

An Assessment on Non-Timber Plant Resources (NTP) of Goalpara District, Assam

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Abstract

Goalpara district is rich in terms of natural plant resources. These resources are distributed in a wide range of habitats of these forests form a dominant part of the district with 51 reserve forests (RF) and 54 proposed reserve forests (PRF). This work is based on extensive survey on these habitats. Much attention was drawn on non-timber plants (NTP). The forest floras are disturbed due to increase in population that resulted destruction of a number of species of economic importance. So various steps should be taken to conserve the rich plant resources of the district.

Key words : RF, PRF, Survey, Habitats, NTP.

Forest form a dominant part of the district of Goalpara. It is having 51 reserve forests with an area of 24,255 hectare and 54 proposed reserved forests with an area of 12,827 hectare. These forests provide a large number of commercial goods which include mainly timber and non-timber forest products (NTP). These are most important natural resources in the earth because they not only provide innumerable needs also support ecosystem of the planet earth. As scientists have estimated at least 30% of the terrestrial area on this planet should remain covered with forest to maintain healthy environment. We are still far behind this target as we are having only 19.27% of forest cover (Saha and Chakraborty 2000).

Study Area

Goalpara district with an area of 1,958 sq km lies between 25°33'—26°12' N latitude and 90°7' E—91°5' E longitude and it is located in the extreme south western part of Assam. Topographically the district exhibits a remarkable diversity as the Garo Hills of Maghalaya form its southern boundary and the greater part of the district constitutes the Brahmaputra plains, which is flowing in the northern side, in the eastern side it is the district of Kamrup and in the west it is Dhubri district along with which Bangladesh border is attached.

Methods

Extensive survey was carried out during 1998—

2003 in almost all parts of the district covering different habitats, forest types. As far as possible field works were carried out in different seasons. During the survey, plant specimens were collected and herbarium materials were prepared following standard herbarium technique (Jain and Rao 1977). In the field apart from transient characters of plants notes on abundance, habitat, associated other plants were recorded (Choudhury 2005, Chauhan 2000, Bentham and Hooker 1862-1863, Kanjilal et al. 1932—1940). The collected specimens were made into herbarium specimens. Preliminary identification were made with the help of literature and subsequently confirmed in Kanjilal herbarium (BSI, Shillong). It is generally seen that in a poor district like Goalpara people are closely associated with forests. Some households in tribal dominated area were surveyed to elucidate the local uses of various forest plants.

Results and Discussion

Collected number of specimens was found to be more than 700. These forest plants provide a large number of commercial goods which include timber, fire wood, pulp wood, food items, resins, non-edible oils, rubber, bamboo, canes, medicines and many more items.

A good number of plants that is about 120 species are used as medicinal plants. The prominent ones are *Andrographis paniculata* (Kalmegh), *Adhatoda*

vasica (Bahaka), *Centella asiatica* (Manimuni), *Houhuynia cordata* (Mosondori), *Costus speciosus* (Jomlakhuti), *Holarrhena antidysentrica* (Dudhkhori), *Cissus quadrangularis* (Harjoralota), *Azardicta indica* (Neem), *Bryophyllum pinnatum* (Pategoja), *Calotropis gigantea* (Akon), *Clarodendron colebrookiamm* (Nephaphu), *Terminalia bellerica* (Bohera).

There are many species, which are used as a food items in the form of spices, vegetables and wild edible fruits. Some of which are –*Murraya koenighii* (Narsingha), *Discorea alata* (Kath alu), *Dillenia indica* (Owtenga), *Sizygium fruticosum* (Guti jamu), *Zizyphus jujuba* (Bogori), *Zizyphus rugosa* (Bon bogori), *Spodius pinnata* (Amora) and many species of green leafy and rhizomatous vegetables.

Many wild species are used as fodder like *Erythrina indica* (Modar), *Schima wallichii* (Makrisal), *Lagerstroemia speciosa* (Ajar) and many grass species. Some species are used as fuel especially by the poor people of the district, which are collected directly, or indirectly from the forest areas. Common of them are –*Ipomea carnea*, *Shorea robusta* (Sal), *Eupatorium odoratum* (Jarmanibon). But it is better to say that all these species that are easily found in their neighboring area are used for their purpose.

Some plants are used for construction of houses prominent among them are different species of bamboo, canes. These raw materials are also used for making household items like furniture, various weaving apparatus, sieves, fishing apparatus, broom, varieties of decorative items etc. Such items are often seen to supply in the neighboring districts and other states from places like Darangiri, Dhenubhanga.

Mention may be made of “pati” plant (*Maranta dichotoma*), which is found abundantly on the bank of Jinari on which many people depend for their livelihood specially the villagers of Dhubapara. From these villages different types of mats are supplied in and around the country.

Many forest items are directly or indirectly associated with the daily lives of the people. Some people prepare ropes from the bark of *Sterculia vilosa* (Odal) a timber yielding plant, plates from leaves of Sal (*Shorea robusta*) from which plants the so-called dhuna (resin) is extracted.

Leaves of some plants like *Ricinus communis* (Era), *Jatropha curcus* (Venda) are used as food for silkworm. Otherwise leaves of *Litsea salicifolia* (Sowalu), which is wildy available, are used as secondary food for muga silk worm.

In the plant kingdom there are some plants, which have the capacity to repel insects due to presence of some substances. *Vitex negundo* (Posotia), *Adhatoda vasica* (Bahaka) *Annona squamosa* (Atlos), are some of the species available in the district of Goalpara, which are used as insect paste repellent. Inflorescence of *Saccharum spontaneum*, which found abundantly in hilly forest areas yield broom of commercial importance.

Seeds of *Abrus precatorius* (roti) are used by goldsmiths to weigh gold while the fruits of *Sapindus mukorossi* (manisal or ritha) are used to clean gold and to wash hair and warm clothes. Fibrous hairs that produce after the bursting of fruits of *Bomax ceiba* (simolu) produce cotton of commercial importance that is used for preparing pillows, mattresse, quilt. This is a much common plant in the forest of Goalpara district. Some ornamental plants are also seen to grow in the forest like *Cycas pectinata*, *Cyathea gigantea* (Tree fern), special mention may be made of some orchids. All these are frequently collected by the poor people of the district to the neighboring market places to earn some money. The fruits of *Bixa orillena* are used for dying threads of weaving.

Besides all these NTP plants the district is rich by timber yielding plants also of sal is most dominant. Thus it can be said that though the district is economically backward it is rich by its floral diversity and natural resources.

Conclusion

Due to various developmental activities like construction of railway lines, roads, bridges the forest areas are often disturbed. Thus the forest flora of the district has been depleted to a considerable extent.

There are many plant species in the district, which are included in the list of endangered plants of Assam e.g. *Oroxylum indicum* (Dingdinga), *Melia azardich* (Ghora neem). Due to decrease of forest besides loss of biodiversity there is increase in temperature, pollu-

tion, decrease in rainfall reliability, runoff of fertile soil, landslides, siltation due to which the water holding capacity of river Brahmaputra which is the longest river of the state and its tributaries are decreasing which is the major cause of flood not only in the district but as a whole of the state of Assam (Ahmed and Das 2003, Barooah and Borthakur 2003).

So people should be conscious about the plant resources of this district and must give importance to protect and conserve these resources and use them in a judicious manner so that we do not exhaust them. We should use the resources in such a way that we always save enough of these for our future generation. Besides the role of general people the district and state administration, some NGO'S have much to do in this regard. Then only it will be possible to conserve the rich diversified flora of the district.

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