasurer and 8 general members.

Biodiversity Values

Flora: The major tree species of the Tindukchari Para Bon are Gamar (*Gmelina arborea*), Garjan (*Dipterocarpus turbinatus*), Sil koroï (*Albizia procera*), Minjiri (*Senna siamea*), and Jam (*Syzygium cumini*). The other (relatively scanty) tree species include Pitraj (*Aphanamixis polystachya*), Chapalish (*Artocarpus chama*), Shimul (*Bombax ceiba*), Jarul (*Lagerstroemia speciosa*), Kanak (*Schima wallichii*), Dumur (*Ficus hispida*), Bot (*Ficus benghalensis*), Bohera (*Terminalia bellirica*), Arjun (*Terminalia arjuna*), Amloki (*Phyllanthus emblica*), Dhakijam (*Syzygium firmum*), Painna gula (*Flacourtia jangoms*), Suruj (*Cerbera odollam*), Chatim (*Alstonia scholaris*), Chalmugra (*Hydnocarpus wightianus*), Gutguitya (*Brusera serrata*), Boilam (*Anisoptera scaphula*), Kala batna (*Lithocarpus acuminatus*), etc. There are three species of bamboo in this VCF namely, Muli (*Melocanna baccifera*), Mitinga (*Bambusa tulda*), and Ora (*Dendrocalamus longispathus*).



The understory vegetation of the forest includes many different herbs and shrubs of culinary and medicinal importance. The major ones include Dheki shak (*Diplazium esculentum*), Kekra sak (*Alternaria sessilis*), Marech shak (*Amaranthus viridis*), Tara (*Alpinia nigra*), Amlic gach (*Aporosa dioica*), Ozon shak (*Spilanthes calva*), Titgula (*Coccinia grandis*), Sugri alu (*Dioscorea alata*), Shora alu (*D. belophylla*), Danalu (*D. bulbifera*), Amila (*Hibiscus subdarifa*), Pahari kola (*Musa ornate*), Aitta kola (*Musa paradisiaca*), Lelang pata (*Premna esculenta*), Tit begun (*Solanum torvum*), Ban okra (*Triumfetta rhomboidea*), Mitha begun bitchi (*Solanum torvum*), Jogya dumur/Jaganna gular (*Ficus recemosa*), Boro jogonna gula (*Ficus auriculata*).

According to the current 'Red List' (IUCN 2023), Suruj and Boilam are in 'threatened', and Kala batna is in 'near threatened' state in Bangladesh.

Fauna: As per information provided by local people, the site harbors diverse species of Mammals, Reptiles, and Birds including several threatened species. The mammals include Rhesus Macaque (*Macaca mulatta*), Wild boar (*Sus scrofa*), Indian Crested Porcupine (*Hystrix indica*), Chinese pangolin (*Manis pentadactyla*), Irrawaddy Squirrel (*Callosciurus pygerythrus*), Lesser Bamboo Rat (*Cannomys badius*), Indian Flying Fox (*Pteropus giganteus*), Common Pipistrelle (*Pipistrellus pipistrellus*). Local people claim that the site also harbors, or visited by, Asian Elephant (*Elephas maximus*), Asiatic Black Bear (*Ursus thibetanus*) and Clouded Leopard (*Neofelis nebulosa*).

The reptiles include Elongated Tortoise (*Indotestudo elongata*), Burmese Python (*Python bivittatus*), Monocled cobra (*Naja kaouthia*), Painted bronze back (*Dendrelaphis tristis*), Common Wolf Snake (*Lycodon aulicus*), Indian Rat snake (*Ptyas mucosa*), Common Mock viper (*Psammodynastes pulverulentus*), Green pit viper (*Trimeresurus albolabris*), Checkered Keelback (*Xenochrophis piscator*), Forest Crested Lizard (*Calotes emma*), Common Garden Lizard (*Calotes versicolor*), Ayeyarwady Bent-toed Gecko (*Cyrtodactylus ayeyarwadyensis*), Takay Gecko (*Gekko gekko*), Common House Gecko (*Hemidactylus frenatus*), Khasi Hills Long-tailed Lizard (*Takydromus khasiensis*), Common Skink (*Eutropis carinata*), etc.

The birds of the VCF include Red Junglefowl (*Gallus gallus*), Common Kingfisher (*Alcedo atthis*), Lineated Barbet (*Psilopogon lineatus*), Coppersmith Barbet (*Psilopogon haemacephalus*), Black-rumped Flameback (*Dinopium benghalense*), Red-breasted Parakeet (*Psittacula alexandri*), Black Drongo (*Dicrurus macrocercus*), Hair-crested Drongo (*Dicrurus hottentottus*), Rufous Treepie (*Dendrocitta vagabunda*), Common Green Magpie (*Cissa chinensis*), Red-whiskered Bulbul (*Pycnonotus jocosus*), Golden-fronted Leafbird (*Chloropsis aurifrons*), Scarlet-backed Flowerpecker (*Dicaeum cruentatum*), Purple Sunbird (*Cinnyris asiaticus*), etc.

It may be noted that Asian Elephant, Asiatic Black Bear, Clouded Leopard, Chinese pangolin and Elongated Tortoise are now ‘critically endangered’, and Rhesus Macaque, and Burmese Python are ‘vulnerable’ in Bangladesh (IUCN, 2015).

The site plays a crucial role in species aggregation as different species of wildlife migrate to this site from the surrounding degraded forest areas for food and shelter, and also use it for their breeding ground.

Associated Values

Tindukchari VCF, being protected for more than a century, works as a source of various provisioning, supporting, and regulating ecosystem services to the local communities. The provisioning services include supply of bamboo as housing material, bamboo shoots and wild vegetables as food, vines as binding materials, fuel wood, medicinal herbs, and water. The supporting and regulating services include nutrient cycling in soil, water purification, carbon sequestration, restoration of soil organic matter, etc.

Management and conservation initiatives

The primary objective of managing the Tindukchari VCF by its management committee is to ensure conservation of the forest for its multiple ecosystem services to the local communities such as sustainable supply of bamboo, wild vegetables and other minor forest products and perennial flow of water in the streams for irrigation and other uses. The VCF management committee has prohibited the following activities in the VCF: (a) cutting of trees and bamboo without the permission of the management committee, (b) hunting of wild animals including birds, (c) setting fire, (d) jhum cultivation, (e) harvesting of bamboo shoots, and (f) application of pesticide in the streams inside the VCF. Visitors and researchers are also required to take verbal consent of the site authority and a local guide assigned by the latter to enter the site for recreational or research purposes. Violation of these regulations by anyone can result in monetary fine or traditional punishment. Members of the management committee, along with other community members monitor the forest through regular patrolling. Community members are allowed to collect minor forest products like bamboo shoot and other wild vegetables only under permission of the management committee.

Management Effectiveness and Sustainability

The community leaders and the management committees have been able to sustainably manage the VCF for more than a century, maintaining its natural state with diverse flora and fauna. The site works as a food source and a habitat not only for its resident animals but also for those of the degraded forest lands around it, where the habitat quality has significantly deteriorated due to unsustainable use and deforestation. Therefore, this site is crucial for conserving the wildlife and native flora of the area. Due to conservation of the forest, the canal at the eastern side of the VCF holds water round the year and acts as a water source for wildlife. The management committee is determined to conserve the VCF in the same way it is being done now for indefinite time in the future.

Key Contact

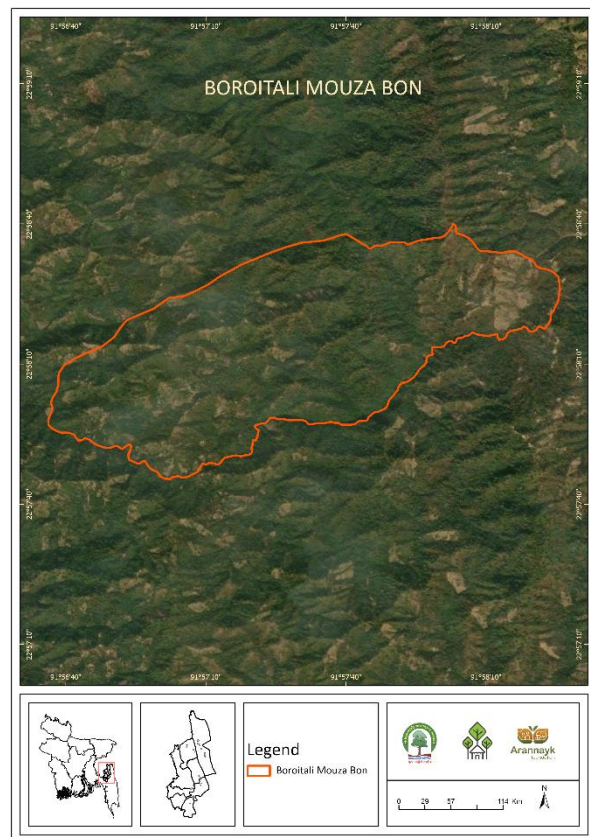
Mr. Unu Mong Marma (President, Tindukchari VCF Conservation Committee)

Contact: 01559710754

6. Boroitali Mouza Bon

Overview

Boroitali Mouza Bon, also known as Fatha Mrang Owa Tang VCF, is located near Kukichara Marma Para (owner of the VCF) at 212 No. Boroitali mouza under Halfchari Union of Guimara Upazila in Khagrachari district. Its approximate mid-point GPS coordinate is 22.970451°N, 91.956065°E. The site lies between Petu Para on its east, Probesh Karbari Para on the west, Lubre Mouza on the north, and Natroi Chora on the south. The total area of the site as per the map prepared by UNDP (2021) is around 687 acres (287.14 ha), but the VCF representatives reported it to be presently 150 acres (60.7 ha). The 150-acre area in the middle of the greater area (687 acre) shown in the UNDP-produced map has good cover of natural forest vegetation but the remaining (peripheral) areas are in degraded state due to jhum cultivation. The site has a clear boundary demarcated by boundary pillars. The site is representative of tropical hill ecosystem and holds a remarkable diversity of flora and fauna. The site currently does not have any conservation related national or international designation other than the local recognition as VCF i.e., community conserved area.



Background and Significance

The Boroitali Mouza Bon was established as a community reserve or VCF by the then Headman of the Mouza in 1903 to ensure sustainable access of the local community to timber, bamboo and non-timber forest products, and perennial flow of water in the streams and canals to meet the needs of the community. About 250 families of Marma and Tripura communities, in five villages, live around the forest area and majority of them are more or less dependent on the natural forest resources of this forest. During 2018-2019, the USAID-funded Chittagong Hill Tracts Watershed Co-Management Activity (CHT-WCA) project, implemented by UNDP in collaboration with the Hill District Council and a local NGO, assisted the community to strengthen the management of the VCF including mapping and boundary demarcation of its area by reforming and developing management capacity of the management committee of the VCF. The project also provided alternative livelihood development support to the forest dependent households in the VCF community. Now the VCF management committee and the community members are protecting and conserving the biodiversity of the site very effectively. The site has a natural patch of tropical hill forest along with a main canal on its south border and several small streams inside the VCF. The natural forest portion of the VCF holds numerous species of trees, shrubs, herbs, and vines as well as a rich diversity of wildlife.

Governance and Management

The site is legally owned by the Government of Bangladesh and governed by the Deputy Commissioner of the district and the Hill District Council, but it is managed by the local community based on customary rights, by establishing an association (*Samity*) under the leadership of the Mouza Headman and the village head (Karbari), named Boroitali Kukichara Marma Para Bon Songrokkhon Samity.

Under the provisions of the CHT Governance Rules (1900), the community (Samity) has established community approved rules and regulations for the management and conservation of the site. With support from the SID-CHT (CHT-WCA) project (2018-2019), the community has strengthened the management capacity and activities of the Samity through reformation of the executive committee of the Samity (VCF management committee) and training of its executive committee members. The executive committee is composed of 11 elected representatives of the community with a President on the top and several other posts below including one general secretary, one treasurer and eight members.

Biodiversity Values

Flora: This site contains most of the common, as well as rare/endangered tree species of the tropical semi-evergreen hill forest of south-eastern Bangladesh, with Muli bamboo (*Melocanna baccifera*) occupying about one-third of the total area of the VCF. The major tree species of the VCF are Gamar (*Gmelina arborea*), Koroi (*Albizia* spp.), Teli Garjan (*Dipterocarpus turbinatus*), Kanak (*Schima wallichii*), and Pitraj (*Aphanamixis polystachya*). Other species include Chapalish (*Artocarpus chama*), Chatim (*Allstonia scholaris*), Kadam (*Anthocephalus chinensis*), Jam (*Syzygium cumini*), Shimul (*Bombax ceiba*), Jarul (*Lagerstroemia speciosa*), Bot (*Ficus benghalensis*), Bohera (*Terminalia bellirica*), Arjun (*Terminalia arjuna*), Amloki (*Phyllanthus emblica*), Dhaki jam (*Syzygium firmum*), Suruj (*Cerbera odollam*), Gutgutya (*Brusera serrata*), Civit (*Swintonia floribunda*) and Ban Amra (*Spondias pinnata*).

The understory vegetation include diverse species of shrubs, herbs and climbers such as Bhat (*Clerodendrum visosum*), Anantakanta (*Dalbergia spinosa*), Dadmardon (*Senna alata*), Tagar (*Tabernaemontana divericata*), Boro (*Ziziphus oenoplia*), Apang (*Achyranthes aspera*), Hatisur (*Heliotropium indicum*), Kumarilata (*Smilax ocreata*), Mon borboti (*Vigna adenantha*), Jharu phul (*Thysanolaena maxima*), Pahari Kola (*Musa ornata*), Sarpagandha (*Rauvolfia serpentina*), Jangali Pan (*Piper hamiltonii*), Jongoler Alu (*Dioscorea villosa*), Sugri alu (*Dioscorea alata*), Tit begun (*Solanum torvum*), Ban okra (*Triumfetta rhomboidea*), Amila (*Hibiscus subdarifa*), Lelang pata (*Premna esculenta*), Dheki shak (*Diplazium esculentum*), Tara (*Alpinia nigra*), Ozon shak (*Spilanthes calva*), Jaganna gula (*Ficus recemosa*), Boro jogonna gula (*Ficus auriculata*), etc.

According to the current 'Red List' (IUCN 2023), Suruj is in 'threatened' and Civit is in 'near threatened' state in Bangladesh.

Fauna: The site harbors diverse species of Mammals, Reptiles, Amphibians and Birds including several threatened species. The mammals include Wild Boar (*Sus scrofa*), Barking deer (*Muntiacus muntjak*), Bengal Slow Loris (*Nycticebus bengalensis*), Capped Langur (*Trachypithecus pileatus*), Rhesus Macaque (*Macaca mulatta*), Indian Crested Porcupine (*Hystrix indica*), Lesser Bandicoot Rat (*Bandicota bengalensis*), Asiatic long-tailed climbing mouse (*Vandeleuria oleracea*), Irrawaddy Squirrel (*Callosciurus pygerythrus*), Lesser Bamboo Rat (*Cannomys badius*), Indian Flying Fox (*Pteropus giganteus*), Common Pipistrelle (*Pipistrellus pipistrellus*), Jungle cat (*Felis chaus*), Leopard cat (*Prionailurus bengalensis*), Common Mongoose (*Herpestes edwardsi*), Crab-eating Mongoose (*Herpestes urva*), and Common Palm Civet (*Paradoxurus hermaphroditus*). The locals claim that the VCF also harbors Asiatic Black Bear (*Ursus thibetanus*) and a tiger-like animal they call 'Sindu Bagh'.

The reptiles include Elongated Tortoise (*Indotestudo elongata*), Burmese Python (*Python bivittatus*), Common Wolf Snake (*Lycodon aulicus*), Chinese Rat snake (*Ptyas korros*), Indian Rat snake (*Ptyas mucosa*), Common Mock viper (*Psammodynastes pulverulentus*), checkered Keelback (*Xenochrophis piscator*), Monocled cobra (*Naja kaouthia*), Green pit viper (*Trimeresurus albolabris*), Takay Gecko (*Gekko gekko*), Forest Crested Lizard (*Calotes emma*), Common Garden Lizard (*Calotes versicolor*), Khasi Hills Long-tailed Lizard (*Takydromus khasiensis*), Common Skink (*Eutropis carinata*), etc.

The birds include Red Junglefowl (*Gallus gallus*), Red-breasted Parakeet (*Psittacula alexandri*), Hill Myna (*Gracula religiosa*), Black Drongo (*Dicrurus macrocercus*), Hair-crested Drongo (*Dicrurus*

hottentottus), Rufous Treepie (*Dendrocitta vagabunda*), Red-whiskered Bulbul (*Pycnonotus jocosus*), Red-vented Bulbul (*Pycnonotus cafer*), Lesser Necklaced Laughingthrush (*Garrulax monileger*), Black-backed Forktail (*Enicurus immaculatus*), Golden-fronted Leafbird (*Chloropsis aurifrons*), Scarlet-backed Flowerpecker (*Dicaeum cruentatum*), Purple Sunbird (*Cinnyris asiaticus*), etc.

It may be noted that Asiatic Black Bear and Elongated Tortoise are now ‘critically endangered’; Barking deer, Capped Langur, and Bengal Slow Loris are ‘endangered’; and Rhesus Macaque and Burmese Python are ‘vulnerable’ in Bangladesh (IUCN, 2015).

The site is important for species aggregation as several wildlife (especially jungle fowl and deer) migrate to this site from the nearest degraded forest areas for food, shelter, breeding, and molting.

Associated Values

Being protected for more than a century, Boroitoli Mouza Bon works as a source of various provisioning, supporting, and regulating ecosystem services to the local communities. The important provisioning service includes supply of bamboo shoots and wild vegetables as food, vines as binding materials, fuel wood, medicinal herbs and water. The supporting and regulating services include nutrient cycling in soil, water purification, carbon sequestration, restoration of soil organic matter and enhanced microbial activity in soil, etc.

Management and conservation initiatives

The primary objective of managing the VCF by its Management Committee and community members is to ensure sustainable yield of bamboo, medicinal herbs, and fruits along with continuous water flow in the streams for multiple needs of the local communities. To protect the site and conserve its biodiversity and other ecosystem services, the management committee has prohibited the following activities in the VCF: (a) cutting of trees and bamboo without the permission of the management committee, (b) hunting of wild animals including birds, (c) setting fire, (d) jhum cultivation, (e) harvesting of bamboo shoots, and (f) application of pesticide in the streams inside the VCF. This notification also mentions that anybody violating these regulations would be punished according to traditional rules. Visitors and researchers are also required to take verbal consent of the site authority and a local guide assigned by the latter to enter the site. Violation of these regulations by anyone can result in monetary fine or traditional punishment. The management committee members closely monitor the forest through regular patrolling.

Management Effectiveness and Sustainability

The management committee(s) of the Boroitoli Mouza Forest has been able to sustainably manage the site for decades, maintaining its natural state with diverse flora and fauna. The site works as a food source and a major habitat for many birds, mammals, reptiles, and other wildlife. Though previously nearby hilly areas had good forest cover, gradual degradation of those areas and their conversion to horticultural plantations have hampered the natural habitats of many wildlife species. Therefore, this site is now the only hope for conserving the wildlife and native flora of the area. Although once the site used to face considerable disturbances as sometimes local habitants used to illegally infiltrate into it and collect forest resources without permission, now such disturbances have reduced significantly due to strengthening of monitoring by the VCF management committee. The Samity is determined to conserve the Mouza forest in similar manner for indefinite time in the future.

Key Contact

Mr. Chand Mohon (President, Boroitali Mouza Bon)

Tel: 019890497633

7. Banchara Para Bon

Overview

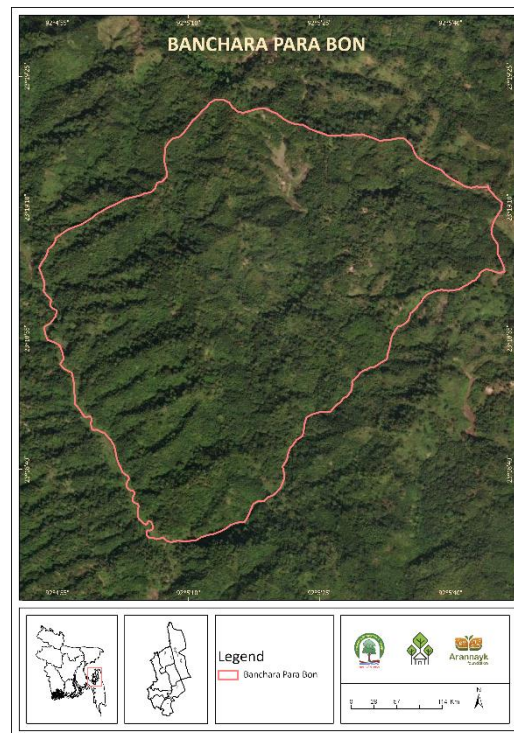
Banchara Para Bon (VCF) is located at 51 no. Dighinala Mouza at 4 no. Dighinala Union of Dighinala Upazila in Khagrachari district. The approximate mid-point GPS coordinate of the site is 23.315559°N, 92.087327°E. As per perception of the local community, the total area of the site is around 200 acres (81 ha), but mapping revealed that it is actually 335 acres. The site has a clear boundary demarcation with boundary pillars and stream pathways. The site is representative of tropical hill ecosystem and currently holds a remarkable biodiversity of flora and fauna. The site currently does not have any conservation related national or international designation other than the local recognition as VCF i.e., community conserved area. The site is surrounded by Pablakhali VCF in the south-east, horticultural plantation on the west and village roads on the north.

Background and Significance

The Banchara Para Bon (VCF) was established by the local community under the leadership of the Mouza Headman and the village head (Karbari) in 1980 to ensure continuous supply of water in their agricultural land and sustainable use of non-timber forest products by the community. During 2018-2019, the SID-CHT (CHT-WCA) project, implemented by UNDP involving the Hill District Council and a local NGO, assisted the community to strengthen the management of the VCF including mapping and boundary demarcation of its area by reforming and developing management capacity of the management committee of the VCF. The project also provided alternative livelihood development support to the forest dependent households in the VCF community. Several families living adjacent to the VCF, who were dependent on this forest for their livelihood, are now actively involved in the management and protection of this forest. The site includes numerous small hills with natural forest cover along with a network of stream pathways including one main and several small streams. Along with its rich floral biodiversity typical of the tropical hill forests of southeastern Bangladesh, the site is also rich in fauna including many birds, ground dwelling mammals and reptiles.

Governance and Management

The site is legally owned by the Government of Bangladesh and governed by the Deputy Commissioner of the district and the Hill District Council, but it is managed by the local community group based on customary rules by establishing a committee named Banchara Para Bon Management Committee. This management committee has adopted CHT Governance rules (1900) as a baseline along with several community approved rules and regulations for the management and conservation of the site's ecological integrity. The management committee consists of a general body formed by all the general members (one representative from each household) and a 9-member executive body consisting of a President on



the top and several other posts below including one General Secretary, one Treasurer and 6 general members. The management committee is reformed through election after every three years.

Biodiversity Values

Flora: Muli bansh (*Melocanna baccifera*) occupies about 30% of the total area of the VCF. The remaining area is quite densely vegetated with diverse species of trees, shrubs, herbs, vines and epiphytes. The major tree species are Garjan (*Dipterocarpus turbinatus*), Dhaki jam (*Syzygium firmum*), Jam (*Syzygium cumini*) and Koroi (*Albizia* spp.). Other tree species include Champa (*Michelia champaca*), Shimul (*Bombax ceiba*), Jarul (*Lagerstroemia speciosa*), Suruj (*Cerbera odollam*), Barta (*Artocarpus lacucha*), Bara Dumur/Jagana Gula (*Ficus auriculata*), Choto Dumur (*F. hispida*), Kanak (*Schima wallichii*), Bot (*Ficus benghalensis*), Bohera (*Terminalia bellirica*), Amloki (*Phyllanthus emblica*), Pitraj (*Aphanamixis polystachya*), Chapalish (*Artocarpus chama*), Chatim (*Alstonia scholaris*), Lotkon (*Baccaurea motleyana*), Kala batna (*Lithocarpus acuminatus*), Faisha Udal (*Sterculia villosa*), Bon Amra (*Spondias pinnata*), and Gutguitya (*Brusera serrata*). etc.



The major shrubs are Bhat (*Clerodendrum visosum*), Anantakanta (*Dalbergia spinosa*), Karful Gach (*Saprosma ternatum*), Sarpagandha (*Rauvolfia serpentina*), Dadmardon (*Senna alata*), Ban okra (*Triumfetta rhomboidea*), Bagh ranga (*Uvaria cordata*), Bon Boro (*Ziziphus oenoplia*), Jali bet (*Calamus guruba*), Bara bet (*Calamus viminalis*), Gila lata (*Entada rheedii*), Acchol, and Surjo pata.

The herbaceous plants include Sun grass (*Imperata cylindrica*), Pahari Kola (*Musa ornata*), Buno kocho (*Colocasia esculenta*), Ghechu (*Aponogeton echinatus*), Ban nate (*Amaranthus viridis*), Hatisur (*Heliotropium indicum*), Jhil Marich (*Sphenoclea zeylancia*), Bon Ada (*Zingiber zerumbet*), Telakhochu (*Coccinia grandis*), Ban Kalmi (*Ipomoea maxima*), Mon borboti (*Vigna adenantha*), Jongoler Alu (*Dioscorea villosa*), Sugri alu (*Dioscorea alata*), Tit begun (*Solanum torvum*), Ban okra (*Triumfetta rhomboidea*), Dheki shak (*Diplazium esculentum*), Kachu (*Colocasia esculenta*), etc.

In this VCF, there are several species of epiphytes too namely, Foxtail orchid (*Aerides multiflora*), Fringed lipped orchid (*Dendrobium fimbriatum*), Pencil orchid (*Dendrobium teritifolium*), and Climbing aroid (*Pothos scandens*).

According to the current 'Red List' of Bangladesh (IUCN 2023), Barta, Suruj, Bagh ranga, and Fringed-lipped orchid are 'threatened', and Kala batna, Jagana dumur, and Foxtail orchid are 'near threatened' species.

Fauna: The site harbors diverse species of Mammals, Reptiles, Amphibians and Birds including several threatened species of Bangladesh. The mammals include Wild Boar (*Sus scrofa*), Jungle cat (*Felis chaus*), Leopard cat (*Prionailurus bengalensis*), Barking Deer (*Muntiacus muntjak*), Rhesus Macaque (*Macaca mulatta*), Capped Langur (*Trachypithecus pileatus*), Pig-tailed Macaque (*Macaca leonia*), Chinese Pangolin (*Manis pentadactyla*), Asiatic Black Bear (*Ursus thibetanus*), Indian Crested Porcupine (*Hystrix indica*), Lesser Bandicoot Rat (*Bandicota bengalensis*), Asiatic long-tailed climbing mouse (*Vandeleuria oleracea*), Irrawaddy Squirrel (*Callosciurus pygerythrus*), Lesser Bamboo Rat (*Cannomys badius*), Indian Flying Fox (*Pteropus giganteus*), Fulvous Fruit Bat (*Rousettus leschenaultii*), Common Pipistrelle (*Pipistrellus pipistrellus*), Indian Crested Porcupine (*Hystrix*

indica), Common Mongoose (*Herpestes edwardsi*), Crab-eating Mongoose (*Herpestes urva*), and Common Palm Civet (*Paradoxurus hermaphroditus*).

The reptiles include Burmese Python (*Python bivittatus*), Gui sap/Bengal monitor (*Varanus bengalensis*), Forest Crested Lizard (*Calotes emma*), Common Garden Lizard (*Calotes versicolor*), Ayeyarwady Bent-toed Gecko (*Cyrtodactylus ayeyarwadyensis*), Tokkhok/Takay Gecko (*Gekko gekko*), Khasi Hills Long-tailed Lizard (*Takydromus khasiensis*), Common Skink (*Eutropis carinata*), Indian Rat snake (*Ptyas mucosa*), Common Mock viper (*Psammodynastes pulverulentus*), Checkered Keelback (*Xenochrophis piscator*), Short-nosed vine snake (*Ahaetulla prasina*), Tawny cat snake (*Boiga ochracea*), Ornate Flying snake (*Chrysopelea ornata*), Common Trinket Snake (*Coelognathus helena*), Painted bronzenack (*Dendrelaphis tristis*), Chinese Rat snake (*Ptyas korros*), Cobra (*Naja kaouthia/ N. naja*), and Green pit viper (*Trimeresurus albolabris*).

The birds of the Banchara VCF include Kalij Pheasant (*Lophura leucomelanos*), Red Junglefowl (*Gallus gallus*), Common Hill Myna (*Gracula religiosa*), Rock Pigeon (*Columba livia*), Yellow footed green pigeon (*Treron phoenicopterus*), Greater Coucal (*Centropus bengalensis*), Green-billed Malkoha (*Phaenicophaeus tristis*), Spotted owl (*Athene brama*), Crested Serpent Eagle (*Spilornis cheela*), Rufous Treepie (*Dendrocitta vagabunda*), Common Green Magpie (*Cissa chinensis*), Red-whiskered Bulbul (*Pycnonotus jocosus*), Red-vented Bulbul (*Pycnonotus cafer*), Lesser Necklaced Laughingthrush (*Garrulax monileger*), Black-backed Forktail (*Enicurus immaculatus*), Golden-fronted Leafbird (*Chloropsis aurifrons*), Scarlet-backed Flowerpecker (*Dicaeum cruentatum*), Purple Sunbird (*Cinnyris asiaticus*), etc.

It may be noted that Asiatic Black Bear and Chinese Pangolin are now ‘critically endangered’; Barking Deer, Capped Langur, and Pig-tailed Macaque are ‘endangered’; Rhesus Macaque, Burmese Python and Kalij Pheasant are ‘vulnerable’; and Leopard cat is ‘near threatened’ in Bangladesh (IUCN, 2015).

The site is important for its species aggregation role. Several species of wildlife seasonally migrate to this site from the nearest degraded forest areas for food, shelter, and breeding.

Associated Values

Banchara Para VCF, being protected for decades, works as a source of various provisioning, supporting and regulating ecosystem services to the local community. The important provisioning service includes supply of bamboo shoots and wild vegetables as food, vines as binding materials, fuel wood, medicinal herbs and water. The supporting and regulating services include nutrient cycling in soil, water purification, carbon sequestration, restoration of soil organic matter and enhanced microbial activity in soil, etc. The site also holds cultural and spiritual value to the locals and visitors as the site has historic past and extraordinary scenic beauty.

Management and conservation initiatives

The primary objective of managing the Banchara Para VCF by its Management Committee is to ensure sustainable yield of bamboo, medicinal herbs and wild fruits along with continuous water supply for the agricultural land. To protect the site and conserve its biodiversity and other ecosystem services, the management committee has prohibited the following activities in the VCF: (a) cutting of trees and bamboo without the permission of the management committee, (b) hunting of wild animals including birds, (c) setting fire, (d) jhum cultivation, (e) harvesting of bamboo shoots, and (f) application of pesticide in the steams inside the VCF. This notification also mentions that anybody violating these regulations would be punished according to traditional rules. Visitors and researchers are also required to take verbal consent of the site authority and a local guide assigned by the latter to enter the site for recreational or research purposes. Violation of these regulations by anyone can result in monetary fine or traditional punishment.

The site is patrolled by the executive committee members along with some other general members of the community at least once a quarter, but more frequently during the bamboo harvesting season. The management committee organizes harvesting of mature bamboos from the VCF in three-year rotation to ensure sustainability of this resource and conservation of existing biodiversity. The sales proceeds are utilized for the management of the VCF and other community development activities.

Management Effectiveness and Sustainability

The VCF management committee has been able to sustainably manage the site for decades, maintaining its natural state with diverse flora and fauna. The site works as a food source and habitat for many birds, mammals, reptiles, amphibians, and birds. As much of the nearby hilly areas have lost natural forest cover due to shifting cultivation and conversion into horticultural orchards, the VCF has been playing a very crucial role in providing shelter to the wildlife population of the surrounding area too. In the past, the VCF used to face considerable disturbances as sometimes local habitants used to illegally infiltrate into it and collect resources without permission, and visitors with recreational targets used to cause plastic waste and sound pollution in the forest, but now such disturbances have reduced significantly due to the strengthened management initiatives of the management committee.

Key Contact

Mr. Progga Joti Chakma (Secretary, Banchara Para VCF Management Committee)

Tel: 01820710560

8. Shriti Bikash Karbari Para Village Common Forest

Overview

Shriti Bikash Karbari Para Village Common Forest (VCF) is located at 51 no. Dighinala Mouza in 4 no. Dighinala Union under Dighinala Upazila of Khagrachari district. Its approximate mid-point GPS coordinate is 23.366191°N, 92.053124°E. It is surrounded by the reserve line of Gangaram Reserved Forest of Forest Department on its east, agricultural land on the west, government road on the north, and Donordhor Karbari Para VCF boundary on the south. The total area coverage of the site is around 90 acres (36.44 ha). The site has a clear boundary demarcated by boundary pillars and stream pathways. The site is representative of tropical hill ecosystem and holds a remarkable diversity of flora and fauna. The site currently does not have any conservation related national or international designation other than the local recognition as VCF i.e., community conserved area.

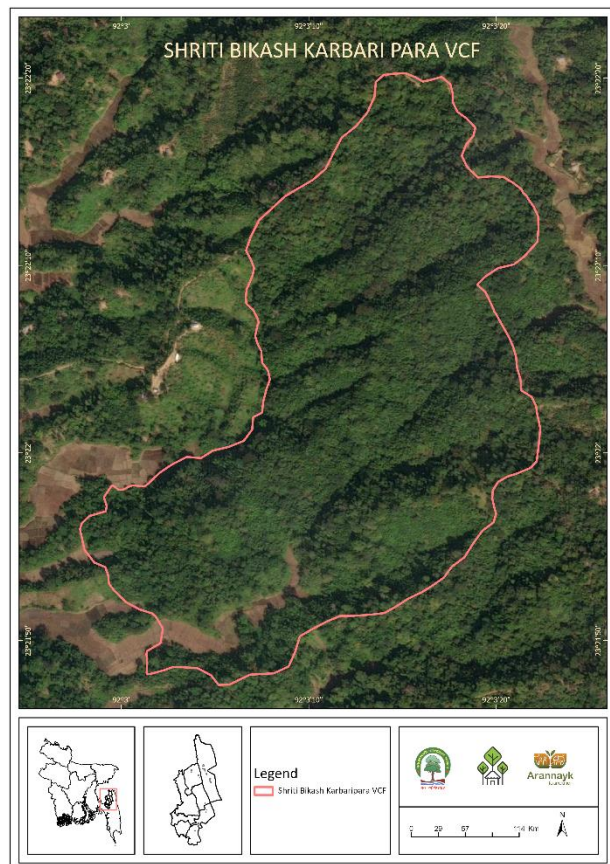
Background and Significance

Shriti Bikash Karbari Para VCF was established in 1970 by the then Headman of the mouza to conserve the forest to ensure water supply to agricultural land and sustainable use of non-timber forest products for the community. From the beginning this site was under the management of committee formed by the Headman involving other representatives of the community. During 2018-19, the USAID-funded Chittagong Hill Tracts Watershed Co-Management Activity (CHT-WCA) project, implemented by UNDP in collaboration with the Hill District Council and a local NGO, assisted the community to strengthen the management of the VCF including mapping and boundary demarcation of its area by reforming and developing management capacity of the management committee. The project also provided alternative livelihood development support to the forest dependent households in the VCF community. Currently a formal committee comprised of the traditional leaders and general members of the community protects and conserves the biodiversity of the site and maintains its natural state. A total of 107 families lives adjacent to the VCF who are dependent on this forest and are also actively involved in the protection and management of this forest.

The site includes patches of tropical hill forest along with a network of streams consisting of a main and several small streams. The forest contains remarkable diversity of native flora and fauna including several red listed species of flora and fauna.

Governance and Management

As an unclassed state forest (USF) land, the site is legally owned by the Government of Bangladesh and governed by the Deputy Commissioner of the district and the Hill District Council, but it is managed by the local community based on customary rights, by forming a committee named Smriti Bikash Karbari Para VCF Management Committee. This management committee has adopted CHT



Governance rules (1900) as a baseline along with several community approved laws and regulations for the management and conservation of the site's ecological integrity. The management committee has an executive body of 13 members and a general body consisting of all the community members. The executive body has a president on the top and several other posts below including one general secretary, one treasurer and six general members.

Biodiversity Values

Flora: The entire area of the VCF is densely vegetated with numerous plant species of the tropical semi-evergreen hill forest of south-eastern Bangladesh. About 40% of the total area of the VCF is covered by Muli bamboo (*Melocanna baccifera*) and the remaining areas with diverse species of trees, shrubs, herbs and climbers as well as other species of bamboo, especially Mitinga (*Bambusa tulda*).



The major tree species of the VCF are Pitraj (*Aphanamixis polystachya*), Garjan (*Dipterocarpus turbinatus*), Bohera (*Terminalia bellirica*), Chapalish (*Artocarpus chama*), and Jam (*Syzygium cumini*). The other tree species include Shimul (*Bombax ceiba*), Jarul (*Lagerstroemia speciosa*), Amloki (*Phyllanthus emblica*), Dhakijam (*Syzygium firmum*), Suruj (*Cerbera odollam*), Gutguitta (*Brusera serrata*), Udal (*Sterculia villosa*), Chatim (*Alstonia scholaris*), Lotkon (*Baccaurea motleyana*), Jaganna gula (*Ficus recemosa*), Boro jogonna gula (*Ficus auriculata*), etc.

The understory vegetation, aside from bamboo, includes diverse species of shrubs, herbs and climbers. The major ones are Bhat (*Clerodendrum visosum*), Jharu phul (*Thysanolaena maxima*), Bon Boro (*Ziziphus oenoplia*), Tagar (*Tabernaemontana divericata*), Sarpagandha (*Rauvolfia serpentina*), Kakra (*Tarenna camoaniflora*), Ban okra (*Triumfetta rhomboidea*), Dadmardon (*Senna alata*), Pahari Kola (*Musa ornata*), Jongoler Alu (*Dioscorea villosa*), Tit begun (*Solanum torvum*), Bon Ada (*Zingiber zerumbet*), Buno kochu (*Colocasia esculenta*), Ghechu (*Aponogeton echinatus*), Lelang pata (*Premna esculenta*), Dheki shak (*Diplazium esculentum*), Tara (*Alpinia nigra*), Ozon shak (*Spilanthes calva*), etc.

Among the above plant species, Suruj is a 'threatened' and Jaganna gula is a 'near threatened' species according to the current 'Red List' of Bangladesh (IUCN 2023).

Fauna: The site harbors diverse species of Mammals, Reptiles, Amphibians and Birds including several threatened species. The other major mammals are Wild Boar (*Sus scrofa*), Barking Deer (*Muntiacus muntjak*), Pig-tailed macaque (*Macaca leonia*), Rhesus Macaque (*Macaca mulatta*), Capped Langur (*Trachypithecus pileatus*), Indian Crested Porcupine (*Hystrix indica*), Indian Mongoose (*Herpestes auropunctatus*), Crab-eating Mongoose (*Herpestes urva*), Common Palm Civet (*Paradoxurus hermaphroditus*).

The major reptiles include Burmese Python (*Python bivittatus*), Elongated Tortoise (*Indotestudo elongata*), King Cobra (*Ophiophagus hannah*), Forest Crested Lizard (*Calotes emma*), Common Garden Lizard (*Calotes versicolor*), Common Skink (*Eutropis carinata*), Common Mock viper (*Psammodynastes pulverulentus*), checkered Keelback (*Xenochrophis piscator*), Monocled cobra (*Naja kaouthia*), and green pit viper (*Trimeresurus albolabris*). Most of the common frogs of the hill forests of CHT such Asian Common Toad (*Duttaphrynus melanostictus*), Indian Bullfrog (*Hoplobatrachus tigerinus*), Red Microhylid Frog (*Microhyla rubra*), Chittagong Microhylid Frog (*Microhyla*

mukhlesuri), Ornate Microhylid Frog (*Microhyla ornata*), Smith's Litter Frog (*Leptobrachium smithi*), Puddle frog (*Occidozyga lima*), and Common Tree Frog (*Polypedates leucomystax*) are also there.

The major birds of Shriti Bikash Karbari Para VCF include Kalij Pheasant (*Lophura leucomelanos*), Red Junglefowl (*Gallus gallus*), Common Hill Myna (*Gracula religiosa*), Rock Pigeon (*Columba livia*), Rufous Treepie (*Dendrocitta vagabunda*), Common Green Magpie (*Cissa chinensis*), Red-whiskered Bulbul (*Pycnonotus jocosus*), Red-vented Bulbul (*Pycnonotus cafer*), Lesser Necklaced Laughingthrush (*Garrulax monileger*), Black-backed Forktail (*Enicurus immaculatus*), Golden-fronted Leafbird (*Chloropsis aurifrons*), Scarlet-backed Flowerpecker (*Dicaeum cruentatum*), and Purple Sunbird (*Cinnyris asiaticus*).

It may be noted that Barking Deer, Pig-tailed macaque, Capped Langur and King Cobra are now 'endangered'; and Burmese Python, Elongated Tortoise and Kalij Pheasant are 'vulnerable' in Bangladesh (IUCN, 2015)

The site plays a crucial role in species aggregation as different species of wildlife migrate to this site from the surrounding degraded forest areas for food and shelter, and also use it for their breeding ground.

Associated Values

Shriti Bikash Karbari Para VCF, which has been protected for decades, works as a source of various provisioning, supporting, and regulating ecosystem services to the local communities. The provisioning services include supply of bamboo as housing material, bamboo shoots and wild vegetables as food, vines as binding materials, fuel wood, medicinal herbs, and water. The supporting and regulating services include nutrient cycling in soil, water purification, carbon sequestration, restoration of soil organic matter, etc.

Management and conservation initiatives

The primary objective of managing the Shriti Bikash Karbari Para VCF by its management committee is to ensure conservation of the forest for its multiple ecosystem services to the local community such as sustainable supply of bamboo, wild vegetables and other minor forest products and perennial flow of water in the streams for irrigation and other uses.

To protect the site and conserve its biodiversity and other ecosystem services, the management committee has prohibited the following activities in the VCF: (a) cutting of trees and bamboo without the permission of the management committee, (b) hunting of wild animals including birds, (c) setting fire, (d) jhum cultivation, (e) harvesting of bamboo shoots, and (f) application of pesticide in the steams inside the VCF. This notification also mentions that anybody violating these regulations would be punished according to traditional rules. Visitors and researchers are also required to take verbal consent of the site authority and a local guide assigned by the latter to enter the site for recreational or research purposes. Violation of these regulations by anyone can result in monetary fine or traditional punishment.

With the capacity building support provided by the SID-CHT (CHT-WCA) project, the management committee of the mouza forest has strengthened protection and management of the forest since 2018. To protect the natural resources of the forest from illicit extraction, the management committee organizes patrolling of the forest by its members and other community people at least once a quarter but more frequently during the bamboo harvesting season. The management committee organizes harvesting of mature bamboos from the VCF usually in three-year rotation to ensure sustainability of this resource. The sales proceeds are utilized for the management of the VCF and other community development activities.

Management Effectiveness and Sustainability

The management committee of the Shriti Bikash Karbari Para VCF has been able to sustainably manage the site for two decades, maintaining its natural state with diverse flora and fauna. The site works as a

food source and a habitat not only for its resident animals but also for those of the degraded forest lands around it, where the habitat quality has significantly deteriorated due to unsustainable use and deforestation. Therefore, this site is crucial for conserving the wildlife and native flora of the area. The management committee is determined to conserve the VCF in the same way it is being done now for indefinite time in the future.

Key Contact

Mr. Smriti Bikash Karbari (President, Shriti Bikash Karbari Para VCF)

Tel: 01873790636

9. Donurdhor Karbari Para Bon

Overview

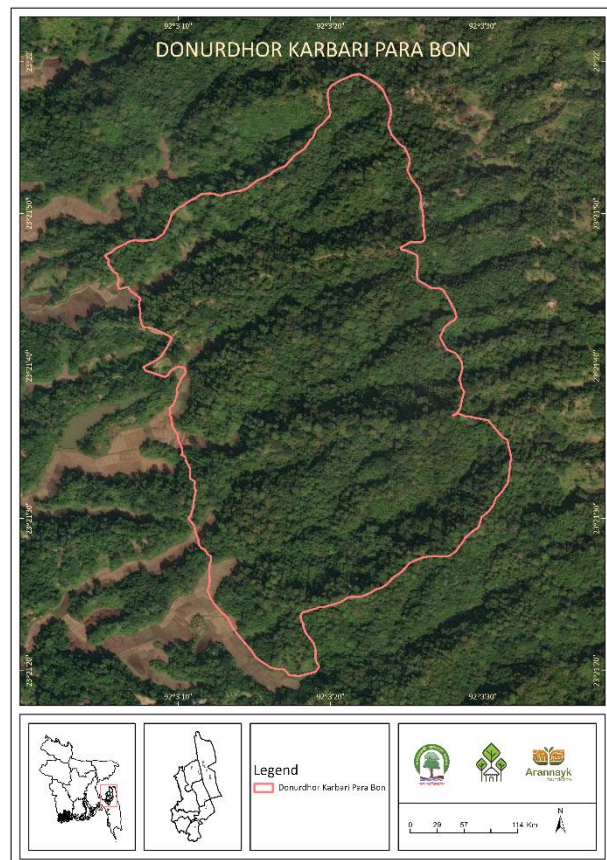
Donurdhor Karbari Para Bon (VCF) is located near Gangaram Reserve Forest at 51 no. Dighinala mouza under 4 no. Dighinala Union of Dighinala Upazila in Khagrachari district at 23.361951°N latitude and 92.055146°E longitude. It is surrounded by Gangaram Reserve Forest of Forest Department on its eastern side, agricultural lands on the western side, Shriti Bikash Karbari Para VCF on the north and Jotno Mohon Karbari Para Bon on the southern side. The total area of the site is around 120 acres (48.58 ha). The site has a clear boundary demarcated by boundary pillars and stream pathways. The site is representative of tropical hill ecosystem and contains diverse species of flora and fauna. The site currently does not have any conservation related national or international designation other than the local recognition as VCF i.e., community conserved area.

Background And Significance

The Dhonuyt/Donurdhor Karbari Para VCF was established in 1947-48 by the then Headman of the mouza. From the very beginning this site was under the management of a committee of the community representatives with the purpose of conserving the forest to ensure year-round availability of stream water and of non-timber forest products to the community members. During 2018-2019, the USAID-funded Chittagong Hill Tracts Watershed Co-Management Activity (CHT-WCA) project, implemented by UNDP in collaboration with the Hill District Council and a local NGO, assisted the community to strengthen the management of the VCF including mapping and boundary demarcation of its area by reforming and developing management capacity of the management committee of the VCF. The site contains a natural patch of tropical hill forest along with a stream pathway network consisting of several streams. About 200 families live adjacent to the VCF who are dependent on this forest and the CHT-WCA project provided alternative livelihood development support to those forest dependent households. The site is quite well preserved as a result of the joint effort of the VCF management committee and the community members at large.

Governance and Management

The site is legally owned by the Government of Bangladesh and governed by the Deputy Commissioner of the district and the Hill District Council, but it is managed by the local community group for decades based on customary rights, by forming a committee called Dhonurdhor Karbari Para Bon Songrokkhon (Conservation) Committee. This management committee has adopted CHT Governance rules (1900) as a baseline along with several community approved laws and regulations for the management and conservation of the site's ecological integrity. The management committee is composed of 21 community representatives and is headed by an elected President on the top and several other posts below including one General Secretary, one Treasurer and 18 general members.



Biodiversity Values

Flora: The entire area of the VCF is densely vegetated with numerous plant species of the tropical semi-evergreen hill forest of south-eastern Bangladesh. About 40% area of the VCF is covered by Muli bamboo (*Melocanna baccifera*) and the remaining areas with diverse species of trees, shrubs, herbs and climbers including other species of bamboos namely, Mitinga (*Bambusa tulda*), Mitinga (*Bambusa tulda*), Ora (*Dendrocalamus longispatus*), Dolu Bash (*Schizostachyum dullooa*).

The major tree species of the VCF are Pitraj (*Aphanamixis polystachya*), Bohera (*Terminalia bellirica*), Gamar (*Gmelina arborea*), Kanak (*Schima wallichii*) and Chakua koro (*Albizia chinensis*). The other species include Garjan (*Dipterocarpus turbinatus*), Chapalish (*Artocarpus chama*), Chalmugra (*Hydnocarpus wightiana*), Dhakijam (*Syzygium firmum*), Jam (*Syzygium cumini*), Suruj (*Cerbera odollam*), Gutguitya (*Brusera serrata*), Amloki (*Phyllanthus emblica*), Shimul (*Bombax ceiba*), Jarul (*Lagerstroemia speciosa*), Bot (*Ficus benghalensis*), Chatian (*Alstonia scholaris*), Lotkon (*Baccaurea motleyana*), Hog plum (*Spondias pinnata*), Uri am (*Hydnocarpus wightiana*), Boilam (*Anisoptera scaphula*), and Civit (*Swintonia floribunda*). The other tree species include



The major shrubs and herbs include Bhat (*Clerodendrum visosum*), Lantana (*Lantana camara*), Bon tejpatha (*Melastoma malabathricum*), Bara bet (*Calamus viminalis*), Bon Boro (*Ziziphus oenoplia*), Jan-Jhani (*Crotalaria pallida*), Anantakanta (*Dalbergia spinosa*), Dadmardon (*Senna alata*), Jangli Boro (*Ziziphus rugosa*), Kakra (*Tarenna camoaniflora*), Bonmali (*Morinda augustifolia*), Sun grass (*Imperata cylindrica*), Kola (*Musa ornata*), Ban okra (*Triumfetta rhomboidea*), Tit begun (*Solanum torvum*), Kachu (*Colocasia esculenta*), Shoti (*Curcuma zadoaria*), and Bon Ada (*Zingiber zerumbet*). There are several species of creepers and climbers such as Kumarilata (*Smilax ocreata*), Gila lata (*Entada rheedii*), Jangali Pan (*Piper hamiltonii*), Pipal (*Piper peepuloides*), Chotra pata/Bichuti (*Tragia involucrata*), Makal (*Trichosanthes tricuspidata*), Telakhochu (*Coccinia grandis*), Mon borboti (*Vigna adenantha*), Painna lata (*Cissus adnata*), etc.

Among the above plant species, Uri am, Boilam and Suruj are in ‘threatened’ state and Civit is in ‘near threatened’ state according to the current ‘Red List’ of plants in Bangladesh (IUCN 2023).

Fauna: The site harbors diverse species of Mammals, Reptiles, Fishes, Amphibians and Birds including several threatened species. The mammals include Barking Deer (*Muntiacus muntjak*), Pig-tailed Macaque (*Macaca leonia*), Capped Langur (*Trachypithecus pileatus*), Chinese Pangolin (*Manis pentadactyla*), Hog deer (*Axis porcinus*), Wild Boar (*Sus scrofa*), Jungle cat (*Felis chaus*), Leopard cat (*Prionailurus bengalensis*), Common Palm Civet (*Paradoxurus hermaphroditus*), Rhesus Macaque (*Macaca mulatta*), Indian Crested Porcupine (*Hystrix indica*), Irrawaddy Squirrel (*Callosciurus pygerythrus*), Lesser Bamboo Rat (*Cannomys badius*), Asiatic long-tailed climbing mouse (*Vandeleuria oleracea*), Indian Flying Fox (*Pteropus giganteus*), Fulvous Fruit Bat (*Rousettus leschenaultii*), Common Pipistrelle (*Pipistrellus pipistrellus*), Small Indian Mongoos (*Herpestes auro-punctatus*), and Crab-eating Mongoos (*Herpestes urva*).

The major reptiles are Elongated Tortoise (*Indotestudo elongata*), Burmese Python (*Python bivittatus*), Khasi Hills Long-tailed Lizard (*Takydromus khasiensis*), Forest Crested Lizard (*Calotes emma*), Common Garden Lizard (*Calotes versicolor*), Ayeyarwady Bent-toed Gecko (*Cyrtodactylus ayeyarwadyensis*), Takay Gecko (*Gekko gekko*), Indian Rat snake (*Ptyas mucosa*), Common Mock viper

(*Psammodynastes pulverulentus*), Vine Snake (*Ahaetulla nasuta*), Short-nosed vine snake (*Ahaetulla prasina*), Tawny cat snake (*Boiga ochracea*), Ornate Flying snake (*Chrysopelea ornata*), Common Trinket Snake (*Coelognathus helena*), Painted bronzenack (*Dendrelaphis tristis*), checkered Keelback (*Xenochrophis piscator*), Monocled Cobra (*Naja kaouthia*), and Green pit viper (*Trimeresurus albolabris*).

Most of the common frogs of the hill forests of CHT such Asian Common Toad (*Duttaphrynus melanostictus*), Indian Bullfrog (*Hoplobatrachus tigerinus*), Red Microhylid Frog (*Microhyla rubra*), Chittagong Microhylid Frog (*Microhyla mukhlesuri*), Ornate Microhylid Frog (*Microhyla ornata*), Smith's Litter Frog (*Leptobrachium smithi*), Puddle frog (*Occidozyga lima*), and Common Tree Frog (*Polypedates leucomystax*) are also there.

Similarly, the site harbours most of the common birds of CHT such as Common Hill Myna (*Gracula religiosa*), Rock Pigeon (*Columba livia*), Yellow footed green pigeon (*Treron phoenicopterus*), Greater Coucal (*Centropus bengalensis*), Green-billed Malkoha (*Phaenicophaeus tristis*), Spotted owl (*Athene brama*), Crested serpent eagle (*Spilornis cheela*), Shikra (*Accipiter badius*), Black kite (*Milvus migrans*), Asian green bee-eater (*Merops orientalis*), Chestnut headed Bee-eater (*Merops leschenaulti*), Common Kingfisher (*Alcedo atthis*), Lineated Barbet (*Psilopogon lineatus*), Coppersmith Barbet (*Psilopogon haemacephalus*), Black-rumped Flameback (*Dinopium benghalense*), Red-breasted Parakeet (*Psittacula alexandri*), Black Drongo (*Dicrurus macrocercus*), Hair-crested Drongo (*Dicrurus hottentottus*), Rufous Treepie (*Dendrocitta vagabunda*), Indian Roller (*Coracias benghalensis*), Common Green Magpie (*Cissa chinensis*), Red-whiskered Bulbul (*Pycnonotus jocosus*), Red-vented Bulbul (*Pycnonotus cafer*), Lesser Necklaced Laughingthrush (*Garrulax monileger*), Black-backed Forktail (*Enicurus immaculatus*), Golden-fronted Leafbird (*Chloropsis aurifrons*), Scarlet-backed Flowerpecker (*Dicaeum cruentatum*), Purple Sunbird (*Cinnyris asiaticus*), etc. It also harbors Red Junglefowl (*Gallus gallus*) and Kalij Pheasant (*Lophura leucomelanos*).

Among these wild animals, Hog deer, Chinese Pangolin and Elongated Tortoise are 'critically endangered'; Barking Deer, Pig-tailed Macaque, and Capped Langur are 'endangered'; Rhesus Macaque, Burmese Python and Kalij Pheasant are 'vulnerable'; and Leopard cat is 'near threatened' in Bangladesh (IUCN, 2015).

The site is important for species aggregation as several wildlife migrate to this site from the nearby VCFs, Reserved Forest and degraded forest areas for food, shelter, and breeding.

Associated Values

Bagaichari Nitoygan Donurdhor Karbari Para VCF, being protected for decades, works as a source of various provisioning, supporting and regulating ecosystem services to the local communities. The important provisioning services include supply of bamboo shoots and wild vegetables as food, vines as binding materials, fuel wood, medicinal herbs and water. The supporting and regulating services include nutrient cycling in soil, water purification, carbon sequestration, restoration of soil organic matter and enhanced microbial activity in soil, etc.

Management and conservation initiatives

The primary objective of managing the VCF by its Management Committee is to ensure sustainable yield of bamboo and other minor forest products and year-round flow of water in the streams.

To protect the site and conserve its biodiversity and other ecosystem services, the management committee has prohibited the following activities in the VCF: (a) cutting of trees and bamboo without the permission of the management committee, (b) hunting of wild animals including birds, (c) setting fire, (d) jhum cultivation, (e) harvesting of bamboo shoots, and (f) application of pesticide in the steams inside the VCF. This notification also mentions that anybody violating these regulations would be punished according to traditional rules. Visitors and researchers are also required to take verbal consent

of the site authority and a local guide assigned by the latter to enter the site for recreational or research purposes. Violation of these regulations by anyone can result in monetary fine or traditional punishment.

The management committee organizes frequent patrolling of the site by the executive committee members along with some other general members of the community during the bamboo harvesting season and occasionally during other times. The committee harvests and sells mature bamboo culms usually in three-year rotations and utilizes the sales proceeds for VCF management and community development activities.

Management Effectiveness and Sustainability The management system of the site has been sustained for decades and has successfully maintained the forest in its natural state. The site works as a food source and a major habitat for many birds, mammals, reptiles and other wildlife. The site authority has ensured not to take any harmful development initiative on the site. Previously, some people from within and outside the village used to illicitly hunt wild animals in the VCF but the current management committee has been able to stop that since 2018 as they have strengthened monitoring and protection of the forest with the help of the CHT-WCA project.

Key Contact

Mr. Nirmal Kanti Chakma (Secretary, called Dhonurdhor Karbari Para Bon Songrokkhon Committee)

Tel: 01557486124

10. Dane Dhan Pata Mouza Bon

Overview

Dane Dhan Pata Mouza Bon (VCF) is located at 23.413557°N latitude and 92.019730°E longitude near Jogesh Chandra Para village at 48 no. Dane Dhan Pata Mouza in 5 no. Babuchara Union of Dighinala Upazila in Khagrachari district. It is surrounded by Dubuk *chara* (canal) on its east, Dhan Pata *chara* on the north, and a village road on the south. The total area of the site is around 150 acres (60.7 ha). The site has a clear boundary demarcated by boundary pillars. The site is representative of tropical hill forest ecosystem and holds a remarkable diversity of native flora and fauna. The site currently does not have any conservation related national or international designation other than the local recognition as VCF i.e., community conserved area.

Background And Significance

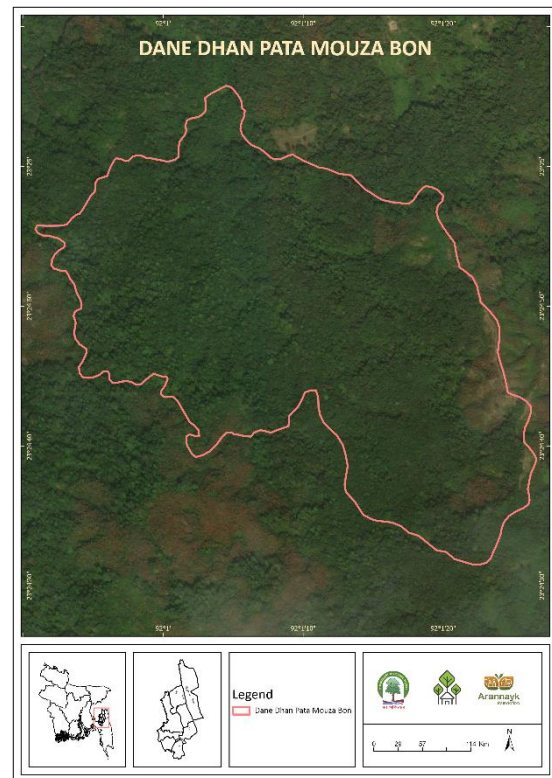
The management of this Mouza Bon was first initiated in 1965 by the then mouza Headman Babu Birendra Lal Chakma. From the very beginning this site was under the management of a committee of the community representatives with the purpose of conserving the forest to ensure year-round availability of stream water and of non-timber forest products to the community members. During 2018-2019, the SID-CHT (CHT-WCA) project, implemented by UNDP in collaboration with the Hill District Council and a local NGO, assisted the community to strengthen the management of the VCF including mapping and boundary demarcation of its area by reforming and developing management capacity of the management committee of the VCF. The project also provided alternative livelihood development support to the forest dependent households in the VCF community. The site holds patches of tropical hill forest along with a network of streams including three main and several small streams. The forest contains remarkable diversity of native flora and fauna including several critically endangered, endangered, and vulnerable species of plants and animals.

Governance and Management

The site is legally owned by the Government of Bangladesh and governed by the Deputy Commissioner of the district and the Hill District Council, but it is managed by the local community group for decades based on customary rights, by forming an association (Samity) called Dane Dhan Pata Mouza Bon Songrokkhon Samity. This Samity has adopted CHT Governance rules (1900) as a baseline along with several community approved laws and regulations for the management and conservation of the site's ecological integrity. The executive committee of the Samity consists of nine elected community representatives including a President, a General Secretary, a Treasurer and six members.

Biodiversity Values

Flora: This site is densely vegetated with the various plant species of the tropical semi-evergreen hill forest of south-eastern Bangladesh. Garjan (*Dipterocarpus turbinatus*) is the major tree species of this VCF. The other tree species include Dhakijam (*Syzygium firmum*), Jam (*Syzygium cumini*), Shimul (*Bombax ceiba*), Jarul (*Lagerstroemia speciosa*), Pitraj (*Aphanamixis polystachya*), Chapalish (*Artocarpus chama*), Bohera (*Terminalia bellirica*), Arjun (*Terminalia arjuna*), Amloki (*Phyllanthus*



emblica), Jongoler am (*Mangifera sylvatica*), Suruj (*Cerbera odollam*), Lotkon (*Baccaurea motleyana*), Sheora (*Streblus asper*), Moskondo (*Pterospermum acerifolium*), Faishya Udal (*Sterculia villosa*), Uri am (*Bouea oppositifolia*), Duli Garjan (*Dipterocarpus gracilis*), Raktan (*Lophopetalum wightianum*), etc. Many of the old trees harbor several epiphytes such as *Aerides multiflora*, *Dendrobium fimbriatum*, *Pothos scandens*, and *Robiquentia succisa*.

There are at least three types of bamboo in this VCF namely, Muli (*Melocanna baccifera*), Mitinga (*Bambusa tulda*), and Ora (*Dendrocalamus longispathus*). Muli bamboo covers about 10% of the total area of the VCF.

The understorey vegetation of the forest includes many species of shrubs, herbs and vines. The shrubs include Bhat (*Clerodendrum visosum*), Anantakanta (*Dalbergia spinosa*), Ban okra (*Triumfetta rhomboidea*), Lantana (*Lantana camara*), Dadmardon (*Senna alata*), Tit begun (*Solanum torvum*), Bon tejpata (*Melastoma malabathricum*), Gilalata (*Entada rheedii*), Bonmali



(*Morinda augustifolia*), Ban Boroj (*Ziziphus oenoplia*), Jali bet (*Calamus guruba*), Bara bet (*Calamus viminalis*), etc. The major herbs are Jharu phul (*Thysanolaena maxima*), Kola (*Musa ornata*), Bhuinora (*Phylla nodiflora*), Sarpagandha (*Rauwolfia serpentina*), Apang (*Achyranthes aspera*), Bhimraj (*Eclipta alba*), Hatisur (*Heliotropium indicum*), Kachu (*Colocasia esculenta*), Shoti (*Curcuma zadoaria*), Bon Ada (*Zingiber zerumbet*), Kumarilata (*Smilax ocreata*), Mon borboti (*Vigna adenantha*), Painna lata (*Cissus adnata*), Telakhochu (*Coccinia grandis*), Jangali Pan (*Piper hamiltonii*), etc.

Among the above plant species, Suruj, Duli Garjan and Raktan trees and *Dendrobium fimbriatum* orchid are ‘threatened’ and Jaganna gula *Aerides multiflora* orchid is ‘near threatened’ species according to the current ‘Red List’ of Bangladesh (IUCN 2023).

Fauna: The site harbors diverse species of Mammals, Reptiles, Amphibians and Birds including several threatened species namely, Barking Deer (*Muntiacus muntjak*), Capped Langur (*Trachypithecus pileatus*), Rhesus Macaque (*Macaca mulatta*), Leopard cat (*Prionailurus bengalensis*), Indian Pangolin (*Manis crassicaudata*), Elongated Tortoise (*Indotestudo elongata*), Burmese Python (*Python bivittatus*), and Kalij Pheasant (*Lophura leucomelanos*).

The other species of mammals include Wild Boar (*Sus scrofa*), Jungle cat (*Felis chaus*), Indian Crested Porcupine (*Hystrix indica*), Common Palm Civet (*Paradoxurus hermaphroditus*), Small Indian Mongoose (*Herpestes auropunctatus*), Crab-eating Mongoose (*Herpestes urva*), Lesser Bandicoot Rat (*Bandicota bengalensis*), Lesser Bamboo Rat (*Cannomys badius*), Asiatic long-tailed climbing mouse (*Vandeleuria oleracea*), Irrawaddy Squirrel (*Callosciurus pygerythrus*), Indian Flying Fox (*Pteropus giganteus*), Fulvous Fruit Bat (*Rousettus leschenaultii*), Common Pipistrelle (*Pipistrellus pipistrellus*).

he other reptiles (‘least concern’) reptiles include Khasi Hills Long-tailed Lizard (*Takydromus khasiensis*), Forest Crested Lizard (*Calotes emma*), Common Garden Lizard (*Calotes versicolor*), Ayeyarwady Bent-toed Gecko (*Cyrtodactylus ayeyarwadyensis*), Takay Gecko (*Gekko gekko*), Common House Gecko (*Hemidactylus frenatus*), Common Skink (*Eutropis carinata*), Common Mock viper (*Psammodynastes pulverulentus*), Checkered Keelback (*Xenochrophis piscator*), Monocled cobra

(*Naja kaouthia*), Vine Snake (*Ahaetulla nasuta*), Short-nosed vine snake (*Ahaetulla prasina*), Tawny cat snake (*Boiga ochracea*), Ornate Flying snake (*Chrysopelea ornata*), Common Trinket Snake (*Coelognathus helena*), Painted bronzenack (*Dendrelaphis tristis*), Common Wolf Snake (*Lycodon aulicus*), Indian Rat snake (*Ptyas mucosa*), and Green pit viper (*Trimeresurus albolabris*).

The other Birds ('least concern') include Common Hill Myna (*Gracula religiosa*), Rock Pigeon (*Columba livia*), Yellow footed green pigeon (*Treron phoenicopterus*), Greater Coucal (*Centropus bengalensis*), Green-billed Malkoha (*Phaenicophaeus tristis*), Spotted owl (*Athene brama*), Crested serpent eagle (*Spilornis cheela*), Shikra (*Accipiter badius*), Black kite (*Milvus migrans*), Asian green bee-eater (*Merops orientalis*), Chestnut headed Bee-eater (*Merops leschenaulti*), Common Kingfisher (*Alcedo atthis*), Lineated Barbet (*Psilopogon lineatus*), Coppermith Barbet (*Psilopogon haemacephalus*), Black-rumped Flameback (*Dinopium benghalense*), Red-breasted Parakeet (*Psittacula alexandri*), Black Drongo (*Dicrurus macrocercus*), Hair-crested Drongo (*Dicrurus hottentottus*), Rufous Treepie (*Dendrocitta vagabunda*), Indian Roller (*Coracias benghalensis*), Common Green Magpie (*Cissa chinensis*), Red-whiskered Bulbul (*Pycnonotus jocosus*), Red-vented Bulbul (*Pycnonotus cafer*), Lesser Necklaced Laughingthrush (*Garrulax monileger*), Black-backed Forktail (*Enicurus immaculatus*), Golden-fronted Leafbird (*Chloropsis aurifrons*), Scarlet-backed Flowerpecker (*Dicaeum cruentatum*), Purple Sunbird (*Cinnyris asiaticus*), etc. Moreover, the site also harbors Red Junglefowl (*Gallus gallus*) and Kalij Pheasant (*Lophura leucomelanos*), which are labelled as "threatened" in Bangladesh.

The site is important for species aggregation as several wildlife species migrate to this site from the nearest degraded forest areas for food, shelter, and breeding.

Associated Values

Dane Dhan Pata Mouza Bon, being protected for decades, works as a source of various provisioning, supporting and regulating ecosystem services to the local communities. The important provisioning services include supply of bamboo shoots and wild vegetables as food, vines as binding materials, fuel wood, medicinal herbs and water. The supporting and regulating services include nutrient cycling in soil, water purification, carbon sequestration, restoration of soil organic matter and enhanced microbial activity in soil, etc.



Management and conservation initiatives

The primary objective of managing the VCF by its management committee is to ensure sustainable yield of bamboo and other minor forest products for subsistence use by the community members, and to keep the streams flowing round the year to fulfill the community's need for water.

To protect the site and conserve its biodiversity and other ecosystem services, the management committee has prohibited the following activities in the VCF: (a) cutting of trees and bamboo without the permission of the management committee, (b) hunting of wild animals including birds, (c) setting fire, (d) jhum cultivation, (e) harvesting of bamboo shoots, and (f) application of pesticide in the streams inside the VCF. This notification also mentions that anybody violating these regulations would be punished according to traditional rules. Visitors and researchers are also required to take verbal consent of the site authority and a local guide assigned by the latter to enter the site for recreational or research purposes. Violation of these regulations by anyone can result in monetary fine or traditional punishment.

The site is patrolled by the management committee members regularly during the bamboo harvesting season and occasionally during other seasons. The management committee harvests and sells mature bamboo culms usually in three-year rotations and utilizes the sales proceeds for VCF management and community development activities.

Management Effectiveness and Sustainability

The community-based organization has been able to sustainably manage the site for decades, maintaining its natural state with diverse flora and fauna. The site works as a food source and habitat for many birds, mammals, reptiles, and other wildlife. Though previously nearby hilly areas had good forest cover, gradual degradation of those areas and their conversion to horticultural plantations have hampered the natural habitats of many wildlife species. Therefore, this site is now the only hope for conserving the wildlife and native flora of the area. Although once the site used to face considerable disturbances as sometimes local habitants used to illegally infiltrate into it and collect forest resources without permission, now such disturbances have reduced significantly due to strengthening of monitoring by the VCF management committee. The Samity is determined to conserve the Mouza forest in similar manner for indefinite time in the future.

Key Contact

Mr. Jubo Laksman Chakma (Mouza Headman and President, Khagrachari District VCF Network Committee, also President, Dane Dhan Pata Mouza Bon Songrokkhon Samity)

Tel: 01863606330

11. Modhyo Dhan Pata Mouza Bon

Overview

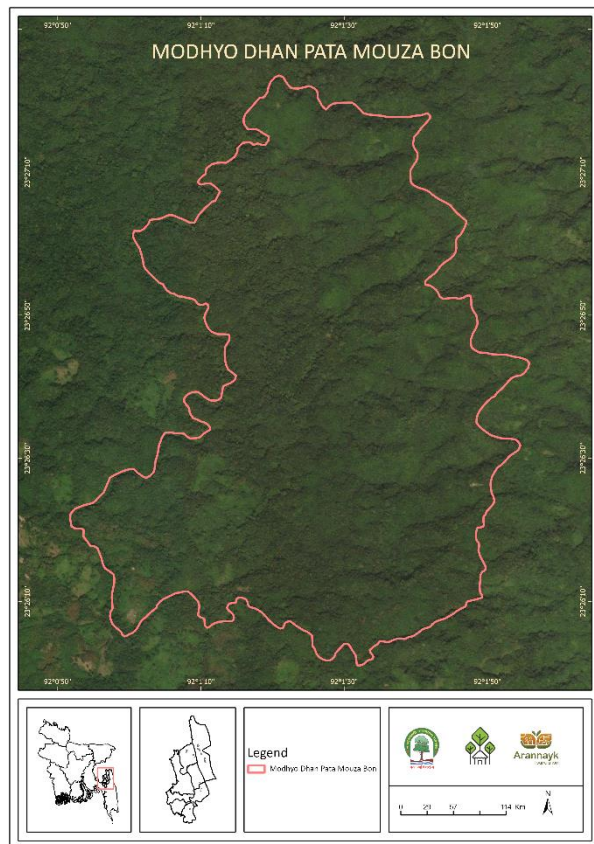
Modhyo Dhan Pata Mouza Bon (VCF) is located at 47 no. Middle Dhon Pata Mouza in 5 no. Babu Chora Union under Dighinala Upazila of Khagrachari district. Its approximate mid-point GPS coordinate is 23.441479°N, 92.023877°E. It has Dhon Pata Chara (canal) on its western side, Pukaba Chara on the northern side and Boundary Chara on the southern side. As per knowledge of the VCF management committee, the total area of the site is around 800 acres (323 ha) as per the map prepared by UNDP (2021) it is actually 658 acres (266.40 ha). The site has a clear boundary demarcated by boundary pillars. The site is representative of tropical hill ecosystem of Bangladesh and holds a remarkable diversity of flora and fauna. The site currently does not have any conservation related national or international designation other than the local recognition as VCF i.e., community conserved area.

Background And Significance

This Mouza Forest was established in 1965 by the then Headman of the mouza. From the very beginning this site was under the management of a committee of the community representatives with the purpose of conserving the forest to ensure water supply in the agricultural lands and sustainable non timber forest products to the local community. During 2018-2019, the SID-CHT (CHT-WCA) project, implemented by UNDP in collaboration with the Hill District Council and a local NGO, assisted the community to strengthen the management of the VCF including mapping and boundary demarcation of its area by reforming and developing management capacity of the management committee of the VCF. The project also provided alternative livelihood development support to the forest dependent households in the VCF community. The site contains natural patches of tropical hill forest along with a network of streams including three main and several small streams. The forest contains remarkable diversity of native flora and fauna including several critically endangered, endangered, and vulnerable species of plants and animals.

Governance and Management

As an unclassed state forest (USF) land, the site is legally owned by the Government of Bangladesh and governed by the Deputy Commissioner of the district and the Hill District Council, but it is managed by the local community based on customary rights, by forming a *samity* (association) named Moddyo Dhon Pata Mouza Bon Songrokkhon Samity. This Conservation Samity has adopted CHT Governance rules (1900) as a baseline along with several community approved laws and regulations for the management and conservation of the site's ecological integrity. The Samity has an executive body consisting of 9 community representatives with a president on the top and 8 other posts below including one general secretary, two treasurers and six general members.



Biodiversity Values

Flora: About 40% area of the VCF is covered by Muli bamboo (*Melocanna baccifera*) and the remaining areas with diverse species of trees, shrubs, herbs and climbers including other species of bamboo, especially Mitinga (*Bambusa tulda*) and Ora (*Dendrocalamus longispathus*).



The major tree species of the VCF are Koroi (*Albizia* spp.), Gamar (*Gmelina arborea*), Garjan (*Dipterocarpus turbinatus*), Chapalish (*Artocarpus chama*), and Kanak (*Schima wallichii*).

The other tree species include Barta (*Artocarpus lacucha*), Chalmugra (*Hydnocarpus wightianus*), Champa (*Michelia champaca*), Pitraj (*Aphanamixis polystachya*), Shimul (*Bombax ceiba*), Bohera (*Terminalia bellirica*), Amloki (*Phyllanthus emblica*), Dhakijam (*Syzygium firmum*), Dharmara (*Stereospermum personatum*), Raktan (*Lophopetalum wightianum*), Hargoja (*Dillenia pentagyna*), Dumur (*Ficus hispida*), Kadam (*Anthocephalus chinensis*), Jam (*Syzygium cumini*), Lotkon (*Baccaurea motleyana*), Bon Boro (*Ziziphus oenoplia*), etc.

The major shrubs, herbs and climbers of this VCF include Bhat (*Clerodendrum visosum*), Jan-Jhani (*Crotalaria pallida*), Anantakanta (*Dalbergia spinosa*), Lantana (*Lantana camara*), Bon tejpata (*Melastoma malabathricum*), Kakra (*Tarenna camoaniflora*), Kola (*Musa ornata*), Apang (*Achyranthes aspera*), Ban nate (*Amaranthus viridis*), Hatisur (*Heliotropium indicum*), Kachu (*Colocasia esculenta*), Ghechu (*Aponogeton echinatus*), Sarpagandha (*Rauvolfia serpentina*), Sun grass (*Imperata cylindrica*), Kash (*Saccharum spontaneum*), Jharu phul (*Thysanolaena maxima*), Kumarilata (*Smilax ocreata*), Chotra pata/Bichuti (*Tragia involucrata*), Makal (*Trichosanthes tricuspidata*), Mon borboti (*Vigna adenantha*), Painna lata (*Cissus adnata*), etc.

Among the above plant species, Barta, and Raktan are ‘threatened’ and Hargoja is ‘near threatened’ species according to the current ‘Red List’ of Bangladesh (IUCN 2023).

Fauna: The site harbors diverse species of Mammals, Reptiles, Amphibians and Birds including several threatened species namely, Barking Deer (*Muntiacus muntjak*), Rhesus Macaque (*Macaca mulatta*), Capped Langur (*Trachypithecus pileatus*), Leopard cat (*Prionailurus bengalensis*), Chinese Pangolin (*Manis pentadactyla*), Kalij Pheasant (*Lophura leucomelanos*), and possibly Wild Dog/Dhole (*Cuon alpinus*) as well.

The other mammals (‘least concern’) include Wild Boar (*Sus scrofa*), Jungle cat, Leopard Cat (*Prionailurus bengalensis*), Indian Crested Porcupine (*Hystrix indica*), Fulvous Fruit Bat (*Rousettus leschenaultii*), and Common Palm Civet (*Paradoxurus hermaphroditus*).

The reptiles (‘least concern’) include Elongated Tortoise (*Indotestudo elongata*) and Burmese Python (*Python bivittatus*), which are in ‘threatened’ state in Bangladesh. The other reptiles include Forest Crested Lizard (*Calotes emma*), Common Garden Lizard (*Calotes versicolor*), Khasi Hills Long-tailed Lizard (*Takydromus khasiensis*), Common Skink (*Eutropis carinata*), Vine Snake (*Ahaetulla nasuta*), Short-nosed vine snake (*Ahaetulla prasina*), Chinese/Indian Rat snake (*Ptyas korros/ P. mucosa*), Common Mock viper (*Psammodynastes pulverulentus*), etc.

The other Birds ('least concern') of the VCF include Red Junglefowl (*Gallus gallus*), Rock Pigeon (*Columba livia*), Hill Myna (*Gracula religiosa*), Red-breasted parakeet (*Psittacula alexandri*), Black Drongo (*Dicrurus macrocercus*), Rufous Treepie (*Dendrocitta vagabunda*), Black-backed Forktail (*Enicurus immaculatus*), Black-hooded Oriole (*Oriolus xanthornus*), Spotted owlet (*Athene brama*), Common Kingfisher (*Alcedo atthis*), Golden-fronted Leafbird (*Chloropsis aurifrons*), Purple Sunbird (*Cinnyris asiaticus*), etc.

The site is important for species aggregation as several wildlife species, especially Barking Deer, Wild boar, and Red Jungle fowl migrate to this site from the nearby degraded forest areas for food and shelter, and they use it as their breeding ground.

Associated Values

Moddho Dhon Pata Mouza Bon, being protected for decades, works as a source of various provisioning, supporting, and regulating ecosystem services to the local communities. The provisioning services include supply of bamboo as housing material, bamboo shoots and wild vegetables as food, vines as binding materials, fuel wood, medicinal herbs, and water. The supporting and regulating services include nutrient cycling in soil, water purification, carbon sequestration, restoration of soil organic matter, etc.



Management and conservation initiatives

The primary objective of managing the Modhyo Dhon Pata Mouza Forest by its management committee is to ensure conservation of the forest for its multiple ecosystem services to the local communities such as sustainable supply of bamboo, wild vegetables and other minor forest products and perennial flow of water in the streams for irrigation and other uses.

To protect the site and conserve its biodiversity and other ecosystem services, the management committee has prohibited the following activities in the VCF: (a) cutting of trees and bamboo without the permission of the management committee, (b) hunting of wild animals including birds, (c) setting fire, (d) jhum cultivation, (e) harvesting of bamboo shoots, and (f) application of pesticide in the steams inside the VCF. This notification also mentions that anybody violating these regulations would be punished according to traditional rules. Visitors and researchers are also required to take verbal consent of the site authority and a local guide assigned by the latter to enter the site for recreational or research purposes. Violation of these regulations by anyone can result in monetary fine or traditional punishment.

To protect the natural resources of the forest from illicit extraction, the management committee organizes patrolling of the forest by its members and other community people once in three months but more frequently during the bamboo harvesting season. The management committee harvests and sells mature bamboo culms usually in three-year rotations and utilizes the sales proceeds for VCF management and community development activities.

Management Effectiveness and Sustainability

The Modhyo Dhan Pata Mouza Bon Songrokkhon Samity has been able to protect and conserve the site for decades, maintaining its natural state with diverse flora and fauna. The site works as a food source and a major habitat for many birds, mammals, reptiles, and other wildlife. Though previously nearby hilly areas had good forest cover, gradual degradation of those areas and their conversion to horticultural

plantations have hampered the natural habitats of many wildlife species. Therefore, this site plays a very important role in conserving the wildlife and native flora of the area. The support of the CHT-WCA project has strengthened the management capacity of the management committee and awareness of the community members in recent years. The Samity is determined to conserve the Mouza forest in similar manner for indefinite time in the future.

Key Contact

Prio Jouti Chakma (General Secretary, Moddyo Dhon Pata Mouza Bon Songrokkhon Samity)

Tel: 01858272432

12. Chatarachara Mouza Bon

Overview

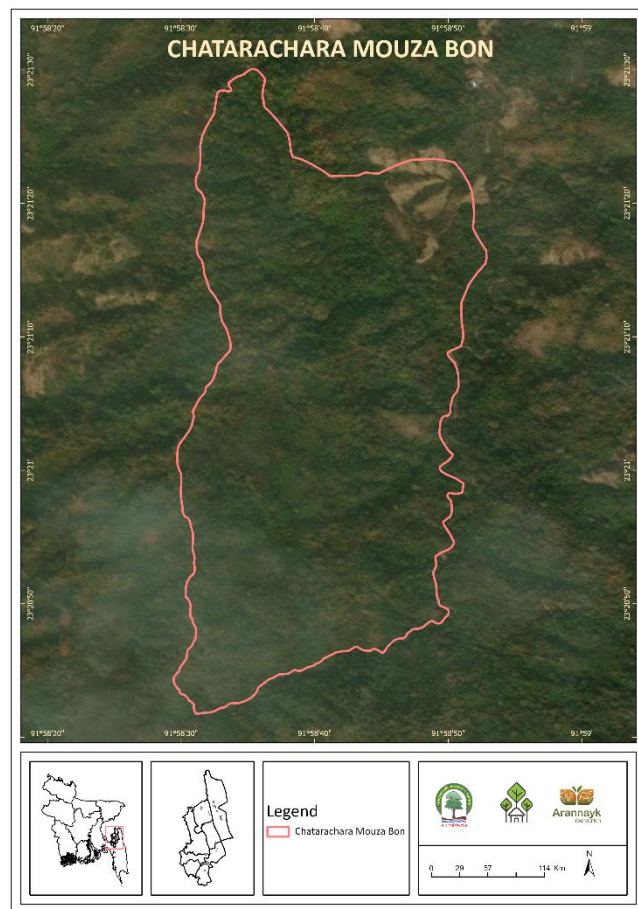
Chatarachara Mouza Bon (VCF) is located at 23.351007°N latitude and 91.977923°E longitude in 34 no. Chatarachara Mouza under Babuchara Union of Dighinala Upazila in Khagrachari district. It is surrounded by Sukna chari on its eastern side, Panchari Upazila boundary on the west, Ulugach chara on the north and Chatarachara mouza boundary on the southern side. The total area of the site is around 200 acres (81 ha). Its boundary is demarcated by boundary pillars. The site is representative of tropical hill ecosystem and holds a remarkable diversity of flora and fauna. The site currently does not have any conservation related national or international designation other than the local recognition as VCF i.e., community conserved area.

Background And Significance

The Chatarachara VCF was established in 1970 by the then mouza Headman. From the very beginning this site was under the management of a committee headed by the Headman, with the purpose of ensuring sustainable access of the local community to non-timber forest products and water. Some 130 families live near the VCF who are dependent on this forest are actively involved in the protection of this forest to maintain its natural state. During 2018-2019, the SID-CHT (CHT-WCA) project, implemented by UNDP in collaboration with the Hill District Council and a local NGO, assisted the community to strengthen the management of the VCF including mapping and boundary demarcation of its area by reforming and developing management capacity of the management committee of the VCF. The project also provided alternative livelihood development support to the forest dependent households in the VCF community. The site holds patches of tropical hill forest along with a network of streams including three main and several small streams. The forest contains remarkable diversity of native flora and fauna including several critically endangered, endangered and vulnerable species of plants and animals.

Governance and Management

The site is legally owned by the Government of Bangladesh and governed by the Deputy Commissioner of the district and the Hill District Council, but it is managed by the local community group for decades based on customary rights, by forming a committee named Chatarachara Gandhikumar Karbari Para VCF Songrokkon Committee. This management committee has adopted CHT Governance rules (1900) as a baseline along with several community approved laws and regulations for the management and conservation of the site. The management committee has a clear hierarchy in its structure. It is composed of 15 community representatives, headed by a President on the top and several other posts below including one General Secretary, one Treasurer and 12 members.



Biodiversity Values

About 40% area of the VCF is covered by Muli bamboo (*Melocanna baccifera*) and the remaining areas with diverse species of trees, shrubs, herbs, and climbers including other species of bamboo, especially Mitinga (*Bambusa tulda*), Ora (*Dendrocalamus longispathus*) and Dolu Bash (*Schizostachyum dullooa*).

The trees of the VCF include at least three threatened species of Bangladesh namely, Duli Garjan (*Dipterocarpus gracilis*), Suruj (*Cerbera odollam*), and Raktan (*Lophopetalum wightianum*). The other tree species include Telia Garjan (*Dipterocarpus turbinatus*), Pitraj (*Aphanamixis polystachya*), Chapalish (*Artocarpus chama*), Jam (*Syzygium cumini*), Shimul (*Bombax ceiba*), Jarul (*Lagerstroemia speciosa*), Bot (*Ficus benghalensis*), Bohera (*Terminalia bellirica*), Arjun (*Terminalia arjuna*), Gutguitta (*Brusera serrata*), Lotkon (*Baccaurea motleyana*), Amloki (*Phyllanthus emblica*), Dhakijam (*Syzygium firmum*), and Teak (*Tectona grandis*).

The shrubs include Bhat (*Clerodendrum visosum*), Anantakanta (*Dalbergia spinosa*), Lantana (*Lantana camara*), Bon tejpata (*Melastoma malabathricum*), Bonmali (*Morinda augustifolia*), Dadmardon (*Senna alata*), Tit begun (*Solanum torvum*), Tagar (*Tabernaemontana divericata*), Kakra (*Tarenna camoaniflora*), Ban okra (*Triumfetta rhomboidea*), Bon Boroi (*Ziziphus oenoplia*), Jangli Boroi (*Ziziphus rugosus*), Jali bet (*Calamus guruba*), Bara bet (*Calamus viminalis*), Gilalata (*Entada rheedii*), etc.

The herbs include Hatisur (*Heliotropium indicum*), Sarpagandha (*Rauvolfia serpentina*), Ban okra (*Triumfetta rhomboidei*), Tit begun (*Solanum torvum*), Ban nate (*Amaranthus viridis*), Ban Kalmi (*Ipomoea maxima*), Kachu (*Colocasia esculenta*), Ghechu (*Aponogeton echinatus*), Bon Ada (*Zingiber zerumbet*), Bon holud (*Curcuma aromatica*), Thankuni (*Centella asiatica*), Gandha bhadali Pata (*Paederia cruddasiana*), Jangali Pan (*Piper hamiltonii*), Bhui amla (*Phyllanthus urinaria*), Tokma (*Hyptis suaveolens*), Jongli ol (*Amorphophallus bulbifer*), Ram kola (*Musa ornata*), etc.

Among the above plant species, Suruj, Duli Garjan and Raktan trees and *Dendrobium fimbriatum* orchid are ‘threatened’ and Jaganna gula *Aerides multiflora* orchid is ‘near threatened’ species according to the current ‘Red List’ of Bangladesh (IUCN 2023).

Fauna: The site harbors diverse species of Mammals, Reptiles, Amphibians and Birds including some of the threatened species of Bangladesh namely, Barking Deer (*Muntiacus muntjak*), Rhesus Macaque (*Macaca mulatta*), Leopard cat (*Prionailurus bengalensis*), Chinese Pangolin (*Manis pentadactyla*), Elongated Tortoise (*Indotestudo elongata*), Burmese Python (*Python bivittatus*), and Kalij Pheasant (*Lophura leucomelanos*). Local community members said that Asian Black Bear (*Ursus thibetanus*) was also there in this VCF until 5 years ago.

The other mammals (‘least concern’) include Jungle cat (*Felis chaus*), Small Indian Mongoose (*Herpestes auropunctatus*), Common Palm Civet (*Paradoxurus hermaphroditus*), Wild Boar (*Sus scrofa*), Crab-eating Mongoose (*Herpestes urva*), Indian Crested Porcupine (*Hystrix indica*), Lesser Bandicoot Rat (*Bandicota bengalensis*), Asiatic long-tailed climbing mouse (*Vandeleuria oleracea*), Irrawaddy Squirrel (*Callosciurus pygerythrus*), Lesser Bamboo Rat (*Cannomys badius*), Indian Flying Fox (*Pteropus giganteus*), Fulvous Fruit Bat (*Rousettus leschenaultii*), Common Pipistrelle (*Pipistrellus pipistrellus*), etc.



The other reptiles ('least concern') include Forest Crested Lizard (*Calotes emma*), Common Garden Lizard (*Calotes versicolor*), Common Skink (*Eutropis carinata*), Takay Gecko (*Gekko gekko*), Khasi Hills Long-tailed Lizard (*Takydromus khasiensis*), Common Wolf Snake (*Lycodon aulicus*), Rat snake (*Ptyas korros/P. mucosa*), Common Mock viper (*Psammodynastes pulverulentus*), Tawny cat snake (*Boiga ochracea*), Ornate Flying snake (*Chrysopelea ornata*), Common Trinket Snake (*Coelognathus helena*), Painted bronzenack (*Dendrelaphis tristis*), checkered Keelback (*Xenochrophis piscator*), etc.

The other birds ('least concern') include Red Junglefowl (*Gallus gallus*), Common Hill Myna (*Gracula religiosa*), Red-breasted Parakeet (*Psittacula alexandri*), Black Drongo (*Dicrurus macrocercus*), Hair-crested Drongo (*Dicrurus hottentottus*), Rufous Treepie (*Dendrocitta vagabunda*), Red-whiskered Bulbul (*Pycnonotus jocosus*), Red-vented Bulbul (*Pycnonotus cafer*), Lesser Necklaced Laughingthrush (*Garrulax monileger*), Black-backed Forktail (*Enicurus immaculatus*), Golden-fronted Leafbird (*Chloropsis aurifrons*), Scarlet-backed Flowerpecker (*Dicaeum cruentatum*), Asian green bee-eater (*Merops orientalis*), Chestnut headed Bee-eater (*Merops leschenaulti*), Indian Roller (*Coracias benghalensis*), Common Kingfisher (*Alcedo atthis*), Lineated Barbet (*Psilopogon lineatus*), Coppermith Barbet (*Psilopogon haemacephalus*), Black-rumped Flameback (*Dinopium benghalense*), Common Green Magpie (*Cissa chinensis*), Purple Sunbird (*Cinnyris asiaticus*), etc.

The site is important for species aggregation as several wildlife species migrate to this site from the nearest degraded forest areas for food, shelter, and breeding.

Associated Values

Chatarachara VCF, being protected for decades, works as a source of various provisioning, supporting and regulating ecosystem services to the local communities. The important provisioning service includes supply of bamboo shoots and wild vegetables as food, vines as binding materials, fuel wood, medicinal herbs, and water. The supporting and regulating services include nutrient cycling in soil, water purification, carbon sequestration, restoration of soil organic matter and enhanced microbial activity in soil, etc.

Management and conservation initiatives

The primary objective of managing the Chadarachhara VCF by its Management Committee is to ensure sustainable yield of bamboo, medicinal herbs and fruits along with continuous water supply to the local communities. The VCF management committee has been active in managing and protecting the site to sustain its natural condition and biodiversity.

To protect the site and conserve its biodiversity and other ecosystem services, the management committee has prohibited the following activities in the VCF: (a) cutting of trees and bamboo without the permission of the management committee, (b) hunting of wild animals including birds, (c) setting fire, (d) jhum cultivation, (e) harvesting of bamboo shoots, and (f) application of pesticide in the steams inside the VCF. This notification also mentions that anybody violating these regulations would be punished according to traditional rules. Visitors and researchers are also required to take verbal consent of the site authority and a local guide assigned by the latter to enter the site for recreational or research purposes. Violation of these regulations by anyone can result in monetary fine or traditional punishment.

The site is patrolled by the management committee members regularly during the bamboo harvesting season and occasionally during other seasons. Mature bamboos are harvested in three-year rotation to ensure sustainability of this resource. Sales proceeds from the bamboos are utilized for VCF management and community development activities.

Management Effectiveness and Sustainability

The community-based organization has been able to sustainably manage the site for decades, maintaining its natural state with diverse flora and fauna. The site works as a food source and habitat

for many birds, mammals, reptiles, and other wildlife. Though previously nearby hilly areas had good forest cover, gradual degradation of those areas and their conversion to horticultural plantations have hampered the natural habitats of many wildlife species. Therefore, this site is now the only hope for conserving the wildlife and native flora of the area. Although once the site used to face considerable disturbances as sometimes local habitants used to illegally infiltrate into it and collect



forest resources without permission, now such disturbances have reduced significantly due to strengthening of monitoring by the VCF management committee. The Samity is determined to conserve the Mouza forest in similar manner for indefinite time in the future.

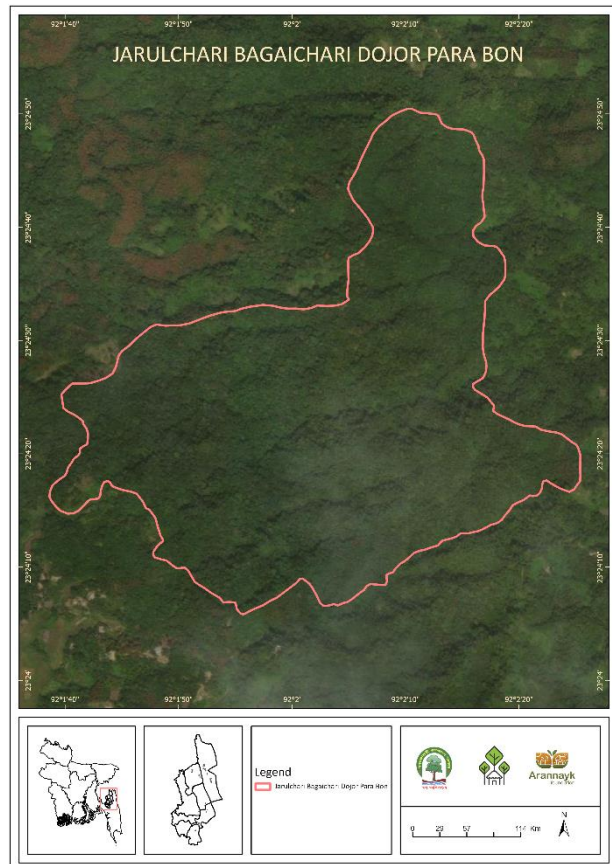
Key Contact

Konika Chakma (Secretary, Chatarachara **Gandhi Kumar Karbari Para VCF Conservation Committee**)
Contact: 01870764800

13. Jarulchari Bagaichari Dojor Para Bon

Overview

Jarulchari Baghaichari Dojor Para Bon (VCF) is located near Notun Chandra Karbari Para village covering part of 49 no. Jarulchori mouza and part of 50 no. Baghaichori mauza in Babuchora Union of Dighinala Upazila in Khagrachari district. Its approximate mid-point GPS coordinate is 23.405903°N, 92.033903°E. It is surrounded by Doluchari Reserved Forest of Forest Department on its eastern side, Jarulchori Para village on the west, Dane Dhonpata Mouza boundary on the north and Robi Chandra Karbari Para village on the southern side. The total area of the site is around 240 acres (97 ha). The site has a clear boundary, demarcated by boundary pillars and border (creek) of adjacent hills. The site is representative of tropical hill ecosystem and holds a remarkable diversity of flora and fauna. The site currently does not have any conservation related national or international designation other than the local recognition as VCF i.e., community conserved area.



Background and Significance

The Jarulchari Baghaichari Dojor Para Bon was established in 1966 by the then Headman of the mouza. From the very beginning this site was under the management of a committee of the community representatives with the purpose of conserving the forest to ensure year-round availability of stream water and of non-timber forest products to the community members. During 2018-2019, the SID-CHT project, implemented by UNDP in collaboration with the Hill District Council and a local NGO, assisted the community to strengthen the management of the VCF including mapping and boundary demarcation of its area by reforming and developing management capacity of the management committee of the VCF. The project also provided alternative livelihood development support to the forest dependent households in the VCF community. The forest contains remarkable diversity of native flora and fauna including several red listed (threatened) species of plants and animals.

Governance and Management

As an unclassified state forest (USF) land, the site is legally owned by the Government of Bangladesh and governed by the Deputy Commissioner of the district and the Hill District Council, but it is managed by the local community group for decades based on customary rights, by forming a committee under the leadership of the Mouza Headman named Jarulchari Baghaichari Dojor Para Bon Songrokkhon Committee. This management committee has adopted CHT Governance rules (1900) as a baseline along with several community approved laws and regulations for the management and conservation of the site's ecological integrity. The management committee is composed of 11 community representatives and is headed by an elected President on the top and several other posts below including one General Secretary, one Treasurer and 8 general members.

Biodiversity Values

Flora: Around 25-30% of the total area of the VCF is covered by Muli bamboo (*Melocanna baccifera*) and the remaining areas with diverse species of trees, shrubs, herbs and climbers.

The trees include several threatened species namely, Duli Garjan (*Dipterocarpus gracilis*), Suruj (*Cerbera odollam*), and Raktan (*Lophopetalum wightianum*). The other species include Pitraj (*Aphanamixis polystachya*), Garjan (*Dipterocarpus turbinatus*), Chapalish (*Artocarpus chama*), Rain Tree (*Samanea saman*), Jam (*Syzygium cumini*), Shimul (*Bombax ceiba*), Jarul (*Lagerstroemia speciosa*), Bot (*Ficus benghalensis*), Bohera (*Terminalia bellirica*), Arjun (*Terminalia arjuna*), Amloki (*Phyllanthus emblica*), Dhakijam (*Syzygium firmum*), Chatim (*Alstonia scholaris*), Suruj (*Cerbera odollam*), Moskondo (*Pterospermum acerifolium*), Lotkon (*Baccaurea motleyana*), etc.

The shrubs include Lantana (*Lantana camara*), Bon tejpata (*Melastoma malabathricum*), Bonmali (*Morinda augustifolia*), Dadmardon (*Senna alata*), Bhat (*Clerodendrum visosum*), Jan-Jhani (*Crotalaria pallida*), Tit begun (*Solanum torvum*), Ban okra (*Triumfetta rhomboidea*), Bon Boro (*Ziziphus oenoplia*), Jangli Boro (*Ziziphus rugosa*), Gila lata (*Entada rheedii*), etc.

The herbs include Jharu phul (*Thysanolaena maxima*), Sun grass (*Imperata cylindrica*), Hatisur (*Heliotropium indicum*), Kola (*Musa ornata*), Shoti (*Curcuma zadoaria*), Bhimraj (*Eclipta alba*), Bhuinora (*Phyla nodiflora*), Sarpagandha (*Rauvolfia serpentina*), Ban nate (*Amaranthus viridis*), Ban Kalmi (*Ipomoea maxima*), Kachu (*Colocasia esculenta*), Ghechu (*Aponogeton echinatus*), Thankuni (*Centella asiatica*), Kustha/kura (*Costus speciosus*), Jongli Ada (*Zingiber capitatum*), Gandha bhadali Pata (*Paederia cruddasiana*), Jongli ol (*Amorphophallus bulbifer*), Jangali Pan (*Piper hamiltonii*), Telakhochu (*Coccinia grandis*), Pipal (*Piper peepuloides*), Kumarilata (*Smilax ocreata*), Painna lata (*Cissus adnata*), etc.

Fauna: The site harbors diverse species of Mammals, Reptiles, Amphibians and Birds including three threatened mammals: Clouded Leopard (*Neofelis nebulosa*) and Barking Deer (*Muntiacus muntjak*), and Rhesus Macaque (*Macaca mulatta*); two threatened reptiles: Burmese Python (*Python bivittatus*) and Elongated Tortoise (*Indotestudo elongata*); and one threatened bird, Kalij Pheasant (*Lophura leucomelanos*).

The other mammals ('least concern') include Wild Boar (*Sus scrofa*), Common Palm Civet (*Paradoxurus hermaphroditus*), Jungle cat (*Felis chaus*), Small Indian Mongoose (*Herpestes auropunctatus*), Indian Crested Porcupine (*Hystrix indica*), Lesser Bandicoot Rat (*Bandicota bengalensis*), Asiatic long-tailed climbing mouse (*Vandeleuria oleracea*), Irrawaddy Squirrel (*Callosciurus pygerythrus*), Lesser Bamboo Rat (*Cannomys badius*), etc.

The other reptiles ('least concern') include Monocled Cobra (*Naja kaouthia*), Indian Rat snake (*Ptyas mucosa*), Checkered Keelback (*Xenochrophis piscator*), Common Mock viper (*Psammodynastes pulverulentus*), Green pit viper (*Trimeresurus albolabris*), Khasi Hills Long-tailed Lizard (*Takydromus khasiensis*), Ornate Flying snake (*Chrysopelea ornata*), and Takay Gecko (*Gekko gekko*). The other reptiles include Ayeyarwady Bent-toed Gecko (*Cyrtodactylus ayeyarwadyensis*), Common House Gecko (*Hemidactylus frenatus*), Forest Crested Lizard (*Calotes emma*), Common Garden Lizard (*Calotes versicolor*), Common Skink (*Eutropis carinata*), Common Trinket Snake (*Coelognathus helena*), Painted bronzenack (*Dendrelaphis tristis*), Common Wolf Snake (*Lycodon aulicus*), Vine Snake (*Ahaetulla nasuta*), Short-nosed vine snake (*Ahaetulla prasina*), Tawny cat snake (*Boiga ohracea*), etc.

The other birds ('least concern') include Red Junglefowl (*Gallus gallus*), Common Hill Myna (*Gracula religiosa*), Red-breasted Parakeet (*Psittacula alexandri*), Rock Pigeon (*Columba livia*), Greater Coucal (*Centropus bengalensis*), Green-billed Malkoha (*Phaenicophaeus tristis*), Spotted owlet (*Athene brama*), Crested serpent eagle (*Spilornis cheela*), Black Drongo (*Dicrurus macrocercus*), Hair-crested

Drongo (*Dicrurus hottentottus*), Rufous Treepie (*Dendrocitta vagabunda*), Common Green Magpie (*Cissa chinensis*), Red-whiskered Bulbul (*Pycnonotus jocosus*), Red-vented Bulbul (*Pycnonotus cafer*), Shikra (*Accipiter badius*), Brahminy Kite (*Haliastur indus*), Black kite (*Milvus migrans*), Asian green bee-eater (*Merops orientalis*), Chestnut headed Bee-eater (*Merops leschenaulti*), Indian Roller (*Coracias benghalensis*), Common Kingfisher (*Alcedo atthis*), Lineated Barbet (*Psilopogon lineatus*), Coppermith Barbet (*Psilopogon haemacephalus*), Black-rumped Flameback (*Dinopium benghalense*), Lesser Necklaced Laughingthrush (*Garrulax monileger*), Black-backed Forktail (*Enicurus immaculatus*), Golden-fronted Leafbird (*Chloropsis aurifrons*), Scarlet-backed Flowerpecker (*Dicaeum cruentatum*), Purple Sunbird (*Cinnyris asiaticus*), etc.

The site plays an important role in species aggregation as several species of wild animals migrate to this site from the nearest degraded forest areas for food, shelter, and breeding.

Associated Values

Jarulchari Baghaichari Dojor Para Bon, which has been protected for decades, works as a source of various provisioning, supporting and regulating ecosystem services to the local communities. The important provisioning services include supply of bamboo as housing material, bamboo shoots and wild vegetables as food, vines as binding materials, fuel wood, medicinal herbs and water. The supporting and regulating services include nutrient cycling in soil, water purification, carbon sequestration, restoration of soil organic matter, etc.



Management and conservation initiatives

The primary objective of managing the Jarulchari Baghaichari VCF management committee and community members is to ensure sustainability of the various ecosystem services of the forest that support subsistence of the local communities such as supply of bamboo, wild vegetables, medicinal herbs and fruits, and persistent flow of water in the streams. The management committee of the site has been active in managing and protecting the site to sustain its natural condition and biodiversity.

To protect the site and conserve its biodiversity and other ecosystem services, the management committee has prohibited the following activities in the VCF: (a) cutting of trees and bamboo without the permission of the management committee, (b) hunting of wild animals including birds, (c) setting fire, (d) jhum cultivation, (e) harvesting of bamboo shoots, and (f) application of pesticide in the streams inside the VCF. This notification also mentions that anybody violating these regulations would be punished according to traditional rules. Visitors and researchers are also required to take verbal consent of the site authority and a local guide assigned by the latter to enter the site for recreational or research purposes. Violation of these regulations by anyone can result in monetary fine or traditional punishment. The site is monitored by the management committee through frequent patrolling. Currently no forest products are harvested from this VCF on a commercial scale.

Management Effectiveness and Sustainability

The management committee(s) of the Jarulchari Baghaichari Dojor Para Bon has been able to sustainably manage the site for decades, maintaining its natural state with diverse flora and fauna. The site works as a food source and a major habitat for many birds, mammals, reptiles, and other wildlife. Though previously nearby hilly areas had good forest cover, gradual degradation of those areas and

their conversion to horticultural plantations have hampered the natural habitats of many wildlife species. Therefore, this site is now the only hope for conserving the wildlife and native flora of the area. Although once the site used to face considerable disturbances as sometimes local habitants used to illegally infiltrate into it and collect forest resources without permission, now such disturbances have reduced significantly due to strengthening of monitoring by the VCF management committee. The Samity is determined to conserve the Mouza forest in similar manner for indefinite time in the future.

Key Contact

Mr. Apon Chakma (President, Jarulchari Baghaichari Dojor Para Bon Songrokkhon Committee)

Tel: 01818220669

14. Nunchari Mouza Bon

Overview

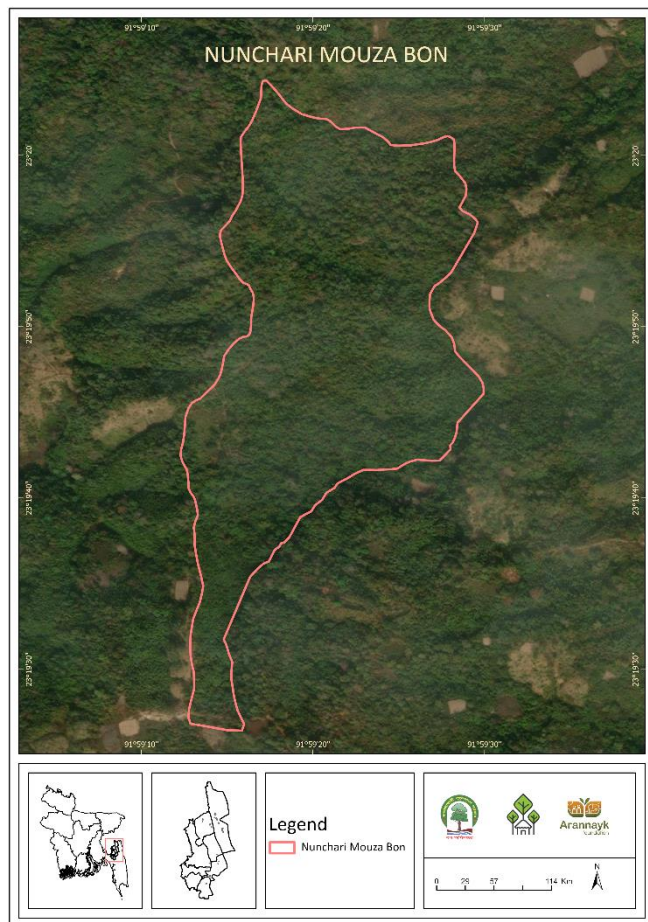
Nunchari Mouza Bon (VCF) is located at 33 no. Nunchari Mouza in 5 no. Babuchara Union under Dighinala Upazila of Khagrachari district. Its approximate midpoint GPS coordinate is 23.33021°N, 91.98908°E. The site has Khon Shing Karbari Para village on its eastern side, Ramcha Loti bon boundary on the western side, agricultural lands on the northern side and Nunchari stream on the southern side. The total area of the site is around 80 acres (32.39 ha). The site has a clear boundary, demarcated by boundary pillars and small hills. The site is representative of tropical hill forest ecosystem of Bangladesh and holds a remarkable diversity of flora and fauna. The site currently does not have any conservation related national or international designation other than the local recognition as VCF i.e., community conserved area.

Background And Significance

The Mouza Bon was established during 1976-77 by the then Headman of the mouza. About 72 families live adjacent to the forest who are directly dependent on the forest resources and are involved in the management of the site. Due to widespread deforestation and degradation of forests around it, the Nunchari Mouza Forest was also under pressure and parts of it got degraded due to illicit extraction of timber and bamboo by the forest dependent people of the surrounding villages. During 2018-2019, the SID-CHT uproject, implemented by UNDP in collaboration with the Hill District Council and a local NGO, assisted the community to strengthen the management of the VCF including mapping and boundary demarcation of its area by reforming and developing management capacity of the management committee of the VCF. The project also provided alternative livelihood development support to the forest dependent households in the VCF community. Currently the local community actively protects and conserves the forest and biodiversity of the site. Despite degradation in some parts of it, the forest contains remarkable diversity of native flora and fauna including several critically endangered, endangered, and vulnerable species of plants and animals.

Governance and Management

As an unclassed state forest (USF) land, the site is legally owned by the Government of Bangladesh and governed by the Deputy Commissioner of the district and the Hill District Council, but it is managed by the local community based on customary rights, by forming a committee named Nunchari Mouza Bon Management Committee. This management committee has adopted CHT Governance rules (1900) as a baseline along with several community approved laws and regulations for the management and conservation of the site's ecological integrity. The management committee is composed of 9 members



with a president on the top and 8 other posts below including one general secretary, one treasurer and six general members.

Biodiversity Values

Flora: Despite degradation in some parts of it, the Nunchari Mouza Forest still contains remarkable diversity of native plant species of the tropical semi-evergreen hill forest of south-eastern Bangladesh. While the site is dominated by shrubby vegetation, still there is a good number of native tree species namely, Pitraj (*Aphanamixis polystachya*), Chapalish (*Artocarpus chama*), Jam (*Syzygium cumini*), Shimul (*Bombax ceiba*), Jarul (*Lagerstroemia speciosa*), Kanak (*Schima wallichii*), Bot (*Ficus benghalensis*), Bohera (*Terminalia bellirica*), Arjun (*Terminalia arjuna*), Amloki (*Phyllanthus emblica*), Dhakijam (*Syzygium firmum*), Gutguitya (*Brusera serrata*), Dumur (*Ficus hispida*), Goda (*Vitex peduncularis*), Jongoler am (*Mangifera sylvatica*), etc.

The major shrubs/small trees are Chikan/Jiban (*Trema orientalis*), Bormala (*Callicarpa arborea*), Banaranga (*Suregada multiflora*), Sadimadi dumur (*Ficus semicordata*), Bhat (*Clerodendrum visosum*), and Bonboroi (*Ziziphus oenoplia*). There are two types of bamboo namely, Muli (*Melocanna baccifera*) and Mitinga bansh (*Bambusa tulda*).

Herbs of culinary use include Ban okra (*Triumfetta rhomboidea*), Tit begun (*Solanum torvum*), Ban nate (*Amaranthus viridis*), Jongoli ol (*Amorphophallus bulbifer*), Jongoler Alu (*Dioscorea villosa*), Yam/Sugri alu (*Dioscorea alata*), Lelang pata (*Premna esculenta*), Kachu (*Colocasia esculenta*), Thankuni (*Centella asiatica*), Dheki shak (*Diplazium esculentum*), Tara (*Alpinia nigra*), Ozon shak (*Spilanthes calva*), Jaganna gula (*Ficus recemosa*), Boro jogonna gula (*Ficus auriculata*), etc.

Fauna: The site still harbors diverse species of Birds, Mammals, Amphibians and Reptiles including several threatened species namely, Rhesus Macaque (*Macaca mulatta*), Capped Langur (*Trachypithecus pileatus*), Elongated Tortoise (*Indotestudo elongata*), Burmese Python (*Python bivittatus*), and Kalij Pheasant (*Lophura leucomelanos*).

The other mammals (least concern) include Wild Boar (*Sus scrofa*), Indian Crested Porcupine (*Hystrix indica*), Irrawaddy Squirrel (*Callosciurus pygerythrus*), Indian Flying Fox (*Pteropus giganteus*), Fulvous Fruit Bat (*Rousettus leschenaultii*), etc.

The other reptiles (least concern) include Indian Rat snake (*Ptyas mucosa*), Common Mock viper (*Psammodynastes pulverulentus*), Green pit viper (*Trimeresurus albolabris*), Checkered Keelback (*Xenochrophis piscator*), Monocled cobra (*Naja kaouthia*), Ornate Flying snake (*Chrysopelea ornata*), Common Trinket Snake (*Coelognathus helena*), Painted bronzenack (*Dendrelaphis tristis*), Common Wolf Snake (*Lycodon aulicus*), Common Garden Lizard (*Calotes versicolor*), Forest Crested Lizard (*Calotes emma*), Khasi Hills Long-tailed Lizard (*Takydromus khasiensis*), Takay Gecko (*Gekko gekko*), Common House Gecko (*Hemidactylus frenatus*), Common Skink (*Eutropis carinata*), etc.

The other birds (least concern) include Red Junglefowl (*Gallus gallus*), Rock Pigeon (*Columba livia*), Yellow footed green pigeon (*Treron phoenicopterus*), Common Hill Myna (*Gracula religiosa*), Greater Coucal (*Centropus bengalensis*), Green-billed Malkoha (*Phaenicophaeus tristis*), Red-whiskered Bulbul (*Pycnonotus jocosus*), Red-vented Bulbul (*Pycnonotus cafer*), Lesser Necklaced Laughingthrush (*Garrulax monileger*), Black-backed Forktail (*Enicurus immaculatus*), Golden-fronted Leafbird (*Chloropsis aurifrons*), Scarlet-backed Flowerpecker (*Dicaeum cruentatum*), Purple Sunbird (*Cinnyris asiaticus*), etc.

The site plays a crucial role in species aggregation as different species of wildlife migrate to this site from the surrounding degraded forest areas for food and shelter.

Associated Values

Nunchari Mouza Forest, which has been protected for decades, works as a source of various provisioning, supporting, and regulating ecosystem services to the local communities. The provisioning services include supply of bamboo as housing material, bamboo shoots and wild vegetables as food, vines as binding materials, fuel wood, medicinal herbs, and water. The supporting and regulating services include nutrient cycling in soil, water purification, carbon sequestration, restoration of soil organic matter, etc.

Management and conservation initiatives

The primary objective of managing the Nunchari Mouza Bon by its management committee and the community is to ensure conservation of the forest for its multiple ecosystem services to the local communities such as sustainable supply of bamboo, wild vegetables and other minor forest products and perennial flow of water in the streams.

To protect the site and conserve its biodiversity and other ecosystem services, the management committee has prohibited the following activities in the VCF: (a) cutting of trees and bamboo without the permission of the management committee, (b) hunting of wild animals including birds, (c) setting fire, (d) jhum cultivation, (e) harvesting of bamboo shoots, and (f) application of pesticide in the steams inside the VCF. This notification also mentions that anybody violating these regulations would be punished according to traditional rules. Visitors and researchers are also required to take verbal consent of the site authority and a local guide assigned by the latter to enter the site for recreational or research purposes. Violation of these regulations by anyone can result in monetary fine or traditional punishment.

The management committee has particularly strengthened the management and protection of the forest from 2018 with the help of the SID-CHT (CHT-WCA) project. The management committee holds its regular meetings twice a year to discuss and plan management and development activities for the mouza forest. The site is patrolled by the members of the management committee along with other community members at least once a quarter but more frequently during the bamboo harvesting seasons. Currently no forest products are harvested from this VCF on a commercial scale.

Management Effectiveness and Sustainability

Owing to the poor economic condition of the forest dependent local communities around the VCF, there has been considerable pressure on this forest as people tend to infiltrate into the forest for jhum cultivation, collection of various minor forest products (bamboo, fuel wood, wild vegetables) and hunting wild animals escaping the eyes of the committee members, which has resulted in degradation of the forest. Since 2018, however, the situation has improved significantly in the recent years, due to the capacity building support provided by the SID-CHT (CHT-WCA) project. The management committee of the forest is now determined to conserve this forest as it is being done now for indefinite time in the future.

Key Contact

Mr. Rintu Tripura (Member, Nunchari Mouza Bon Management Committee)

Contact: 01881358908

15. Pablakhali Mouza Bon

Overview

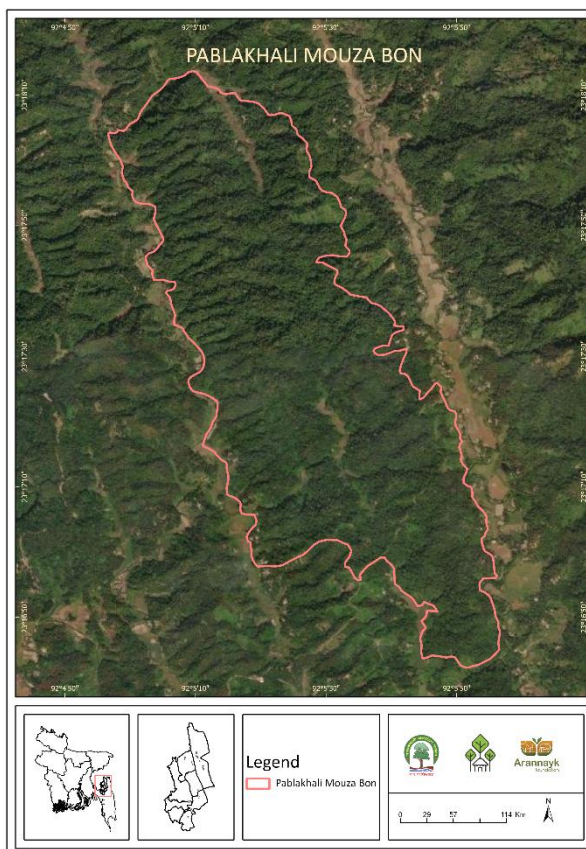
Pablakhali Mouza Bon (VCF) is located at 52 no. Pablakhali Mouza in Kobakhali Union under Dighinala Upazila of Khagrachari district. Its approximate mid-point GPS coordinate is 23.291110°N, 92.090734°E. The site has Kobakhali Chara (stream/canal) on its eastern side, Pablakhali Chara on the west, Bangda Haba Chara on the north and Dojor Para village on the south. According to the perception of the VCF community representatives, the total area of the VCF is 700 acres (283.40 ha) but as per the map prepared by UNDP, it is 531 acres (214.98 ha). The site has a clear boundary demarcated by boundary pillars and natural features, such as base of adjacent hills. The site is representative of tropical hill ecosystem and holds a remarkable diversity of flora and fauna. The site currently does not have any conservation related national or international designation other than the local recognition as VCF i.e., community conserved area.

Background and Significance

The Pablakhali Mouza Bon was established during 1946-47 by the then Headman of the mouza to conserve the forest to ensure sustainable access of the local community to timber, bamboo, fuel wood, wild vegetables and other minor forests for subsistence use along with perennial flow of water the streams and canals for multiple use and ecological benefits. From the very beginning this site was under the management of committee formed by the Headman involving other representatives of the community. During 2018-2019, the SID-CHT (CHT-WCA) project, implemented by UNDP in collaboration with the Hill District Council and a local NGO, assisted the community to strengthen the management of the VCF including mapping and boundary demarcation of its area by reforming and developing management capacity of the management committee. The project also provided alternative livelihood development support to the forest dependent households in the VCF community. Currently the local community actively protects and conserves the forest and biodiversity of the site. The forest contains remarkable diversity of native flora and fauna including several critically endangered, endangered, and vulnerable species of plants and animals.

Governance and Management

As an unclassed state forest (USF) land, the site is legally owned by the Government of Bangladesh and governed by the Deputy Commissioner of the district and the Hill District Council, but it is managed by the local community based on customary rights, by forming a committee named Pablakhali Mouza Forest Management Committee. This management committee has adopted CHT Governance rules (1900) as a baseline along with several community approved laws and regulations for the management and conservation of the site's ecological integrity. The management committee is composed of 17 members with a president on the top and 16 other posts below including one general secretary, one treasurer and 14 general members.



Biodiversity Values

Flora: About 40% of the total area of the VCF is covered by Muli bamboo (*Melocanna baccifera*) and the remaining areas are densely vegetated with diverse species of trees, shrubs, herbs and climbers. The major tree species include Teli Garjan (*Dipterocarpus turbinatus*), Chapalish (*Artocarpus chama*), Dhaki jam (*Syzygium grande*), Bohera (*Terminalia bellirica*) and Pitraj (*Amoora rohituka*). It contains several 'threatened' tree species of Bangladesh (IUCN, 2015) namely, Uri am (*Bouea oppositifolia*),



Barta (*Artocarpus lacucha*), Raktan (*Lophopetalum wightianum*), Chaulmugra/Kurzi (*Hydnocarpus kurzii*), Huria/Lamba kanta batna (*Castanopsis castanicaarpa*); Dholi/Raj batna (*Lithocarpus ploystachya*), Holdu Barela (*Horsfieldia amygdalina*), Sampan (*Scaphium scaphigerum*), and Kusum (*Schleichera oleosa*), two near-threatened species, Buddha narikel (*Pterygota alata*) and Civit (*Swintonia floribunda*), and one data deficient species, Kata Garjan (*Dipterocarpus tuberculatus*).

The other tree species include Kanak (*Schima wallichii*), Goda (*Vitex peduncularis*), Jarul (*Lagerstroemia speciosa*), Dumur (*Ficus hispida*), Haldu (*Haldina cordifolia*), Jam (*Syzygium cumini*), Banderhola (*Duabanga grandiflora*), Sil Batna (*Castanopsis indica*), Shimul (*Bombax ceiba*), Gamar (*Gmelina arborea*), Chatim (*Alstonia scholaris*), Gutgutyta (*Protium serratum*), Horitoki (*Terminalia chebula*), Udal (*Sterculia villosa*), Modon mosta (*Actinodaphne angustifolia*), Asar (*Grewia nervosa*), Jongoler am (*Mangifera sylvatica*), etc.

The major understory shrubs and small trees include Amloki (*Phyllanthus emblica*), Bormala (*Callicarpa arborea*), Dadbari (*Dalbergia stipulacea*), Ban-naranga (*Suregada multiflora*), Choto kamini (*Murraya koenigii*), Sadimadi dumur (*Ficus semicordata*), Bonboroi (*Ziziphus oenoplia*), Bhat (*Clerodendrum visosum*), Dadmardon (*Senna alata*), etc. There are also perennial woody climbers like Gila lata and Harinhara (*Bridelia stipularis*), Jangali Pan (*Piper hamiltonii*), Pipal (*Piper peepuloides*), Kumarilata (*Smilax ocreata*), etc. Aside from Muli bamboo, the site also contains other species of bamboo namely, Mitinga (*Bambusa tulda*), Ora (*Bambusa vulgaris*) and Kanta bansh (*B. bambos*).

Fauna: The site harbors diverse species of Birds, Mammals, Amphibians and Reptiles including several threatened species namely, Clouded Leopard (*Neofelis nebulosa*), Rhesus Macaque (*Macaca mulatta*), Pig-tailed Macaque (*Macaca leonia*), Barking Deer (*Muntiacus muntjak*), Elongated Tortoise (*Indotestudo elongata*), Burmese Python (*Python bivittatus*), and Kalij Pheasant (*Lophura leucomelanos*).

The other mammals (least concern) include Wild Boar (*Sus scrofa*), Common Palm Civet (*Paradoxurus hermaphroditus*), (*Felis chaus*), Small Indian Mongoose (*Herpestes auropunctatus*), Indian Crested Porcupine (*Hystrix indica*), Irrawaddy Squirrel (*Callosciurus pygerythrus*), etc.

The other reptiles (least concern) include Monocled cobra (*Naja kaouthia*), Indian Rat snake (*Ptyas mucosa*), Common Mock viper (*Psammodynastes pulverulentus*), Green pit viper (*Trimeresurus albolabris*), Checkered Keelback (*Xenochrophis piscator*), Common Wolf Snake (*Lycodon aulicus*), Common Garden Lizard (*Calotes versicolor*), Forest Crested Lizard (*Calotes emma*), etc.

The other (least concern) birds include Red Junglefowl (*Gallus gallus*), Hill Myna (*Gracula religiosa*), Rock Pigeon (*Columba livia*), Yellow footed green pigeon (*Treron phoenicopterus*), Greater Coucal (*Centropus bengalensis*), Green-billed Malkoha (*Phaenicophaeus tristis*), Spotted owl (*Athene brama*), Crested serpent eagle (*Spilornis cheela*), Black kite (*Milvus migrans*), Asian green bee-eater (*Merops orientalis*), Chestnut headed Bee-eater (*Merops leschenaulti*), Indian Roller (*Coracias benghalensis*), Common Kingfisher (*Alcedo atthis*), etc.



The site also plays a crucial role in species aggregation as different species of wildlife migrate to this site from the surrounding degraded forest areas for food and shelter, and also use it for their breeding ground.

Associated Values

Pablakhali Mouza Forest being protected for decades which has been protected for decades, works as a source of various provisioning, supporting and regulating ecosystem services to the local communities. The provisioning services include supply of bamboo as housing material, bamboo shoots and wild vegetables as food, vines as binding materials, fuel wood, medicinal herbs, and water. The supporting and regulating services include nutrient cycling in soil, water purification, carbon sequestration, restoration of soil organic matter, etc. The site also holds spiritual and cultural values to the locals and visitors as the site has historic past and extraordinary scenic beauty.

Management and conservation initiatives

The primary objective of managing the Pablakhali Mouza Forest by its management committee is to ensure conservation of the forest for its multiple ecosystem services to the local communities such as sustainable supply of bamboo, wild vegetables and other minor forest products and perennial flow of water in the streams for irrigation and other uses.

To protect the site and conserve its biodiversity and other ecosystem services, the management committee has prohibited the following activities in the VCF: (a) cutting of trees and bamboo without the permission of the management committee, (b) hunting of wild animals including birds, (c) setting fire, (d) jhum cultivation, (e) harvesting of bamboo shoots, and (f) application of pesticide in the streams inside the VCF. This notification also mentions that anybody violating these regulations would be punished according to traditional rules. Visitors and researchers are also required to take verbal consent of the site authority and a local guide assigned by the latter to enter the site for recreational or research purposes. Violation of these regulations by anyone can result in monetary fine or traditional punishment.

With the capacity building support provided by the CHT-WCA project, the management committee of the VCF has strengthened protection and management of the forest since 2018. The management committee organizes patrolling of the forest by its members and other community people once in three months but more frequently during the bamboo harvesting seasons. Mature bamboos are harvested in three-year rotation to ensure sustainability of this resource. Sales proceeds from the bamboos are utilized for VCF management and community development activities.

Management Effectiveness and Sustainability

The management committee of the Pablakhali Mouza Forest has been able to sustainably manage the site for decades, maintaining its natural state with diverse flora and fauna. Although once the site used

to face considerable disturbances as sometimes local habitants used to illegally infiltrate into it for jhum cultivation, collection of various minor forest products (bamboo, fuel wood, wild vegetables) and hunting of wild animals, now such disturbances have reduced significantly due to strengthening of monitoring by the VCF management committee, thanks to the capacity building support provided by the CHT-WCA project. The site works as a food source and a habitat not only for its resident animals but also for those of the degraded forest lands around it, where the habitat quality has significantly deteriorated due to unsustainable use and deforestation. Therefore, this site is now the only hope for conserving the wildlife and native flora of the area. The management committee is determined to conserve the Mouza forest in similar manner for indefinite time in the future.

Key Contact

Mr. Trideb Kanti Dewan (Secretary, Pablakhali Mouza Bon management Committee)

Contact: 01553245822

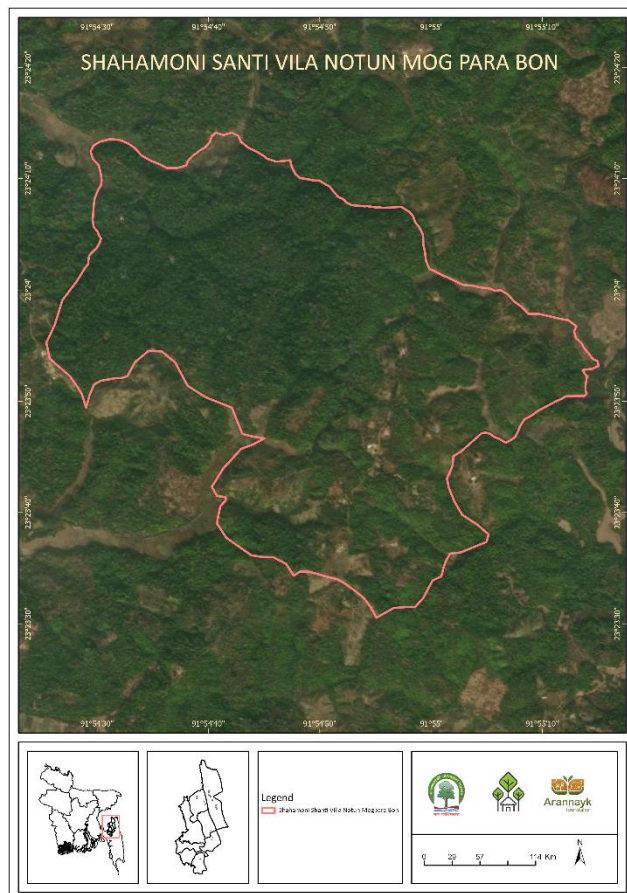
16. Shahamoni Santi Vila Notun Mog Para Bon

Overview

Shaha Moni Shanti Villa Notun Mog Para Bon (VCF) is located at 243 no. Chengi Mouza under 2 no. Chengi Union in Panchari Upazila of Khagrachari district. Its approximate mid-point GPS coordinate is 23.398366°N, 91.913960°E. It has Khisha Moni Boiddo Para village on its east, Omorendra Karbari Para on the north, Machuli Para on the west and Taraban Bhabona Kendra and Lambo Para on the south. The total area of the site, as per community perception, is 130 acres (52.61 ha) but the mapping exercise found it to be 239 acres (96.76 ha). The site has a clear boundary, marked by boundary pillars. It is representative of tropical hill forest ecosystem of Bangladesh and holds a remarkable diversity of flora and fauna. The site currently does not have any conservation related national or international designation other than the local recognition as VCF i.e., community conserved area.

Background And Significance

Shaha Moni Shanti Villa Notun Mog Para VCF was established during 2001-02 by the then Mouza Headman Babu Shantimoy Chakma to conserve the forest to ensure water supply to agricultural land and sustainable use of non-timber forest products for the community. Around 700 households live in nine hamlets (Para) in and around the VCF. From the beginning this site was under the management of committee formed by the Headman involving other representatives of the community. During 2018-19, the USAID-funded Chittagong Hill Tracts Watershed Co-Management Activity (CHT-WCA), under the Strengthening Inclusive Development in Chittagong Hill Tracts (SID-CHT) project, implemented by UNDP in collaboration with the Hill District Council and a local NGO, assisted the community to strengthen the management of the VCF including mapping and boundary demarcation of its area by reforming and developing management capacity of the management committee. The project also provided alternative livelihood development support to the forest dependent households in the VCF community. Currently a formal committee comprised of the traditional leaders and general members of the community protects and conserves the biodiversity of the site and maintains its natural state. The site includes a natural patch of tropical hill forest along with a network of streams consisting of three main and several small streams. The forest contains remarkable diversity of native flora and fauna including several critically endangered, endangered, and vulnerable species of plants and animals.



Governance and Management

As an unclassed state forest (USF) land, the site is legally owned by the Government of Bangladesh and governed by the Deputy Commissioner of the district and the Hill District Council, but it is managed by the local community based on customary rights, by forming a committee named Shaha Moni Shanti Villa Mog Para VCF management Committee. This management committee has adopted CHT Governance rules (1900) as a baseline along with several community approved laws and regulations for the management and conservation of the site's ecological integrity. The management committee includes an executive body consisting of 9 community representatives and an advisory body consisting of 5 elite community representatives. The executive body has a president on the top and several other posts below including one general secretary, one treasurer, and 6 general members.

Biodiversity Values

Flora: About 20% of the total area of the VCF is covered by Muli bamboo (*Melocanna baccifera*) and the remaining area is densely vegetated with numerous species of trees, shrubs and herbs including climbers and epiphytes.

UNDP (2021) conducted a biodiversity survey in this VCF during 2020-21 which recorded a total of 89 plant species belonging to 73 genera under 37 families of which 27 were herbs, 14 shrubs, 34 trees, 12 climbers and 2 epiphytes. The plant species with abundant availability were Chapalish (*Artocarpus chama*), Haritaki (*Terminalia chebula*), Bohera (*Terminalia bellirica*), Jam (*Syzgium cumini*), Dhenki Sakh (*Ampelopteris proliferata*), Tara Sak (*Alpinia nigra*), Kochu Sakh (*Colocasia esculenta*), Ek Dhaikkya Kochu, Tita Kochu and jongoler Amra (*Spondias pinnata*). The herbaceous plants form parts of diet of local community. Plants with moderate availability in the VCF were: Cau Gulo (*Garcinia cowa*), Amilik Bichi (*Aporosa dioica*), Amloki (*Phyllanthus emblica*), Gutgutya (*Protium serratum*), Sorbaik (*Ficus auriculata*), and Jongoler Am (*Mangifera sylvatica*), most of which are ecologically important for maintaining ecosystem health. Plants with decreasing availability in the VCF were: Harha Ghula, Kusum Gulo (*Schleichera oleosa*), Nolum, Jongoler Alu (*Dioscorea villosa*), Jongoila Saleh and Betaghi. Three bamboo species namely kanta bansh (*Bambusa bambos*), mitinga bansh (*Bambusa tulda*) and pharua bansh (*Bambusa polymorpha*) were abundantly available in this VCF. A shrub called 'Dikranga Chuillya' by Chakma and Tripur people and 'Rongma' by Marmas (*Ixora nigricans*) was designated as the indicator species of the VCF.

Among the above species, Kusum Gulo (*Schleichera oleosa*) is a vulnerable (VU) and Sorbaik (*Ficus auriculata*) is a near threatened (NT) plant of Bangladesh (IUCN 2023). The VCF representatives reported that there has been no loss of any plant species since the UNDP survey.

Fauna: The UNDP study (2021) recorded a total of 126 species of wild animals were observed in Shamoni Shati Bhila Mag Para VCF. Among them 9 were amphibians, 26 reptiles (12 lizards, 8 snakes, 6 turtles and tortoises), 54 birds and 37 mammals. In addition, 56 insect species were identified. Red Jungle fowl was considered as the indicator animal in the VCF. Streams in this VCF were found to be dry and no crustaceans, mollusks or fish were observed. Among the insects, giant water bug, Urchunga, larvae of wasps and bees are consumed as food by the locals.

In the present study, the local key informants reported that the VCF harbors many different wild animals, some of which are under 'threatened' categories as per the Bangladesh Red List of wild animals (IUCN, 2015). The threatened animals include the 'critically endangered' Chinese Pangolin (*Manis pentadactyla*); the 'endangered' Barking Deer (*Muntiacus muntjak*); the 'vulnerable' Rhesus macaque (*Macaca radiata*) and Burmese Python (*Python bivittatus*); and the 'near threatened' Leopard cat (*Prionailurus bengalensis*).

The other mammals (less concern) include Wild Boar (*Sus scrofa*), Jungle cat (*Felis chaus*), Small Indian Mongoose (*Herpestes auropunctatus*), Common Palm Civet (*Paradoxurus hermaphroditus*), Fulvous Fruit Bat (*Rousettus leschenaultii*), Common Pipistrelle (*Pipistrellus pipistrellus*), etc.

The other reptiles (less concern) include Indian Rat snake (*Ptyas mucosa*), Monocled cobra (*Naja kaouthia*), checkered Keelback (*Xenochrophis piscator*), Common Mock viper (*Psammodynastes pulverulentus*), Green pit viper (*Trimeresurus albolabris*), Takay Gecko (*Gekko gecko*), Khasi Hills Long-tailed Lizard (*Takydromus khasiensis*), etc.

The common birds of the VCF include Red Junglefowl, Common Hill Myna (*Gracula religiosa*), Red-breasted Parakeet (*Psittacula alexandri*), Red-whiskered Bulbul (*Pycnonotus jocosus*), Red-vented Bulbul (*Pycnonotus cafer*), Lesser Necklaced Laughingthrush (*Garrulax monileger*), Black-backed Forktail (*Enicurus immaculatus*), Golden-fronted Leafbird (*Chloropsis aurifrons*), etc.

The site is important for species aggregation as several wildlife species migrate to this site from the nearby degraded forest areas for food and shelter. Both ground-dwelling animals and birds also move between this VCF and the nearby forest of the Taraban Bhabona Kendra. The UNDP (2021) study found Lineated Barbet, Common Green Magpie and Red Junglefowl to breed in this VCF in the upper, middle and undergrowth areas of the forest during March-June, April-May and January-October, respectively.

Associated Values

Shaha Moni Shanti Villa Mog Para VCF, being protected for decades works as a source of various provisioning, supporting and regulating ecosystem services to the local communities. The provisioning services include supply of bamboo as housing material, bamboo shoots and wild vegetables as food, vines as binding materials, fuel wood, medicinal herbs, and water. The supporting and regulating services include nutrient cycling in soil, water purification, carbon sequestration, restoration of soil organic matter, etc.



Management and conservation initiatives

The primary objective of managing the Shaha Moni Shanti Villa Mog Para VCF by its management committee is to ensure conservation of the forest for its multiple ecosystem services to the local community such as sustainable supply of bamboo, wild vegetables and other minor forest products and perennial flow of water in the streams for irrigation and other uses.

To protect the site and conserve its biodiversity and other ecosystem services, the management committee has prohibited the following activities in the VCF: (a) cutting of trees and bamboo without the permission of the management committee, (b) hunting of wild animals including birds, (c) setting fire, (d) jhum cultivation, (e) harvesting of bamboo shoots, and (f) application of pesticide in the streams inside the VCF. This notification also mentions that anybody violating these regulations would be punished according to traditional rules. Visitors and researchers are also required to take verbal consent of the site authority and a local guide assigned by the latter to enter the site for recreational or research purposes. Violation of these regulations by anyone can result in monetary fine or traditional punishment.

With the capacity building support provided by the CHT-WCA project, the management committee of the mouza forest has strengthened protection and management of the forest since 2018. The management committee members closely monitor the forest through frequent patrolling to protect the natural resources of the forest from illicit extraction. Currently no forest products are harvested from this VCF on a commercial scale.

Management Effectiveness and Sustainability

The management committee of the Shaha Moni Shanti Villa Mog Para VCF has been able to sustainably manage the site for two decades, maintaining its natural state with diverse flora and fauna. The site works as a food source and a habitat not only for its resident animals but also for those of the degraded forest lands around it, where the habitat quality has significantly deteriorated due to unsustainable use and deforestation. The main canal in VCF that preserves water round the year acts as a source of drinking water for wildlife. Therefore, this site is crucial for conserving the wildlife and native flora of the area. The management committee is determined to conserve the VCF in the same way it is being done now for indefinite time in the future.

Key Contact

Mr. Shanti Moy Chakma (President, Shaha Moni Shanti Villa Mog Para VCF Management Committee)

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17. Nirbogazo Chara Village Common Forest

Overview

Nirbogazo Chara Village Common Forest (VCF), also called ‘Nirbogazo Chara Reserve’ by the local community, is located at 89 no. Laxmichari Mouza in Laxmichari Upazila of Khagrachari district at 22.824083° North latitude and 91.943656° East longitude. The total area of the site is around 200 acres (81 ha). The site is surrounded by the Nirbogazo Chara village (settlement area) on the east, canals on both west and northern sides and degraded hills on the south. The site has a clear boundary delineated by boundary pillars and stream pathways. The site is representative of tropical hill ecosystem and holds a significant biodiversity of flora and fauna. The site currently does not have any conservation related national or international designation other than the local recognition as VCF i.e., community conserved area.

Background and Significance

The conservation of the site as a VCF was initiated by the local community under the leadership of the mouza Headman and the Karbari (village head) in 1947 to ensure continuous supply of water in their agricultural land and sustainable use of non-timber forest products by the community. During 2018-2019, a USAID-funded project titled Chittagong Hill Tracts Watershed Co-Management Activity (CHT-WCA), implemented by UNDP involving the Hill District Council and a local NGO, assisted the community to strengthen the management of the VCF including mapping and boundary demarcation of its area by reforming and developing management capacity of the management committee of the VCF. The project also provided alternative livelihood development support to the forest dependent households in the VCF community. The site includes numerous small hills with natural forest cover along with a stream pathway network consisting of several small streams. Along with its rich floral biodiversity typical of the tropical hill forests of southeastern Bangladesh, the site is also rich in faunal diversity including many birds, ground dwelling mammals and reptiles.

Governance and Management

The site is legally owned by the Government of Bangladesh and governed by the Deputy Commissioner of the district and the Hill District Council, but it is managed by the local community group based on customary rules by establishing a committee named Nirbogazo Chara VCF Management Committee. This management committee has adopted CHT Governance rules (1900) as a baseline along with

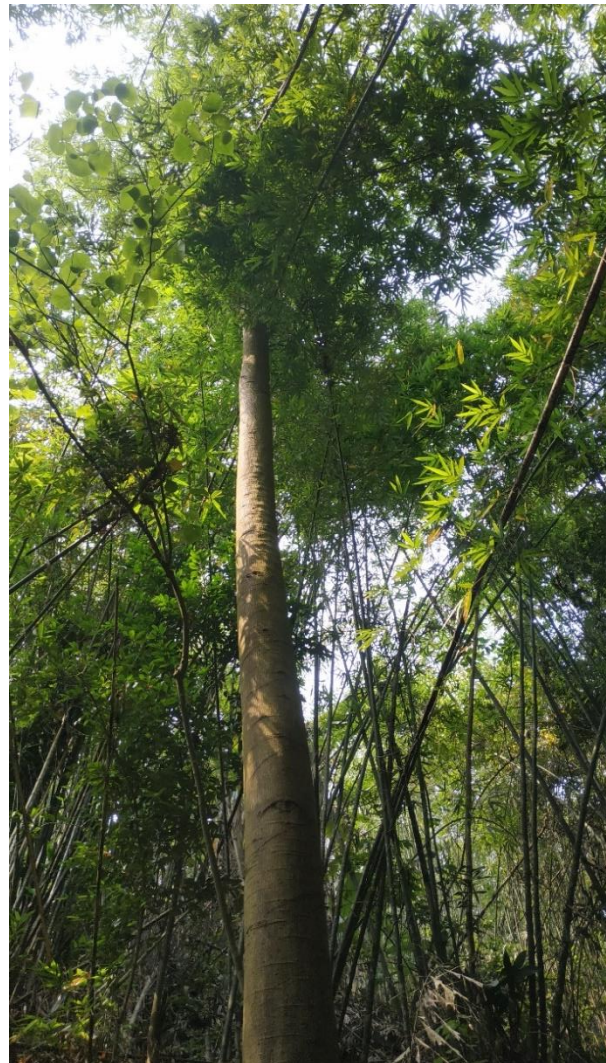


several community approved rules and regulations for the management and conservation of the site's ecological integrity. The management committee consists of a general body formed by all the general members (one representative from each household) and a 11-member executive body consisting of a President on the top and several other posts below including one General Secretary, one Treasurer and eight general members. The management committee is reformed through election after every three years.

Biodiversity Values

Flora: Almost half of the total area of the VCF is covered by Muli bamboo (*Melocanna baccifera*) and the remaining areas with diverse species of trees, shrubs, herbs and climbers. It includes several threatened species of Bangladesh namely, Uri am (*Bouea oppositifolia*), Boilam (*Anisoptera scaphul*), and one near-threatened species, Civit (*Swintonia floribunda*).

The major tree species of the VCF are Chakua koroi (*Albizia chinensis*), Pitraj (*Aphanamixis polystachya*), Garjan (*Dipterocarpus turbinatus*), and Chapalish (*Artocarpus chama*). Other tree species include Jam (*Syzygium cumini*), Dhakijam (*Syzygium firmum*), Jongoler am (*Mangifera sylvatica*), Shimul (*Bombax ceiba*), Jarul (*Lagerstroemia speciosa*), Bot (*Ficus benghalensis*), Bohera (*Terminalia bellirica*), Arjun (*Terminalia arjuna*), Amloki (*Phyllanthus emblica*), Suruj (*Cerbera odollam*), and Gutguitya (*Brusera serrata*).



Fauna: The site also harbors many species of mammals, reptiles, amphibians and birds including two threatened species of mammals: Barking deer (*Muntiacus muntjac*) and Rhesus Monkey (*Rhesus Macaque*). The other wild animals of the VCF (more common and 'least concern') include Wild Boar (*Sus scrofa*), Asian Palm Civet (*Paradoxurus hermaphroditus*), and Himalayan porcupine (*Hystrix brachyura*) among mammals; Bengal Monitor (*Varanus bengalensis*), Rat snake (*Coluber mucosus*), and some other reptiles; and Red Junglefowl (*Gallus gallus*), Oriental magpie (*Copsychus saularis*), Common Mayna (*Acridotheres tristis*), Black drongo (*Dicrurus macrocercus*), Jungle crow (*Corvus levaillantii*), Black Hooded Oriole (*Oriolus xanthornus*), Spotted dove (*Spilopelia chinensis*), Buff striped keelback (*Amphiesma stolatum*), and some other birds.

The site is also important for species aggregation as several species of wildlife, especially deer and jungle fowl migrate to this site from the nearest degraded forest areas for food, shelter, and breeding.

Associated Values

Nirbogazo Chara VCF provides various provisioning, supporting and regulating ecosystem services to the local community. The important provisioning service includes supply of bamboo shoots and wild vegetables as food, vines as binding materials, fuel wood, medicinal herbs and water. The supporting and regulating services include nutrient cycling in soil, water purification, carbon sequestration, restoration of soil organic matter and enhanced microbial activity in soil, etc.

Management and conservation initiatives

The primary objective of managing the Nirbogazo Chara VCF by its Management Committee is to ensure sustainable yield of bamboo, medicinal herbs and wild fruits along with continuous water supply for the agricultural land.

To protect the site and conserve its biodiversity and other ecosystem services, the management committee has prohibited the following activities in the VCF: (a) cutting of trees and bamboo without the permission of the management committee, (b) hunting of wild animals including birds, (c) setting fire, (d) jhum cultivation, (e) harvesting of bamboo shoots, and (f) application of pesticide in the steams inside the VCF. This notification also mentions that anybody violating these regulations would be punished according to traditional rules. Visitors and researchers are also required to take verbal consent of the site authority and a local guide assigned by the latter to enter the site for recreational or research purposes. Violation of these regulations by anyone can result in monetary fine or traditional punishment. The management committee members closely monitor the forest through frequent patrolling to protect the natural resources of the forest from illicit extraction. The committee harvests mature bamboos in three-year intervals and utilizes the sales proceeds for the management of the VCF and other community development activities.

Management Effectiveness and Sustainability

Current management of the site that has sustained for decades has been able to conserve the ecosystem along with its diverse flora and fauna. The site works as a habitat and food source for many birds, mammals, reptiles, and other wildlife species. Though previously nearby hilly areas had good forest cover, gradual deforestation and degradation of those forests and their conversion into horticulture have shrunken the natural habitats of wildlife in the area. This VCF is now the only hope for conserving the affected and endangered wildlife in the area. Although, before streamlining the management of the VCF with the help of the SID-CHT (CHT-WCA) project, the site used to face considerable disturbances as sometimes local habitants used to illegally infiltrate into it and collect forest resources without permission, now such disturbances have reduced significantly.

Key Contact

Gyanolal Talukder (Secretary, Nirbogazo Chara VCF Management Committee)

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18. Maishchari Mouza Bon

Overview

Maishchari Mouza Bon (VCF) is located near Sati Para village at Maishchari Mouza in Mohalchari Union of Mohalchari Upazila in Khagrachari district. Its approximate mid-point GPS coordinate is 23.004948°N, 91.978419°E. The total area of the site is around 100 acres (40.46 ha). The site has a clear boundary demarcated partly by boundary pillars and partly by natural features such as the bottom line of the adjacent hills. The site is representative of tropical hill forest ecosystem and holds a significant diversity of native flora and fauna. The site currently does not have any conservation related national or international designation.

Background And Significance

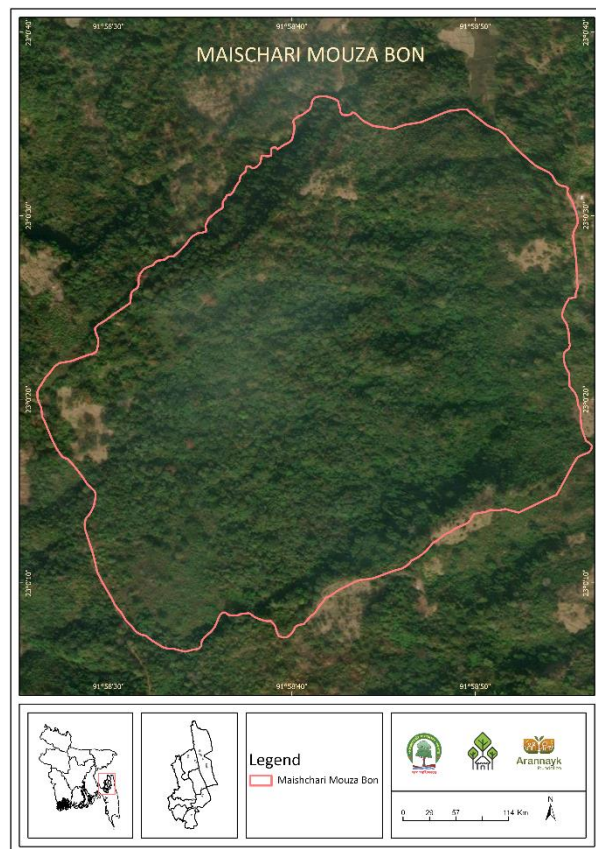
The management of this Mouza Forest (VCF) was first initiated during 2004-05 by the Headman of the mouza by forming a committee involving other representatives of the community. The purpose has been to ensure conserve the natural forest for its ecosystem services to the local communities such as sustainable supply of timber, fuel wood, bamboo,

wild vegetables and other minor forest products and stream water. Later, during 2018-2019, the USAID-funded Chittagong Hill Tracts Watershed Co-Management Activity (CHT-WCA) project, implemented by UNDP in collaboration with the Hill District Council and a local NGO, assisted the community to strengthen the management of the VCF including mapping and boundary demarcation of its area by reforming and developing management capacity of the management committee of the VCF. The project also provided alternative livelihood development support to the forest dependent households in the VCF community. Currently the local community is actively protecting the forest to maintain its natural state.

The site holds patches of natural forests along with a network of streams including three main and several small streams. The forest contains remarkable diversity of native flora and fauna including several critically endangered, endangered, and vulnerable species of plants and animals.

Governance and Management

As an unclassified state forest (USF) land, the site is legally owned by the Government of Bangladesh and governed by the Deputy Commissioner of the district and the Hill District Council, but it is managed by the local community based on customary rights, by forming a committee named Maishchari Mouza Forest Management Committee. This management committee has adopted CHT Governance rules (1900) as a baseline along with several community approved laws and regulations for the management and conservation of the site's ecological integrity. The management committee is composed of 13 members with a president on the top and 12 other posts below including two vice-presidents, one general secretary, two thematic secretaries, two treasurers and five general members.



Biodiversity Values

Flora: Except some peripheral degradation, most areas of the VCF is densely vegetated with various plant species of the tropical semi-evergreen hill forest of south-eastern Bangladesh including several threatened and rare species.

A UNDP (2021) study recorded a total of 96 plant species belonging to 78 genera under 78 families from the Maischari VCF of which, 41 were herbs, 21 shrubs, 21 trees, and 13 climbers. *Glochidion lanceolarium*, an endangered/rare tree with the local names Kechchua, Bhauri, Kakra, and Tsekaban (Marma), was designated as the indicator plant of the VCF. The plant species with abundant availability in this VCF were: Amloki (*Phyllanthus emblica*), Jam (*Syzigium cumini*), Bohera (*Terminalia bellirica*), Dheki shak (*Ampelopteris proliferata*), Tita



Shak, Minmini Shak/Thankuni (*Centella asiatica*), Amili Shak and Jongoler Alu (*Dioscorea alata*, *D. villosa*). Plants with moderate availability were: Bandor Marfa, Gutgutya (*Protium serratum*), Shimul (*Bombax ceiba*), Jongli Tara (*Alpinia nigra*), and Kochu (*Colocasia esculenta*). Plants with decreasing availability were: Kusum (*Schleichera oleosa*), Haritaki (*Terminalia chebula*), Jongli Boro (*Ziziphus rugosa*/*Z. oenoplia*), Jongli Am (*Mangifera sylvatica*), Fakgula, Moiccha Amili (possibly *Hibiscus subdarifa*), Chiun Shak, Katthol Dinghi and Lelong Pata (*Premna esculenta*), most of which are culinary plants used by the local community. Four bamboo species namely Muli bansh (*Melocanna baccifera*), Kanta bansh (*Bambusa bambos*), Mitinga bansh (*Bambusa tulda*) and Borak bansh (*B. balcooa*) were abundantly available in the VCF.

In the present survey, about 30% of the total area of the VCF was found to be covered by Muli bamboo (*Melocanna baccifera*). Beside this, the major trees and shrubs were: Koro (*Albizia proera*), Shimul (*Bombax ceiba*), Garjan (*Dipterocarpus turbinatus*), Kanak (*Schima wallichii*), Chapalish (*Artocarpus chama*), Borta (*Artocarpus lacucha*), Bohera (*Terminalia bellirica*), Dharmara (*Steriospermum chelonoides*), Civit (*Swintonia floribunda*), Champa (*Michelia champaca*), Dumur (*Ficus recemosa*, *F. hispida*), Bon Boro (*Ziziphus oenoplia*), Tagar (*Tabernaemontana divericata*), Bhat (*Clerodendrum visosum*), Bon tejpatha (*Melastoma malabathricum*), Dadmardon (*Senna alata*), Ban okra (*Triumfetta rhomboidea*), and Jangli Boro (*Ziziphus rugosa*), Amila (*Hibiscus subdarifa*).

Fauna: The UNDP (2021) survey recorded a total of 108 species of wild animals in Maischari VCF including 2 species of crustaceans, 2 mollusks, 6 fish, 6 amphibians, 12 reptiles (9 lizards, 3 turtles and tortoises), 37 birds and 43 mammals. In addition, 61 insect species were also identified. *Elongated Tortoise* was identified as the indicator animal species of the VCF. In the survey, 2 crustaceans (Thengua Icha, and Shadu Panir Kakra), 2 mollusks (Poba Shamuk and Leja Shamuk), 6 fish species (Darkina, Chela Punt, Jaya, Bailla, Taki, and Balichata) were directly observed in the streams. Among the insects, Urchunga, larvae of wasps and bees are consumed as food by the locals.

According to the information provided by the key informants of the present study, this VCF harbors many different species of wild animals, some of which are under ‘threatened’ categories as per the Bangladesh Red List of wild animals (IUCN, 2015). The threatened animals include the ‘critically endangered’ Asiatic Black Bear (*Ursus thibetanus*) and the ‘endangered’ Barking Deer (*Muntiacus muntjak*).

The other wild animals ('least concern') of the VCF mentioned by the respondents are Wild Boar (*Sus scrofa*), Indian Crested Porcupine (*Hystrix indica*), Forest Crested Lizard (*Calotes emma*), Common Garden Lizard (*Calotes versicolor*), Kakra (*Leocarcinus vemalis*), Icha mach (*Macrobrachium rosenberghii*), Red Junglefowl (*Gallus gallus*), Red-breasted Parakeet (*Psittacula alexandri*), and Common Hill Myna (*Gracula religiosa*) among many others.

Based on the site conditions and regional availability, the VCF is likely to harbour Jungle cat, Asian palm civet, Irawaddy squirrel, Indian flying fox, and Fulvous Fruit bat among mammals; Vine Snake, Indian Rat snake, Common Mock viper, green pit viper, Monocled cobra, and checkered Keelback; lizards like Elongated Khasi Hills Long-tailed Lizard, Common Skink, Bent-toed gecko, and Tokay gecko among lizards; and Lesser coucal, Green-billed Malcoha, Spotted owlet, Crested serpent eagle, Shikra, Black-rumped flameback, Black Drongo, Rufous Treepie, Red-whiskered bulbul, Red-vented bulbul, Lesser necklaced laughingthrush, Black-backed forktail, Scarlet-backed Flowerpecker, and Purple Sunbird among birds. The site is also likely to harbor other mammals such as Jungle cat, Asian palm civet, Irawaddy squirrel, Indian flying fox, and Fulvous Fruit bat among birds.

The site is important for species aggregation as several wildlife species migrate to this site from the nearby degraded forest areas for food, shelter and breeding purposes. The UNDP (2021) study found Yellow-footed Green Pigeon, Common Hill Myna and Red Junglefowl to breed in this VCF in the upper, middle and undergrowth areas of the forest during March-June, April-July and January-October, respectively.

Associated Values

Maishchari Mouza Bon, being protected for decades, works as a source of various provisioning, supporting and regulating ecosystem services to the local communities. The provisioning services include supply of bamboo as housing material, bamboo shoots and wild vegetables as food, vines as binding materials, fuel wood, medicinal herbs, and water. The supporting and regulating services include nutrient cycling in soil, water purification, carbon sequestration, restoration of soil organic matter, etc.

Management and conservation initiatives

The primary objective of managing the Maishchari Mouza Forest by its management committee and the community is to ensure conservation of the forest for its multiple ecosystem services to the local communities such as sustainable supply of bamboo, wild vegetables and other minor forest products and perennial flow of water in the streams. In 2008, a plantation program was undertaken in the degraded areas of this forest to increase the vegetation cover. Later, during 2018-2019, the UNDP implemented SID-CHT project (CHT-WCA component) provided capacity building support to the management committee of the VCF and helped in demarcating the boundary of the site with pillars. Currently the management committee is active in protecting the forest to conserve its biodiversity and other ecosystem services. Management Committee meetings are held twice a year to discuss necessary activities for the VCF. The site is patrolled by management committee members along with other community members at least once in three months but more frequently during the bamboo harvesting season. Extraction and collection of forest resources such as timber, fuel wood, and bamboo without the consent of the management committee, hunting of wild animals and jhum cultivation inside the VCF are strictly prohibited. Violation of these regulations by anyone can result in monetary fines or traditional punishment. Visitors and researchers are also required to get verbal consent of the site authority and to take a local guide assigned by the latter to enter the site for recreational or research purposes. The management committee harvests mature bamboos in three-year intervals and distributes that among the community members as per their needs and sell the remaining volume to traders and distribute the sales proceeds among the community members other community development activities.

Management Effectiveness and Sustainability

Owing to the poor economic condition of the forest dependent local communities there has been considerable pressure on this forest as people tend to infiltrate into the forest for jhum cultivation, collection of various minor forest products (bamboo, fuel wood, wild vegetables) and hunt wild animals escaping the eyes of the committee members. Nonetheless, the current management system of the site has been sustained for decades and has been able to maintain the natural condition and biodiversity in most parts of the mouza forest and the situation has improved significantly in the recent years, thanks to the support provided by the CHT-WCA project. The management committee of the forest is now determined to conserve this forest as it is being done now for indefinite time in the future.

Key Contact

Mr. Chitto Kumar Karbari (President, Maishchari Mouza Forest Management Committee)

Tel: 01559715431

19. Ultachari Bihar Para Bon

Overview

Ultachari Bihar Para Bon, also known as Ultachari Shadon Chandra Karbari Para Bon, as well as Ultachari Village Common Forest (VCF) is located beside Ultachari Bihar Para village at 249 no. Keyangghat mouza in 3 no. Kayangghat Union under Mohalchari Upazila of Khagrachari district. The approximate mid-point GPS coordinate of the site is 23.022309°N, 92.055403°E. The total area of the site is around 200 acres (80.93 ha). The site has a clear boundary demarcated by boundary pillars and stream pathways. The site is representative of tropical hill ecosystem and currently holds a rich variety of flora and fauna. The site currently does not have any conservation related national or international designation other than the local recognition as VCF i.e., community conserved area.

Background And Significance

Ultachari Sadhon Chandra Karbari Para VCF was established in 1965 by the then Headman of the mouza to conserve the forest to ensure water supply to agricultural land and sustainable use of non-timber forest products for the community. From the beginning this site was under the management of committee formed by the Headman involving other representatives of the community. Later, from 2018, the USAID-funded Chittagong Hill Tracts Watershed Co-Management Activity (CHT-WCA) project, implemented by UNDP in collaboration with the Hill District Council and a local NGO, assisted the community to strengthen the management of the VCF including mapping and boundary demarcation of its area by reforming and developing management capacity of the management committee. The project also provided alternative livelihood development support to the forest dependent households in the VCF community. Now a formal committee comprised of the traditional leaders and general members of the community protects and conserves the biodiversity of the site and maintains its natural state. Several families live adjacent to the VCF who are dependent on this forest and are also actively involved in the protection and management of this forest.

The site includes patches of tropical hill forest along with a network of streams consisting of two medium sized streams. The forest contains remarkable diversity of native flora and fauna including several red listed species of flora and fauna.

The site includes patches of tropical hill forest along with a network of streams consisting of two medium sized streams. The forest contains remarkable diversity of native flora and fauna including several red listed species of flora and fauna.

Governance and Management

As an unclassified state forest (USF) land, the site is legally owned by the Government of Bangladesh and governed by the Deputy Commissioner of the district and the Hill District Council, but it is managed by the local community based on customary rights, by forming a committee named Ultachari VCF Management Committee. This management committee has adopted CHT Governance rules (1900) as a baseline along with several community approved laws and regulations for the management and



conservation of the site's ecological integrity. The management committee has a 13-member executive body and a general body consisting of all the community members. The executive body consists of a president on the top and several other posts below including one general secretary, one treasurer and 10 general members.

Biodiversity Values

Flora: This site is densely vegetated with the various plant species of the tropical semi-evergreen hill forest ecosystem of south-eastern Bangladesh including the threatened tree species, Uri am (*Boua oppositifolia*) and the near-threatened Civit (*Swintonia floribunda*).



The other important tree species of the VCF include Pitraj (*Aphanamixis polystachya*), Garjan (*Dipterocarpus turbinatus*), Chapalish (*Artocarpus chama*), Jam (*Syzygium cumini*), Shimul (*Bombax ceiba*), Jarul

(*Lagerstroemia speciosa*), Goda (*Vitex peduncularis*), Bot (*Ficus benghalensis*), Bohera (*Terminalia bellirica*), Arjun (*Terminalia arjuna*), Amloki (*Phyllanthus emblica*), Dhakijam (*Syzygium firmum*), Suruj (*Cerbera odollam*), Gutgutya (*Brusera serrata*), Jiban (*Trema orientalis*) and Lotkon (*Baccaurea motleyana*). There are numerous species of shrubs and herbs under the trees and gaps in the forests such as Bhat (*Clerodendrum visosum*), Ban okra (*Triumfetta rhomboidea*), Bon Boroi (*Ziziphus oenoplia*), Mon borboti (*Vigna adenantha*), Kumarilata (*Smilax ocreata*), Painna lata (*Cissus adnata*), Sarpagandha (*Rauwolfia serpentina*), Kochu (*Colocasia esculenta*), etc. Bamboo (*Melocanna baccifera*, *Bambusa tulda*) occupies about one-tenth of the total area of the VCF.

Fauna: The site harbors diverse species of Birds, Mammals, Amphibians and Reptiles including three critically endangered species: Spectacles langur (*Trachypithecus phayrei*), Chinese Pangolin (*Manis pentadactyla*), and Elongated Tortoise (*Indotestudo elongata*); the 'endangered' mammal Barking Deer (*Muntiacus muntjak*); and the 'vulnerable' Rhesus Macaque (*Macaca mulatta*) and Burmese Python (*Python bivittatus*). The site also harbors Wild Boar (*Sus scrofa*), Indian Crested Porcupine (*Hystrix indica*), and Red Junglefowl (*Gallus gallus*).

Based on the site conditions and regional availability, the VCF is likely to harbour many other species of wild animals namely, Common Palm Civet, Irrawaddy Squirrel, Small Indian Mongoose, and Crab-eating Mongoose among mammals; Forest Crested Lizard Common Garden Lizard, Takay Gecko, Khasi Hills Long-tailed Lizard, Common Skink, Vine Snake, Indian Rat snake, Common Mock viper, Green pit viper, checkered Keelback, and monocled cobra among reptiles; and many species of birds such as Rock Pigeon, Common Hill Myna, Greater Coucal, Green-billed Malkoha, Red-vented Bulbul, Lesser Necklaced Laughingthrush, Black-backed Forktail, Golden-fronted Leafbird, Scarlet-backed Flowerpecker, Purple Sunbird, etc.

The site also plays a crucial role in species aggregation as different species of wildlife migrate to this site from the surrounding degraded forest areas for food, shelter, and breeding purposes.

Associated Values

Ultachari VCF, being protected for decades, works as a source of various provisioning, supporting, and regulating ecosystem services to the local communities. The provisioning services include supply of

bamboo as housing material, bamboo shoots and wild vegetables as food, vines as binding materials, fuel wood, medicinal herbs, and water. The supporting and regulating services include nutrient cycling in soil, water purification, carbon sequestration, restoration of soil organic matter, etc. The site also holds spiritual value to the locals and visitors as the site has historic past and extraordinary scenic beauty.

Management and conservation initiatives

The primary objective of managing the Ultachari VCF by its management committee is to ensure conservation of the forest for its multiple ecosystem services to the local communities such as sustainable supply of bamboo, wild vegetables and other minor forest products and perennial flow of water in the streams for irrigation and other uses. To protect the natural resources of the forest from illicit extraction, the management committee organizes patrolling of the forest by its members and other community people at least once in three months but more frequently during the bamboo harvesting season. Trespassing and/or extraction or collection of forest resources without the consent of the management committee are strictly prohibited. Violation of this regulation can result in monetary fine or traditional punishment. Visitors or researchers also have to take verbal consent of the site authority and a local guide assigned by the latter to enter the site for recreational or research purposes. The management committee members closely monitor the forest through frequent patrolling to protect the natural resources of the forest from illicit extraction. Currently no forest products are harvested from this VCF on a commercial scale.

Management Effectiveness and Sustainability

The community leaders and the management committees have been able to sustainably manage the VCF for decades, maintaining its natural state with diverse flora and fauna. The site works as a food source and a habitat not only for its resident animals but also for those of the degraded forest lands around it, where the habitat quality has significantly deteriorated due to unsustainable use and deforestation. Therefore, this site is crucial for conserving the wildlife and native flora of the area. Due to conservation of the forest, the streams inside of the VCF hold water round the year and acts as a water source for wildlife. The management committee is determined to conserve the VCF in the same way it is being done now for indefinite time in the future.

Key Contact

Mr. Ripon Chakma (General Secretary, Ultachari VCF Management Committee)

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20. Korrollyachari Sarnath Bonobihar Para Bon

Overview

Korrollyachari Sarnath Bonobihar Para Bon (VCF) is located near Sarnath Boan Bihar at 249 no. Kayang Ghat Mouza in 3 no. Kayang Ghat Union under Mohalchari Upazila of Khagrachari district. Its mid-point GPS coordinate is 23.002808°N, 92.047517°E (approx.) and is surrounded by village roads on its east, west and southern sides and the Headman Para village on the north. The total area of the site is 60 acres (24.28 ha) including 23.06 ha (approx.) natural forest and 1.21 ha horticultural (mango and sweet orange) plantation. The site has a clear boundary demarcated by boundary pillars and stream pathways. The site is representative of tropical hill forest ecosystem and holds significant diversity of flora and fauna. The site currently does not have any conservation related national or international designation.

Background And Significance

Korrollyachari Sarnath Bonobihar Para Bon was established in 1967 by the then Headman of the mouza. From the very beginning this site was under the management of committee of the community to ensure continuous supply of stream water and sustainable non timber forest products to the community. Around 20 families live adjacent to the VCF who are dependent on this forest and are actively involved in the management of this forest. During 2018-2019, the SID-CHT (CHT-WCA) project, implemented by UNDP in collaboration with the Hill District Council and a local NGO, assisted the community to strengthen the management of the VCF including mapping and boundary demarcation of its area by reforming and developing management capacity of the management committee of the VCF. The project also provided alternative livelihood development support to the forest dependent households in the VCF community.

Out of the 24.28 ha total area, there is a horticultural (mango and sweet orange) plantation on 1.21 ha area. The remaining 23.06 ha area contains natural forest in very good condition. There are several small streams inside the forest area. The natural forest portion of the VCF is rich in floral and faunal biodiversity and holds several red listed (threatened) species of plants and animals of the hill forest ecosystem of Bangladesh.



Governance and Management

As an unclassed state forest (USF) land, the site is legally owned by the Government of Bangladesh and governed by the Deputy Commissioner of the district and the Hill District Council, but it is managed by the local community based on customary rights, by forming a committee named Korollyachari Sarnath Bonobihar Para Ban Management Committee. This management committee has adopted CHT Governance rules (1900) as a baseline along with several community approved laws and regulations for the management and conservation of the site's ecological integrity. The management committee is composed of 17 members with a chairman on the top and several other posts below including one general secretary, one treasurer and 14 general members.

Biodiversity Values

Flora: Except some peripheral degradation, this site is densely vegetated with numerous plant species of the tropical semi-evergreen hill forests of south-eastern Bangladesh.

Muli bamboo (*Melocanna baccifera*) occupies about 30% of the total area of the VCF. The major tree species of the VCF include: Pitraj (*Aphanamixis polystachya*), Garjan (*Dipterocarpus turbinatus*), Chapalish (*Artocarpus chama*), Jam (*Syzygium cumini*), Moskondo (*Pterospermum acerifolium*), Faissa Udal (*Sterculia villosa*), Shimul (*Bombax ceiba*), Jarul (*Lagerstroemia speciosa*), Bohera (*Terminalia bellirica*), Amloki (*Phyllanthus emblica*), Dhaki jam (*Syzygium firmum*), Gurtutya (*Brusera serrata*), Lotkon (*Baccaurea motleyana*), Chatim (*Alstonia scholaris*), etc.

The site also contains several threatened species namely, Uri am (*Bouea oppositifolia*), Raktan (*Lophopetalum wightianum*), and the near-threatened species, Civit (*Swintonia floribunda*).

The understorey vegetation of the VCF includes diverse species of shrubs, herbs, climbers and epiphytes. The major shrubs are Lantana (*Lantana camara*), Bon tejpatha (*Melastoma malabathricum*), Ban okra (*Triumfetta rhomboidei*), Bon Boroi (*Ziziphus oenoplia*) and Jangli Boroi (*Ziziphus rugosa*). The herbs include Kola (*Musa ornata*), Kash (*Saccharum spontaneum*), Jahru phul (*Thysanolaena maxima*), and Assam Lata (*Chromolaena odorata*). The climbers include Jali bet (*Calamus guruba*), Bara bet (*Calamus viminalis*), Jangli Pan (*Piper hamiltonii*), Pipal (*Piper peepuloides*), Kumari lata (*Smilax ocreata*), Mon borboti (*Vigna adenantha*), Painna lata (*Cissus adnata*), Gila lata (*Entada rheedii*), etc.

Fauna: The site harbors diverse species of Birds, Mammals, Amphibians and Reptiles including several 'threatened' species namely, Capped Langur (*Trachypithecus pileatus*), Rhesus Macaque (*Macaca mulatta*), Burmese Python (*Python bivittatus*) and Kalij Pheasant (*Lophura leucomelanos*).

The other wildlife species of the VCF include Jungle cat (*Felis chaus*), Indian Crested Porcupine (*Hystrix indica*), Lesser Irrawaddy Squirrel (*Callosciurus pygerythrus*), Indian Flying Fox (*Pteropus giganteus*), and Fulvous Fruit Bat (*Rousettus leschenaultii*) among mammals; Ayeyarwady Bent-toed Gecko (*Cyrtodactylus ayeyarwadyensis*), Takay Gecko (*Gekko gekko*), Khasi Hills Long-tailed Lizard (*Takydromus khasiensis*), Common Skink (*Eutropis carinata*), Painted bronzenack snake (*Dendrelaphis tristis*), Indian Rat snake (*Ptyas mucosa*), Common Mock viper (*Psammodynastes pulverulentus*), checkered Keelback (*Xenochrophis piscator*), Monocled Cobra (*Naja kaouthia*), and Green pit viper (*Trimeresurus albolabris*) among reptiles; and many species of birds including Red Junglefowl (*Gallus gallus*), Rock Pigeon (*Columba livia*), Greater Coucal (*Centropus bengalensis*), Green-billed Malkoha (*Phaenicophaeus tristis*), Spotted owlet (*Athene brama*), Crested serpent eagle (*Spilornis cheela*), Common Hill Myna (*Gracula religiosa*), Black-backed Forktail (*Enicurus immaculatus*), Scarlet-backed Flowerpecker (*Dicaeum cruentatum*), and Purple Sunbird (*Cinnyris asiaticus*).

The site is important for species aggregation as several wildlife species migrate to this site from the nearby degraded forest areas for food and shelter, and also serves as their molting and breeding ground.

Associated Values

Korollyachari Sarnath Bonobihar Para Ban, being protected for decades, works as a source of various provisioning, supporting and regulating ecosystem services to the local communities. The provisioning services include supply of bamboo as housing material, bamboo shoots and wild vegetables as food, vines as binding materials, fuel wood, medicinal herbs, and water. The supporting and regulating services include nutrient cycling in soil, water purification, carbon sequestration, restoration of soil organic matter, etc.

Management and conservation initiatives

The primary objective of managing the Korollyachari Sarnath Bonobihar Para Ban by its management committee is to ensure sustainable yield of bamboo and medicinal herbs and fruits along with continuous water supply for the agricultural land. The VCF Management Committee provides protection to the forest to conserve all the existing species of flora and fauna by patrolling the forest frequently. Trespassing and/or extraction or collection of forest resources without the consent of the management committee are strictly prohibited. Violation of this regulation by anyone can result in monetary fine or traditional punishment. Visitors or researchers also have to take verbal consent of the site authority and a local guide assigned by the latter to enter the site for recreational or research purposes. The management committee members closely monitor the forest through frequent patrolling to protect the natural resources of the forest from illicit extraction. Currently no forest products are harvested from this VCF on a commercial scale.

Management Effectiveness and Sustainability

Current management system of the site has been sustaining for decades and has managed the site to maintain its natural state, although horticultural plantation has been done in a small part of it, adjacent to the settlement area, which once got degraded. Since 2018, the management of the VCF has been strengthened through the support of the CHT-WCA project and the community is now more committed to conserving the natural forest. Though previously nearby hilly areas had good forest cover, gradual degradation of those areas and their conversion to horticultural plantations have hampered the natural habitats of many wildlife species. Therefore, this site is now the only hope for conserving the wildlife and native flora of the area. The management committee of the VCF is determined to conserve this forest as it is being done now for indefinite time in the future.

Key Contact

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