

**SOCIO-ECONOMICAL STATUS AND  
DEPENDENCY OF PEOPLE LIVING IN ECO-  
SENSITIVE ZONE OF NAGI AND NAKTI BIRD  
SANCTUARY, JHAJHA, JAMUI (BIHAR)**

**A SURVEY WORK ASIGNED BY  
DEPARTMENT OF ENVIRONMENT AND FOREST  
GOVERNMENT OF BIHAR**

WORK CONDUCTED BY:

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## PREFACE

The present work on the Data collection of the Socio-economical conditions and Dependence of People living in the villages near Eco-sensitive zone (ESZ) of "Nagi and Nakti Bird Sanctuary" of Jhajha administrative Block, Dist Jamui, Bihar has been given to me by Dept. of Environment and Forest, Government of Bihar, vide its letter no. 1146 dt. 21.10.2014, and assigned by Sri A. K. Pandey (IFS), the Regional Chief Conservator of Forest, Bhagalpur.

Mandar Nature Club, Bhagalpur has studied different aspects of this region since its inception as a bird sanctuary. MNC as a non-government organization (NGO) is regularly visiting Nagi & Nakti dams / lakes and many other sanctuaries like Udhwa (Rajmahal, Jharkhand), Gogabil (Katihar), Kabar Lake Bird Sanctuary (Begusarai), Saraiya Man (West Champaran), Kusheshwar Sthan (Darbhanga) etc. Different members of this club have expertise in different fields of work, such as identification and census of birds, biodiversity of plants and animals, water analysis and socio-economical survey in human population, therefore, the Department of Environment and Forest assigned work on different aspects of this region to us.

We owe the thankfulness to the "Parivar Vikas" Jamui, Sri Kapildeo Yadav and Sri Sahdeo Yadav, President, "Van Samiti" of Nakti and Nagi Sanctuary respectively, and local bodies of Panchagata Samities.

I am thankful to Dr. P. K. Verma, a life member of MNC for his cooperation in data analysis and presentation scientifically.

I would like to acknowledge Sri Anand Kumar, Range Officer, Jhajha, for his regular support and personal interest in this work without which this work could not be completed within this short period.

I am especially thankful to the staffs of forest departments of Jamui and Bhagalpur, Sri Arvind Mishra, state co-ordinator, BCN, Sri A. K. Dwivedi, IFS, D F O Jamui, Sri Lalan Kumar Singh IFS, Conservator of Forest Bhagalpur, and finally Sri A. K. Pandey, IFS, Regional Chief Conservator of Forest, Bhagalpur.

Dr. Sunil Kumar Agrawal  
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## INTRODUCTION

In district **Jamui** of **Bihar** a number of tribal villages are found as the area is full of hills and terrains. The forest is characteristically reminiscent of Chhotanagpur plateau in physical feature. A large number of small dams were built in early decades of independence in this region that increased their dependence on agriculture, and now it has become a very good place for study of the socio-economical development of tribal population in this area.

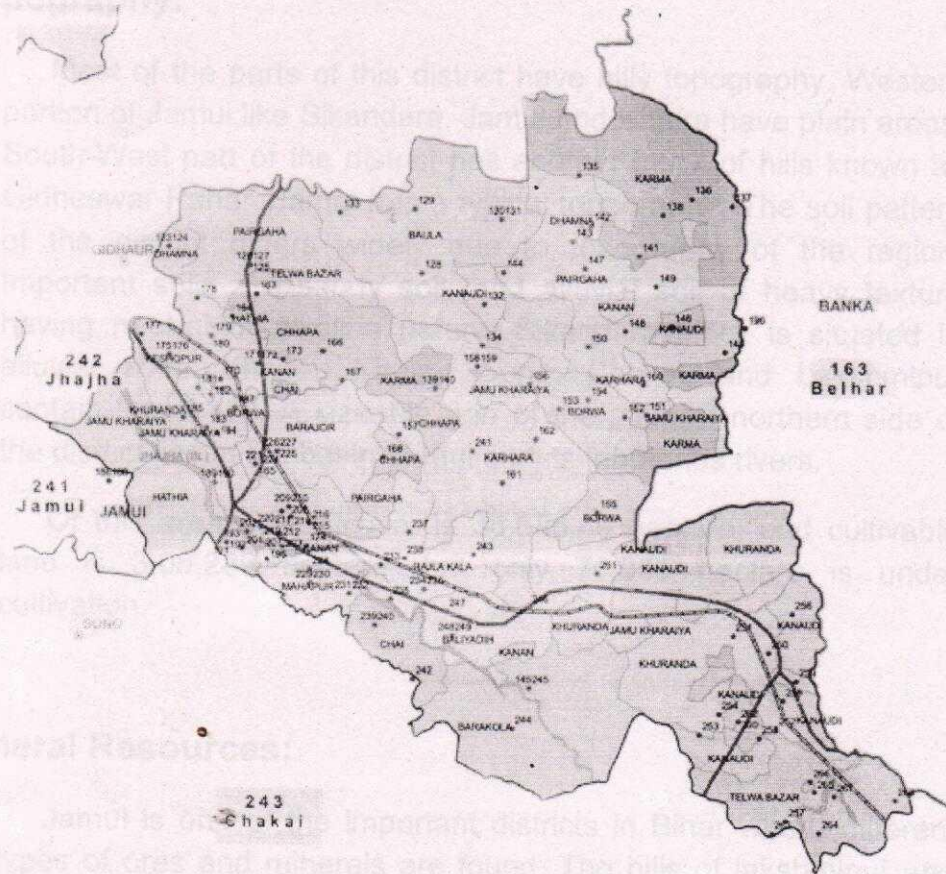
Jamui is one of the famous districts of Bihar which has a glorious part. Historical existence of Jamui has been observed from the period of Mahabharata period, about 3000 BC. Archeological and historical evidence shows its close association with Jain tradition for a long past to the present time. History of Bihar will remain incomplete without history of Jamui. In Jain and Bodh literature it is described in the name **Jambhiyaagram** that was said to be situated at the bank of river **Ujjihuvialya** that changed in due source as **Jamui** and river **Rijuvalika** and the river **Ulai** still existing in Jamui. The old name of Jamui has been traced as **Jambhubania** in a copper plate that is kept in Patna Museum..

According to the available literature, Jamui was related to the Gupta and Pal rulers before 12<sup>th</sup> century, but after that this place became famous for Chandel rules. Prior to Chandel kings, this place was ruled by Nigoria, who was defeated by Chandels and the dynasty of Chandels founded in 13<sup>th</sup> century. The kingdom of Chandels was spread over the whole of Jamui.

### Location:

Jamui is situated at a longitude of 86°, 13' E and latitude of 24°, 55'N. It is surrounded by districts Munger and Lakhisarai in north, Giridih district of Jharkhand in south, in east Deoghar (Jharkhand) and Banka and in west Nawada district of Bihar. Its area is 3098 km<sup>2</sup>.

Fig - 1: Political map of District Jamui, Bihar



**Legend**

- |                          |                      |                     |
|--------------------------|----------------------|---------------------|
| ● District Head Quarters | □ Block boundary     | ══ National Highway |
| ○ Sub district hqrs      | □ Panchayat Boundary | ══ Other road       |
| □ State Boundary         | □ Village boundary   | ▨ River             |
| □ District Boundary      | ● Polling station    |                     |
| □ AC Boundary            | ══ Railway           |                     |

## Climatic Conditions

### Topography:

Most of the parts of this district have hilly topography. Western portion of Jamui like Sikandara, Jamui and Khaira have plain areas, South-West part of the district has another block of hills known as Gidheswar Pahar. Jamui has a typical topography. The soil pattern of the district differs widely due to topography of the region. Important soils are sandy soil, and alluvial soil of heavy texture having neutral or alkaline nature. Sikandara block is situated in alluvial zone. Jhajha, Khaira, Sono, Chakai, and Lakshmipur contain forest soil. A sizeable part of the plain of northern side of the district lies in the basin of Kiul and its tributaries rivers.

Of this area, forest cover is 38,685.49 hectare, and cultivable land is 3,05,289 hectare, but only 76,955 hectare is under cultivation.

### Mineral Resources:

Jamui is one of the important districts in Bihar where different types of ores and minerals are found. The hills of lakshmipur and khaira comprised of archaen schists including the iron ore. In lakshmipur, sono and chakai, the chief formation is gneiss basement complex. Mica mines lie in the portion of adjoining Hazaribagh district. Besides these there is possibility of availability of lime stone, china clay, manganese, graphite, pegmatite, tourmaline, quartz etc. In the southern hills of the district or of the gold has been observed in sono block. Hill areas of jamui are also acquainted with valuable stone like marble, topaz, American diamond and asphaltic, manik etc. Coal is found in the hilli area of Barahat block.

## **Climatic Conditions:**

The climate of this district is also diverse nature because in some parts it is very healthy and pleasant whereas some areas face extremes of the climate. The average maximum temperature is 41°C (35-42°C) and average minimum temperature is 21°C (5-30°C). The average annual rain fall in this district is 1102.9 mm. Chakai, Sono and Jhajha blocks have greater rainfall than other blocks of Jamui.

1. Winter : November to February
2. Summer : March to May
3. Monsoon : June to September
4. Autumn : October to November

The major rivers flowing through the surroundings are Kiul, Burnar, Sukhnar, Nagi, Nakti, Ulai and Bunbuni. All these are seasonal rivers. Relatively bigger dams have been built on Nagi and Nakti dams.

## **District Administration:**

District Jamui has only one sub-division and only one police district but two police sub-divisions. It has ten blocks and ten circles but only 12 police stations despite the fact that it is Nuxlite affected area. There are 153 panchayats covering 1528 villages. The infra-structural support to police administration is poor and in-effective to control crime and Nuxlite problems.

Chakai block is largest so far the number of Panchayatas and number of villages are concerned. Jhajha comes on third position that has 20 Panchayats and 192 villages, that is an average 10 villages are present per Panchayata. These are the following panchayats:

- |                 |                |
|-----------------|----------------|
| 1. Baijla       | 2. Barajora    |
| 3. Barakola     | 4. Shai        |
| 5. Burwa        | 6. Chhapa      |
| 7. Dhamna       | 8. Hathia      |
| 9. Jamukhariya  | 10. Kanan      |
| 11. Kanaudi     | 12. Karaha     |
| 13. Karma       | 14. Kwshopur   |
| 15. Khuranda    | 16. Mahapuor   |
| 17. Pairaha     | 18. Bajla Kala |
| 19. Telwa Bazar | 20. Belia dih  |

**Table – 1: Police and Administrative Units of Jamui District, Bihar**

Sl. No.		
1.	No. of police districts	1
2.	No. of sub-divisions	1
3.	No. of police sub-divisions	2
4.	No. of police stations	12
5.	No. of blocks	10
6.	No. of circles	10
7.	No. of Panchayats	153
8.	No. of villages	1530

## DEMOGRAPHY OF JAMUI

As per the Census report 2011, the population of Jamui district is 1,70,000 in which males are 91,004 and females are 78,996. The sex ratio is 822/1000. The children (0-6 years) population constitutes 10.32%. Children (0-6 years) sex ratio is 958/1000. It is above the average national ratio 949/1000.

The population growth rate is 25.85% in which the rate of boys is 15.12% and the rate of girls is 18.73% (average 16.43%). The

**Table – 2: Administrative Units of Jamui District, Bihar**

S. No.	Blocks	Panchayats	Villages
1.	Chakai	23	600
2.	Khaira	22	120
3.	Jhajha	20	197
4.	Sono	19	250
5.	Sikandara	14	068
6.	Lakshmipur	13	082
7.	Aliganj	13	069
8.	Jamui	12	081
9.	Barahat	09	043
10.	Gidhaur	08	020
Total	10	153	1530

### **Flora and Fauna:**

Southern block of the district has forest area where variegated vegetation is found. Sal is the most important tree. Sakhua (*Shorea robusta*), kathal (*Artocarpus heterophyllus*), khair (*Senegalia* or *Acacia catechu*), mahua (*Madhuca longifolia*) and kendu (*Diospyros melanoxylon*) are the common trees of the southern area of this district. Besides them peepal, gular, banyan, mango are seen commonly spread almost all over the district. A number of species of bamboos and grasses are found in the entire hills.

Hyena, fox, wild dogs, mongoose, porcupines and wild cat (*Tendua*, *Panthera pardus*) are common in the hill area of the district. Small wild creatures are also found in the forest.

### **DEMOGRAPHY OF JAMUI:**

As per the census report 2011, the population of Jamui district is total 1760405 in which males are 916064 and females are 844341. The sex ratio is 922/1000. The children (0 – 6 years) population comprises 18.32%; children (0-6 years) sex ratio is 956/1000. It is above the average national ratio 940/1000.

The population growth rate is 25.85% in which the rate of boys is 18.12% and the rate of girls is 18.78% (average 18.43%). The



population density of the district is 401/km<sup>2</sup>; it is below the national population density 588/km<sup>2</sup>. However, only 8.26 % people live in urban area and 91.74% in rural area.

According to the census of 1991, 17.35% population is scheduled caste and 5.07% is scheduled tribe. According to 2011 census, the SC population is 17.4% (17.29 Mahadalit), ST population is 4.8% and minority population is 12.2%.

The population of people below poverty line (BPL) is 2,28,944 that is 59.56% of the total population.

20.6% rural population comprises agriculture laborers. However, only 22.9% population of SC/ST and 12.33% population of Muslims are engaged in agriculture.

### Education:

The average literacy of Jamui district is 59.79% in which males have 71.24% and females have 47.29%.

Literacy	Rural	Urban
Male	70.15%	82.86%
Female	45.56%	65.95%
Total	58.4%	74.85%

As per data of Bihar State Government, 2011, as many as 2,82,770 children are enrolled in government schools and have been supplied mid-day meal with almost 100 % attendance.

### Water Resources:

Rain water and underground water are the main source of water as the district is much away from perennial Ganges. The uncountable number of hill streams form minor rivulets but some of them combine together to form seasonal rivers such as Anjana, Ulai, Ajay, Burnasr, Bunbuni, Nagi, Nakti etc. and Kiul River is largest one.

There is no big irrigation project in this district. Small irrigation dams and natural water reservoirs like Garhi dam, Nakti dam and Nagi dam are the main source of the irrigation. Kukur jhap dam on Anjana River, lower “Kiul Jalasaya scheme” and “Gidheswera Payeen” are some of the other important irrigation projects of the district. Water of Kiul, Ulai, and other rivers and other tributaries are also used for irrigation.

Open boring surface percolation wells and tube wells are also being used for irrigation by peasants.

### Agriculture:

The major crops produced in this region are rice, maize, wheat and pulses along with vegetables seasonally. As compared to Jamui block (83.33%), only 55.49% land is used in agriculture in Jhajha block. The exact data of Lakshmipur, Gidhaur and Aliganj is not available that comprises about 19,000 hectare (3,05,289 ha against 2,84,194 ha available data).

**Table – 3:** Cultivation land use in different Blocks of Jamui district

S. No.	Blocks	Area	Cultivated area (%)	Main crops produced
1.	Chakai	72659.83	40.43	Rice, maize
2.	Khaira	42070.90	47.78	Rice, wheat
3.	Jhajha	39616.89	55.49	Rice, wheat
4.	Sono	36147.75	61.84	Rice, maize
5.	Sikandara	34211.28	71.62	Rice, wheat
6.	Lakshmipur	NA	NA	NA
7.	Aliganj	NA	NA	NA
8.	Jamui	14208.26	83.33	Rice, wheat
9.	Barahat	45279.86	52.96	Rice, wheat
10.	Gidhaur	NA	NA	NA
	Total	284194.83	58.49	

## **JHAJHA BLOCK**

In 1991 when Jamui was made a district, Jhajha became a block of Jamui. Jamui is a separate parliamentary constituency.

Jhajha block of Jamui has an area about 9.87 km<sup>2</sup> and population about 40,646 as per 2011 census. Males constitute 53% and females 46%. Jhajha has an average literacy 63%, higher than the national literacy 59.5%; male literacy is 71% and female literacy is 53%. In Jhajha 15% population is under age of 6 years.

Jhajha has one degree college, One women's college, four +2 schools, three middle schools and a number of primary schools. For higher education students migrate to other nearby cities.

In Jhajha block, 20 village panchayats and 198 villages are present in which Chapa (07 villages), Baijla (07 villages), Karhara (10 villages), Barajora (--villages) and Pairgaha (16 villages) panchayats fall near Nagi river and Nakti dam. The important villages in the vicinity are Tulsikura, Tarakura, Dhobiakura, Goradamni, Chhapa, Haranja (two villages) of Chhapa panchayata, Karma of Karhara panchayata, Nakwadih Prakash Nagar, Chhuchunaraia) of Barajora panchayata, Baijla, Kubri, Kusauna, Bhelbinda, Kathbajra, Foksa and Jugar of Baijla panchayata and Saraia of Pairgaha panchayata.

### **Approach to Nagi and Nakti Bird Sanctuaries**

These two bird sanctuaries can be approached by rail and road routes.

Jhajha Junction is the nearest railway station from which the sanctuaries can be visited by road. Nagi dam is about 6.2 km from the railway station via Dhamna road but it is 7.6 km via State highway - 18. Nakti is about four km north to Nagi. From Jamui, Jhajha railway station is about 34 km.

National highway 18 and 82 and State Highway 333 connect Jhajha with nearby districts.



Fig 1: Satellite image of the dam area in Jamui, Bihar

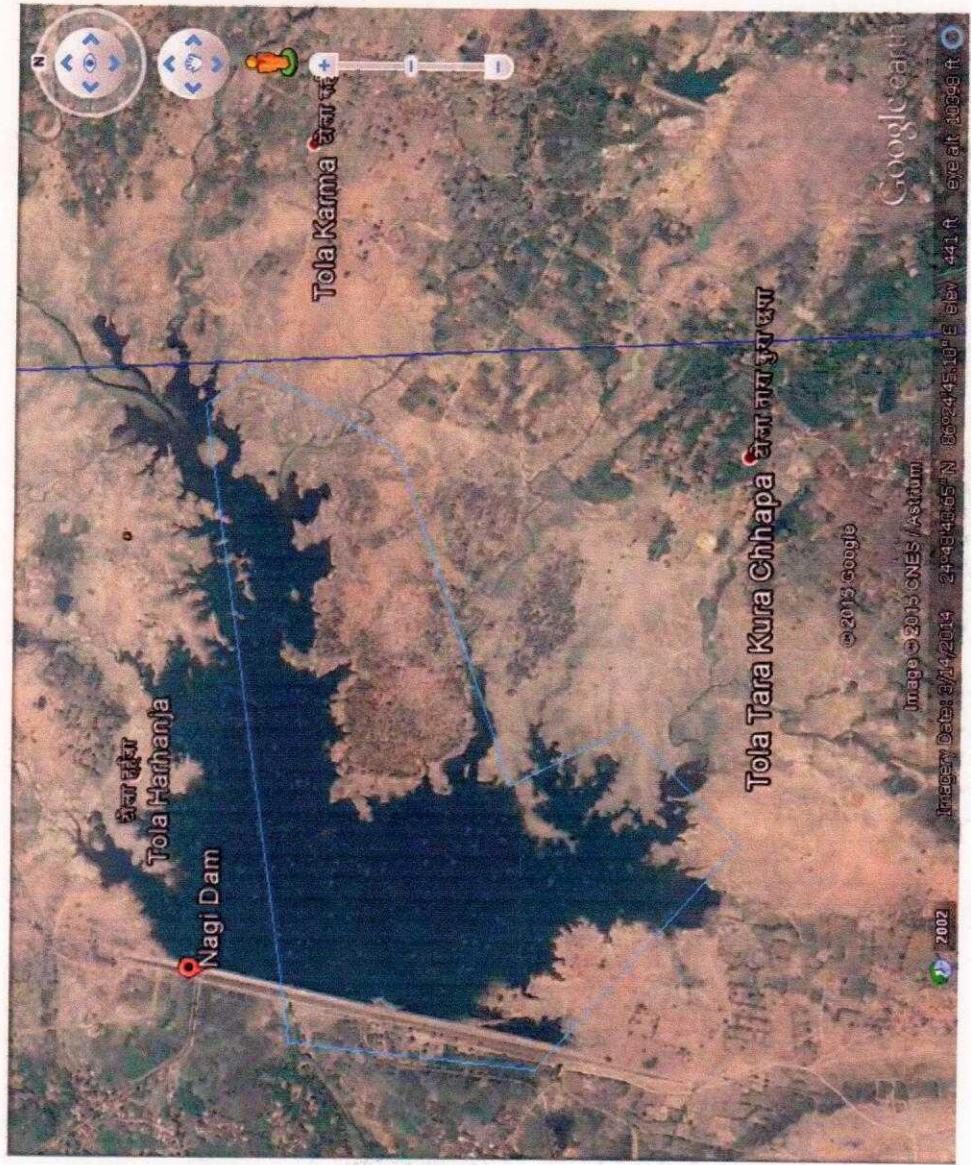


Fig 2: Satellite image of the Nagi Dam area in Jamui, Bihar

## NAGI DAM BIRD SANCTUARY

Nagi dam bird sanctuary is a small water body created by the construction of Nagi dam over the river Nagi. The water body has become heaven for the local and migratory birds. The sanctuary is located 6 km off the Jamui-Jhajha road under Jhajha revenue block of Jamui district. The sanctuary sight is assembled by the road only. It is located on Jamui Jhajha road in North-East direction and 31 km from the Jamui railway station. It is 12 km away from Jhajha railway station.

Total notified area of the sanctuary is 191.51 hectare or 1.915 km<sup>2</sup>. After construction of the dam over river Nagi state government has declared it as Nagi dam bird sanctuary vide its notification on S.O. 643 dated 22.07.1987 under section 18 of the wild life protection act 1972. The collector of the Jamui district issued a proclamation in the district gazette under section 21 of the wild life protection act 1972 on 16.11.1997. Since the land has been acquired by the state government for the reservoir, there is no right and this has been reported by the collector, Jamui to the government. Final notification of the sanctuary under section 26A of the wild life protection act 1972 was issued by the state government, 4.9.2009. The sanctuary comprise of the reserve area only. The dam sanctuary and installation related to the dam are within the sanctuary. There is no private installation inside the sanctuary area. The sanctuary area is very small and it consists mainly of the water body of the Nagi dam and some older plantation area around the dam site.

The clear water surface of the dam attracts a variety of migratory birds such as ducks, teals, and geese along with many species of resident birds. During winter season it is a unique picnic spot and bird watchers can see a large variety of birds at one place. There is no natural forest around the sanctuary but some plantation of miscellaneous species has been done in the area in 1984. The dam is surrounded by private farm lands.

Sanctuary is surrounded by Tarakura, and Karma on the east, Haranja (Laharia tand), Naukadih villages on the west, Harhanja on the north, Tarakura Chapa villages on the south and Bharat

(Prakash) nagar and Tola Barajor on the north-east. Fresh concrete boundary pillars have to be constructed on the priority base. There is core or buffer zone.

In the locality around Neg' Jain eight villages are situated very close to each other. These are Tarakura chhapa, Tulikura chhapa, Chhapa, Goradamni, Haraha - 1, 2 in chhapa panchayat, Kamra of Kamra panchayat and Nakuadi of Barajora panchayat.

Among these villages Goradamni is smallest having only 48 families whereas Tarakura chhapa is the largest having 184 families (Table - 4). The total population of these eight villages is 4283 in which children under 6 years are 931 (21.7%) and adults under 30 years are 1374 (32.1%), however the population of children is very low in Tarakura Chhapa (14.4%) and Kamra (13.12%) whereas it was higher in Chhapa (23.16%). It may be because of their improper education and awareness about family planning.

In Tulikura Chhapa and Chhapa villages adult population is not as high as compared to about 80% in other villages namely Haraha-1, Kamra and Nakuadi. The result suggests that in the three villages where children population is average or lower some awareness may have grown recently.

In Haraha - 1, 2 and Kamra there is no Muslim population, but in Tarakura chhapa, Tulikura chhapa and Goradamni 16-18% Muslims and remaining Hindus are present (Table - 5). In Haraha however Muslim population is higher about 48%. They live together and have common culture and share all activities of village equally. In these Village OBCs are dominant (59-70%) and SC population is 10-14% still there is no social discrimination.

From Table - 6 it is evident that only 20% people have Pucca (cemented) homes and others have un-cemented khapa homes or thatched homes, that is these are poor people with insufficient resources. In Goradamni literacy is very poor (16%) whereas in other villages 30-45% literacy is found. It is because only 4 primary schools are present in these eight villages.

About 80% population is dependent on agriculture, but being a hill area, none has large farm house. Therefore, almost 90% families are engaged in business of hill (native cigarette) making and brown making. They also have pet animals like cattle (25-35%), goats (6-12%) and poultry (0-12%) as additional source of

## SOCIO-ECONOMICAL STUDY OF VILLAGES NEAR NAGI DAM

In the locality around Nagi dam eight villages are situated very closely; these are Tarakura chhapa, tulsikura chhapa, chhapa, goradamni, Haranja -1, 2 in chhapa panchayata, Karma of Karhara panchayata and Nakuadih of barajora panchayata.

Among these villages Goradamni is smallest having only 48 families whereas Tarakura chhapa is the largest having 194 families Table – 4). The total population of these eight villages is 4853 in which children under 6 years are 931 (19.1%) and adults under 30 years are 1374 (28.31%). however, the population of children is very low in Tarakura Chahapa (14.4%), and Karma (12.02%) whereas it was higher in Chhhapa (29.16%). It may be because of their improper education and awareness about family planning.

In Tulsikura Chhapa and Chhapa villages adult population of about 18% only as compared to about 36% in three villages namely Haranja-1, Krma and Nakuadih. The result suggests that in the three villages where children population is average or lower some awareness must have grown recently.

In Haranja -1, 2 and Karma there is no Muslim population, but in in Tarakura chhapa, Tulsikura chhapa, chhapa and Goradamni 16-18% Muslims and remaining Hindus are present (Table – 5). In Nakuadih however, Muslim population is higher about 48%. They live together amicably and have common culture and share all activities of village equally. In these village OBCs are dominant (59 – 90%), and SC population is 10 – 41% still there is no social discrimination.

From Table – 6 it is evident that only 20 % people have *Pakka* (cemented) homes and others have un-cemented *khapra* homes or thatched homes, that is, these are poor people with insufficient livelihood. Goradamni has very poor (16%) literacy whereas in other villages 30-45% literacy is found. It is because only 4 primary schools and two middle schools are present in these eight villages.

About 60% population is dependent on agriculture, but being a hill area, none has larger farm house. Therefore, almost 90% families do household business of bidi (native cigarette) making and broom making. They also have pet animals like cattle (25-35%), goats (5-12%) and poultry (0-12%) as additional source of



income. Still, not less than 30% people have to work as Daily labours in the nearby cities and 23% have migrated out for job.

Only 20 families have a TV set, and 10 motorcycles in these 8 villages. About 130 families have transistors as only source of information.

Hardly 30% families have their own toilet, and they frequently go in open for it. In every village 4-5 open wells as well as tube wells are present as only source of potable water. The water quality is however unknown.

For these eight villages only six primary health centres are present with very poor facilities and people frequently go to Jhajha city for treatment. The most prevalent diseases of this area are asthma (6.32%), abdominal ailments (4.29%), tuberculosis (2.63%) and others.

Table - 4: Population in different villages near Nagi Dam, Jhajha, Bihar

S. No.	Name of Panchayat	Name of Village	Number of Families	Population Size	Children's Population	Adult (30 yrs) Population
1.	Chhapa	Tarakura Chapa	194	M = 494 F = 479 Total = 973	M = 66 F = 69 Total = 135 (14.40%)	M = 104 F = 94 Total = 198 (21.13%)
2.	Chhapa	Tulsikura Chapa	125	M = 328 F = 364 Total = 692	M = 71 F = 88 Total = 159 (22.97%)	M = 69 F = 54 Total = 128 (18.49%)
3.	Chhapa	Chhapa	71	M = 196 F = 188 Total = 384	M = 54 F = 58 Total = 112 (29.16%)	M = 42 F = 34 Total = 76 (19.79%)
4.	Chhapa	Gora Damni	48	M = 143 F = 138 Total = 281	M = 31 F = 33 Total = 64 (22.77%)	M = 47 F = 35 Total = 82 (29.18%)
5.	Chhapa	Laharia tand	123	M = 349 F = 307 Total = 656	M = 77 F = 63 Total = 140 (21.34%)	M = 126 F = 116 Total = 242 (36.89%)
6.	Chhapa	Haranja	119	M = 340 F = 308 Total = 648	M = 61 F = 74 Total = 135 (20.83%)	M = 109 F = 104 Total = 211 (32.56%)
7.	Karhara	Karma	138	M = 424 F = 341 Total = 765	M = 57 F = 35 Total = 92 (12.02%)	M = 141 F = 131 Total = 272 (35.55%)
8.	Barajora	Nakuadih	84	M = 217 F = 237 Total = 454	M = 50 F = 44 Total = 94 (20.70%)	M = 90 F = 75 Total = 165 (36.34%)
				4853	931 (19.1%)	1374 (28.31%)

**Table - 5:** Ethnic distribution of people in different villages near Nagi Dam, Jhajha, Bihar

S. No.	Name of Panchayat	Name of Village	Religion	OBC %	SC %	ST %
1.	Chhapa	Tarakura Chapa	Hindu – 84 % Mushlim – 16 %	73	27	None
2.	Chhapa	Tulsikura Chapa	Hindu – 83 % Mushlim – 17 %	74	26	None
3.	Chhapa	Chhapa	Hindu – 16 % Mushlim – 18 %	73	27	None
4.	Chhapa	Gora Damni	Hindu – 82 % Mushlim - 18%	72	28	None
5.	Chhapa	Laharia tand	Hindu – 100 % Mushlim – Zero	60	40	None
6.	Chhapa	Haranja	Hindu – 100 % Mushlim - Zero	60	40	None
7.	Karhara	Karma	Hindu – 100 % Mushlim - Zero	59	41	None
8.	Barajora	Nakuadih	Hindu – 52 % Mushlim – 48 %	90	10	None

Table - 6A: Social status of people in different villages near

**Table - 6A:** Social status of people in different villages near  
Nagi Dam, Jhajha, Bihar

S. No.	Name of Panchayat	Name of Village	Approach (Road)	Pakka house	Kachha house	Thatched house
1.	Chhapa	Tarakura Chapa	Pakka & Kachha	18%	46%	36%
2.	Chhapa	Tulsikura Chapa	Pakka & Kachha	19%	42%	39%
3.	Chhapa	Chhapa	Pakka & Kachha	21%	38%	41%
4.	Chhapa	Gora Damni	Pakka & Kachha	14%	30%	56%
5.	Chhapa	Laharia tand	Pakka & Kachha	21%	53%	24%
6.	Chhapa	Haranja	Pakka & Kachha	18%	36%	46%
7.	Karhara	Karma	Pakka & Kachha	20%	42%	38%
8.	Barajora	Nakuadih	Pakka & Kachha	21%	32%	47%

**Table – 6B:** Social status of people in different villages near Nagi Dam, Jhajha, Bihar

S. No.	Name of Panchayat	Name of Village (Population)	Schools	Educated	Uneducated
1.	Chhapa	Tarakura Chapa (973)	Primary : 01 Middle : No	M – 190 F – 104 Total – 294 (30.21%)	M – 304 F – 375 Total – 679 (69.79%)
2.	Chhapa	Tulsikura Chapa (692)	Primary : No Middle: 01	M – 174 F – 68 Total – 242 (34.97%)	M – 154 F – 396 Total – 450 (65.03%)
3.	Chhapa	Chhapa (384)	Primary: 01 Middle: No	M – 96 F – 47 Total – 143 (37.23%)	M – 100 F – 141 Total – 241 (63.77%)
4.	Chhapa	Gora Damni (281)	Primary: No Middle: No	M – 37 F – 09 Total – 46 (16.37%)	M – 106 F – 129 Total – 235 (85.63%)
5.	Chhapa	Laharia tand (656)	Primary: 01 Middle: No	M – 188 F – 66 Total – 254 (38.71%)	M – 161 F – 241 Total – 402 (62.29%)
6.	Chhapa	Haranja (648)	Primary: No Middle: 01	M – 176 F – 53 Total – 229 (35.33%)	M – 164 F – 255 Total – 419 (64.67%)
7.	Karhara	Karma (765)	Primary: 01 Middle: No	M – 205 F – 111 Total – 316 (41.30%)	M – 219 F – 230 Total – 449 (58.70%)
8.	Barajora	Nakuadih (454)	Primary: No Middle:01	M – 127 F – 74 Total – 201 (44.27%)	M – 127 F – 141 Total – 268 (55.73%)

**Table - 7: Social status (Occupational Classes) of people in different villages near Nagi Dam, Jhajha, Bihar**

S. No.	Name of Panchayat	Name of Village	Caste business	Agri-culture	Daily laborers	Outstation laborers	Household business
1.	Chhapa	Tarakura Chapa	06%	59%	28%	23%	94%
2.	Chhapa	Tulsikura Chapa	07%	58%	32%	10%	95%
3.	Chhapa	Chhapa	07%	54%	26%	20%	91%
4.	Chhapa	Gora damni	08%	56%	21%	23%	92%
5.	Chhapa	Laharia tañd	10%	50%	29%	11%	98%
6.	Chhapa	Haranja	09%	58%	27%	06%	98%
7.	Karhara	Karma	08%	64%	16%	12%	96%
8.	Barajora	Nakuadih	32%	48%	11%	9%	92%

Table - 8: Social status (Livestock) of people in different villages near Nagi Dam, Jhajha, Bihar

S. No.	Name of Panchayat	Name of Village	Cow	Buffalo	Goat	Oxen	Poultry
1.	Chhapa	Tarakura Chapa	35	02	10	09	10
2.	Chhapa	Tulsikura Chapa	31	03	12	05	10
3.	Chhapa	Chhapa	27	03	08	04	07
4.	Chhapa	Gora damni	22	02	05	04	12
5.	Chhapa	Laharia tand	30	05	10	06	0
6.	Chhapa	Haranja	28	06	11	07	0
7.	Karhara	Karma	17	07	09	04	0
8.	Barajora	Makuadih	26	10	15	12	70

62

52

37

133

258

**Table - 9: Social status (Commodities) of people in different villages near Nagi Dam, Jhajha, Bihar**

S. No.	Name of Panchayat	Name of Village	Radio	TV	Bicycle	Motor cycle	Bullock cart
1.	Chhapa	Tarakura Chapa	25	05	30	02	03
2.	Chhapa	Tulsikura Chapa	15	02	28	01	02
3.	Chhapa	Chhapa	06	02	15	01	02
4.	Chhapa	Gora damni	09	02	10	0	02
5.	Chhapa	Laharia tand	21	02	28	01	02
6.	Chhapa	Haranja	17	02	21	01	01
7.	Karhara	Karma	22	03	25	02	0
8.	Barajora	Nakuadih	15	02	17	02	01



**Table - 10: Toilet and Water Resources in different villages near Nagi Dam, Jhajha, Bihar**

S. No.	Name of Panchayat	Name of Village (No. Family)	Toilet	Water Resources	
				Open Well	Tube Well
1.	Chhapa	Tarakura Chapa (194)	54 (27.83%)	05	04
2.	Chhapa	Tulsikura Chapa (125)	37 (29.6%)	05	04
3.	Chhapa	Chhapa (71)	28 (39.43%)	04	03
4.	Chhapa	Gora damni (48)	17 (34.41%)	04	03
5.	Chhapa	Laharia tand (123)	41 (33.33%)	03	02
6.	Chhapa	Haranja (119)	37 (31.09%)	04	04
7.	Karhara	Karma (138)	42 (30.43)	04	05
8.	Barajora	Nakuadih (84)	28 (33.33%)	03	04

**Table - 11: Health problems of people in different villages near Nagi Dam, Jhajha, Bihar**

S. No.	Name of Panchayat	Name of Village	Health centres (PHC)	Diseases			
				Tuber-culosis	Asthma	Abdominal	Others
1.	Chhapa	Tarakura Chapa	1	12 (1.23%)	37 (3.8%)	25 (2.57%)	24 (2.46%)
2.	Chhapa	Tulsikura Chapa	0	16 (2.31%)	26 (3.76%)	38 (5.49%)	20 (2.89%)
3.	Chhapa	Chhapa	1	14 (3.6%)	40 (10.42%)	24 (6.25%)	22 (5.72%)
4.	Chhapa	Gora damni	1	16 (5.69%)	40 (14.23%)	26 (9.25%)	18 (6.40%)
5.	Chhapa	Laharia tand	1	18 (2.78%)	52 (8.04%)	21 (3.25%)	09 (1.39%)
6.	Chhapa	Haranja	0	15 (2.31%)	50 (7.71%)	19 (2.93%)	16 (2.46%)
7.	Karhara	Karma	1	17 (2.22%)	32 (4.18%)	22 (2.87%)	29 (3.79%)
8.	Barajora	Nakuadih	1	10 (2.20%)	30 (6.60%)	42 (9.25%)	18 (3.96%)
				128 (2.63%)	307 (6.32%)	218 (4.49%)	156 (3.21%)

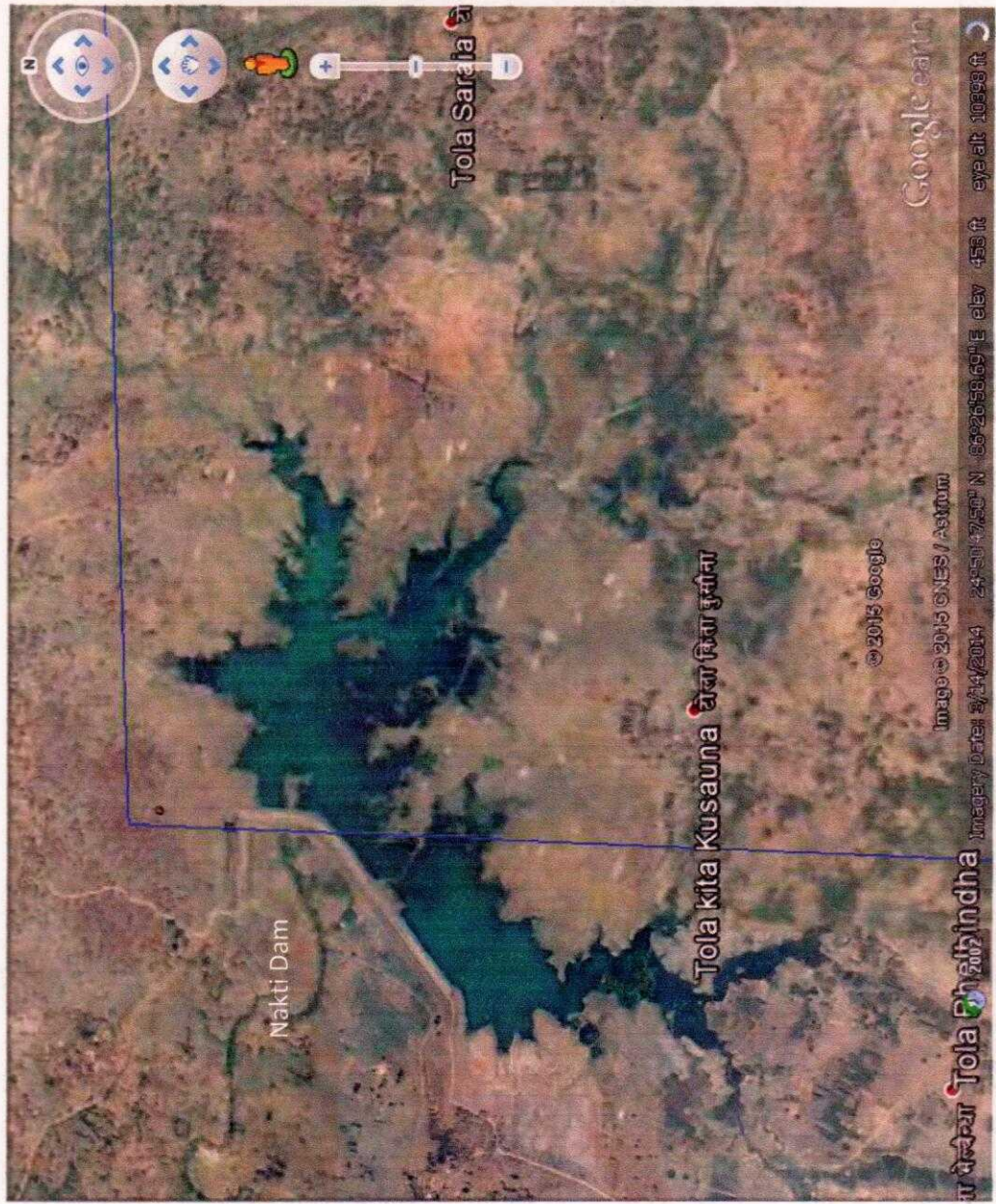


Fig 3: Satellite image of the Nakti Dam area in Jamui, Bihar

## NAKTI DAM BIRD SANCTUARY

Nakti dam bird sanctuary is a small water body created by the construction of Naktii dam over the river Nakti. The water body has become heaven for the local and migratory birds. The sanctuary is located 7 km off the Jamui-Jhajha road under Jhajha revenue block of Jamui district. The sanctuary sight is asssembled by the road only. It is located on Jamui Jhajha road in North-East direction and 31 km from the Jamui railway station. It is 12 km away from jhajha railway station.

Total notified area of the sanctuary is 332.85 hectare or 3.3258 km<sup>2</sup>. After construction of the dam over river Nakti state government has declared it as Nakti dam bird sanctuary vide its notification on S.O. 643 dt. 22.07.1987 under section 18 of the wild life protection act 1972. The collector of the Jamui district issued a proclamation in the district gazette under section 21 of the wild life protection act 1972 on 16.11.1997. Since the land has been acquired by the state government for the reservoir, there is no right and this has<sup>e</sup> been reported by the collector, Jamui to the government. Final notification of the sanctuary under section 26A of the wild life protection act 1972 was issued by the state government, 4.9.2009. The sanctuary comprise of the reserve area only. The dam sanctuary and installation related to the dam are within the sanctuary. There is no private installation inside the sanctuary area. The sanctuary area is very small and it consists mainly of the water body of the Nakti dam and some older plantation area around the dam site.

Sanctuary is surrounded by Gamharia, and Saraia on the east, Kathbajra abd Jugra villages on the west, Baijla and Jugra on the north and Belbingha, Kubri and Kusauna villages on the south. Fresh concrete boundary pillars have to be constructed on the priority base. There is core or buffer zone.

## SOCIO-ECONOMICAL STUDY OF VILLAGES NEAR NAKTI DAM

In the locality around Nakti dam seven villages are situated very closely; these are Kusauna, Baijla, Bhelbinda, Kathbajra, Phoksa, Jugra phoksa and Saraia. Saraia is under Pairgaha Panchayata whereas other six villages are under Baijla Panchayata.

Among these villages Kathbajra and Jugra Phoksa are very small having only 43 and 47 families respectively, whereas Sarai is the largest having 175 families followed by Baijla (154 families) and Bhelbinda (131 families) (Table – 12). The total population of these seven villages is 3885 in which children under 6 years are 752 (19.36%) and adults under 30 years are 920 (23.68%). However, the population of children is very low in Kathbajra (16.5%) whereas it was higher in Kasauna (22.96 %) and Phoksa (21.97%). It may be because of their improper education and awareness about family planning as well as poor medical facilities.

In Jugra Phoksa and Sarai villages adult population of about 17% only as compared to about 31.5% in Kathbajra and 33% in Kusauna. The result suggests that in the villages where children population is average or lower some awareness may have grown recently.

Only 26% Muslim population is present in Kusauna village but in other villages are only Hindus (Table – 13). In Kusauna 13%, Bhelbinda 15% and in Sarai 50% population is that of tribals. In these village OBCs are dominant (50 – 100 %), and SC population is 17 – 34 %. In Kathbajra and sarai there is no scheduled caste population. In spite of mixed population there is no social discrimination. They live together amicably and have common culture and share all activities of village equally.

From Table – 14A, it is evident that only 22 – 34 % people have *Pakka* (cemented) homes and others have un-cemented *khapra* homes or thatched homes, that is, these are poor people with insufficient livelihood. Pairgaha has very poor (26%) literacy whereas in other villages 35 – 50 % literacy is found. It is because only one middle school is present in these seven villages though one primary school is present in each village.

About 40 to 50 % population is dependent on agriculture, but in Kathbajra only 14% people depend on agriculture. Being a hill area,

none has larger farm house. Therefore, almost 90% families do household business of bidi (native cigarette)-making and broom making. A bidi maker can earn about 50 rupees per day and average 2-3 persons per family are engaged in it and earn 150 rupees per day. The broom is made mainly by tribes in some villages mainly in winter from munja grasses (*Saccharum munja*)

They also have pet animals like cattle (11 – 32 %), goats (5 – 13 %) and poultry by Muslims as additional source of income. Still, not less than 30% people have to work as daily laborers in the nearby cities, and 10 - 20 % has migrated out for job.

Only 17 families have a TV set, and 47 motorcycles in these 7 villages. About 63 families have transistors as only source of information.

Hardly 30 – 43 % families have their own toilet, and they frequently go in open for it. In every village 2 – 3 open wells as well as tube wells are present as only source of potable water. Baijla and Sarai are larger villages and number of open wells and tube wells is more. The water quality is however unknown.

For these seven villages only 4 primary health centres (PHC) are present with very poor facilities and people frequently go to Jhajha city for treatment. The most prevalent diseases of this area are asthma (6.54%), abdominal ailments (6.05%), tuberculosis (2.57%) and others.

Table - 12: Population in different villages near Nakti Dam, Jhajha, Bihar

S. No.	Name of Panchayat	Name of Village	Number of Families	Population Size	Children's Population	Adult (30 yrs) Population
1.	Baijla	Kusauna	60	M = 164 F = 167 Total = 331	M = 41 F = 35 Total = 76 (22.96%)	M = 62 F = 48 Total = 110 (33.23%)
2.	Baijla	Bhelbinda	131	M = 357 F = 337 Total = 714	M = 70 F = 58 Total = 128 (17.92%)	M = 98 F = 92 Total = 190 (26.61%)
3.	Baijla	Baijla	154	M = 457 F = 408 Total = 865	M = 86 F = 86 Total = 172 (19.88%)	M = 103 F = 98 Total = 201 (23.23%)
4.	Baijla	Kathbajra	43	M = 110 F = 96 Total = 206	M = 21 F = 13 Total = 34 (16.50%)	M = 38 F = 27 Total = 65 (31.55%)
5.	Baijla	Phoksa	97	M = 275 F = 262 Total = 537	M = 59 F = 59 Total = 118 (21.97%)	M = 86 F = 76 Total = 142 (26.44%)
6.	Baijla	Jugra phoksa	47	M = 237 F = 170 Total = 407	M = 43 F = 37 Total = 80 (19.65%)	M = 38 F = 32 Total = 70 (17.19%)
7.	Paigaha	Saraia	175	M = 429 F = 396 Total = 825	M = 71 F = 73 Total = 144 (17.45%)	M = 73 F = 69 Total = 142 (17.21%)
				3885	752 (19.36%)	920 (23.68%)

**Table - 13:** Ethnic distribution of people in different villages near Nakti Dam, Jhajha, Bihar

S. No.	Name of Panchayat	Name of Village	Religion	OBC %	SC %	ST %
1.	Baijla	Kusauna	Hindu – 74% Mushlim –26%	70	17	13
2.	Baijla	Bhelbinda	Hindu – 100% Mushlim – no	61	34	15
3.	Baijla	Baijla	Hindu – 100 % Mushlim – no	56	46	no
4.	Baijla	Kathbajra	Hindu –100 % Mushlim - no	100	no	no
5.	Baijla	Phoksa	Hindu –100% Mushlim - no	77	23	no
6.	Baijla	Jugra phoksa	Hindu –100% Mushlim - no	70	30	no
7.	Pairgaha	Saraia	Hindu –100% Mushlim - no	50	no	50



Table - 14A : Social status of people in different villages near Nakti Dam, Jhajha, Bihar

Table - 14A : Social status of people in different villages near Nakti Dam, Jhajha, Bihar

S. No.	Name of Panchayat	Name of Village	Approach (Road)	Pakka house	Kachha house	Thatched house
1.	Baijla	Kusauna	Pakka & Kachha	27%	43%	30%
2.	Baijla	Bhelbinda	Pakka & Kachha	20%	33%	47%
3.	Baijla	Baijla	Pakka & Kachha	34%	36%	30%
4.	Baijla	Kathbajra	Pakka & Kachha	22%	58%	20%
5.	Baijla	Phoksa	Pakka & Kachha	21%	44%	35%
6.	Baijla	Jugra phoksa	Pakka & Kachha	22%	39%	39%
7.	Paigaha	Saraia	Pakka & Kachha	22%	48%	30%

**Table – 14B : Social status of people in different villages near Nakti Dam, Jhajha, Bihar**

S. No.	Name of Panchayat	Name of Village (population)	Schools	Educated	Uneducated
1.	Baijla	Kusauna (331)	Primary : 01 Middle : 01	M – 78 F – 45 Total – 123 (37.16%)	M – 86 F – 122 Total – 208 (62.83%)
2.	Baijla	Bhelbinda (714)	Primary : 01 Middle: 00	M – 238 F – 122 Total – 360 (50.42%)	M – 119 F – 235 Total – 354 (49.57%)
3.	Baijla	Baijla (865)	Primary: 01 Middle: 01	M – 219 F – 155 Total – 374 (43.23%)	M – 238 F – 253 Total – 491 (56.76%)
4.	Baijla	Kathbajra (206)	Primary: 01 Middle: 00	M – 65 F – 26 Total – 91 (44.17%)	M 45 F – 90 Total – 115 (55.82%)
5.	Baijla	Phoksa (537)	Primary: 01 Middle: 01	M – 155 F – 90 Total – 245 (45.62%)	M – 120 F – 172 Total – 192 (35.75%)
6.	Baijla	Jugra Phoksa (407)	Primary: 01 Middle: 00	M – 115 F – 28 Total – 143 (35.13%)	M – 122 F – 142 Total – 264 (64.86%)
7.	Paingaha	Saraia (825)	Primary: 01 Middle: 00	M – 145 F – 69 Total – 214 (25.93%)	M – 284 F – 327 Total – 611 (74.06%)

**Table - 15:** Social status (Occupational Classes) of people in different villages near Nakti Dam, Jhajha, Bihar

S. No.	Name of Panchayat	Name of Village	Caste business	Agri-culture	Daily laborers	Outstation laborers	Household business
1.	Baijla	Kusauna	20%	42%	18%	10%	91%
2.	Baijla	Bhelbinda	18%	53%	17%	12%	92%
3.	Baijla	Baijla	40%	32%	10%	18%	96%
4.	Baijla	Kathbajra	58%	14%	10%	18%	98%
5.	Baijla	Phoksa	30%	42%	18%	10%	98%
6.	Baijla	Jugra phoksa	27%	41%	12%	20%	98%
7.	Paigaha	Saraia	10%	47%	33%	10%	99%

**Table - 16: Social status (Livestock) of people in different villages near Nakti Dam, Jhajha, Bihar**

S. No.	Name of Panchayat	Name of Village	Cow	Buffalo	Goat	Oxen	Poultry
1.	Baijla	Kusauna	22	08	7	09	24
2.	Baijla	Bhelbinda	21	09	15	08	12
3.	Baijla	Baijla	26	08	12	06	00
4.	Baijla	Kathbajra	09	02	05	00	00
5.	Baijla	Phoksa	13	02	06	05	00
6.	Baijla	Jugra phoksa	07	03	06	02	00
7.	Paingaha	Saraia	22	10	13	08	30

**Table - 17: Social status (Commodities) of people in different villages near Nakti Dam, Jhajha, Bihar**

S. No.	Name of Panchayat	Name of Village	Radio	TV	Bicycle	Motor cycle	Bullock cart
1.	Baijla	Kusauna	08	03	04	01	01
2.	Baijla	Bhelbinda	09	03	07	01	00
3.	Baijla	Baijla	13	04	10	01	02
4.	Baijla	Kathbajra	07	01	05	00	01
5.	Baijla	Phoksa	10	02	09	01	00
6.	Baijla	Jugra phoksa	07	02	04	01	01
7.	Paigaha	Saraia	09	02	08	01	0

**Table - 18: Toilet and Water Resources in different villages near Nakti Dam, Jhajha, Bihar**

S. No.	Name of Panchayat	Name of Village (No. family)	Toilet	Water Resources	
				Open Well	Tube Well
1.	Baijla	Kusauna (60)	26 (43.33%)	02	03
2.	Baijla	Bhelbinda (131)	48 (36.64%)	03	03
3.	Baijla	Baijla (154)	66 (42.85%)	04	05
4.	Baijla	Kathbajra (43)	18 (41.86%)	03	02
5.	Baijla	Phoksa (97)	30 (30.92%)	04	02
6.	Baijla	Jugra Phoksa (47)	17 (36.17%)	02	02
7.	Paigaha	Saraia (125)	51 (40.80%)	07	04
		657	256 (38.96%)		

### Contribution of Forest Department

Forest and Range plans were prepared after recommendation of the working committee under the five year plan in 1954 for various purposes. It was completed in second five year plan in 1956. The law was to create the forest area which was built to regulate about the forest of various types but forest area has less potential.

**Table - 19: Health problems of people in different villages near Nakti Dam, Jhajha, Bihar**

S. No.	Name of Panchayat	Name of Village	Health centres (PHC)	Diseases			
				Tuber-culosis	Asthma	Abdominal	Others
1.	Baijla	Kusauna (331)	0	14 (4.22%)	30 (9.06%)	36 (10.87%)	10 (3.02%)
2.	Baijla	Bhelbinda (714)	1	14 1.96	34 (4.76%)	38 (5.32%)	14 (1.96%)
3.	Baijla	Baijla (865)	1	13 (1.50%)	36 (4.16%)	37 (4.27%)	12 (1.38%)
4.	Baijla	Kathbajra (206)	0	15 (7.28%)	37 (17.96%)	39 (18.93%)	09 (4.36%)
5.	Baijla	Phoksa (537)	1	13 (2.42%)	37 (6.89%)	40 (7.44%)	10 (1.86%)
6.	Baijla	Jugra Phoksa (407)	0	14 (3.43%)	38 (9.33%)	10 (2.45%)	15 (3.68%)
7.	Paingaha	Saraia (825)	1	17 (2.06%)	42 (5.09%)	35 (4.24%)	06 (0.72%)
				100 (2.57%)	254 (6.54%)	235 (6.05%)	76 (1.96%)

## Contribution of Forest Department:

Nagi and Nakti dams were prepared after recommendation of the planning commission under first five year plan in 1956 for irrigation purposes. It was completed in second five years plan in 1958. Its cost was 3 crores per dam. Nagi was built to irrigate about 1.55 thousand hectare lands, but Nakti Lake has less potential.

Total notified area of the Nagi Lake sanctuary is 191.51 hectare or 1.915 km<sup>2</sup> and that of Nakti lake sanctuary is 332.85 hectare or 3.3258 km<sup>2</sup>. After construction of the dam over river Nagi and Nakti rivers the state government has declared it them as bird sanctuaries vide its notification on S.O. 643 dt. 22.07.1987 under section 18 of the wild life protection act 1972. The collector of the Jamui district issued a proclamation in the district gazette under section 21 of the wild life protection act 1972 on 16.11.1997. Since the land has been acquired by the state government for the reservoir, there is no right of people to interfere in any activity of the lake and use water for any purpose other than agriculture as decides by the forest department. This has been reported by the collector, Jamui to the government. Final notification of the sanctuary under section 26A of the wild life protection act 1972 was issued by the state government, 4.9.2009.

The two lakes are surrounded by government land. It covers 500 meters to five km distance from lake at various sites in which reforestation program is being run by the Forest department.

Near Nagi Lake, the protected forest areas are present in the following villages situated about 500 meters away. :

Tarakura – Nakuadih	:	95.00 acre (38.475 hectare)
Tarakura–Chhapa	:	4. 15 acre (1.69 hectare)
Barajora	:	150.59 acre (60.99 hectare)
Nakuadih	:	677.99 acre (274.58 hectae)

Tarakura, Nakuadih, Tarakura chhapa, Barajor are at 1 km distance where as Chilko Taitaria and Boradamgi are at 5 km distance from the dam site.



Near Nakti dam also the protected forest areas are present in the following villages situated about 500 meters away.

Baijla	:	281.48 acre (113.99 hectare)
Saraia	:	368.77 acre (149.35 acre)
Kathnajra	:	627.80 acre (254.26 hectare)
Bhelbinda	:	18.46 acre (7.48 hectare)
Kubri	:	226.28 acre (91.64 hectare)

Kathbajra, Baijla, Kubri, Bhelbinda and Gamharia are situated at the distance 1 km whereas Phoksa, Gamharia, Khairna, Paigaha and Sabejor are situated 5 km away from the dam.

The forest department undertook the participation of people for reforestation and its protection. It supplies plantlets to people free of cost to grow green belt. To grow economically important plants such as the timber plants "Hariyali Mission" was started and a number of "Van samities" were made on panchayat level. The department gives financial support to the local people under this mission. The samity decides who should be selected for plantation aids in different years.

#### Financial Aids in 1914-15:

Jhajha forest division selected 23 natives of this area and distributed 1,12,755 plants of different species free of cost, and provided Rs. 60/- for maintenance of these plants. The first installment was 30 rupees, whereas second and third installments were 15 rupees each.

### **Dependency of People on Forest**

In addition to the income agriculture, house hold business of bidi making, broom making and cattle farming, they get extra help from forest products. They use forests as their pasture ground for cattle and goat. The leaves and wood collected from forests are used as their fuel. They also collect toddy from the palm trees and palm leaves are used in thatch making. The munja grass is used in broom as well as in rope making. Many of them illegally cut and sell timbers also.

Although the two lakes are not used for aquaculture and pisciculture, some fishes and molluscas do exist there and migratory birds frequently visit the dam sites. Some local people often catch fishes and snails for food. However, they protect the birds due to awareness generated by the department of environment and forest and NGO like Mandar Nature Club of Bhagalpur.

### **Suggestions for Further Economical Development:**

Jamui has been declared as one of the poorest region of Bihar where the scheduled caste population is in majority. For the socio-economical development of this region, particularly in the rural areas like that in villages near Nagi and Nakti bird sanctuary following suggestions are being given.

1. **More reservoirs** should be constructed for greater harvesting of rain water.
2. **Potable water resources** and **sanitary system** must be developed.
3. More **primary and middle schools** must be opened in different villages one per 250 children.
4. As the house hold business of **bidi** and **broom** making is not sustainable, some other small scale industries must be developed in this region.
5. **Agro-forestry** be developed with **public private partnership** on government lands and attempts should be made to grow fruit plants; the local communities must be given share on the basis of their constructive contribution.
6. **Bamboo farming** and making various items from it must be promoted.
7. **Animal husbandry** may be promoted.
8. **Medicinal and aromatic plants (Mepiculture)** must be developed to add new resources of income.
9. As the forests have abundance of grasses and leaves, these can be used for vermi-composting. The technology of **vermiculture** may be developed at community level so that the dependency on chemical fertilizer can decrease and some extra-income can be generated. It also reduces pollution of soil and water.



**Fig 4:** Reforestation program of Department of Environment and Forest



Fig 05 Team of MNC Visiting Forest Dept Jhahja Bihar



**Fig 07 Village Women Making "Bi i"**



**Fig 8 A Village Making Bambo "Dalia"**