

# Vegetation Pattern And Forest Dependent Survival Strategies of Schedule Caste And Schedule Tribes of Dakshin Dinajpur

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**Abstract :** Forests play an important role in influencing the climate of the district and also the quality of life of the dwellers along the forest fringes.. Concentration of forests in the district of Dakshin Dinajpur of West Bengal is mostly along the eastern and southern borders which the district shares with Bangladesh. The total forest cover of the district is 0.93 thousand hectare. A wide range of flora including herbs, shrubs and trees belonging to Liliopsida and Magnoliopsida has been detected, collected and recorded for the biodiversity form the study area. As many as 9 families of Liliopsida and 29 families of Magnoliopsida has been observed in the forests of Danga, Sarongbari, Kashiabari, Dogachhi from 2012 to 2015. The major ethnic groups include Santhals ( Murmu, Tudu, Baskey, Kisku, Hembram etc.), Oraon ( Kechhe, Kerketta, Bandra, Minji etc.) and Munda (Barla, Soren, Pahan, Murani, Topno etc.), whereas, Schedule caste category is dominated by Rajbanshis. The questioners were made to know about their livelihood and other socioeconomic aspects. Their livelihood mainly depends on the edible resources from the forest, Minor forest produce and Non timber products of forest patches.

**Keywords:** Forest, Schedule caste, Schedule tribe, Livelihood

## I. INTRODUCTION

The district Dakshin Dinajpur covers 2219 sq. km, situated at the backward area, is predominantly an agriculture based district in the State of West Bengal. This geographically remote area is home to a population of 16,76,276 (as per municipal data, 2011). Amongst these Schedule caste and Schedule tribes comprise 28.78% and 16.12% respectively of total population of the district.

Forests play an important role not only in influencing the climate of a district but also the quality of life of its dwellers. They also serve as the storehouse of a wide range of flora and fauna. Concentration of forests in the district of Dakshin Dinajpur is mostly along the eastern and southern borders which the district shares with Bangladesh. The total forest cover of the district is 0.93 thousand hectare. In 2013-2014 the total forest area measured was 1463.79 hectare. The plant cover is 16%. Some of the forest village population is comprised, predominantly, of the Schedule tribe and Schedule Caste along with the general category. They depend on the product and resources of the forests for many a reason.

The major objectives of the study are A).To have an insight about the vegetation patterns and diversity of the total forest patches of the district. B) To know the present socio-economic status of different Schedule casts and Tribal sub castes in forest villages. C) To witness the aspects of tribal livelihood systems.

## II. REVIEW OF LITERATURE

In India nearly 250 million people live in and around forests. To recognize and vest the forest rights and occupation in forest land in forest dwelling Scheduled Tribes and other traditional forest dwellers who have been residing in such forests for generations but whose rights could not be recorded; to provide for a framework for recording the forest rights so vested and the nature of evidence required for such recognition and vesting in respect of forest land ( Forest Rights Act, 2006) .

Eligibility to get rights under the Act is confined to those who "primarily reside in forests" and who depend on forests and forest land for a livelihood. Further, either the claimant must be a member of the Scheduled Tribes scheduled in that area or must have been residing in the forest for 75 years.

The economy, religion, polity and social institutions of Indian tribal people cannot be understood without understanding various aspects of the forest surrounding the population. (Mallik and Panigrahi, 1998).

A very important observation was done by Behura (1982) regarding the customary laws of various tribal communities can be seen when one examines the folk taxonomies given by tribal communities to flora and fauna, and from their classification of plants as more and less useful, edible and non-edible, hygienic and poisonous, ritualistic and non-ritualistic, medicinal and non-medicinal.

The comparison to the general people the tribal people have followed best practice in managing their land-based resources and forest wealth (Saxena, 1995)

There is no doubt that decreasing non timber forest product (NTFP) adversely affected livelihood sustenance and food basket of a large number of poor tribal households ( Roy Burman , 1987)

The Government of India has come out with the Minor Forest Produce Act (2005) whereby forest dependent communities should be endowed with collection, processing and trade in minor forest produce on the principle of “Share and Care”.

Biological Diversity Act (2002) recommended that provisions should include coverage of a minimum 1/3 rd area under forest for protection of indigenous people and ecological balance.

## II. RESEARCH METHODOLOGY

The study area were earmarked by frequent visit to the forests at various point of time from 2012 to 2015. The study area covered the forest fringes like Danga, Sarongbari, Kashiabari, Dogachhi of Dakshin Dinajpur district. A thorough survey of the vegetation pattern was done and specimens were collected and recorded. The plants collected were pressed, dried and preserved following proper technique for herbarium sheet preparation. The identification was made following relevant floras and manuals ( Prain 1903, Das, 2004, Ghosh *et al.* 2008)

During the study period the author had the opportunity to interact with the forest village dwellers directly who are mostly Adivasis and others belonging to Schedule caste and Schedule tribe category, but a few were from the general category also. The questioners were made to know about their livelihood and other socioeconomic aspects of their life.

## III. RESULTS AND DISCUSSION

Extensive survey and visit to the study areas resulted in interesting observations regarding the vegetation pattern which in turn throws light on the biodiversity of forest flora of the district. As many as 9 families of Liliopsida and 29 families of Magnoliopsida has been observed in the forests of Danga, Sarongbari, Kashiabari, Dogachhi from 2012 to 2015. Plants observed and collected are represented the the following tables ( 4.1 & 4.2).

The major ethnic groups include Santhals ( Murmu, Tudu, Baskey, Kisku, Hembram etc.), Oraon ( Kechhe, Kerketta, Bandra, Minji etc.) and Munda (Barla, Soren, Pahan, Murani, Topno etc.), whereas, Schedule caste category is dominated by Rajbanshis.

Table 4.1: Vegetation Pattern of the study area-- Liliopsida

Liliopsida	Family	Plants observed/ collected
1.	Colchicaceae	<i>Gloriosa superba</i>
2.	Orchidaceae	<i>Vanda tessellate, Habernaria commelinifolia</i>
3.	Alismataceae	<i>Sagittaria sagittigolia ssp leucopetala, Sagittaria sagittigolia ssp lappula,</i>
4.	Pontederiaceae	<i>Eichhornia crassipes</i> <i>Monochoria hastata</i>
5.	Smilacaceae	<i>Smilax zeylanica</i>
6.	Cyperaceae	<i>Cyperus rotundus, C. compressus,</i> <i>C. corymbosus, Kyllinga triceps</i>
7.	Poaceae	<i>Setaria glauca, Hygrorhyza aristata, Leptochloa chinensis,</i> <i>Imperata cylindrica</i>
8.	Hydrocharitaceae	<i>Hydrilla verticillata, Valisneria spiralis</i>
9.	Potamogetonaceae	<i>Potamogeton crispus, P. mucronatus</i>

Table 4.2: Vegetation Pattern of the study area-Magnoliopsida

Magnoliopsida	Family	Plants observed/ collected
1.	Amaranthaceae	<i>Amaranthus spinosus</i> , <i>Alternanthera sessilis</i> , <i>Aerva aspera</i>
2.	Chenopodiaceae	<i>Chenopodium ambrosoides</i>
3.	Polygoniaceae	<i>Polygonum plebium</i> , <i>Persicaria orientalis</i>
4.	Hypericaceae	<i>Hypericum japonicum</i>
5.	Passifloraceae	<i>Passiflora foetida</i>
6.	Cucurbitaceae	<i>Coccinia grandis</i> , <i>Trichosanthes cucumerina</i>
7.	Dipterocarpaceae	<i>Shorea robusta</i>
8.	Bombacaceae	<i>Bombax ceiba</i>
9.	Malvaceae	<i>Sida cordata</i> , <i>S. acuta</i> , <i>S. rhomboidea</i>
10.	Euphobiaceae	<i>Phyllanthusvirgatus</i> , <i>P. urinaria</i> , <i>Jatropha gossypifolia</i> ,
11.	Combretaceae	<i>Terminalia arjuna</i>
12.	Lythraceae	<i>Lagerstoemia speciosa</i>
13.	Moraceae	<i>Ficus hispida</i> , <i>Streblus asper</i>
14.	Fabaceae	<i>Cassia tora</i> , <i>C. sophera</i> , <i>C. siamea</i> , <i>Mimosa pudica</i> , <i>Acacia auriculiformis</i> , <i>Derris scandens</i> , <i>Tephrosia purpurea</i> , <i>Dalbergia sissoo</i> , <i>Pongamia pinnata</i> , <i>Desmodium triflorum</i> , <i>D. Gangeticum</i> etc.
15.	Rutaceae	<i>Aegle marmelos</i> , <i>Murraya koenigii</i> , <i>M. paniculata</i>
16.	Meliaceae	<i>Azadirachta indica</i> , <i>Melia azadirach</i>
17.	Asteraceae	<i>Mikania cordata</i> , <i>Eclipta prostate</i> , <i>Ageratum conyzoides</i> , <i>Vernonia cineria</i> , <i>Yongia japonica</i> , <i>Centipeda minima</i> , etc.
18.	Rubiaceae	<i>Mitracarpus hirtus</i> , <i>Dentella repens</i> , <i>Anthocephalus indicus</i> , <i>Spermacoce articularis</i> etc.

Plants from some other important families of Magnoliopsida observed are Rhamnaceae, Vitaceae, Anacardiaceae, Apioaceae, Apocynaceae, Solanaceae, Convolvulaceae, Boraginaceae, Scrophulariaceae, Acathaceae, Verbenaceae.

### 4.3 Dependence on Forest by the forest village dwellers for livelihood

The ethnic groups of the studied area are involved in various type of livelihood for sustenance. The edible forest resources and Non timber products are main options for their sustainable livelihood. Some are as follows-

#### 4.3.1 Food and medicine

Forests serve as important genetic reservoirs for plants and animals that have potential use for food and medicine. Forest food offers a safety net for the most vulnerable population groups in this district, and healthy forest ecosystems may also help in regulation of infectious diseases. The most popular tribal food include various types of edible mushrooms like edible sporocarps of oyster mushrooms (*Pleurotus ostreatus*), angel wings (*Pleurotus porrigens*), lion's mane (*Hericium abietis*), and sulfur-shelf (*Laetiporus sulphureus*), bamboo shoots, tender twigs of herbs and pteridophytes, fruits as well as seeds. The hunting habit is a traditional practice of the tribal people. They birds, eggs of birds, small animals, rodents, ants etc.

Forest herbs are intensively used among some groups of tribal people who consider natural products healthier than synthetic drugs as seen during the course of the study. The tribes residing in the fringes of

the forests of the area are living under line of poverty and lack money to buy medicines. Moreover, they lose a working day and wages if they attend any health centre nearby. If rural populations in developing countries lose their access to forest food and medicine, e.g., due to deforestation or ecosystem degradation, this may lead to food insecurity, malnutrition, and disease. Hence, preservation of forests and woodlands is extremely important for the supply of forest food. In order to use forest food to complement diets in balanced ways, the forest villagers should be enriched with more knowledge on the nutritional values of different types of forest food. The traditional knowledge of indigenous people and local communities in gathering and hunting of forest foods and medicinal forest plant species should be paid more attention to.

#### **4.3.2 Fuel**

The women of the forest fringes do not, in most cases, have LPG connection and for domestic fuel for cooking they totally depend on the forests. Due to easy access to the jungles, the rampant use of firewood may destroy the ecological balance in these far-flung areas. The economic significance of the time and energy spent by the women in collecting firewood and other products from forests is enormous and thus augment the household income.

#### **4.3.3 Other dependence**

The tribal economy largely depends on forest resources. Other livelihood includes grazing cattle, honey collection, fishing etc. serve as an alternative source of income.

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