

**ABBREVIATED RESETTLEMENT ACTION
PLAN
FOR
TURGA PUMPED STORAGE PROJECT**

(FINAL DRAFT)

April 2018

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ABBREVIATIONS

ARAP	Abbreviated Resettlement Action Plan
BDO	Block Development Officer
CSR	Corporate Social Responsibility
DMS	Detailed Measurement Survey
DPR	Detailed Project Report
EC	Environmental Clearance
EIA	Environmental Impact Assessment
EMP	Environmental Monitoring Plan
FC	Forest Clearance
FD	Forest Department
GIS	Gas Insulated Switchgear
GOI	Government of India
GOJ	Government of Japan
GPS	Global Positioning System
GRC	Grievance Redress Committee
GRS	Grievance Redress System
I&W Dep	Irrigation and Waterways Department
IHHL	Individual Household Latrine
JICA	Japan International Cooperation Agency
MOEFCC	Ministry of Environment, Forest and Climate Change
MW	Megawatt
NTFP	Non-Timber Forest Product
ODA	Official Development Assistance
PPSP	Purulia Pumped Storage Project
P.S.I.C.	Project Site in charge
SC	Scheduled Caste
SIA	Social Impact Assessment
ST	Scheduled Tribe
WBSEB	West Bengal State Electricity Board
WBSEDCL	West Bengal State Electricity Distribution Company Limited
WBSETCL	West Bengal State Electricity Transmission Company Limited

1 INTRODUCTION

With the fourth biggest population and fifth biggest economic volume in India, West Bengal State is expecting a steep increase in the power demand and the generation capacity. The peak demand in 2015 reached 7,544 MW, and that of 2019 is expected to be as much as 11,172 MW. Though the power supply in the State is rather stable in comparison with national average, there has been a need to enhance the supply capacity at peak hours by making use of surplus power, and to further improve the quality of power supply for immediate response.

For the supply of electricity during peak hours, pumped storage power generation is considered as one of the most appropriate methods since it can raise the output in a short time and allows the surplus electricity to be utilized during off-peak hours where certain level of base power source is secured. Former West Bengal State Electricity Board (WBSEB)¹ conducted a technical survey for pumped storage power plants in 1979, in which they identified, evaluated, screened, and prioritized the potential development sites within the State. Among the four most prioritized sites for pumped storage power plant², the Purulia site was selected to develop a pumped storage power plant and started its operation in 2008.

Following the success of Purulia Pumped Storage Project (PPSP) in not only enforcement of electricity supply itself, but also the associated local area development activities, WBSEDCL stepped forward to the second most potential pumped storage power plant, i.e., Turga PSP. They elaborated the Detailed Project Report (DPR) in which environmental and social adverse impacts were carefully avoided and minimized to the maximum extent possible. An environmental impact assessment (EIA) (associated with social impact assessment (SIA), environmental monitoring plan (EMP) and public hearing) was conducted in 2015 and 2016, to which the Environmental Advisory Committee (EAC) of the Ministry of Environment, Forest and Climate Change (MoEFCC) gave a recommendation for an environmental clearance (EC) in June 2016. Forest clearance (FC) (stage-1), which was given as a condition for obtaining the EC, is expected to be issued following the decision in the Forestry Advisory Committee (FAC) held on 25 January 2018. WBSEDCL will apply for the issuance of the EC to the MOEFCC as soon as they receive the FC.

The GOI requested JICA to extend its yen-loan assistance to Turga PSP, and J-Power proceeded with a technical study commissioned by JICA, in which environmental and social surveys were included as one of the most critical study items. This abbreviated resettlement

1 WBSEB was unbundled into WBSETCL and WBSEDCL in April 2007.

2 Purulia, Turga, Kathlajal and Bandhu.

action plan (ARAP) is developed as one of the environmental and social documents prepared for JICA to appraise the project, and WBSEDCL is expected to be compliant with the guiding principles of the plan and implement it accordingly.

2 OBJECTIVES

The ARAP is developed with objectives of 1) providing information and data on the level and kinds of social impact likely caused by the project implementation, especially impact on land use, local livelihoods and communities; 2) setting out the policy framework and guiding principles on such social impact (for both predicted ones and unforeseen ones) in compliance with the Indian laws and regulations, and the JICA Guidelines for Environmental and Social Considerations (issued in April 2010), and; 3) planning the required actions based on the entitlements given under the above policy framework and guiding principles.

3 LIMITATION

The ARAP is based on the proposed construction of Turga PSP, and 400kV transmission lines from switchyard to the GIS substation with presently available technical design and primary data collection results collected during the survey period from October 2017 to March 2018.

Losses of livelihood means and income due to potential use of non-forest WBSEDCL land have been identified as a result of consultation with WBSEDCL and interviews with affected household members. The WBSEDCL land is located in Kudna and those households who cultivate unauthorizedly were interviewed and their geographical locations were also identified by GPS. Not only the affected households, group interviews with residents were held in November 2017 followed by public consultations in February 2018, in which livelihood restoration activities, compensation for the affected people, and local area development plan were discussed.

The ARAP has been developed for prior consent between JICA and WBSEDCL for Turga PSP project to be eligible for Japanese ODA Loan. As of April 2018, however, it is uncertain if non-forest land (private land and WBSEDCL land) are utilized or not for borrow area purpose, since it depends on the quantity and quality of soil exploited in forest land. WBSEDCL will

monitor the progress of construction work and make decisions when the time comes. Along with the finalization of land use plan, a detailed measurement survey (DMS) shall be conducted by the contractors (supervised by WBSEDCL and the Consultant) in consultation with the Land Department and Agriculture Department to assess the values of crops and other agricultural products and examine the compensation amount, based on the compensation framework and principles described in this plan which are compliant with the Indian laws and regulations, and the JICA Guidelines.

4 OUTLINE OF PROJECT COMPONENTS THAT MAY CAUSE SOCIAL IMPACTS

This project is comprised of the following four components from (1) to (4).

- (1) Construction of a pumped storage power generation facilities (upper reservoir, lower reservoir, power intake, intake tunnel, penstock, tailrace tunnel, tailrace outlet, underground powerhouse (output: 250 MW *4), etc.)
- (2) Procurement and collection of construction materials and installation works
- (3) Extension of transmission lines and towers (approximately 1.7km from the switchyard to the existing power substation)
- (4) Provision of consultancy services (detailed design, assistance for tenders, supervision of construction works, etc.)

According to the WBSEDCL, the Project will require approximately 300 ha of land, of which 292 ha will be diverted for the pumped storage power plant and associated facilities³, and 7.82 ha for ROW of transmission lines and tower locations. 292 ha for Turga PSP is comprised of 234 ha of forest land, 58 ha of non-forest land (34 ha of irrigation reservoir that presently belongs to the Irrigation & Waterways Department (I&W Dept.), and 24 ha of WBSEDCL's land and private land). The tenure of the irrigation reservoir will be transferred to WBSEDCL, and 24 ha may be temporarily used or leased. The submergence area for upper and lower reservoirs is 146.589 ha. The lower reservoir is planned to be developed by expanding the existing irrigation reservoir.

³ The usages of the required land (292 ha) are: 146.589 ha for upper and lower reservoirs, 16.332 ha for civil structures, 16.332 ha for construction facilities, 18.60 ha of stockpile, processing and disposal areas, 21.97 ha for project roads (permanent and temporary), 18.60 ha for rock quarry areas 42.401 ha for borrow areas (clay areas), and 8.537 ha for other project components.

5 NECESSITY OF LAND USE PATTERN AND RESETTLEMENT

5.1 LAND USE PATTERN

There will be no permanent land acquisition under the project. The land use under the final project design will be 292 ha for the construction of the pumped storage power plant and its relevant facilities, and another 7.82 ha for the right of way (ROW) of the transmission lines and towers (1.7 km long and 46 m wide)⁴.

The following table shows the land usages for the project and their present land category.

Table 5-1 Land Use Plan under the Project & their Present Use

(Unit: ha)

Component	Land use	Present land classification		
		Forest land	Non-forest land	
			Government	Private
1. Turga PSP	291.416	233.416	0	0
a. Submergence area (lower & upper reservoirs)	146.589	112.900	33.689	0
b. Civil structures	16.332	16.332	0	0
c. Construction facilities	18.387	18.387	0	0
d. Stockpile, processing and disposal area	18.600	18.600	0	0
e. Project roads (permanent & temporary)	21.970	21.970	0	0
f. Rock quarry area	18.600	18.600	0	0
g. Borrow area	42.401	18.090	9.55	14.761
h. Other project components	8.537	8.537	0	0
2. ROW of Transmission line	7.820	7.820	0	0
3. TOTAL	299.236	241.236	43.239	14.761

Source: WBSEDCL

Note 1: The non-forest land for the submergence area, 33.689 ha, is the irrigation reservoir presently located where lower reservoir will be developed. The reservoir belongs to the I&W Dept.

Note 2: The non-forest land for the borrow area (24.311 ha) is comprised of WBSEDCL's former borrow area used in the construction of Purulia PSP (9.55 ha) and private land (14.761 ha).

Note 3: Breakups of each component are different from those written in the DPR and EIA submitted to the GOI in 2016. The figures shown in the above table are the latest and final ones that reflect the results of MOEFCC's site inspection conducted in November 2017.

5.2 RESETTLEMENT

There is no involuntary resettlement anticipated by such land use under the project.

⁴ The maximum width of RoW corridor is calculated based on tower design, span, and wind speed, maximum sag of conductor and its swing plus other requirement of electric safety. According to the MOEF Guideline No. F.NO. 7-25 / 2012 - FC dt 05/05/2014, width of ROW for 400 kV D/C line under standard conditions is considered as 46m.

6 POTENTIAL SOCIAL IMPACTS

In the process of and as a result of the technical survey for DPR, permanent acquisition of private land or involuntary resettlement have been avoided by identifying alternative and feasible designs that have the least adverse impact on the project impacted area.

For the Turga PSP construction, 234 ha of forest land will be diverted for project facilities, permanent and temporary roads, installation and processing of construction facilities, stockpile, disposal, rock quarry area and borrow area. ROW clearance for another 7.82 ha of forest land will be obtained for transmission lines and towers.

Out of 58 ha of non-forest land, 24.311 ha of non-forest land (9.55 ha of WBSEDCL land and 14.761 ha of private land) may be utilized as borrow areas during construction period if the quantity and quality of soil collected in forest land is not sufficient. Among 14.761 ha of private land, two plots are located in Hathinada (total 5.945 ha), and another two in Gosaidi (1.82 ha)). The rest 7 ha of private land is planned in Kudna without being identified yet as of April 2018 but considered as an additional option to use as borrow area. When it is found necessary to use or lease private land in the non-forest area, contractor will negotiate with each and every land owner to conclude a lease contract with mutual consent on the conditions. Land owners have rights to deny or reject such temporary use if they do not wish, to which contractor must respect and search for alternative land. No involuntary or forced provision of private land is therefore anticipated. WBSEDCL will supervise if the contracts are concluded with fair and favorable conditions for land owners according to the Indian law.

Out of 9.55 ha of WBSEDCL land, it has been identified that one WBSEDCL's land in Kudna (4.98 ha) may potentially cause loss of livelihood means and income as local farmers have been cultivating paddy and vegetable there without tenure. When it is found necessary to use the Kudna borrow area under the project, they will lose their products, livelihood means and income, and the ARAP has been compiled in accordance with Indian acts and JICA's policy, address the issue of losses of products, livelihood means and income. The ARAP will be translated into local languages and disclosed for the reference of the affected people as well as other interested groups.

Table 6-1 Details of Planned Borrow Areas

No.	Location ID	Location	Land Category		Remarks
			WBSEDCL land	Private land	
1. Borrow area for upper reservoir					
a.	UCA-4	Hathinada	-	4.1 ha	Contractor will conclude a lease contract based on mutual consent with land owner.
b.	UCA-5	Hathinada	-	1.845 ha	ditto
2. Borrow area for lower reservoir					
a.	LCA-4	Gosaidi	-	1.006 ha	ditto
b.	LCA-5	Gosaidi	-	0.81 ha	ditto
c.	LCA-1	Kudna	4.98 ha	-	Local farmers grow crops and other agricultural products unauthorizedly
d.	Unidentified yet	Kudna	-	7 ha	-

Source: JICA Study Team

33.689 ha of non-forest land that belongs to the I&W Dept. presently used as the irrigation reservoir will be expanded as lower reservoir. Irrigation water and drinking water is currently taken at the existing irrigation reservoir where people residing nearby also do fishing from time to time. Construction of a coffer dam next to the lower reservoir is one of the countermeasures reflected in the project design that ensures availability of drinking water, irrigation water, and enables fishing activities to be continued during the construction period.

There are least gaps between the legal framework of India and West Bengal State, and JICA's Policy. WBSEDCL is expected to be compliant to and consistent with her country's statutes and good practices as well as JICA's policy to help ensure that affected people are able to rehabilitate themselves to at least their pre-project condition.

WBSEDCL has decided that they will not declare the cut-off-date⁵ prior to the project implementation, since it will be fixed after the construction starts whether they have to go on to the use of non-forest WBSEDCL land. WBSEDCL has a clear idea that they exploit the forest land first, and will not explore any land owned or used by local residents until they find it difficult to collect sufficient quantity and quality of soil within the forest land to the expected level. However, once the necessity to exploit the construction materials on WBSEDCL land is confirmed, WBSEDCL will hold consultations with the affected people and will make prior payment of compensation through contractors. The updated and latest official information on the affected people will be collected by the District Magistrate and Block Development Officer (BDO) of Baghmundi. Livelihood restoration activities will be conducted through BDO financed by WBSEDCL.

⁵ The "cut-off date" makes owners/users of the land eligible to be categorized as the affected people and be eligible to the project entitlements.

7 POLICY FRAMEWORK UNDER THE PROJECT

The following issues shall be the principles and policy framework mutually confirmed by both sides.

7.1 COMPENSATION

Compensation and rehabilitation support will be provided to the affected people, that is, any person or household which on account of project implementation would have his, her or their:

- Standard of living adversely affected;
- Interest in any land;
- Income earning opportunities adversely affected; or
- Social and cultural activities and relationships affected or any other losses that may be identified during the process of land requisition.

All affected people will be eligible for compensation and rehabilitation assistance, irrespective of tenure status, social or economic standing and any such factors that may discriminate against achievement of the objectives outlined above. Lack of legal rights to the assets lost or adversely affected tenure status and social or economic status will not bar the affected people from entitlements to such compensation and rehabilitation measures.

All the affected people cultivating land within the project impacted areas as of the date of the latest census and inventory of lost assets, are entitled to compensation for their lost products and means of livelihoods, and restoration of incomes will be provided with rehabilitation measures sufficient to assist them to improve or at least maintain their pre-project living standards, income-earning capacity and production levels.

Compensation for the affected people who are dependent on agricultural activities will be land-based wherever possible. Land-based strategies may include provision of replacement land and upgrading livelihoods of people without legal land titles. If replacement land is not available, other strategies may be built around opportunities for re-training, skill development, wage employment, or self-employment. Solely cash compensation will be avoided as an option if possible, as this may not address losses that are not easily quantified, such as access to services and traditional rights, and may eventually lead to those populations being worse off than without the project.

7.2 ASSISTANCE

Assistance will be provided not only for immediate losses, but for their transition period for the restoration of the livelihood and standards of living of the affected people.

The ARAP takes into consideration the needs of those most vulnerable to the adverse impacts (including the poor, those without legal title to land, tribes, women, children, elderly and disabled) and ensure they are considered in planning and mitigation measures identified. Assistance should be provided to help them improve their socio-economic status.

7.3 PARTICIPATION

The affected people will be involved in the process of developing and implementing the ARAP.

The affected people and their communities will be consulted about the project, the rights and options available to them, and proposed mitigation measures for adverse effects, and to the extent possible be involved in the decisions that are made.

7.4 INSTITUTIONAL ARRANGEMENTS

Adequate budgetary support will be fully committed and made available by WBSEDCL to cover the costs of land use, compensation and income restoration measures within the agreed implementation period.

Payment of compensation, and start of the livelihood rehabilitation activities of the affected people, will be completed prior to relevant construction activities.

Organization and administrative arrangements for the effective preparation and implementation of the ARAP will be identified prior to the commencement of the process.

Appropriate reporting (including auditing and redress functions), monitoring and evaluation mechanisms, will be identified and set in place.

8 FEATURES OF POTENTIALLY AFFECTED HOUSEHOLDS

The socioeconomic features of the local communities in the project impacted area were collected through group interviews of local people from the surrounding villages, and a verbal and written interview with the BDO, Bagmundi block.

In addition, based on the data and information given by WBSEDCL, the survey team shortlisted the households of potentially affected by the project implementation if non-forest

WBSEDCL land is used as borrow area as mentioned above, and their salient features were collected during the survey, namely; demographic profile, education, occupation, land tenure, assets, household infrastructure, etc. through the initial baseline survey comprised of population census, asset inventory and household socioeconomic survey.

The survey team was comprised of WBSEDCL (executing agency), JICA Study Team, WAPCOS (local consultant hired by JICA Team), and local coordinators well conversant with local language selected from the communities. Pre-test of the questionnaire was conducted at three households prior to the household interview survey, following which the prepared questionnaire was reviewed and revised to suit the local context as attached to this report. The interview survey itself was conducted between 24 to 29 November 2017 and 22 February 2018. A total of seventeen families were covered under the survey. The Team revisited some of them to correct discrepancies among raw data and collect missing information within the said period for compiling, systematizing and analyzing the data accurately. Out of the interviewed seventeen families covered under the survey, five households from Kudna village are identified as the potentially affected households whose livelihood means conducted unauthorizably on WBSEDCL land may be lost.

8.1 DEMOGRAPHIC FEATURES

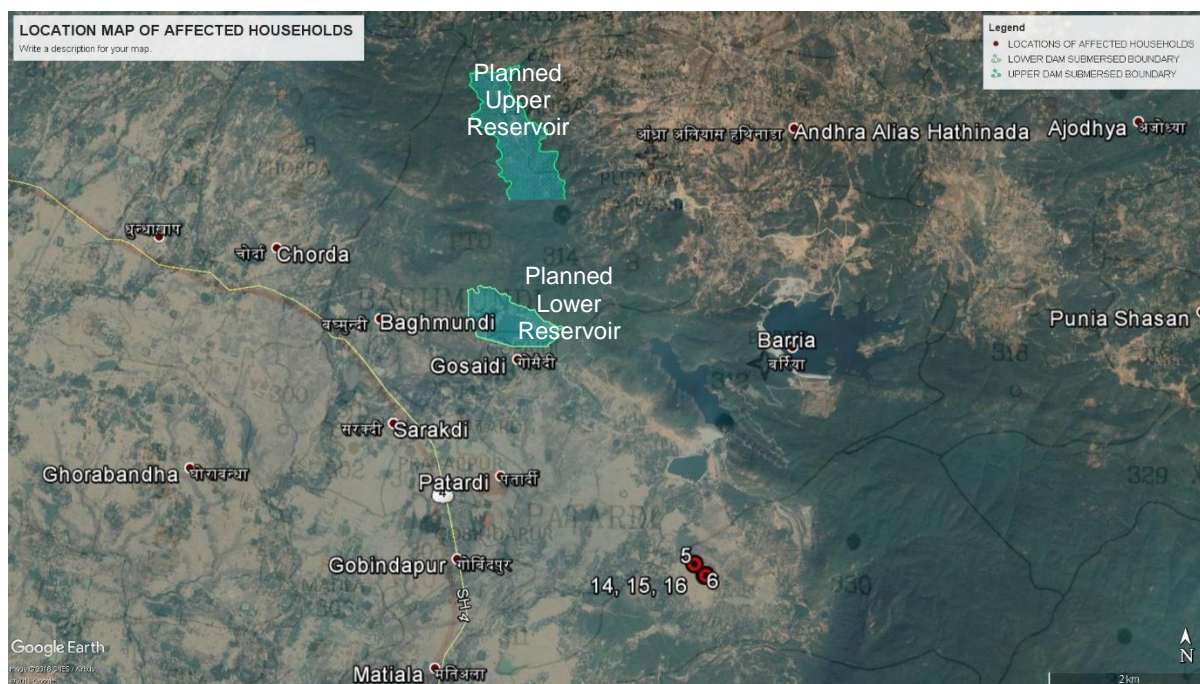
Among the five households, one belongs to general caste, and the rest four are Scheduled Tribe (Santhal). Out of 25 household members, 13 (52.0%) are male and 12 (48.0%) are female (Table 8-1). One (4.0%) is below 6 years old, 5 people (20.0%) from 7 to 14 years old, 10 people (40.0%) from 15 to 29 years old, 5 (20.0%) from 30 to 44 years old, 4 (16.0%) from 45 to 59 years old, and nobody is above 50 years old. Their living locations are shown in the map below (Figure 8-1).

Table 8-1 Basic Features of Potentially Affected Households

(Unit: number of household or person)

Living village	Private land for borrow area		No of HHs	Caste		No of people	Gender		Age distribution					
	Location	ID		Gen	ST		M	F	0-6 yrs	7-14 yrs	15-29 yrs	30-44 yrs	45-59 yrs	60 yrs <
Kudna	Kudna	LCA-1	5	1	4	25	13	12	1	5	10	5	4	0

Source: JICA Study Team



Source: JICA Study Team

Note: Out of seventeen surveyed households, serial numbers of five households from Kudna are “5”, “6”, “14”, “15”, and “16”.

Figure 8-1 Locations of Potentially Affected Households in Kudna

8.2 EDUCATION

In terms of literacy, 18 people (72.0%) are literate and 6 (24.0%) are illiterate. The rest one is under school age (below six years old). 9 people (36.0%) have attended school (the minimum education is Class 4th and the highest is undergraduate), another 9 (36.0%) are now attending school (as of November 2017 when the survey was conducted), and 6 (24.0%) never attended although education at government schools in the surveyed area are imparted for free.

Table 8-2 Literacy and Education Status

(Unit: number of person)

Living village	No of people	literacy			School attendance				highest education			
		literate	illiterate	Not yet school age	under school	attended before	currently attending	never	primary	junior-secondary	higher secondary	higher
Kudna	25	18	6	1	1	9	9	6	3	7	6	2

Source: JICA Study Team

Note: As of November 2017, one person was not yet at school age (under six years old). He is therefore not counted either “literate” or “illiterate.”

8.3 OCCUPATION AND PRODUCTS

All five households are involved in farming activities. Three of them have farming as their primary occupation whereas the other two have driver, operator, and laborer as their main income earners.

They grow paddy, one of them grows pulse too. All of whom grow agriculture products for self-consumption (domestic purpose), one of them also sell their products for commercial purposes. Annual volumes of paddy production differ by household. All of them depend on rainwater for irrigation.

All surveyed households collect NTFP throughout a year except rainy season as their main source of energy is fuelwood. Tree leaves are also collected for making indigenous plates for serving food. The selling price of fuelwood is Rs. 100 per bundle⁶.

They also rear livestock at almost every household. Cows and goats are reared by all five households, followed by roosters (four households) and ducks (two households). Major purpose of keeping livestock is for self-consumption / domestic, and a few households sell them at local market.

8.4 ECONOMIC LEVEL

(1) Income Level

Income levels stated voluntarily by the households are varied. The minimum monthly household income is Rs. 3,000 (two households), followed by Rs. 5,000 (two households). All four households grow paddy and other agricultural products only for self-consumption. There is one household whose monthly income is Rs. 27,000. It is noted that the figures are not exact or accurate, as they work on their own (daily or seasonally) and no official income statement was given as evidence.

(2) Other information

Most of the potentially affected households are below poverty line. They are assisted and subsidized by various social welfare programs from the Central and State Governments. They have at least one “zero balance account” to receive government financial assistance. They are also entitled to purchase grains and pulses at “public distribution shops” at nominal rates.

⁶ One bundle consists 30 kg.

8.5 IMMOVABLE ASSET

(1) Land

According to the verbal explanation by the households, total land they own are also varied among them. The minimum land is 10 decimals, and the maximum is 100 decimals⁷. The rest three households have either 38, 55 or 70 decimals of land. Again, it is noted that the figures are not exact or accurate, as no official document was presented as evidence.

(2) Homestead Structure

All five households have kuccha (semi-structured with temporary materials made up of mud, dry leaves, straw and bamboo) structure of homestead.

(3) Trees

Trees owned by the households are in their peripheries, while trees reared in the surveyed villages are Boheda, Dumari, Dates, Custard Apple, Guava, Lemon, Karam, Mango, Saali and Teak.

8.6 MOVABLE ASSET

Four households have both mobile phones and bicycles. TV is owned by one.

8.7 INFORMATION SOURCES

Important information such as government assistance schemes, other issues and prior notice of meetings are imparted through civil volunteers, Village Pradhans, and Panchayat members. The official channel for information sharing is the Gram Panchayat Office. Two affected households collect information through newspaper, while one collects from TV.

8.8 HOUSING INFRASTRUCTURE

(1) Sources of Energy

All surveyed households are electrified except one. Firewood is the major source of cooking at all households.

(2) Water Supply

Common tube well is the major source of drinking water among four households. Water taken from pond or lake is used for domestic purpose among all households. Rainwater is used for irrigation purpose by all households.

(3) Sanitation Facility

One household has pit toilet (traditional pit latrine) at home, while the rest use open space. Liquid and solid domestic wastes are disposed at open space among all households.

⁷ One decimal is equal to 435.6 square feet or 40.46856 m².

8.9 COMMON DISEASES

Survey analysis elucidates that cold and cough are commonly found among the surveyed households. Malaria and diarrhea are also found among some of them. Medical facilities in the surveyed villages are subsidized by the Government and services are given for free if they are eligible under the schemes of West Bengal State and Central Government.

8.10 VULNERABILITY

Along with general caste, ST people (Santhal) are among the project affected households. Santhal people are commonly seen in Nepal, Bangladesh, and several parts of North India (Bihar, Jharkhand, West Bengal, Odisha and Tripura), and Bhumij people are found in West Bengal, Jharkhand and Odisha too. Their villages are connected by local road network and accessible from the block capital and other neighboring villages. They purchase goods and services at local markets, and wear clothes same as rest of the local residents. Santal people speak Santali (*Olchiki*) as their first language and Bengali as their second. The illiterate among them, most of them are female elderly, only speak Santali. They often collect NTFP and sell them at local market in Baghmundi town. Their identification, their forest rights, and reservation of vacancies in services and posts are secured and protected by the Constitution and domestic laws⁸. According to WBSEDLC and the BDO, most of the affected people and the communities in the project impacted area are below poverty line, and they are assisted and subsidized by various social welfare programs from the Central and State Governments. Under the Individual Household Latrine (IHHL) Scheme of the GOI, for instance, Rs. 10,000 is given to each household for latrine construction.

9 PROJECT AFFECTED PEOPLE AND THEIR ELIGIBILITY

The potential affected households and their people are summarized as in the table below.

⁸ The West Bengal Scheduled Castes and Scheduled Tribes (Identification) Act, 1994, The Scheduled Tribes and Other Traditional Forest Dwellers (Recognition of Forest Rights) Act 2006, The West Bengal Scheduled Castes and Scheduled Tribes (Reservation of Vacancies in Services and Posts) Act, 1976.

Table 9-1 Number of the Affected Households and their People

(Unit: number)

Type of affected people	No of Village	Legal		Unauthorized (encroached)		TOTAL	
		Household	Person	Household	Person	Household	Person
Cultivators of WBSEDCL land (LCA-1)	1	0	0	5	25	5	25

Source: JICA Sturdy Team

Note: WBSEDCL will conduct local consultations to officially identify the number of the affected households and people with information provided by the District Magistrate, if they find they must explore non-forest WBSEDCL land to use as borrow area. The numbers in the table are the snapshot collected in the initial baseline survey as of November 2017.

Among the borrow areas that belong to WBSEDCL which used to be PPSP's clay core exploited areas, five households state that they cultivate crops and vegetable at Kudna borrow area⁹. It may cause adverse impact on the local livelihoods if the cultivated land including private land are used for collecting construction materials. It is uncertain yet, however, at the timing of pre-construction period, whether non-forest land will be used for exploiting clay core materials for the construction. There needs further geological investigation, soil sampling test and actual excavation to confirm if the earmarked forest land as borrow area can provide all the required amount and quality of clay core construction materials. WBSEDCL has a clear-cut idea that they will exploit the forest land first, followed by the government land, and requisition of non-forest private land is their last. The affected households will therefore be finally confirmed along with the construction progress in due course of time.

9.1 ENTITLEMENT MATRIX

Based on the compensation policy for the losses caused by the project and livelihood restoration activities, the entitlement matrix has been drafted as in the table below:

Table 9-2 Entitlement Matrix

Type of loss	Entitled Persons (Beneficiaries)	Entitlement (Compensation Package)	Implementation issues/Guidelines	Responsible Organization
--------------	----------------------------------	------------------------------------	----------------------------------	--------------------------

⁹ It was not easy for the respondents to state accurate land area to be likely leased. Those who stated that they cultivate the affected land do not have a clear idea either how much amount of products they generate by their farm activities as all of them consume their products at home and sell the rest at local market.

Type of loss	Entitled Persons (Beneficiaries)	Entitlement (Compensation Package)	Implementation issues/Guidelines	Responsible Organization
Loss of access to cultivable land by cultivator	Cultivators (unauthorized) of WBSEDCL land	<ul style="list-style-type: none"> - Crop / vegetable compensation equivalent to higher values of either 1) government prices at the time of compensation, or 2) annual average market prices - Double harvesting times - Additional grant (20%) for the expenses (manpower, fertilizer, materials, seeds, seedlings etc.) 	<p><Assessment></p> <ul style="list-style-type: none"> - Assessment of quantity and quality of land - Assessment of market value of crops / vegetables <p><Entitlement></p> <ul style="list-style-type: none"> - Updating of title of the affected persons - APs will be fully informed of the entitlements and procedures regarding payments in prior <p><Payment></p> <ul style="list-style-type: none"> - Prior payment 	<p><Assessment></p> <p>Dept. of Agriculture</p> <p><Entitlement></p> <p>Contractor (supervised by WBSEDCL)</p> <p><Payment></p> <p>Contractor (supervised by WBSEDCL)</p>

Source: JICA Study Team

Note: Existing local government regulations of Purulia District for compensation calculations for crops and vegetables will be used where ever available.

9.2 COMPENSATION FOR LOSSES OF LIVELIHOOD MEANS AND INCOME

For the project, the losses and entitlements of the affected people are crops and/or vegetables on the WBSEDCL owned land, and livelihood means (cultivation).

The following table summarizes the WBSEDCL land possibly utilized in the project. There will be no building, tree, or cattle affected by the project. WBSEDCL will pay the compensation based on the policy framework as defined in the ARAP if the land is used.

Table 9-3 Assets likely Impacted under the Project

Land use in the project			Affected Land (ha)		No of Affected HH	Land condition and products as stated by the affected households		
Village	Purpose	Location ID	Gov land	Pvt land		Condition	Product	Product purpose
Kudna	Borrow area	Kudna (LCA1)	4.98	-	5	farmland	Paddy	self-consumption / commercial

Source: WBSEDCL and JICA Study Team

Note: WBSEDCL will conduct local consultations to officially identify the number of the affected households and people with information provided by the District Magistrate, if they find they must explore non-forest land to temporarily use as borrow area. The number of affected households, land condition and products are as stated by the interviewed households collected in the initial baseline survey as of November 2017

10 VALUATION OF ASSETS AND COMPENSATION FOR LOSSES

Crop compensation that is commonly practiced in Purulia District reflects the government rate that offsets fluctuation of selling prices at market for the benefit of farmers, but it does not

concern other cost borne for soil improvement, fertilizers, pesticide, chemicals, tools, manpower, etc.

Crop compensation for the project shall be calculated based on the following formula:

$$X*2*1.2$$

X: Harvests' value to be lost. It is one harvest season per year in the project area.

2: Two times of harvest

1.2: 120% including top-up payment to enhance compensation (20% covers expenses borne for other than crops such as fodder, manpower, pesticide, fertilizer, etc).

The main crop grown in the non-forest land that may be utilized temporarily for extracting clay is paddy. Average crop yield for paddy is 51 quintals per ha, and its government rate is Rs. 1,550 per quintal according to the Office of the Assistant Director of Agriculture of Baghmundi Block¹⁰. Their seeds are supplied from Government of West Bengal and are available at various Government registered seeds shops. Their agriculture products are sold at CPC, FPO and public market.

With an assumption that the Kudna clay area is used, the compensation amount has been estimated as approximately Rs. 950,000 as at 2017/18 price as shown in Table 10-1. Price escalation shall be considered at 10% per annum

Table 10-1 Estimation of Crop Compensation

Affected Land			(a)	(b)	(c)	(d)=(a)*(b) *(x+1) ^x (c)	(e)=(d)*0.2	(f)=(d)+(e)
Village	Gov land (ha)	Pvt land (ha)	Average crop yield for Paddy (Quintal / ha)	Production One Season (Quintal / ha)	Govt Rate of Paddy / Quintal (Rs. / quintal)	Compensation for Two Crops (Rs.)	Top-up (20% for fodder, manpower etc. Rs)	TOTAL
Kudna	4.98	-	51	610.98	1,550	787,338	157,468	944,806

Source: JICA Study Team

Note: the average crop yield for paddy and government rate of paddy per quintal are as of 2017/18 collected from the Department of Agriculture.

¹⁰ Wheat, kalai, tomato and onion are also grown in the project site. As per the official data collected from the Office of the Assistant Director of Agriculture of Baghmundi Block, average crop yield (quintal /ha) for them are 25, 9.5, 31, and 37 respectively.

11 LIVELIHOOD RESTORATION ACTIVITIES

People identified as affected people whose crops and vegetables will be lost by having borrow areas in non-forest WBSEDCL land are entitled to receive compensation and livelihood assistance from WBSEDCL.

Livelihood restoration provides necessary arrangements for improving or at least restoring the livelihoods and standards of living of affected people in the project community, which will ensure the compensation and other assistance are provided in a transparent and equal way. Livelihood restoration will include offering in the form of cash compensation if it is appropriate, and other assistance deemed as necessary to affected people. Opportunities shall be given to affected households to participate in negotiation process for defining reasonable prices of the used land and their products.

The livelihood restoration initiatives shall be considered followings.

- Involvement of affected person in the opportunities for the construction and operation period of the project which shall security their jobs toward sustainable life.
- Arrangement of providing trainings and extension courses for farmers
- Participation of affected people and local communities inclusive of interested parties and contribution of their opinions in establishment of restoration mechanism.

Following activities are proposed for the affected people and local communities:

(1) Training for Skill Development

One member of each family, either male or female, shall be given training for skill development. It is suggested to provide ITI Training at the Government ITI located at Purulia.

A scholarship provision of Rs. 15,000 per year for meeting their fee and study material requirement at the ITI along with Rs. 5,000 per year for meeting their hostel expenses for a period of one year is being made for one member of each 5 affected households. Hence 5 students are proposed to be covered under this scheme. The ITI shall provide training in additional fields like tailoring, incense stick making, etc. along with the training like carpenter, electrician, mechanic and computer typing, etc. keeping in in mind the target families to help enhance the current livelihood status of the surrounding area villages.

A total amount of Rs. 375,000 may be earmarked for providing scholarships, details of which are given in Table 11-1.

Table 11-1 Details of ITI Expenditure per temporarily affected family

S.No.	Activities	Amount (Rs.)
1	Hostel expenses (@ Rs.5,000/month x 5 students x 1 year)	300,000
2	Fees/course material (@ Rs.15,000/year x 5 students for 1 year)	75,000
	Total	375,000

Source: JICA Survey Team

(2) Training and Extension Courses for Farmers

Since farming is widely done by the project surrounding villages hence training to the farmers shall be imparted. The training shall include the following aspects of environmental protection:

Table 11-2 Training and Extension Courses for Farmers

No.	Program	Measures
1	Prevention of spread of water related diseases	<ul style="list-style-type: none"> • Hygiene and personal health care • Control of water spills, puddling etc. • Prevention and prophylactic measures for control of vectors • Disposal of human waste • Disposal of drainage water
2	Safe use of agro-chemicals	<p>Control of weeds in channels</p> <ul style="list-style-type: none"> • Methods of cleaning and disposal of weeds • Detrimental environmental effects of agro-chemicals • Information on biological weed control. <p>Pest control</p> <ul style="list-style-type: none"> • Specific uses of pesticides and its optimization • Residual degradability • Effect on untargeted species • Safety procedures during application • Rate and frequency of application • Disposal of packing material and surpluses • Storage of chemicals <p>Fertilizer use</p> <ul style="list-style-type: none"> • Type, dosage, application techniques, timing and frequency of application and its relationship with type of soils; • Disposal or storage of packing materials and surpluses. <p>Topics to be covered under Environmental conservation programmes are:</p> <ul style="list-style-type: none"> • Protection of forest or trees • Control of tree felling of fuel wood and timber • Advice on establishment of village woodlot • Soil conservation measures. • Such training courses can be organized by Agriculture Department, state government of West Bengal • Information on cropping measures such as weeding, rotational cropping, cleaning of bunds, etc.
3	Environmental conservation program	Dissemination

Source: JICA Survey Team

A lumpsum amount of Rs. 1.5 million shall be earmarked and given to the Agriculture Department to train the residents of the surrounding villages.

Apart from the livelihood restoration activities, local area development plan is proposed in SIA and submitted to the GOI as part of EIA for EC including upgradation of education facilities, scholarship for students, improvement of public health facilities, community toilets, portable water facilities, new ponds, playground, etc.

12 INSTITUTIONAL FRAMEWORK AND IMPLEMENTATION PROCESS

Since the results of the initial baseline survey are preliminary ones, WBSEDCL will update the list of affected people by conducting the DMS, based on the official information collected at the District Magistrate Office and Land Revenue Department when they find they must go on to the use of non-forest government land. Analysis on socio-economic situation of the affected people who cultivate Kudna land will be officially updated by the District Magistrate and BDO.

Although the Project may generate social impacts and it will be only minor impacts at small-scale, a DMS must be undertaken prior to starting the use of Kudna borrow area. The objective of the DMS will be a) to identify products to be compensated and to collect detailed data of all affected households concerning such losses and compensation cost, and b) to collect socio-economic data of all affected households with a view to identifying losses of livelihood and specific needs for livelihoods restoration, especially of vulnerable households.

With the results of DMS, accurate scope of impacts will be identified and detail compensation rates and rehabilitation measures will be prepared. The information shall be incorporated into the revised ARAP. The revised ARAP will be translated into Bengali language and disclosed to the affected people and villages at BDO Office.

During the construction stage, it is the contractors who will deliver the compensation payments according to the official information and the policy framework agreed in the ARAP. This step should be completed prior to the land use. WBSEDCL will ensure appropriate coordination between relevant authorities and organizations and monitor the affected people are well treated as agreed. BDO will conduct the livelihood restoration activities on behalf. All the payment will be done directly / indirectly by WBSEDCL.

13 IMPLEMENTATION SCHEDULE

The implementation schedule of crop compensation and livelihood restoration activities will be decided according to the results of further geological investigation, soil sampling test and actual excavation to confirm if the earmarked forest land as borrow area can provide all the required amount and quality of clay core construction materials. WBSEDCL has a clear-cut idea that they will exploit the forest land first, followed by their own land, and requisition of non-forest private land is their last.

Tentative implementation schedule for compensation, livelihood restoration activities, local area development activities and monitoring works are outlined in Figure 13-1. WBSEDCL will finalize who the affected households are, amount of compensation, and livelihood restoration activities in collaboration with BDO and Agriculture Department. Livelihood restoration activities will be carried out for the best interest of the affected people, and so will be the land area development activities for entire local people in the project site.

A Project Site Office will be established prior to the construction phase, simultaneously with the planning activities of the Project, and will remain active during the construction period.

Activities	Y-2	Y-1	Y1	Y2	Y3	Y4	Y5	Y6	Y7	Y8
	L/A, C/S		Construction						Operation	
1. Detailed Design										
2. Local Consultation by BDO										
4. Updated ARAP submitted by WBSEDCL										
5. Compensation for the project affected people										
6. Livelihood Restoration Activities										
7. Local Area Development Activities										
8. Monitoring by WBSEDCL										

Source: JICA Study Team

Figure 13-1 Tentative Implementation Schedule

14 GRIEVANCE REDRESS

Affordable and accessible procedures for settlement of disputes arising from compensation payments; such grievance mechanisms should take into account the availability of judicial recourse and community and traditional dispute settlement mechanisms.

A site-specific procedure shall be developed for receiving complaints, logging in the GRS logbook for recording and registering purpose, investigation, and analysis and responding to the affected people.

Focal Point for Grievance

Grievance focal person shall be BDO of Baghmundi Block to implement the GRS procedure fairly, equally effectively. He will receive the complaints in verbal or with letter from the affected households directly and indirectly. The complaint shall be recorded and registered accordingly and deliver the message to the Project Site Office promptly.

Project Site in charge

Site based grievance redress team shall be the Chief Engineer cum Project Site in charge at the Project Site office of WBSEDCL. He will review the any complaint and concerns and find a solution to ease the degree of complaints, which will be agreed and accepted by the affected people. In this stage, many issues shall be resolved as possible locally.

Grievance Redress Committee

If the case is not addressed to the affected people's satisfaction, P.S.I.C shall proceed to submit the issue to Grievance Redress Committee for further review.

GRC is the highest authority to make final decision within project specific Grievance Redress System on the received issues which cannot be sorted out up to P.S.I.C. level. GRC will be comprised of District Magistrate of Purulia District, WBSEDCL, State Department of Power, Police Administration Office, BDO and Gram Panchayat.

Unsolved Issue

If the case is still not resolved by GRC, the affected people can proceed through juridical system such as appealing on court for final resolution.

15 COSTS AND BUDGET

All the expenditure shall be borne and paid by WBSEDCL. Crop compensation will be paid through contractor, whereas the budget for livelihood restoration activities will be allocated from WBSEDCL to BDO, and BDO will conduct them on behalf of WBSEDCL.

The total amount is estimated approximately Rs. 2.8 million. The number of affected households for compensation and those covered under the livelihood restoration activities will be revised according to the official identification, and the budget will be estimated accordingly with consideration of price escalation too.

Table 15-1 Cost Estimate for Crop Compensation and Trainings for Income Restoration

No	Item	Cost (Rs.)
A	Crop compensation for the affected people	944,806
B	Livelihood Restoration Activities	1,875,000
	1. Skill development trainings	375,000
	(1) Hostel expenses (@ Rs.5,000/month x 5 students x 1 year)	300,000
	(2) Fees/course material (@ Rs.15,000/year x 5 students for 1 year)	75,000
	2. Training and Extension Courses for Farmers	1,500,000
	(1) Prevention of spread of water related diseases	Lump sum
	(2) Safe use of agro-chemicals	
	(3) Environmental conservation program	
Total		2,819,806

Source: JICA Study Team

16 ARRANGEMENTS FOR MONITORING AND EVALUATION

Internal monitoring will be carried out by WBSEDCL periodically during the whole land use process conducted by the contractor. Internal monitoring will take place on a quarterly basis or other timing depending on the progress.

Livelihood restoration activities will be conducted by BDO on behalf of WBSEDCL. WBSEDCL will monitor the activities during the implementation period quarterly or other timing depending on the progress.

A draft monitoring form is attached to this ARAP and modification shall be done prior to the ARAP implementation.

17 CONSULTATIONS WITH AFFECTED PEOPLE

A series of consultation meetings held in the project area including one official public hearing in February 2016, group interviews in November 2017, and public consultation in February 2018. During discussion, the project summary was explained and local people's concerns and potential impacts by the project were discussed. As a result, there are no objections against the project and no comments which require additional issue in compensation policy at this timing.

ANNEX 1 HOUSEHOLD SURVEY QUESTIONNAIRE

For the potential affected households only

Questionnaire No.

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WBSEDCL is planning to construct new pumped storage power plant in Bagmundi Community Development Block. We would like you to cooperate with us to carry out the household survey attention to the potential affected households. The survey results will help us develop a report that describe the degree of social impacts caused by the Project and income restoration strategies. Your cooperation in completing this survey by providing your valuable opinions and reviews will be highly appreciated.

Section 1- Particulars of Interviewed Household's Location			
1.1	C.D.Block Name	Bagmundi	1
		Others (specify: _____)	2
1.2	Gram Panchayat Name:	Ajodhya	1
		Bagmundi	2
		Others (specify: _____)	3
1.3	Constituent Village Name:	BHUNIGHRA	1
		TELIA BHASA	2
		SALDI	3
		SARAKDI	4
		PRATAPPUR	5
		PATARDI	6
		GOBINDAPUR	7
		MADLA	8
		BARRIA	9
		GOSAIDI	10
		BAGHMUNDI	11
		PURNA TANR PANIA	12
		RANGA	13
		BARE LOHAR	14
		Others (specify: _____)	15

Household's location (please measure by GPS in order to plot their location on a map)

Coordinates (Latitude / Longitude)	Altitude

Category of Household (please select either of the following)

Owners of private land to be requisitioned temporarily as clay core area	1
People / farmers who are likely to lose their livelihood means	2
Others (specify)	3

Answers to choose for Q2 to Q22 of Section A

	Choices	Code		Choices	Code
Answers to 2:	Household head	1	Answers to 12:	Literate	1
	Spouse	2		Illiterate	2
	Children	3			
	Children in law	4	Answers to 13:	Attended before	1
	Brother / sister in law	5		Currently attending	2
	Parent / parent in law	6		Never attended	3
	Grandparents	7			
	Grandchildren	8	Answers to 14:	Pre-school (before 1 st yr)	1
	Other relatives	9		Primary (1 st to 5 th yr)	2
	Adopted child	10		Junior (6 th to 8 th yr)	3
	Non-relative	11		Higher secondary (9 th to 12 th)	4
	Others (specify)	12		> University / Collage	5
				Vocational	6
Answers to 3:	Male	1		Special institution for disabled	7
	Female	2		Others (specify)	8
Answers to 4:	Living together	1	Answers to 15:	Available at work	1
	Temporarily Away	2		Able to work and seeking	2
				Able to work but stay out of job	3
Answers to 6:	Single (never married)	1		Student	4
	Currently married	2		Household duties	5
	Widowed/Widower	3		Dependent	6
	Separated	4		Pensioner	7
	Divorced	5		Rentier	8
				Beggar	9
Answers to 7:	Hindu	1		Others (specify)	10
	Muslim	2			
	Christian	3	Answers to 19:	On foot	1
	Sikh	4		Bicycle	2
	Buddhist	5		Rickshaw	3
	Jain	6		Motorbike	4
	Others (specify)	7		Car/Jeep/Van	5
				Auto-rickshaw	6
Answers to 8	Scheduled Tribe (ST)	1		Bus / public transportation	7
	Scheduled Caste (SC)	2		Train	8
	OBC (Other Backward Class)	3		Boat / water transport	9
	General	4		Others (specify)	10
				No travel required	11
Answers to 10:	Hindi	1			
	Bengali	2	Answer to 20:	Daily basis	1
	Others (specify)	3		Monthly basis	2
				Seasonal basis	3
Answers to 11:	Hindi	1		Yearly basis	4
	Bengali	2		Others (specify)	5
	English	3			
	Others (specify)	4	Answers to 21(b)	Main worker (>6 months)	1
				Marginal 1 (3<6 months)	2
				Marginal 2 (<3 months)	3
				Non-worker	4

A. POPULATION CENSUS

A1. Household Identification

Please describe composition of your family and other people who reside together in the table below. If you have two or more households living together, please state all of them. **(Include those living together in the same household and those who are supposed to return to the household but temporarily away due to seasonal work, working abroad, study, etc.; including extended family and non-relatives (house maids, baby sitters) who live together)**

	1	2	3	4	5(a)	5(b)	6	7	8	9	10	11	12	13	14
	Name of the household members starting with the head of the household	Relation with Head	Sex	Living together or temporarily away	Date of Birth	Age (in yrs)	Current marital Status	Religion	ST / SC / OBC, Gen	If SC or ST, write name of SC/ST	Mother tongue	Other languages known	Literacy status	Status of attendance	Highest educational level attained
1		1													
2															
3															
4															
5															
6															
7															
8															
9															
10															

(Note) Please mark or tick the person who responds the interview survey.

(Note for 5) Please collect information on the date/month/year of birth (5(a)), based on which the enumerator can confirm the age of the respondent (5(b)). If the respondent is not clear about when he/she was born, fill 5(b) based on their age statement.

	1	15	16	17	18	19	20	21(a)	21(b)	22(a)	22(b)	22(c')
	Name	Current job status / non-economic status	Primary Occupation 2017	Secondary Occupation 2017	Distance from home to workplace (in km) (or school)	Mode of travel	Work base (daily, monthly, seasonal, yearly etc.)	(If work daily) average no of working days per week during 2017	Total work period during 2016 (or in the past one year)	Daily income 2017	Monthly income 2017	Annual income 2016 (or in the past one year)
1												
2												
3												
4												
5												
6												
7												
8												
9												
10												

(Note for 17) Please fill in if the respondent is involved in more than two occupations.

(Note for 22) Please collect information on the income based on the nature of their work. For instance, if the respondent is a daily labourer, the enumerator shall choose 22(a). If the respondent is a government staff, the enumerator shall choose 22(b). If the respondent is a farmer or he/she has a clear idea about their income 2016 (or the past one year), choose 22(c').

B. ASSET INVENTORY

1. Immovable Assets

Please describe the tenure status of land, structure and trees you own/use.

(1) Land

Please check (√) if you own/use either of listed land below (if you have other lands, specify what kind of lands they are).

Please provide approximate area size of each land which you use (also provide the amount of money that you paid to purchase the land you own, and that you currently pay yearly for rented land). Please state if you have a legal document to own/use your land.

Type of Land		1.Present status*1	2.Area (decimal)	3.Amount for purchase / annual rent (Rs.)	4.Location	5.Legitimacy to land (Yes -1, No -2)
a.	() Land plot for housing unit					
b.	() Home garden					
c.	() Yard					
d.	() Farm land					
e.	() Tree plantation area					
f.	() Pastureland					
g.	() Fishpond					
h.	() Others (specify)					
Out of the above, the land area to be requisitioned or acquired		Type of land:		Area (decimal)	Value (Rs.)	

Answers to1: Own -1, Rented from someone -2, Provided free from someone -3, Govt quarters / govt own -4, Private company quarters -5, Other -6

(2) Structure

Please check (√) if you own/use either of listed structures below in and out of your land (if you have other structures, specify what kind of structures they are).

Please provide approximate area size of each structure which you use (also provide the amount of money that you paid to purchase the structures you own, and that you currently pay yearly for their rent). Please state if you have a legal document to own/use your structure.

Type of Structure			1.Present status*1	2.Area (decimal)	3.Amount for purchase / annual rent (Rs.)	4.Location	5.Legitimacy to land (Yes -1, No -2)
a.	()	Residence					
b.	()	Shop (separate)					
c.	()	Dwelling house (residence + shop)					
d.	()	Cattle shed					
e.	()	Farm house					
f.	()	Others (specify)					
Out of the above, the structure and their area to be requisitioned or acquired			Type of structure		Area (decimal)	Value (Rs.)	

Answers to1: Own -1, Rented from someone -2, Provided free from someone -3, Govt quarters / govt own -4, Private company quarters -5, Other -6

(3) Tree

Please check (√) if you own either of listed trees below within your land (if you have other trees, please specify what kind of tree they are).

Please also provide number of trees (also provide the amount of money that you paid to purchase the trees you own, and that you currently pay yearly for their rent). Please state if you have a legal document to own/use your trees.

Type of Tree			1.Present status*1	2.No of trees	3.Amount for purchase / annual rent (Rs.)	4.Location	5.Legitimacy to land (Yes -1, No -2)
a.	()	Leave tree					
b.	()	Fruit tree					
c.	()	Bamboo tree					
d.	()	Timber					
e.	()	Others (specify)					
Out of the above, the trees and their numbers to be requisitioned or acquired			Type of tree:		Number of trees	Value (Rs.)	

Answers: Own -1, Rented from someone -2, Provided free from someone -3, Govt quarters / govt own -4, Private company quarters -5, Other -6

(4) Type of Agriculture Products

Please choose products you harvest from your land and trees.

Please check (√) if you produce either of listed products below, and provide 1) seasonal production volume, 2) number of harvest per year, and 3) total production volume per year. If you have other products, please specify and add them in the box.

Type of Product			1		2	3	4	5	6
			Purpose		Unit price per kg	Product volume per season	Number of harvest per year	Total volume per year	Total value per year
			Domestic	Commercial	Rs.	Kg	No of times	Kg	Rs.
a.	()	Paddy							
b.	()	Vegetable							
c.	()	Pulses							
d.	()	Oil seeds							
e.	()	Bamboo shoots							
f.	()	Wheat							
g.	()	Others (specify)							
Out of the above, the products to be requisitioned or acquired			Type of product:			Annual volume (kg)		Value (Rs.)	

(5) Type of NTFP

Please choose NTFPs you collect from forests.

Please check (✓) if you collect either of listed NTFPs below, and provide 1) Volume per day, 2) Volume per month, and 3) total production volume per year. If you have other NTFPs, please specify and add them in the box.

Type of NTFP			1		2(a)	2(b)	3	4	5
			Purpose		Unit price per kg	Volume per day	Volume per month	Total volume per year	Total value per year
			Domestic	Commercial	Rs.	Kg	Kg	Kg	Rs.
a.	()	Fuelwood							
b.	()	Spices							
c.	()	Nuts							
d.	()	Seeds							
e.	()	Berries							
f.	()	Mushroom							
g.	()	Oils							
h.	()	Foliage							
i.	()	Leaves							
j.	()	Medicinal plants							
k.	()	Peat							
l.	()	Dates							
m.	()	Honey							
n.	()	Others (specify)							
Out of the above, the products to be requisitioned or acquired					Type of NTFP		Annual volume (kg)	Value (Rs.)	

(Note) Please collect information on the volume based on the nature of the work and convenience of the respondent. For instance, if the respondent collects NTFP daily and sell them at the market, the enumerator shall choose "volume per day". If the respondent sells NTFP at monthly basis, choose "volume per month".

2. Movable Assets

(1) Type of Livestock

Please choose livestock you keep at your farm.

Please check (√) if you raise livestock and fish either of listed animals below, and provide their numbers. If you have other livestock, please specify and add them in the box.

Type of Livestock			1		2	3	4
			Purpose		Unit price	Number	Total Value
			Domestic	Commercial	Rs.	No.	Rs.
a.	()	Rooster / hen (chicken)					
b.	()	Boar / sow (pig)					
c.	()	Cow / bull (cattle)					
d.	()	Water buffalo					
e.	()	Goat					
f.	()	Duck					
g.	()	Fish					
h.	()	Sheep					

(2) Home Assets

Please choose assets (home appliance, farm equipment, transportations).

Please check (√) if you have either of listed items below, and provide their numbers. If you have other assets, please specify and add them in the box.

Type of Assets			No	Type of Assets			No
a.	()	Radio		k.	()	Table Fan / ceiling fan	
b.	()	TV		l.	()	Car / Truck / Van	
c.	()	Satellite TV Antenna		m.	()	Motorbike	
d.	()	Landline phone		n.	()	Bicycle	
e.	()	Mobile phone		o.	()	Tractor / trailer	
f.	()	PC (computer)		p.	()	Canoe / boat	
g.	()	Video / VCD / DVD player		q.	()	Cart (bullock)	
h.	()	Refrigerator		r.	()	Plough	
i.	()	NA		s.	()	Seed planting machine	
j.	()	NA		t.	()	Others (specify)	
s							

(3) Other Movable Assets

Please add any other assets than those already stated in the above.

C. SOCIOECONOMIC CONDITION

C1. Housing Infrastructure

1. Characteristics of Housing Unit

Please choose about the housing unit that your household is occupying.

Pucca House	1
Kucha house	2
Wooden house	3
Bamboo	4
Hut	5
Other (specify)	6

Pucca House: houses, the walls and roof of which are made of permanent materials.

Kutchra House: Houses in which both walls and roof are made of materials, which have to be replaced frequently.

2. Source of energy

Please describe main source of energy for lighting, cooking and irrigation purposes that your household is using. If you have other facilities that require energy, please specify.

	Lighting	Cooking	Irrigation	Other:
Source of energy				

Answers: Electricity - 1, Kerosene -2, Candle -3, Battery -4, Generator (private) -5, Water mill (private) -6, Solar system -7, LPG -8, Liquid fuel -9, Biogas -10, Dried dung -11, Firewood -12, Charcoal -13, Coal -14

3. Source of water

Please choose main source of water for drinking, domestic and irrigation purposes from the answers below and write their number in each box.

	Drinking purpose	Domestic purpose	Irrigation purpose
Main source of water			

Answers: Tap water / piped -1, Tube well / deep well / shallow well / borehole -2, Protected well -3, Spring / pond / lake -4, Rivers / stream / canal -5, Waterfall / rain water -6, Bottled water -7, Tanker / truck -8, Other -9

4. Sanitation

Please describe conditions of sanitation

(1) Type of toilet at home

Dispose at open land	1
Discharge to river / pond / lake	2
Other (specify)	3
Bucket (surface latrine)	4
None	5
Other (specify)	6

(2) Liquid waste

Dispose at open land	1
Discharge to river / pond / lake	2
Other (specify)	3

(3) Solid waste

Please choose how solid wastes are disposed.

Regular public collection service provided (or others)	1
Regular private collection service available	2
Incinerate	3
Dispose at open land	4
Dispose to river / pond / lake	5
Other (specify)	6

C2. Information Source

What means of information do you have? (Please choose all that apply)

Radio	1
TV	2
Newspaper	3
Magazine	4
Internet (via smart phone, PC)	5
Temple	6
Neighbourhood	7
School (through children)	8
Panchayat	9
Other (specify)	10

C3. Common Diseases

Which diseases do your household members often suffer?

Cold	1
Cough	2
Malaria	3
Tuberculosis (TB)	4
HIV/AIDS	5
Diarrhea	6
Dysentery	7
Hepatitis A	8
Dengue fever	9
Diabetes	10
Heart disease	11
Cancer	12
Fitsulla	13
Typhoid	14
Jaundice	15
Other (specify)	16

C5. Household Income and Expenditure

1. Household Income

(1) Are you saving money?

Yes / No

(2) If answered "Yes", for what purpose are you saving money?

2. Household Expenditure

(1) Please state how much you spend monthly and yearly (average) for the items given below as an entire household?

No	Expenditure Item	"0"	Don't know	By government
1.	Food			
2.	Education			

No	Expenditure Item	"0"	Don't know	By government
3.	Living (including health and medical expenses)			
4.	Clothes			
5	Others (specify)			

(2) Do you currently borrow money?

1. Yes / No

2. If answered "Yes", for what purpose do you borrow money?

(3) Which sources do you use to borrow money when you are in need?

Close relatives	1
Relatives	2
Neighbours	3
Friends	4
Bank	5
Microcredit	6
Temple / Mosque	7
Other (specify)	8

Interviewer's Observation and Remarks (if any)

Accompanied by WBSDCL Yes No

Name and Signature of Interviewer

Date of Interview

(print)

Name of Supervisor:
(signature)

Checked on DDMMYY

ANNEX 2 MONITORING FORM (DRAFT)

Date: (DD/MM/YY)

Quarter (1/2/3/4) of Year (YYYY)

I. Progress of Land Acquisition and Resettlement

	Activities	Unit	Planned Total	Progress in Quantity			Progress in %		Expected Date of Completion	Implementing Party	
				During the Quarter	Till the Last Quarter	Up to the Quarter (Total Progress)	Till the Last Quarter	Up to the Quarter (Total Progress)			
1	Land Use Plan	1	Land Survey	%						DM, Land Dept	
		2	Determination of the actual size and boundaries of the land for borrow area	%						Contractor	
		3	Development of a scaled map	%						Contractor	
2	Compensation	1	Local Consultations	Times						BDO	
		2	Reconciliation on the crop values and other resources	%						Agri Dept	
		3	Establishment of a grievance redress mechanism (GRM)	No of grievance received							BDO
				No of grievance							
		4	Litigation process (if any)	No of litigations raised							BDO, DM, WBSEDCL
				No of litigations reconciled							
5	Payment of compensation including top-up payment	No of entitled persons							Contractor		
		No of person received									
		Total paid amount									
3	Vacation of WBSEDCL land	1	Vacation of WBSEDCL by PAPs	No of PAPs to vacate						Contractor	
				No of PAPs who vacated							
				Total area vacated							
4	Livelihood restoration activities	1	Livelihood restoration activities	No of activities						BDO	
				No of entitled persons							
		2	Local engagement at construction site	No of villagers engaged							

2. Details of Local Consultations

No.	Date	Place / No of Participants	Contents of Consultation	Correspondences	Comments from Participants
1					
2					
3					

(ex. Public participation meetings, local consultation meetings, stakeholder meetings)

3. Details of Grievance Redress

No.	Date of Receipt of Complaints	Contents of Complaints	Correspondences	Resolved / Not Yet Resolved
1				
2				
3				

4. Implementation of Livelihood Restoration Activities

BDO will monitor the change of living standard of the PAPs. When PAPs are found that their living standard worsen, or whose present means of livelihood became not-viable, BDO, in coordination with other appropriate institutions, will provide necessary support within the framework of Indian legislation.

No.	Brief Description of the Implemented Livelihood Restoration Activities	Results during Report Period (No. of trainings implemented, No of Participants, etc.)	Location
1			
2			
3			

(ex. Education and other development inputs, rehabilitation of vulnerable groups)

5. Restoration of Livelihoods and Living Standard

Date of Survey:

No.	Description about Surveyed Area	No of Surveyed HH	No of HHs with Increased Income	No of HHs with Decreased Income	No of HHs with Unchanged Income	Types of Problems Encountered	Perceived Need for Additional Assistance
1							
2							
3							

6. Others

If there is any issues to be mentioned, please describe the details.

No.	Details of the issue	Causes of the problems and actions to be taken
1		
2		