



**Aadivasi Welfare Foundation**

2020-2021

# **FINAL REPORT ON PLANTATION ACTIVITY**

Jharkhand & Odisha



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# 1- PROFILE OF IMPLEMENTING AGENCY

Adivasi Welfare Foundation, is a section 8 organization working in multiple tribal dominated states in India (Adivasi means tribal), registered in Mumbai, Maharashtra, having its corporate office in Jamshedpur, Jharkhand. Our key areas of operations are in the domains of Nature and Biodiversity Conservation, Tackling climate changes, Soil and Moisture Conservation and Livelihood Generation.

We are an not-for-profit organization which started its operation in 2018. We carry out large-scale tree plantation in remote areas through the locals of the regions, thereby generating livelihood for them.

## Other Details-

### Address of Registered Office

Shop No 9, Highland Park Business Complex,  
Bhandup Village Rd, Mulund West,  
Mumbai, Maharashtra 400078

### Address of Corporate Office

Adivasi Welfare Foundation, Sri Krishna Road, Near Srinath University,  
Majhitola, Adityapur, Jamshedpur, Jharkhand 831013

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CIN- U85300MH2018NPL317398

# 2-PROJECT OVERVIEW

## 2.1 BACKGROUND

Deforestation and forest degradation are the major concerns in maintaining the ecological balance and conserving forest resources which bear global significance. In India, forests have undergone significant changes due to several anthropogenic as well as natural factors including increased population pressure. This has resulted in a reduction in rainfall, a heavy increase in the frequency of floods and droughts, and topsoil erosion. Environmentally, forests help in maintaining the ecological balance and for that, area coverage of forest plantation has to be increased.

Implementation of the large scale plantation project has therefore been considered as an effective approach in preventing further ecosystem degradation. The trees planted will help to reclaim degraded and deforested patches into a healthy primary forest, improved wildlife habitats and ecosystem services. Moreover, the increased vegetation in the region will help not just in controlling soil erosion, but will also improve moisture conservation, enhance water table in the region, controlling towards the prevention of the severe drought and flood conditions of the region and forest fires.

## 2.2 INTRODUCTION

In the financial year of 2020-21, The project for plantation of approx. 1.15 million saplings have been implemented on the common waste land of Jashipur block of Mayurbhanj district in the state of Odisha & Boram, Patamda, Potka, Golmuri Cum Jugsalai blocks of East Singhbhum district in the state of Jharkhand. In which, approx 0.4 million saplings have been planted in the state of Odisha & 0.7 million in the state of Jharkhand.

*The project is funded by Grow.Trees.*

Planting locations of different Projects 2020-21		
S. No.	Location of Plantation	No. of saplings planted
1	East. Singhbhum, Jharkhand	7,03,000
2	Mayurbhanj, Odisha	4,55,000
	Total	11,58,000



## **2.3 OBJECTIVE**

- Tackling Climate change and conserving the environment through Afforestation Activities.
- To Restore & Conserve local Bio-diversity.
- To increase green coverage
- To support local communities by providing Flowers, Fruits, Fodder and Fuel.
- To improve Catchment area of local Water bodies.
- Generating Livelihood for marginalized rural and/or Tribal people in the process.

## **2.4 METHODOLOGY**

Adivasi Welfare Foundation had identified the available area for plantation in consultation with the local population such as Grampanchayat/ Local Authorities/ Self-Help Groups. Then, we requested for obtaining permission for the plantation from concerned individuals and/or groups in prescribed manner. The primary stakeholders, the community members had been consulted by conducting focus group discussions, through the experienced people and local communities of the area.

Village level collectives were formed and their capacities had been built on protecting the plants against being untimely felled, from morbidity etc. The concerned departments had been consulted on choice of species, and other activities such as raising nursery, planting, soil and moisture conservation measures to be taken up etc. Each activity was duly documented. The entire area of plantation was then measured by GPS and polygon is prepared. The measured area was cross-checked with the record and maps were prepared by the field staff. Measurement of all surviving seedlings was made in the planted area.

## **2.5 PLANTING PROCESS**

1. Initiate series of village level discussions to select appropriate species for planting and ensure pitting on time and the planting plan with the community.
2. Collect secondary data (land details, permission letter from village institution)
3. Ensure approval of plans by village institution and commitment to protect the plants for years.
4. Timely procurement of saplings from nursery.
5. Monitor planting activities and timely after-care follow up.

# 2-PROJECT & SITE DETAILS

## 3.1. MAYURBHANJ, ODISHA

State	District	Block	No. of Saplings to be Planted	Plantation Area (HA)
Odisha	Mayurbhanj	Jashipur	4,55,000	182 Ha

### General Description

The district comes under the North Central Plateau agro-climatic zone. The climate of this district is characterized by an oppressive hot summer, high humidity nearly all the year around, and well distributed rainfall during the monsoon seasons. The project region is inhabited by a variety of communities. Prominent among these are Bhumija, Gondas, Kolha, Santhala and Mankadia. Most of them are settled agricultural and supplementing their income by being dependent on various forest resources.

### Baseline climatic conditions & Rainfall

Odisha is one of the warmest region in India with an average daily high temperature of 32 degrees centigrade. The climate is very warm with an annual average of 32 degrees, but has few truly tropical and sultry months. It is yearlong warm or hot. The most rain days occur from from June to September. The average rainfall in this district is 1,600.2 mm. The rainfall is fairly uniform over the district and the variation in the annual rainfall from year to year is not large.

### Soil Type

Soils of Odisha are mainly developed by the relief, parent material and climate. The biotic features, mainly the natural vegetation follows the climatic pattern. Soils of Odisha have been divided into 8 broad soils groups. North central plateau contains mainly red soil.

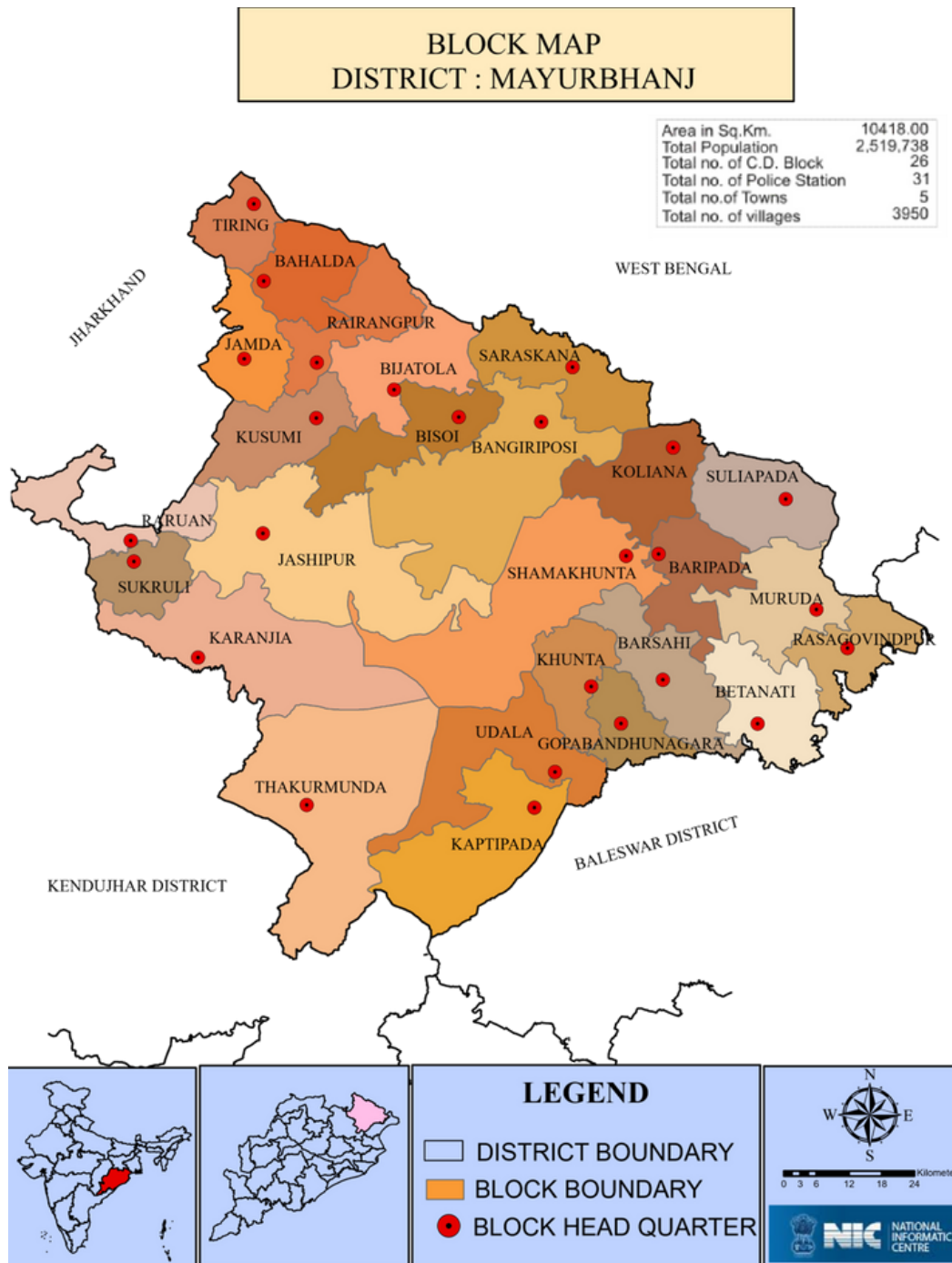
### Demography

According to the 2011 data, the district has a population of 2,519,738. Out of the total, only 7.66% lives in the town, while 92.34% live in villages. The population density is 242 people per sq.km.

## Flora & Fauna

Its vegetation and wildlife in the coastal area is completely different from that in the plateaus and plains as the back water lagoons – including Chilka, the largest coastal lake of India – have a very significant impact on the region's ecological and biological balance. A variety of resident birds stay around the islands covering the lakes, while an assortment of migratory birds find no better place than Orissa's forests. About 38% of Orissa's total land comes under forest cover. The state possesses about 7,000 species of flora which include the 120 species of Orchids and 63 species of Mangroves. The forests of the state house plenty of Teak and Bamboo trees.

Odisha (Orissa) wildlife is very diverse. As the flora of Odisha, large variety of wildlife can be observed in state's forests. They are home to a range of distinctive animals – including Royal Bengal Tigers, Asiatic Elephants, Leopards, Lion Tailed Macaque, Giant Squirrel, Indian Pangolin, Barking Deer, Mouse Deer, Sloth Bear, Sambar, Chowsinghas, Flying Cat and Wild Dogs, as well as Cobra, Python and Gharial etc.



3.1.1. Village wise Break-up of saplings planted

State	District	Block	Gram Panchayat	Village	Location - Latitude	Location - Longitude	Area (Ha)	No. of saplings
Odisha	Mayurbhanj	Jashipur	Manada	Manada	21.982445	86.016656	22.0	55,000
Odisha	Mayurbhanj	Jashipur	Jamukeshwar	Kumbharpandugandi	22.000568	86.059135	68.0	170,000
Odisha	Mayurbhanj	Jashipur	Jamukeshwar	Jamukeswar	22.024794	86.071223	40.0	100,000
Odisha	Mayurbhanj	Jashipur	Jamukeshwar	Bhanda	22.020823	86.073418	12.0	30,000
Odisha	Mayurbhanj	Jashipur	Manada	Manada	21.982965	86.016896	20.0	50,000
Odisha	Mayurbhanj	Jashipur	Baunsanali	Tangarbalda	22.014359	86.050273	8.0	20,000
Odisha	Mayurbhanj	Jashipur	Baunsanali	Bandiraposi	22.008026	86.037123	12.0	30,000
Total							182	4,55,000

3.1.2. Species wise Break-up of saplings planted

S. No.	Common Name	Scientific Name	Total
1	Teak	Tectona grandis	5,000
2	Acacia	Acacia auriculiformis	3,05,000
3	Aam	Mangifera indica	22,000
4	Jamun	Syzygium cumini	2,000
5	Nimbu	Citrus x limon	40,000
6	Seesham	Dalbergia sissoo	50,000
7	Guava	Psidium Guajava	20,000
8	Jackfruit	Artocarpus heterophyllus	2,000
9	Neem	Azadirachta indica	2,000
10	Palash	Butea monosperma	5,000
11	Kendu	Diospyros melanoxylon	2,000
Total			4,55,000



3.1.3. VILLAGE DEMOGRAPHICS & ACTIVITIES

VILLAGE 1- MANADA



According to Census 2011 information the location code or village code of Manada village is 388451. Manada village is located in Jashipur tehsil of Mayurbhanj district in Odisha, India. It is situated 8km away from sub-district headquarter Jashipur (tehsildar office) and 108km away from district headquarter Baripada. As per 2009 stats, Manada village is also a gram panchayat. The total geographical area of village is 195 hectares. Manada has a total population of 1,007 peoples, out of which male population is 503 while female population is 504. Literacy rate of manada village is 66.53% out of which 75.15% males and 57.94% females are literate. There are about 268 houses in manada village. Pincode of manada village locality is 75709 1.Karanjia is nearest town to manada for all major economic activities, which is approximately 35km away.

Block	Gram Panchayat	Village	Location- Latitude	Location - Longitude	Area (Ha)	No. of Saplings Planted	Mandays Created	Location Code
Jashipur	Manada	Manada	21.982965	86.016896	42	1,05,000	4000	OD20001

Species Wise Distribution			
S. No.	Common Name	Scientific Name	Total
1	Teak	Tectona grandis	5,000
2	Acacia	Acacia auriculiformis	60,000
3	Aam	Mangifera indica	4,500
4	Jamun	Syzygium cumini	2,000
5	Nimbu	Citrus x limon	5,000
6	Seesham	Dalbergia sissoo	15,000
7	Guava	Psidium Guajava	2,500
8	Jackfruit	Artocarpus heterophyllus	2,000
9	Neem	Azadirachta indica	2,000
10	Palash	Butea monosperma	5,000
11	Kendu	Diospyros melanoxylon	2,000
Total			1,05,000

## VILLAGE 2- KUMBHARPANDUGANDI



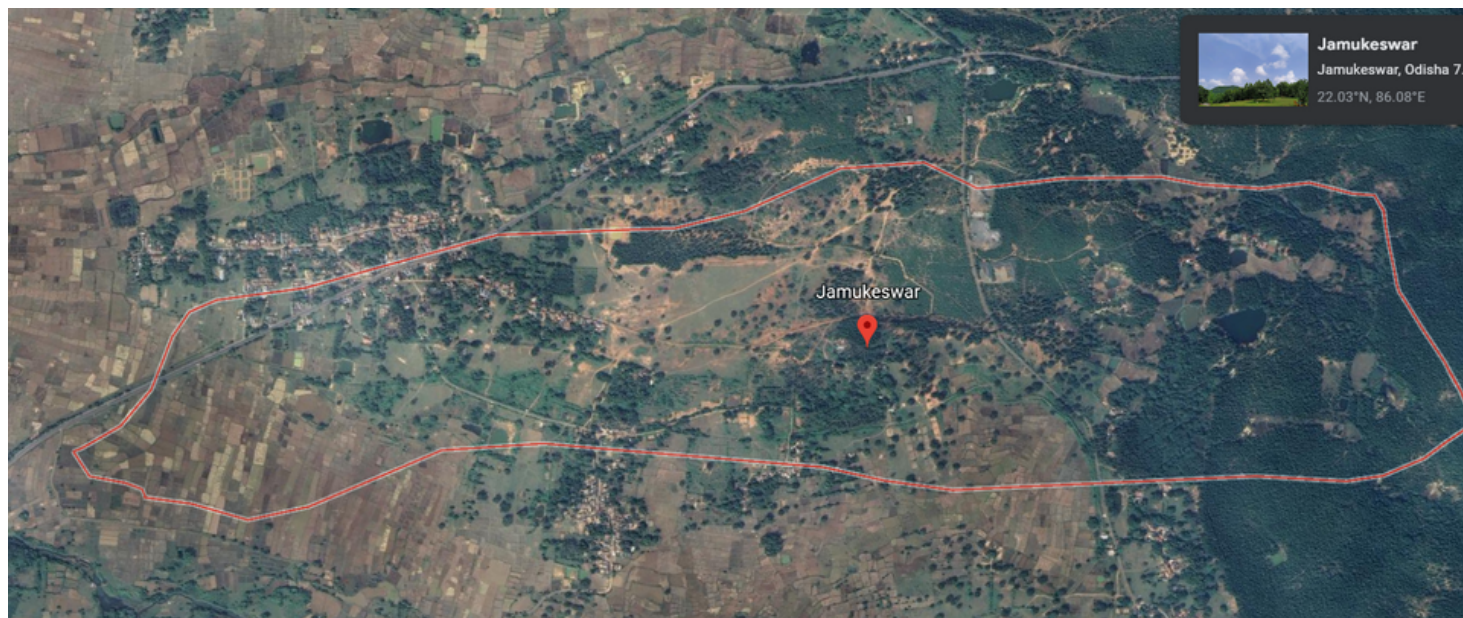
According to Census 2011 information the location code or village code of Kumbharbandugandi village is 388456. Kumbharbandugandi village is located in Jashipur tehsil of Mayurbhanj district in Odisha, India. It is situated 31 km away from sub-district headquarter Jashipur (tehsildar office) and 98 km away from district headquarter Baripada. As per 2009 stats, Jamukeswar is the gram panchayat of Kumbharbandugandi village. The total geographical area of village is 227 hectares. Kumbharbandugandi has a total population of 803 peoples, out of which male population is 411 while female population is 392. Literacy rate of Kumbharbandugandi village is 47.45% out of which 56.69% males and 37.76% females are literate. There are about 220 houses in kumbharbandugandi village. Pincode of Kumbharbandugandi village locality is 757034. Karanjia is nearest town to Kumbharbandugandi for all major economic activities, which is approximately 10km away.

Block	Gram Panchayat	Village	Location-Latitude	Location - Longitude	Area (Ha)	No. of Saplings Planted	Mandays Created	Location Code
Jashipur	Jamukeshwar	Kumbharbandugandi	22.000568	86.059135	68	1,70,000	6800	OD20002

Species Wise Distribution			
S. No.	Common Name	Scientific Name	Total
1	Acacia	Acacia auriculiformis	1,19,000
2	Aam	Mangifera indica	8,500
3	Nimbu	Citrus x limon	17,000
4	Seesham	Dalbergia sissoo	17,000
5	Guava	Psidium Guajava	8,500
Total			1,70,000



## VILLAGE 3- JAMUKESWAR

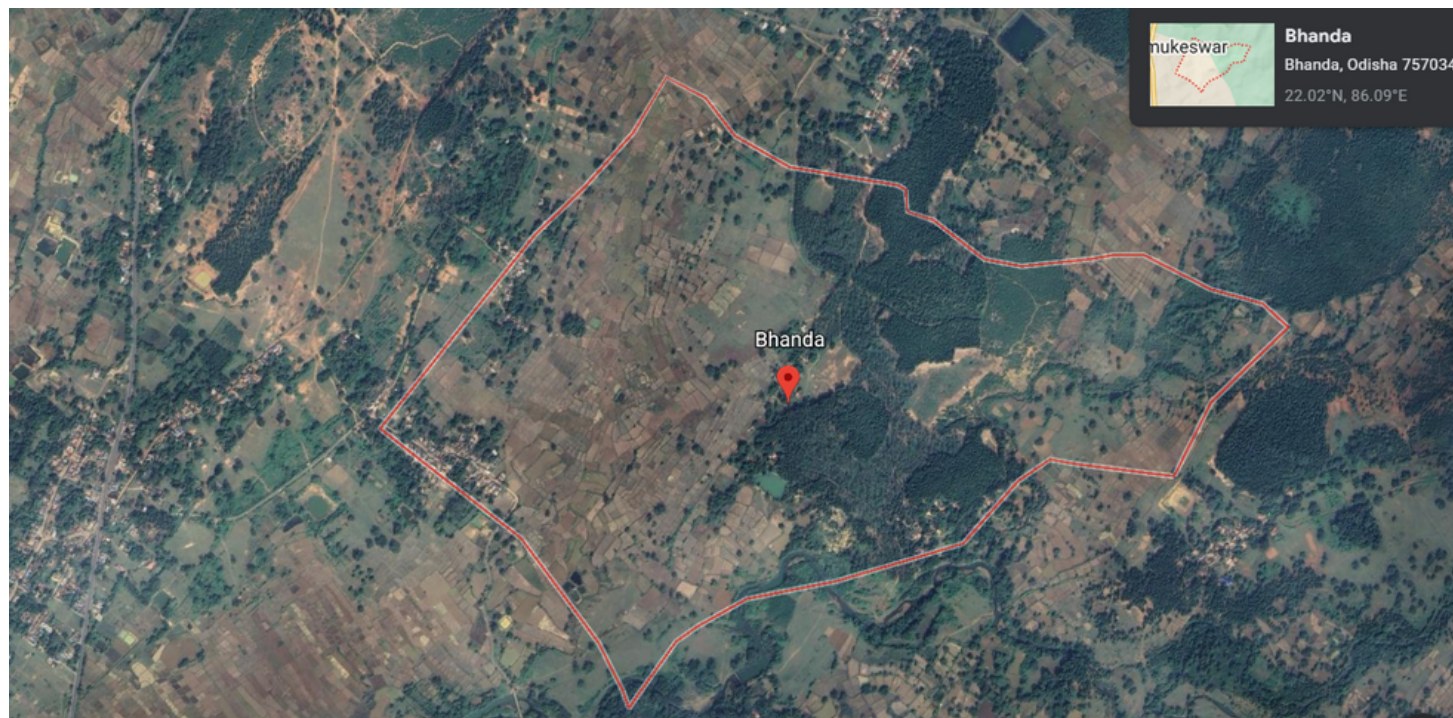


According to Census 2011 information the location code or village code of Jamukeswar village is 388414. Jamukeswar village is located in Jashipur tehsil of Mayurbhanj district in Odisha, India. It is situated 30km away from sub-district headquarter Jashipur (tehsildar office) and 97km away from district headquarter Baripada. As per 2009 stats, Jamukeswar village is also a gram panchayat. The total geographical area of village is 220 hectares. Jamukeswar has a total population of 685 peoples, out of which male population is 323 while female population is 362. Literacy rate of Jamukeswar village is 64.23% out of which 74.61% males and 54.97% females are literate. There are about 194 houses in Jamukeswar village. Pincode of Jamukeswar village locality is 757034. Karanjia is nearest town to Jamukeswar for all major economic activities, which is approximately 35 km away.

Block	Gram Panchayat	Village	Location-Latitude	Location - Longitude	Area (Ha)	No. of Saplings Planted	Mandays Created	Location Code
Jashipur	Jamukeshwar	Jamukeswar	22.024794	86.071223	40	1,00,000	4000	OD20003

Species Wise Distribution			
S. No.	Common Name	Scientific Name	Total
1	Acacia	Acacia auriculiformis	70,000
2	Aam	Mangifera indica	5,000
3	Nimbu	Citrus x limon	10,000
4	Seesham	Dalbergia sissoo	10,000
5	Guava	Psidium Guajava	5,000
Total			1,00,000

## VILLAGE 4- BHANDA



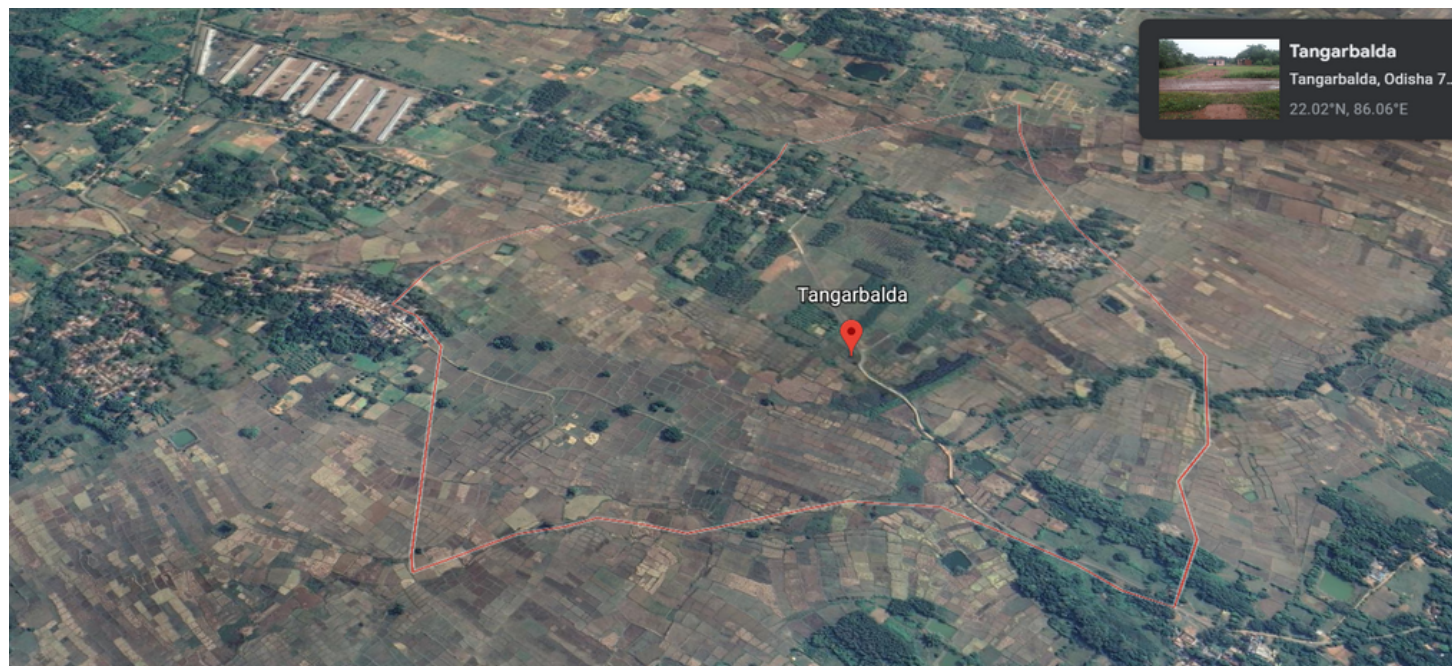
According to Census 2011 information the location code or village code of Bhandra village is 388413. Bhandra village is located in Jashipur tehsil of Mayurbhanj district in Odisha, India. It is situated 31km away from sub-district headquarter Jashipur (tehsildar office) and 98km away from district headquarter Baripada. As per 2009 stats, Jamukeshwar is the gram panchayat of Bhandra village. The total geographical area of village is 124 hectares. Bhandra has a total population of 593 peoples, out of which male population is 288 while female population is 305. Literacy rate of bhandra village is 45.53% out of which 53.47% males and 38.03% females are literate. There are about 152 houses in bhandra village. Pincode of bhandra village locality is 757034. Karanja is nearest town to bhandra for all major economic activities, which is approximately 33km away.

Block	Gram Panchayat	Village	Location-Latitude	Location - Longitude	Area (Ha)	No. of Saplings Planted	Mandays Created	Location Code
Jashipur	Jamukeshwar	Bhandra	22.020823	86.073418	12	30,000	1200	OD20004

Species Wise Distribution			
S. No.	Common Name	Scientific Name	Total
1	Acacia	Acacia auriculiformis	21,000
2	Aam	Mangifera indica	1,500
3	Nimbu	Citrus x limon	3,000
4	Seesham	Dalbergia sissoo	3,000
5	Guava	Psidium Guajava	1,500
Total			30,000



## VILLAGE 5- TANGARBALDA

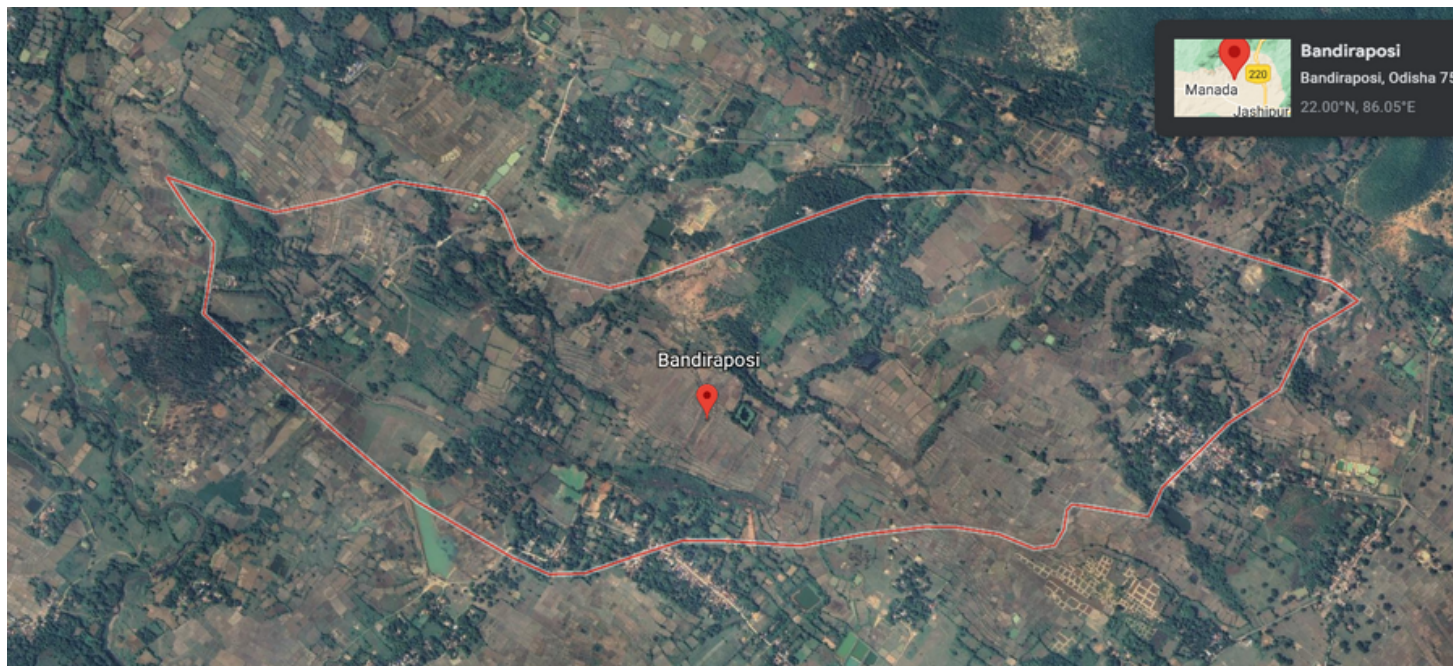


According to Census 2011 information the location code or village code of Tangarbaldā village is 388417. Tangarbaldā village is located in Jashipur tehsil of Mayurbhanj district in Odisha, India. It is situated 33 km away from sub-district headquarter Jashipur (tehsildar office) and 100km away from district headquarter Baripada. As per 2009 stats, Baunsanali is the gram panchayat of Tangarbaldā village. The total geographical area of village is 111 hectares. Tangarbaldā has a total population of 712 peoples, out of which male population is 323 while female population is 389. Literacy rate of Tangarbaldā village is 67.42% out of which 71.21% males and 64.27% females are literate. There are about 165 houses in Tangarbaldā village. Pincode of Tangarbaldā village locality is 757034. Karanjia is nearest town to Tangarbaldā for all major economic activities, which is approximately 8 km away.

Block	Gram Panchayat	Village	Location-Latitude	Location - Longitude	Area (Ha)	No. of Saplings Planted	Mandays Created	Location Code
Jashipur	Baunsanali	Tangarbaldā	22.014359	86.050273	8	20,000	800	OD20005

Species Wise Distribution			
S. No.	Common Name	Scientific Name	Total
1	Acacia	Acacia auriculiformis	14,000
2	Aam	Mangifera indica	1,000
3	Nimbu	Citrus x limon	2,000
4	Seesham	Dalbergia sissoo	2,000
5	Guava	Psidium Guajava	1,000
Total			20,000

## VILLAGE 6- BANDIRAPOSI



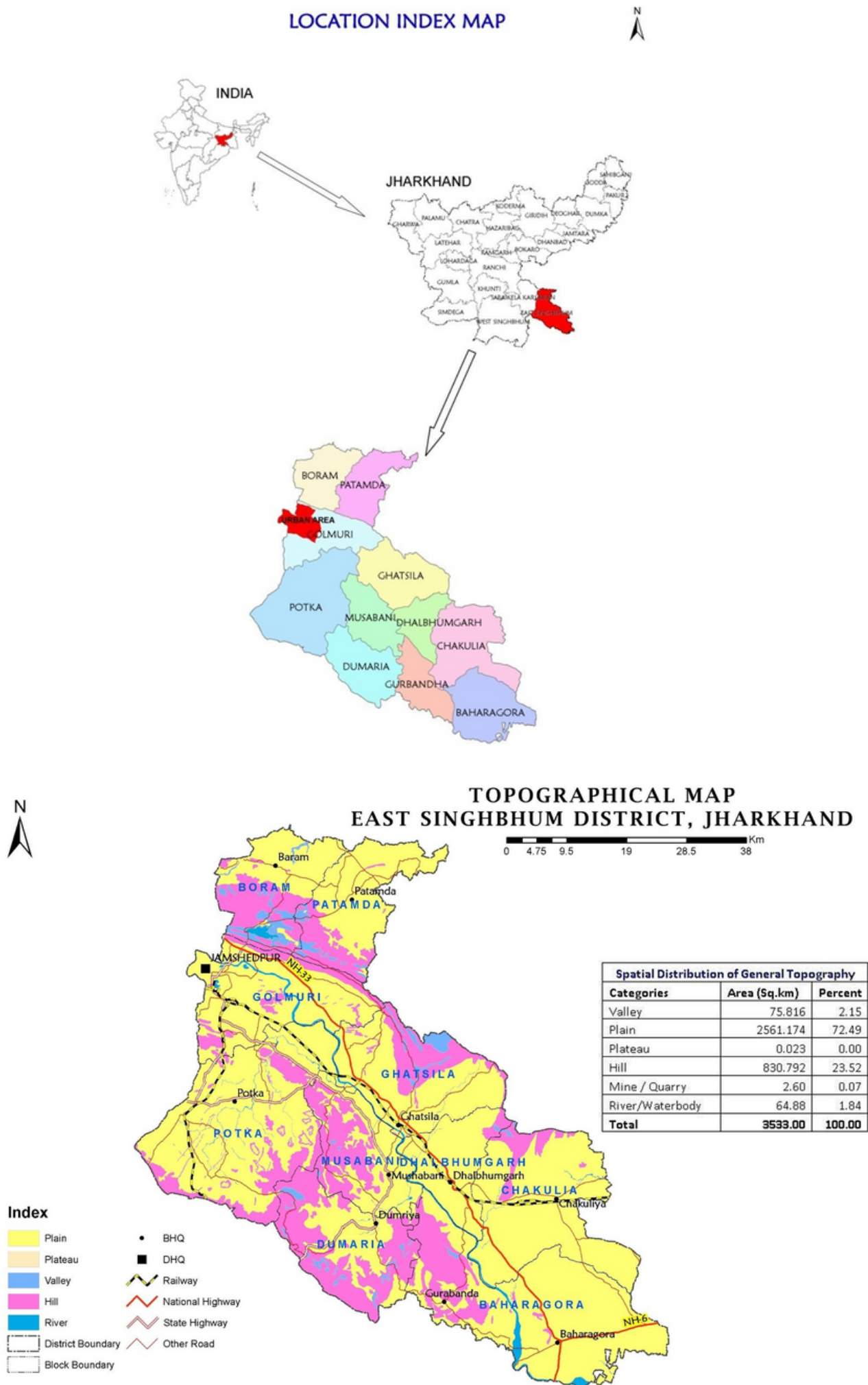
According to Census 2011 information the location code or village code of Bandiraposi village is 388454. Bandiraposi village is located in Jashipur tehsil of Mayurbhanj district in Odisha, India. It is situated 35 km away from sub-district headquarter Jashipur (tehsildar office) and 102km away from district headquarter Baripada. As per 2009 stats, Baunsanali is the gram panchayat of Bandiraposi village. The total geographical area of village is 302 hectares. Bandiraposi has a total population of 657 peoples, out of which male population is 306 while female population is 351. Literacy rate of Bandiraposi village is 46.88% out of which 54.58% males and 40.17% females are literate. There are about 177 houses in Bandiraposi village. Pincode of Bandiraposi village locality is 757034. Karanjia is nearest town to Bandiraposi for all major economic activities, which is approximately 28 km away.

Block	Gram Panchayat	Village	Location-Latitude	Location - Longitude	Area (Ha)	No. of Saplings Planted	Mandays Created	Location Code
Jashipur	Baunsanali	Bandiraposi	22.008026	86.037123	12	30,000	1200	OD20006

Species Wise Distribution			
S. No.	Common Name	Scientific Name	Total
1	Acacia	Acacia auriculiformis	21,000
2	Aam	Mangifera indica	1,500
3	Nimbu	Citrus x limon	3,000
4	Seesham	Dalbergia sissoo	3,000
5	Guava	Psidium Guajava	1,500
Total			30,000



3.2. EAST SINGHBHUM, JHARKHAND



State	District	Block	No. of Saplings Planted	Plantation Area (HA)
Jharkhand	East Singhbhum	Patamda	7,03,000	281.2 Ha

## General Description

East Singhbhum dist. is situated at the southeast corner of the Jharkhand . The total geographical area of district is about 3533 sq. kms. which is 2.03% of the whole state. The Subarnarekha river flows from west to south-east direction. The district is rich in minerals and these are found abundantly. The project is inhabited by a variety of tribe communities. prominent among them are Santhals, Ho, Munda, Kharwar, Lohra, Kharia and some other smaller tribes are mostly found. Most of them are settled agriculturists and supplementing their income by being dependent on various forest resources.

## Baseline climatic conditions & Rainfall

The Climate of the district is temperate. Annual rainfall is 1200 mm to 1400 mm. This area comes under the path of south- west monsoon so sometimes it receive heavy rain during July to September. During the summer season maximum temperature goes up to 40-45 degree centigrade whereas in winter it has recorded a minimum 8 degree centigrade.

## Soil Type

East Singhbhum district is mainly rocky. Soil texture varies from zone to zone. The soil is acidic lateritic and red soil (morum) in nature. Soil fertility status is not so bad but water retention capacity is poor. Weather is dry-hot in summer (maximum temperature 48 degrees Celsius recorded) and very cold in winter (minimum temperature 8 degrees Celsius recorded). The area under irrigated farming is found to be approximately 3%. The total area under crop in the zone is approximately 3.70% lakh ha. The principal crops grown in descending order are paddy, vegetables, Maize, Linseed, Niger, Wheat, Moong, Gram, Kalai, Marua, Bajra and Arhar.

## Demography

According to the 2011 census East Singhbhum district has a population of 2,293,919. This gives it a ranking of 199th in India (out of a total of 640). The district has a population density of 648 inhabitants per square kilometer (1,680/sq mi). Its population growth rate over the decade 2001-2011 was 15.53%. East Singhbhum has a sex ratio of 949 females for every 1000 males and a literacy rate of 76.13%. Scheduled Castes and Schedule Tribes made up 4.9% and 28.5% of the population respectively.



## Flora & Fauna

The hillocks on the plateau mostly form part of the dolerite dykes that run crisscross all over the plateau. They are very low and in chains. Their top boulders are exposed. The thin soil has scrubs and bushes, chiefly some chasmophytes. The hills fringing the central plateau are granitic in nature, low and covered with a few small trees or are completely barren. Lantana and other exotic weeds are seen. The wooded hillocks show Sal or a mixed forest of deciduous species or bamboo. All such lands as are too far from towns and villages or are protected from grazing and cutting are followed by *Anona squamosa*, *Eugenia* species, Palms, *Gymnosporia montana* and *Butea monosperma*, ultimately leading to a pioneer monsoon forest. Cultivated fields surrounding isolated villages, which are located mostly near the roads and railways, occupy the major part of the plateau. The northern and western faces of the hills are covered over with almost pure stands of sal and other species.

As the railway lines and roads have been taken to the most distant parts for easy exploitation of mineral resources, numerous railway stations and townships have sprung up, near which there has been much cutting of forest and grazing. In such areas are seen *Combretum decandrum*, *Acacia* species, bamboo, neem, *holarrhena*, *Flacourtia*, *woodfordia*, *Phoenix acaulis* and *Lygodium* species and *Lantana camara*, *croton sparsiflorus*, *cassia* species and *hyptis suaveolens* near the fringes. In the Dhalbhum area the forests are mainly on the open ridges and in the undulating valleys and belong mainly to the reserved and protected types. The forests are very dense and contain tall trees both evergreen and deciduous standing close together and bearing lots of mistletoes, orchids and other epiphytes and thick undergrowth. The trees have mentioned before. Some of the hill tops barren due to exploitation for minerals.

The Ghatshila-Chakulia area, along the side of the railway line and the road is a comparatively level country much land having been brought under cultivation and only trees of importance to the villages such as mahua, Sahijana, Neem, Bargad, Peepal, Khajur, Aam, Imli, Papaya, Katahal and Ber are seen. On the hill side, in these areas there are forests present but they have been much exploited for a pretty long time and the jungles are in a poor state. The north Kolhan area and the South Porahat area – The condition here is bad so far as the vegetation is concerned. There has been much cutting and grazing. On the slopes of the hills are seen, sal with *Gardenia* species, *Dillenia aurea*, *phoenix acaulis* valleys sal with *careya arborea* and *Dillenia pentagata*, *asan harra*, *kusum* and *pterocarpus marsupium*. On the even lands, a few *salai*, *dhaura*, *cheistanthus collinus*, *lannea grandis*, *Sterculia urens*, *Co-chlospermum gossypium*, bamboo and khajur are seen. Self introduced herbs like *scoparia dulcis*, *Ageratum conyzoides*, *clerodendron infortunatum* are seen. The hill ranges on the north-eastern boundary between Anandpur and Bandagaon – There is a steep rise of about 1500 feet the mountain range being crossed by a ghat to reach the Ranchi district. The ghat area is covered with protected forest. Being the southern face, the jungle is not very thick and the species are mostly xerophilous ones.

Sal is present but the plants are not very tall and not close together. It is accompanied by many white barked trees (*Sterculia urens*) as elsewhere and also a few mahua, peepal, semal, palas, aam and *kydia calycina* accompanied by climbers like *combretum decandrum*, *discoreas*, *Smilax* species, and *vitis* species the under shrubs are amla, *woodfordia*, *Indigofera pulchella* and tall grasses

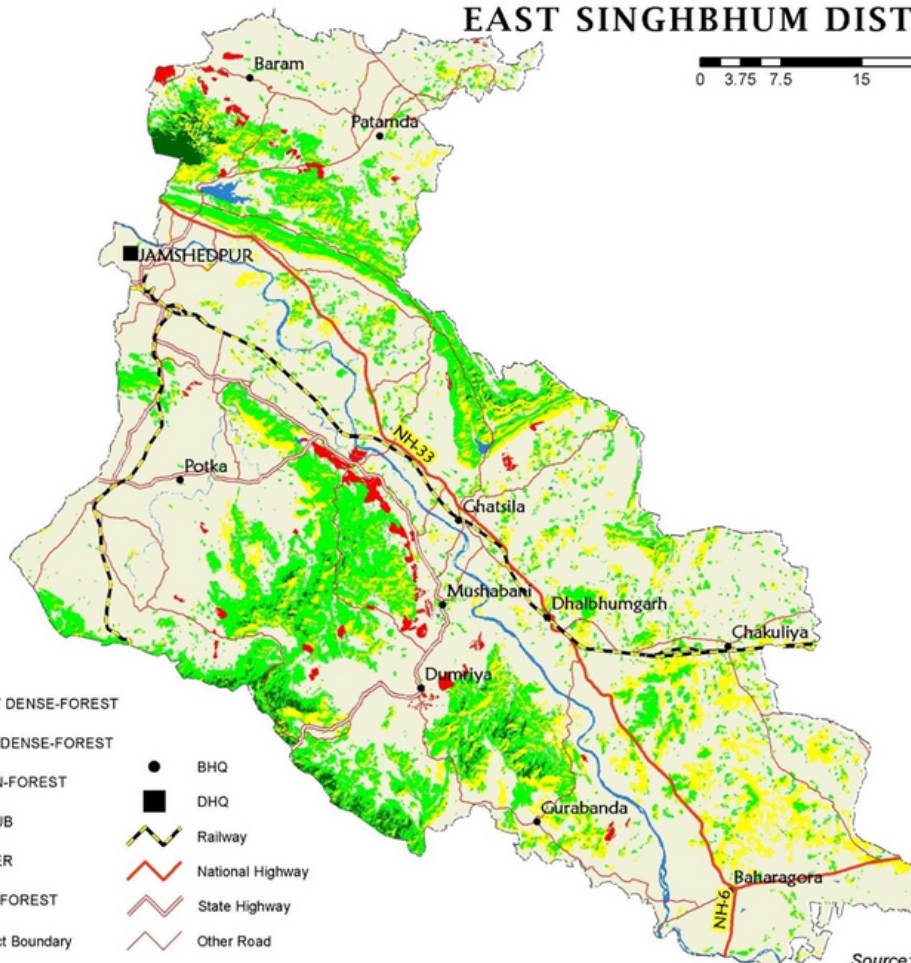
## FOREST COVER EAST SINGHBHUM DISTRICT, JHARKHAND



0 3.75 7.5 15 22.5 30 Km

### INDEX

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| <span style="display:inline-block; width:15px; height:15px; background-color:darkgreen;"></span> VERY DENSE-FOREST | <span style="display:inline-block; width:10px; height:10px; background-color:black;"></span> BHQ                   |
| <span style="display:inline-block; width:15px; height:15px; background-color:limegreen;"></span> MOD.DENSE-FOREST  | <span style="display:inline-block; width:10px; height:10px; background-color:black;"></span> DHQ                   |
| <span style="display:inline-block; width:15px; height:15px; background-color:yellow;"></span> OPEN-FOREST          | <span style="display:inline-block; width:15px; height:15px; border-bottom:2px solid black;"></span> Railway        |
| <span style="display:inline-block; width:15px; height:15px; background-color:red;"></span> SCRUB                   | <span style="display:inline-block; width:15px; height:15px; border-bottom:2px solid red;"></span> National Highway |
| <span style="display:inline-block; width:15px; height:15px; background-color:blue;"></span> WATER                  | <span style="display:inline-block; width:15px; height:15px; border-bottom:2px solid brown;"></span> State Highway  |
| <span style="display:inline-block; width:15px; height:15px; background-color:lightyellow;"></span> NON-FOREST      | <span style="display:inline-block; width:15px; height:15px; border-bottom:2px solid brown;"></span> Other Road     |
| <span style="display:inline-block; width:15px; height:15px; border:1px solid black;"></span> District Boundary     |  |



Source: Forest Cover from FSI (Forest Survey of India)

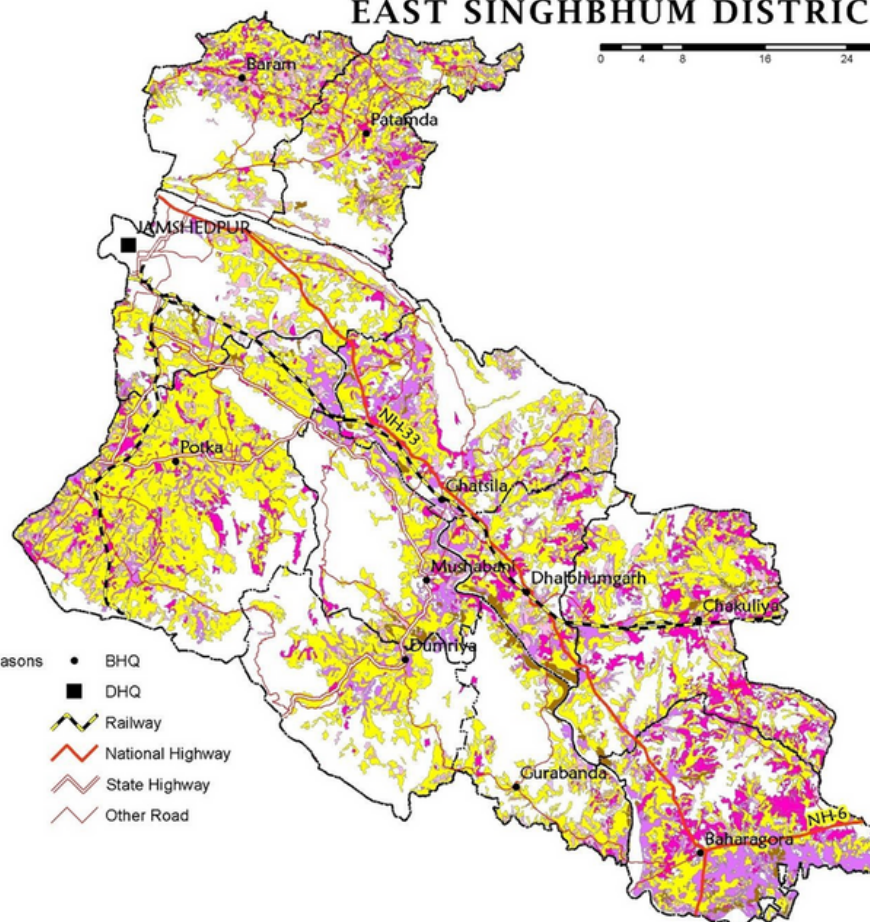
## AGRICULTURE PATTERN EAST SINGHBHUM DISTRICT, JHARKHAND



0 4 8 16 24 32 Km

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| <span style="display:inline-block; width:15px; height:15px; background-color:darkblue;"></span> Cropped in more than two seasons | <span style="display:inline-block; width:10px; height:10px; background-color:black;"></span> BHQ                   |
| <span style="display:inline-block; width:15px; height:15px; background-color:blue;"></span> Cropped in two seasons               | <span style="display:inline-block; width:10px; height:10px; background-color:black;"></span> DHQ                   |
| <span style="display:inline-block; width:15px; height:15px; background-color:yellow;"></span> Kharif                             | <span style="display:inline-block; width:15px; height:15px; border-bottom:2px solid black;"></span> Railway        |
| <span style="display:inline-block; width:15px; height:15px; background-color:lightblue;"></span> Rabi                            | <span style="display:inline-block; width:15px; height:15px; border-bottom:2px solid red;"></span> National Highway |
| <span style="display:inline-block; width:15px; height:15px; background-color:lightyellow;"></span> Zaid                          | <span style="display:inline-block; width:15px; height:15px; border-bottom:2px solid brown;"></span> State Highway  |
| <span style="display:inline-block; width:15px; height:15px; background-color:lightgreen;"></span> Fallow Land                    | <span style="display:inline-block; width:15px; height:15px; border-bottom:2px solid brown;"></span> Other Road     |
| <span style="display:inline-block; width:15px; height:15px; background-color:lightblue;"></span> Agricultural Plantation         |  |
| <span style="display:inline-block; width:15px; height:15px; background-color:lightblue;"></span> Wasteland                       |  |
| <span style="display:inline-block; width:15px; height:15px; border:1px solid black;"></span> Block Boundary                      |  |
| <span style="display:inline-block; width:15px; height:15px; border:1px solid black;"></span> District Boundary                   |  |



3.2.1. Village wise Break-up of saplings planted

State	District	Block	Gram Panchayat	Village	Location - Latitude	Location - Longitude	Area (Ha)	No. of saplings
Jharkhand	East Singhbhum	Patamda	Laylam	Nutandih	22.84395	86.29692	79.2	1,98,000
Jharkhand	East Singhbhum	Patamda	Laylam	Kumari	22.88953	86.292679	24	60,000
Jharkhand	East Singhbhum	Patamda	Laylam	Dungri	22.84492	86.3047381	24	60,000
Jharkhand	East Singhbhum	Patamda	Laylam	Laylam	22.86651	86.28793	38	95,000
Jharkhand	East Singhbhum	Patamda	Laylam	Punsa	22.85142	86.28101	22.4	56,000
Jharkhand	East Singhbhum	Boram	Laylam	Rapcha	22.891811	86.298622	18.4	46,000
Jharkhand	East Singhbhum	Patamda	Laylam	Khejuridih	22.882489	86.301782	2	5,000
Jharkhand	East Singhbhum	Patamda	Laylam	Santhaltola	22.89310	86.28848	18.8	47,000
Jharkhand	East Singhbhum	Golmuri Cum Jugsalai	Luwabasa	Luyabasa Khairbani	22.73940	86.27968	34.4	86,000
Jharkhand	East Singhbhum	Potka	Chandpur	Dholadi	22.65309	86.19737	16	40,000
Jharkhand	East Singhbhum	Jamshedpur	XLRI- Tata Steel	XLRI Road Sonari	22.81988	86.186345	4	10,000
Total							281.2	7,03,000

3.2.2. Species wise Break-up of saplings planted

S. No.	Common Name	Scientific Name	Total
1	Teak	Tectona grandis	5,000
2	Acacia	Acacia auriculiformis	4,58,000
3	Karanj	Pongamia pinnata	3,100
4	Aam	Mangifera indica	34,500
5	Jamun	Syzygium cumini	5,000
6	Nimbu	Citrus x limon	60,000
7	Seesham	Dalbergia sissoo	80,900
8	Guava	Psidium Guajava	34,500
9	Jackfruit	Artocarpus heterophyllus	5,000
10	Palash	Butea monosperma	10,000
11	Kendu	Diospyros melanoxylon	2,000
Total			7,03,000



3.2.3. VILLAGE DEMOGRAPHICS & ACTIVITIES

VILLAGE 1- NUTANDIH OR LALPUR



According to Census 2011 information the location code or village code of Nutandih Or Lalpur village is 363233. Nutandih Or Lalpur village is located in Patamda subdivision of Purbi Singhbhum district in Jharkhand, India. It is situated 13km away from sub-district headquarter Patamda (tehsildar office) and 39km away from district headquarter Jamshedpur. As per 2009 stats, Laylam is the gram panchayat of Nutandih Or Lalpur village. The total geographical area of village is 129 hectares. Nutandih Or Lalpur has a total population of 721 peoples, out of which male population is 354 while female population is 367. Literacy rate of Nutandih or Lalpur village is 39.67% out of which 49.72% males and 29.97% females are literate. There are about 144 houses in Nutandih or Lalpur village. Pincode of Nutandih or Lalpur village locality is 832105. Jamshedpur is nearest town to Nutandih or Lalpur village for all major economic activities.

Block	Gram Panchayat	Village	Location- Latitude	Location - Longitude	Area (Ha)	No. of Saplings Planted	Mandays Created	Locatio n Code
Patamda	Laylam	Nutandih	22.84395	86.29692	79.2	1,98,000	4120	JH20001
Species Wise Distribution								
S. No.	Common Name		Scientific Name			Total		
1	Teak		Tectona grandis			5,000		
2	Acacia		Acacia auriculiformis			1,06,500		
3	Aam		Mangifera indica			9,750		
4	Jamun		Syzygium cumini			5,000		
5	Nimbu		Citrus x limon			10,500		
6	Seesham		Dalbergia sissoo			29,500		
7	Guava		Psidium Guajava			9,750		
8	Jackfruit		Artocarpus heterophyllus			5,000		
9	Bamboo		Bambusa balcooa			5,000		
10	Palash		Butea monosperma			10,000		
11	Kendu		Diospyros melanoxylon			2,000		
Total						1,98,000		



## VILLAGE 2- KUMARI



According to Census 2011 information the location code or village code of Kumari village is 363333. Kumari village is located in Boram subdivision of Purbi Singhbhum district in Jharkhand, India. It is situated 20km away from district headquarter Boram. Boram is the sub-district headquarter of Kumari village. As per 2009 stats, Laylam is the gram panchayat of Kumari village. The total geographical area of village is 286.45 hectares. Kumari has a total population of 826 peoples, out of which male population is 409 while female population is 417. Literacy rate of Kumari village is 36.92% out of which 49.14% males and 24.94% females are literate. There are about 225 houses in Kumari village. Pincode of Kumari village locality is 832105. Jamshedpur is nearest town to Kumari village for all major economic activities.

Block	Gram Panchayat	Village	Location-Latitude	Location - Longitude	Area (Ha)	No. of Saplings Planted	Mandays Created	Location Code
Boram	Laylam	Kumari	22.89122	86.2934	24	60,000	2400	JH20002

Species Wise Distribution			
S. No.	Common Name	Scientific Name	Total
1	Acacia	Acacia auriculiformis	42,000
2	Aam	Mangifera indica	3,000
3	Nimbu	Citrus x limon	6,000
4	Seesham	Dalbergia sissoo	6,000
5	Guava	Psidium Guajava	3,000
Total			60,000

## VILLAGE 3- LAYLAM



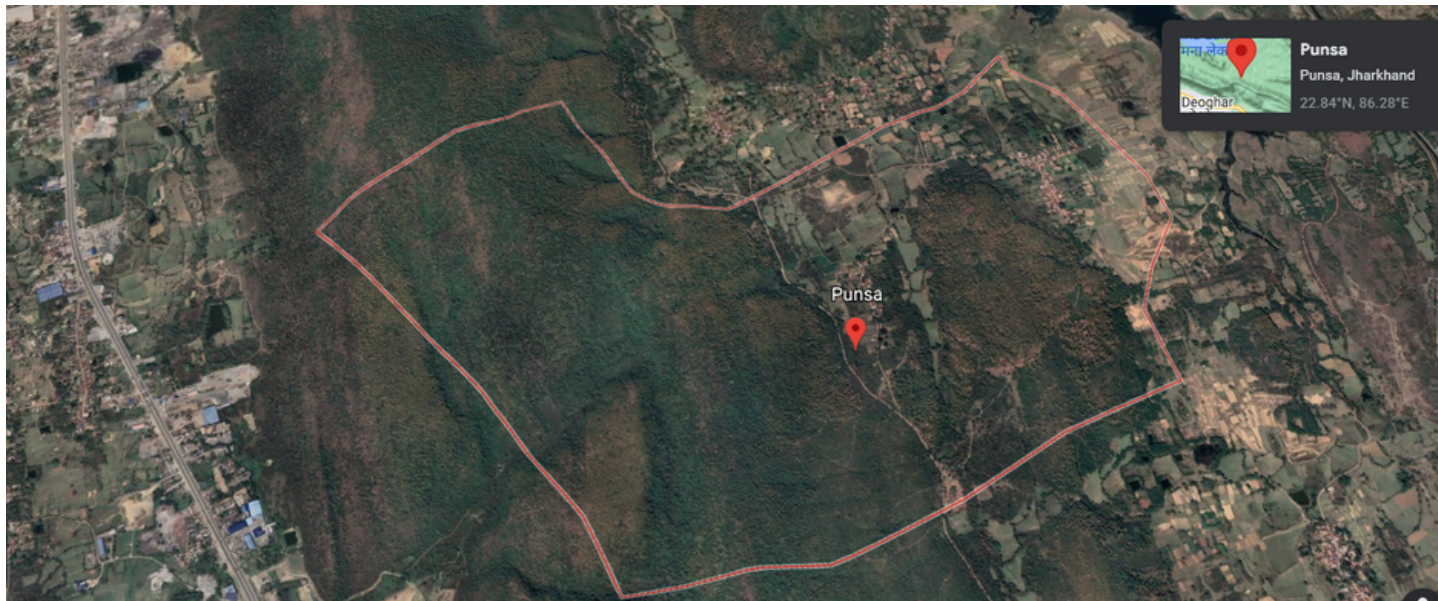
According to Census 2011 information the location code or village code of Laylam village is 363321. Laylam village is located in Boram subdivision of Purbi Singhbhum district in Jharkhand, India. It is situated 13km away from sub-district headquarter Boram (tehsildar office) and 20km away from district headquarter Jamshedpur. As per 2009 stats, Laylam village is also a gram panchayat. The total geographical area of village is 1053 hectares. Laylam has a total population of 1,673 peoples, out of which male population is 861 while female population is 812. Literacy rate of laylam village is 41.06% out of which 54.36% males and 26.97% females are literate. There are about 330 houses in laylam village. Pincode of laylam village locality is 832105. Jamshedpur is nearest town to laylam village for all major economic activities.

Block	Gram Panchayat	Village	Location-Latitude	Location - Longitude	Area (Ha)	No. of Saplings Planted	Mandays Created	Location Code
Boram	Laylam	Laylam	22.86651	86.28793	38	95,000	3800	JH20003

Species Wise Distribution			
S. No.	Common Name	Scientific Name	Total
1	Acacia	Acacia auriculiformis	6,65,00
2	Aam	Mangifera indica	4,750
3	Nimbu	Citrus x limon	9,500
4	Seesham	Dalbergia sissoo	9,500
5	Guava	Psidium Guajava	4,750
Total			95,000



## VILLAGE 4- PUNSA

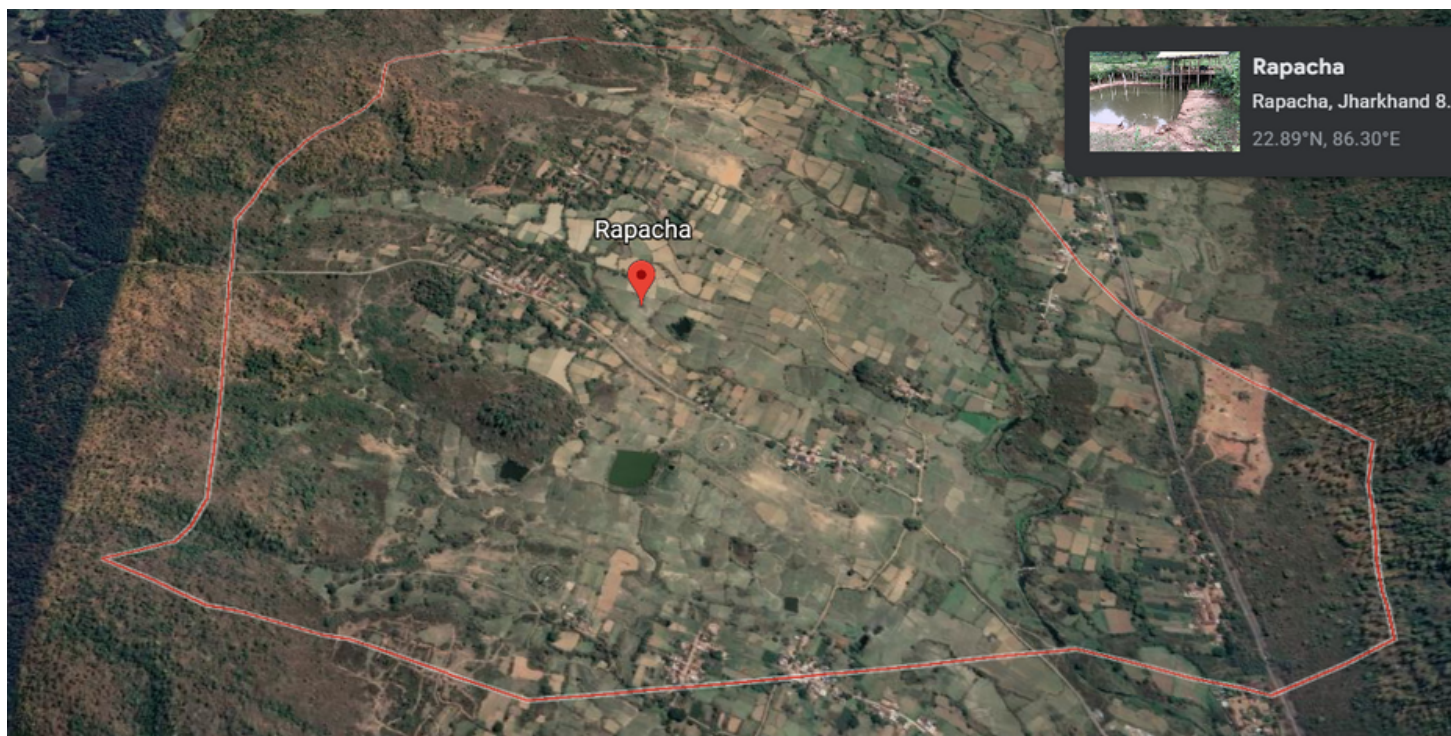


According to Census 2011 information the location code or village code of Punsā village is 363319. Punsā village is located in Boram subdivision of Purbi Singhbhum district in Jharkhand, India. It is situated 30 km away from sub-district headquarter Boram (tehsildar office) and 20km away from district headquarter Jamshedpur. As per 2009 stats, Laylam is the gram panchayat of Punsā village. The total geographical area of village is 303 hectares. Punsā has a total population of 757 peoples, out of which male population is 380 while female population is 377. Literacy rate of Punsā village is 51.65% out of which 57.63% males and 45.62% females are literate. There are about 150 houses in Punsā village. Pincode of Punsā village locality is 832105. Jamshedpur is nearest town to Punsā village for all major economic activities.

Block	Gram Panchayat	Village	Location-Latitude	Location - Longitude	Area (Ha)	No. of Saplings Planted	Mandays Created	Location Code
Boram	Laylam	Punsā	22.85142	86.28101	22.4	56,000	2240	JH20004

Species Wise Distribution			
S. No.	Common Name	Scientific Name	Total
1	Acacia	Acacia auriculiformis	39,200
2	Aam	Mangifera indica	2,800
3	Nimbu	Citrus x limon	5,600
4	Seesham	Dalbergia sissoo	5,600
5	Guava	Psidium Guajava	2,800
Total			56,000

## VILLAGE 5- RAPACHA



According to Census 2011 information the location code or village code of Rapacha village is 363332. Rapacha village is located in Boram subdivision of Purbi Singhbhum district in Jharkhand, India. It is situated 13 km away from sub-district headquarter Boram (tehsildar office) and 20 km away from district headquarter Jamshedpur. As per 2009 stats, Laylam is the gram panchayat of Rapacha village. The total geographical area of village is 222 hectares. Rapacha has a total population of 862 peoples, out of which male population is 439 while female population is 423. Literacy rate of Rapacha village is 33.41% out of which 43.51% males and 22.93% females are literate. There are about 226 houses in Rapacha village. Pincode of rapacha village locality is 832105. Boram is nearest town to Rapacha village for all major economic activities.

Block	Gram Panchayat	Village	Location-Latitude	Location - Longitude	Area (Ha)	No. of Saplings Planted	Mandays Created	Location Code
Boram	Laylam	Rapacha	22.891811	86.298622	18.4	46,000	1840	JH20005

Species Wise Distribution			
S. No.	Common Name	Scientific Name	Total
1	Acacia	Acacia auriculiformis	32,200
2	Aam	Mangifera indica	2,300
3	Nimbu	Citrus x limon	4,600
4	Seesham	Dalbergia sissoo	4,600
5	Guava	Psidium Guajava	2,300
Total			46,000



VILLAGE 6- LAYLAM KHEJURDIH



Block	Gram Panchayat	Village	Location -Latitude	Location - Longitude	Area (Ha)	No. of Saplings Planted	Mandays Created	Location Code
Patamda	Laylam	Khejuridih	22.86651	86.28793	2	5,000	3800	JH20006

Species Wise Distribution			
S. No.	Common Name	Scientific Name	Total
1	Acacia	Acacia auriculiformis	3,500
2	Aam	Mangifera indica	250
3	Nimbu	Citrus x limon	500
4	Seesham	Dalbergia sissoo	500
5	Guava	Psidium Guajava	250
Total			5,000

## VILLAGE 7- DHOLADIH



According to Census 2011 information the location code or village code of Dholadi village is 363663. Dholadi village is located in Potka subdivision of Purbi Singhbhum district in Jharkhand, India. It is situated 12km away from district headquarter Potka. Potka is the sub-district headquarter of Dholadi village. As per 2009 stats, Chandpur is the gram panchayat of Dholadi village. The total geographical area of village is 454.33 hectares. Dholadi has a total population of 1,324 peoples, out of which male population is 665 while female population is 659. Literacy rate of dholadi village is 54.61% out of which 66.77% males and 42.34% females are literate. There are about 245 houses in dholadi village. Pincode of dholadi village locality is 832107. Potka is nearest town to dholadi village for all major economic activities.

Block	Gram Panchayat	Village	Location-Latitude	Location - Longitude	Area (Ha)	No. of Saplings Planted	Mandays Created	Location Code
Potka	Chandpur	Dholadi	22.65309	86.19737	16	40,000	1600	JH20007

Species Wise Distribution			
S. No.	Common Name	Scientific Name	Total
1	Acacia	Acacia auriculiformis	28,000
2	Aam	Mangifera indica	2,000
3	Nimbu	Citrus x limon	4,000
4	Seesham	Dalbergia sissoo	4,000
5	Guava	Psidium Guajava	2,000
Total			40,000



## VILLAGE 8- LUYABASA



According to Census 2011 information the location code or village code of Luyabasa village is 363445. Luyabasa village is located in Golmuri Cum Jugsalai subdivision of Purbi Singhbhum district in Jharkhand, India. It is situated 51km away from sub-district headquarter Golmuri-cum-jugsalai (tehsildar office) and 17km away from district headquarter Jamshedpur. As per 2009 stats, Luwabasa is the gram panchayat of Luyabasa village. The total geographical area of village is 572.81 hectares. Luyabasa has a total population of 1,832 peoples, out of which male population is 929 while female population is 903. Literacy rate of luyabasa village is 60.48% out of which 68.14% males and 52.60% females are literate. There are about 373 houses in luyabasa village. Pincode of luyabasa village locality is 831008. Golmuri Cum Jugsalai is nearest town to luyabasa village for all major economic activities.

Block	Gram Panchayat	Village	Location - Latitude	Location - Longitude	Area (Ha)	No. of Saplings Planted	Mandays Created	Location Code
Golmuri Cum Jugsalai	Luwabasa	Luyabasa	22.73940	86.27968	34.4	86,000	3440	JH20008

Species Wise Distribution			
S. No.	Common Name	Scientific Name	Total
1	Acacia	Acacia auriculiformis	60,200
2	Aam	Mangifera indica	4,300
3	Nimbu	Citrus x limon	8,600
4	Seesham	Dalbergia sissoo	8,600
5	Guava	Psidium Guajava	4,300
Total			86,000



### 3.3. Pictures of Planted sites of East Singhbhum & Odisha

















# 4-ABOUT THE BENEFICIARIES

- PREVALENT RELIGIONS - Sarna, Hinduism
- PREVALENT COMMUNITIES - Kurmi, Mahatos, Lodha, Munda, Santhal, Bhumi, Oraon
- PREVALENT SOCIAL GROUPS - ST, SC, OBC
- MEANS OF LIVELIHOOD - Agriculture and related activities, MGNREGA activities, Contractual labour, Local vendors
- SOURCES OF FOOD - Public Distribution System, Kitchen Gardens, Personal farms, Weekly haats, Markets
- SOURCES OF WATER - Solar-powered Community water tanks with pumps, Manual water pumps, lakes, ponds, wells
- SHELTER - Mostly Self-constructed kaccha mud houses

## 4.1 ODISHA

Odisha is regarded as the Homeland of the tribal. The total population is contributing about 9 percent of the tribal population of the country. The state has the unique distinction of having as many as 62 numbers of scheduled Tribe communities and 13 Particularly Vulnerable Tribal Groups (PVTGs) which is the largest number(having in a single state) in the country. The Tribal of Odisha is confronted with a number of problems like poverty, food insecurity and illiteracy including others which are becoming impediments to their sustainable development and successful implementation of the programmers. The farmers of the area still follow traditional methods of irrigation, which include- dependence on rain, through ponds, lakes, manual water pumps, etc., due to which their agricultural productivity is extremely sensitive to the availability of these resources. The magnitude and distribution of rainfall have a profound impact on the overwhelmingly rain-fed farming system of the region. Given the erratic rainfall pattern of Odisha, and the rain-fed nature of the farming system, agriculture is the primary source of income of the people of the area for just a little over half the year. The rest of the year, they suffer from seasonal unemployment ,apart from the days of employment generated for them through MGNREGA activities. Hence, the villages constitutes of mostly low-income households.

## 4.2 JHARKHAND

The farmers of the area still follow traditional methods of irrigation, which include- dependence on rain, through ponds, lakes, manual water pumps, etc., due to which their agricultural productivity is extremely sensitive to the availability of these resources. The magnitude and distribution of rainfall have a profound impact on the overwhelmingly rain-fed farming system of the region. Given the erratic rainfall pattern of Jharkhand, and the rain-fed nature of the farming system, agriculture is the primary source of income of the people of the area for just a little over half the year. The rest of the year, they suffer from seasonal unemployment, apart from the days of employment generated for them through MGNREGA activities. Hence, the village constitutes of mostly low-income households.



# 5-REFERENCES

- <https://www.grow-trees.com/>
- <https://www.sciencedirect.com/science/article/pii/S1110982316301636>
- <https://www.mdpi.com/2225-1154/5/1/18/htm>
- <http://moef.gov.in/wp-content/uploads/2017/08/Jharkhand.pdf>
- <https://earth.google.com/web/search/>
- <https://www.downtoearth.org.in/coverage/wildlife-biodiversity/jumbo-conflict-43530>
- [http://jharenvis.nic.in/Database/TRIBESOFJHARKHAND\\_2328.aspx](http://jharenvis.nic.in/Database/TRIBESOFJHARKHAND_2328.aspx)
- [https://www.researchgate.net/publication/275012714\\_Temperature\\_Trends\\_in\\_Ranchi\\_City\\_Jharkhand](https://www.researchgate.net/publication/275012714_Temperature_Trends_in_Ranchi_City_Jharkhand)
- <https://www.nasa.gov/>
- <https://earthobservatory.nasa.gov/>
- <https://www.wti.org.in/>
- <https://agri.jharkhand.gov.in/sameti/Sameti%20PDF/Reading%20Material%20of%20VLWs/SAMETI-Soil%20Scienc%20Book.pdf>
- <https://science.howstuffworks.com/nature/climate-weather/storms/trees-affect-weather1.htm>
- <https://greenpop.org/10-environmental-benefits-planting-tree/>
- <https://www.nwf.org/Trees-for-Wildlife/Wildlife-Benefits>
- <https://canopy.org/blog/impacts-of-trees-on-mental-health/>
- <https://www.unicef.org/india/what-we-do/gender-equality>
- <https://www.villageinfo.in>