

# Traditional knowledge about plant medicine Vs. Socio economic development of the tribal people -a study in Ausgram-1 Block of Birbhum District, West Bengal, India

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**Abstract** - Birbhum district of West Bengal has a long and potential history of tribal culture. They are rich in ethnobotanical knowledge. Almost all the villages there are some elder persons having knowledge of plant medicine and their respective medicinal importance. Due to low side effects and low cost, economically weaker section of the people are to rely on their traditional medicine system. But these age-old knowledge are now on the way of extinction. Kabiraj or Gunins are very much reluctant to make any documentation of their knowledge. This special knowledge always runs through their progenitors. However modern education system are spreading gradually through the young generation of the tribal people. Modern medical system also reached to the tribal village. Younger generation of tribal community are not showing their interest in traditional knowledge. So it is the high time to document their ethnic knowledge which may play a vital role in homeopathy, Ayurveda, and as an indicator of past environment and conservation of nature and natural resources. The present survey in Ausgram block of Birbhum district depicts the similar story. Measure should be taken immediately to preserve this almost endangered highly valued ethno-botanical culture before its complete extinction.

**Index Terms** - Ayurveda, Endangered, Ethnobotany, Modern education.

## INTRODUCTION

Since ancient times human are exploiting the plant for their medicinal properties. Medicinal plants are an important therapeutic aid for various ailments. India has about 45000 plant species (Grover et al; 2002) and among them almost 7500 species of plants are used for medicinal purpose (Kala, 2005, Jagtap et. Al; 2006) Especially the poorer section and mainly the tribes

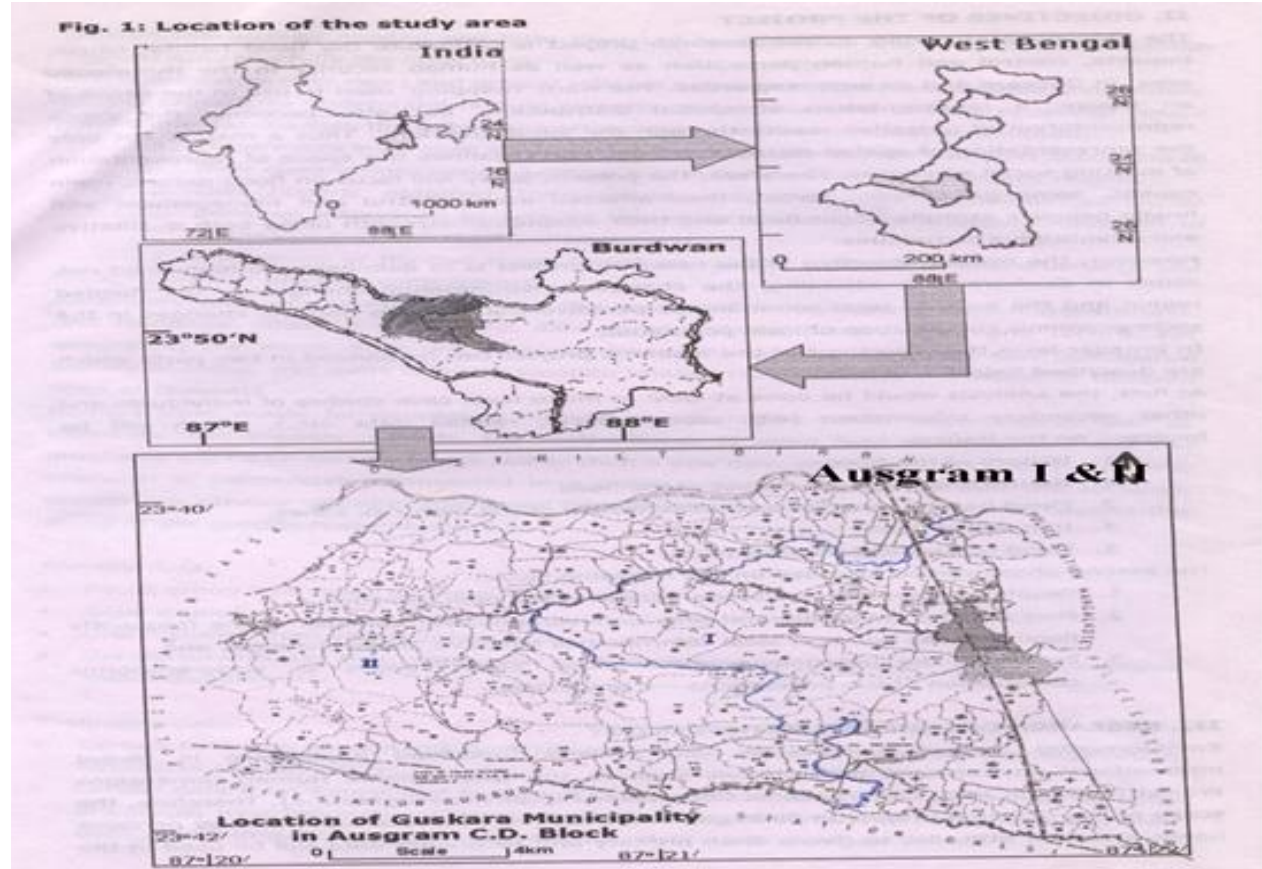
residing close to the forests are the chief user of medicinal plants. India has the second largest tribal population after Africa in the world. Tribal communities living in bio-diversity rich areas possess a wealth of knowledge on the utilization and conservation of medicinal plants (Bara et al; 2001). But the knowledge is not documented it is inherited generation after generation orally from elder one to younger one. However, our knowledge of traditional health care system is not being inherited properly as a secret rite of the ancient societies (Srivastava et al. 1987, Bharadwaj and Gakhar 2005, Khumbongmayum et al. 2005). Recently this knowledge is gradually disappearing in their younger generations due to various developmental and cultural activities by the state Govt. and NGOs, which are on way to change the private and cultural life of the tribals (Binu, 2009). Degradation of the surrounding environment and deforestation has adversely affected food, accessibility, livelihood options and quality of life and finally tribal people are changing their occupation pattern, livelihood with the touch of modern society from the heart core of forest habited. Present study area Ausgram-I & II in Burdwan district is very rich in plants diversity as well as ethnic diversity, as per the 2011 Census ST population of Ausgram-I is 13.05% & Ausgram-II is 14.42% and had a great traditional knowledge base in plant resources. It is inhabited by the large number of Santhal tribes as well as Munda, Kol, Ho, Oraon, Paharia, Mahali, Lohar etc. and leads an intricate life very dependent on forest plants. The livelihood systems in the area are primarily dependent on combination of agriculture, forest based economy and some informal sectors. This study will focus the

changing socio-economic pattern due to declining of forest resources as well as the ethno socio cultural attributes of the tribal peoples in the forest areas.

### STUDY AREA

The study area lies in the north western part of Burdwan district, West Bengal covering area of (Map enclosed) 8264 hectares and is enclosed within latitude  $23^{\circ}42' - 23^{\circ}40'$  and longitude  $87^{\circ}20' - 87^{\circ}22'$  in the

survey of India topographical maps (73M10, 73M11, 73M14, 73M15). The area rich in vegetation, and some major forest patches have enriched biodiversity in the environment. The forest areas are part of Jangal Mahal extended from Birbhum district to Burdwan district. The area located just midst of two rivers Ajoy, flowing in the north, the Damodar, in the south Barakar on west, and two rivers controlling the middle part, that are Kunur and Khari.



Present study of Ausgram-I & II in Burdwan district is very rich in plants diversity as well as ethnic diversity and had a great traditional knowledge base in plant resources. It is inhabited by the large number of santhal tribes and leads an intricate life totally dependent on forest plants. The livelihood systems in the area are primarily dependent on combination of agriculture, forest based economy and some informal sectors. This study will focus the changing socio-economic pattern due to declining of forest resources as well as the ethno socio cultural attributes of the tribal peoples in the forest areas. Based on lateritic utisols soils and hydrological system by the immense rivers the total area predominated by large patches of

forest areas under Preserve forest (PF) Reserve forest(RF) Fairly dense Sal open mixed jungle. Physically, the area is a flattened land nearly 40 meters height from mean sea level. Typical subtropical climate and lateritic soil helps to origin large areas of forest patches in the said areas.

### OBJECTIVES

As the Tribal's are mainly forest dweller, they have an age-old tradition to make their living from forest resources. However, the recent development in socio-economic status makes the scenario changed. We like to excavate the root of this some changes. In the study,

it is tried to focus the factors that forced them to turn round their face from forest to mainstream culture.

- Role of tribal women in household practice will be excavated.
- The importance of medicinal plants, which is gradually declining in tribal society with the advent of mainstream medical facility, will be pondered.
- Impact of normal education on their lifestyle will be assessed.

METHODOLOGY

- Information was gathered, taking interview of the informants and as witness of the uses during the period of studies in the field.
- The field study was carried out by putting questionnaire to people of different age group, of different socio-economic strata, vaidyas & kabirajs.

- The informants were requested to accompany us in the field to detect the plants and their locations.
- Plants were identified using relevant scientific literature.
- Information collected from them lured us to analyze the data scientifically and systematically that help us to correlates socio-economic upliftment along with the gradual obliteration of their age-old customs.

RESULT AND DISCUSSION

Field data is collected from 25 Santhal households in Ausgram CD block. Data is taken in random way to cover the whole area about 100 households. We have set up the questionnaire basis some parameter regarding the uses of medicinal plants by tribal peoples surrounding Ausgram forest.

FAMILY REPORT

1. Family serial no.	2. Total members		3. Educational qualification	4. Occupation	5. Firewood collector		6. Familiar with other medicinal plants?	7. Uses medicinal plants?	generation s	8. Medicinal plants they used	9. Cause of reluctance in using medicinal plants	10. Distance of nearest health centre or other medical facility
	Male	Female			Male	Female						
FAMILY-1	8			Agriculture,labourer,100 days work		1	1	1	1+2+3	1		
FAMILY-2	6			Agriculture,labourer.		1	1	1	1+2+3	1		
FAMILY-3	6					1	1	1	1+2	1		
FAMILY-4	7					1	x	x	1	x		
FAMILY-5	7					1	1	1	1+2	1		
FAMILY-6	3					x	x	x	x	X		
FAMILY-7	1					1	x	1	1	1		
FAMILY-9	5					1	1	1	1+2	X		
FAMILY-10	8					1	1	1	1+2+3	1		
FAMILY-11	5					1	1	1	1+2	1		
FAMILY-12	8					1	1	1	1+2+3	1		
FAMILY-13	8					1	1	1	1+2+3	1		
FAMILY-14	5					x	x	x	1	X		
FAMILY-15	2					1	1	1	1+2	1		
FAMILY-16	4					x	x	x	x	X		
FAMILY-17	4					1	1	1	1+2+3	1		
FAMILY-18	5					x	x	x	x	X		
FAMILY-19	1					1	x	x	1	X		
FAMILY-20	3					x	x	x	1	X		

FAMILY-21	3				1	1	1	1+2+3	1		
FAMILY-22	4				1	x	1	1+2	X		
FAMILY-23	6				1	x	x	1	X		
FAMILY-24	5				1	1	1	1+2	x		
FAMILY-25	2				x	x	x	x	X		
TOTAL	120				19	14	16	1+2+3=7 1+2=8 1=6	12		

In respect of population 37.5% of them are totally dependent upon medicinal plants in all the three generations. 31.7% of population are dependent on medicinal plants partially by their two earlier generations. 19.1% of the population where medicinal plants uses restricted only to the older generation. In respect of household only 28% family used medicinal plants in all the three generations. Only 32% of household uses medicinal plants by their two older generations. And 19.1% household uses medicinal plants restricted only to their older generation. Rest 16% of populations now ignores the medicinal plants and their uses completely.

### Details report of the column no-9

Family serial no.	No interest in medicinal plants & their uses	Problems in identification of medicinal plants	Easy availability of other medicinal facility (allopathic or homeopathy)	Traditionally uninterested in medicinal plants	Baidyas and kabirajes are not easy available	Better economic conditions
FAMILY-1		1	1	1		
FAMILY-2		1	1			
FAMILY-3		1	1			
FAMILY-4	1	1	1	1		1
FAMILY-5		1	1			
FAMILY-6	1	1	1	1		1
FAMILY-7		1	1			
FAMILY-8			1			1
FAMILY-9		1	1			
FAMILY-10		1	1			
FAMILY-11		1	1			
FAMILY-12		1	1			
FAMILY-13						
FAMILY-14		1	1	1		
FAMILY-15		1	1			
FAMILY-16	1	1	1	1		
FAMILY-17			1			
FAMILY-18	1	1	1	1		
FAMILY-19	1	1	1	1		
FAMILY-20	1	1	1	1		1
FAMILY-21	1		1	1		
FAMILY-22		1				
FAMILY-23	1	1	1			
FAMILY-24	1	1	1			
FAMILY-25	1	1	1	1		
TOTAL	10	21	23	10		4

LIST OF MDICINAL PLANTS AND THEIR USES IN MENTIONED DISEASES

Family serial no.	Skin diseases	Wound healing	Enteric	Hepatitis	Fever & cold	Anemia	Others
Family-2	Neem - ( <i>Azadirachta indica</i> )		Jiroti leaf, ( <i>Murraya paniculata</i> ), Indure leaf, Bel ( <i>Aegle marmelos</i> ) Laukeshari leaf			Krishnachura bark- ( <i>Delonix regia</i> )	
Family-3	<i>Azadirachta indica</i>				Tulshi- <i>Ocimum sanctum</i>	Patabahari	
Family-4							Arjun bark- ( <i>Terminalia arjuna</i> )
Family-10			Gathnari leaf	<i>Acyranthus aspera</i>			
Family-11		Betelagata		Garland of Poramula, <i>Acyranthus aspera</i>	Irdom ( <i>Ricinus communis</i> ) bark		
Family-12	Gath		Kanthakal, Red sandalwood bark		Red sandalwood bark		
Family-13		Bone fracture Harjora, ( <i>Ossus quadrangularis</i> ) leaf, Doka ( <i>Lanne coromandelica</i> ) bark, Amrabark	<i>Andrographis peniculata</i> , Gathnari, Tirta, Tijumalam	<i>Acyranthus aspera</i> , <i>Ficus leaf</i>	<i>Andrographis peniculata</i> ,		For pregnancy- <i>Hibiscus</i> flower, Shaluk ( <i>Nymphaea nouchali</i> ), Kalojire ( <i>Nigella sativa</i> ), Golmorich ( <i>Piper nigrum</i> ), Joikul, Darchini, Namkul for abortion- Root of ( <i>Piper betle</i> ) Pan pata
Family-17		Stomachache- Shal ( <i>Shorea robusta</i> ), Rohin tree, Varendra					

Data categorically shows the status to using medicinal plants in tribal lifestyle

1. Level-I- Young People: 28% of total household, 1st generation to learning education, and age group of 1-25 are not willing to use it and not using.
2. Level-II- Matured People: 60% of surveyed household, Previous generation of learner group i.e. Parental group: age group of 26-45 are using it and at the same time using modern medicinal facilities also.
3. Level-III- Old People: 84% of surveyed households, Forefather of learner groups, age group of 46 and above using it.

Some findings regarding the uses of medicinal plants by the tribal or Adibasi society in Ausgram CD block.

1. Ausgram CD block I and II is located north of Bardhaman Sadar just from 33Km. The region is found with dense Sal forest.

2. Tropical climate high rain and high temperature with lateritic type of soil enrich the region with dense vegetation covers in the studied area.
3. There are many tribal people settled in a small patch covering the whole forest. Total ST Population is found 25%.
4. Most of all settled in a compact way about 30-60 households very near to a forest side. So that they can get every facilities from the forest.
5. It is found that tribal people are willing to settle their livelihood along the roadside instead of in dense forest getting all kind of facilities like road, water, and electricity.
6. Residing within the dominant Bengali culture they are forced to assimilate this culture along with their own and thereby accustomed with the modern life and needs. able to speak Bengali language and started agricultural practices with settled life.
7. Finally they are not willing to depend on the traditional medical facilities on medicinal plants



in broad. 1st generation ,the younger group less interested about it due to education, better economic condition, problem of identify medicinal plants.

8. But some people who have aware about it traditionally, they are willing to use in their life at the side of modern health system.
9. And finally we have seen the old age people who have got the facilities in previous time, it is due to unavailability of baidyas and kabiraj, lack of education, poor medical facilities and inaccessibility of the mainstream society.



Figure 1 Author interrogating a tribal lady



Figure -2 medicinal plants are drying



Figure -3 Tribal children are in primary School.



Figure -4 Tribal old persons showing medicinal plants

### CONCLUSION

Report shows that we are gradually losing a great ethnic knowledge about medicinal plants. Modern scientific knowledge slowly infuses to the tribal community. Democracy allows them to participate in mainstream culture. However, no efforts are made to preserve their age-old conventional knowledge. Measure should be taken to preserve this almost endangered highly valued ethno-botanical culture. Encouragement from government and different N.G.O.s are needed to protect this vast hidden knowledge and should be provided all kind of facilities for their practice. Medicinal plants have almost no side effects. Medicinal plants yielded drug of very low cost price. India is still developing country; mentionable sections of people are below poverty line and they are still depend on low cost medicine and herbal medicine and used to go to the Kabiraj and Gunins. Before extinction, this vast knowledge of ethno medicine must be documented properly.

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