

Operation Manual



IRAP at the Gram Panchayat Level Orissa State, India



International Labour Organization

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Integrated Rural Accessibility Planning at the Gram Panchayat Level

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**IRAP at the
Gram Panchayat Level
Orissa State, India**

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Abbreviations

ABDO	Additional Block Development Officer
AD	Accessibility Database
AI	Accessibility Indicator
BDO	Block Development Officer
GP	Gram Panchayat
GPEO	Gram Panchayat Extension Officer
HH	Households
ILO	International Labour Organisation
IRAP	Integrated Rural Accessibility Planning
PA	Progress Assistant
PRI	Panchayati Raj Institute
Q	Quality
SEO	Social Educational Officer
SHG	Self Help Groups
TT	Travel Time

Chapter 1: Introduction

This publication is the “how-to-do operation” manual for the Integrated Rural Accessibility Planning tools (IRAP). It will be used by the Panchayati Raj Department to train Gram Panchayat representatives in how to apply IRAP when formulating the 5-year “Shelf of Projects”.

Local Level Planning and the PRIs

Panchayati Raj Institutions (PRIs) in India are the prime instruments of decentralization at the grass-root level. The PRIs have the responsibility to address the problems of a growing population and scarce development resources. However, the success of the PRIs ability to tackle these problems depends to a large extent on the proper mandate of self-governance, decentralised planning and financial autonomy.

The 73rd Constitutional Amendment Act, 1992 on Panchayati Raj is an important event in the evolution of India’s democracy. The act provides the means to strengthen the roots of Indian federalism by strengthening State Governments’ ability to better plan and implement programmes for economic development and social justice. The amendment has enabled State Governments to provide necessary powers and functions to the PRIs to:

1. Function as institutions of local self-government and
2. Plan and implement schemes for economic development and social justice including the 29 subjects listed in the Eleventh Schedule.

The enactment of the new legislation on Panchayati Raj in almost all the states and Union Territories by April 24, 1994 is a significant landmark in the history of Panchayati Raj movement in India. The PRI system is a three-tier one at the District level (Zilla Parishad), Block level (Panchayat Samiti) and Panchayat level (Gram Panchayat). The Gram Panchayat (GP) is the lowest-level democratic unit mandated to plan and implement programmes at the grass-root level.

The PRIs have administrative as well as financial powers.

Planning at the Gram Panchayat Level

The Panchayati Raj Institutions have the overall responsibility for social and economic development within their jurisdiction. A large component of the projects to realise these goals are related to the development and management of rural infrastructure. Funds for such activities at the Gram Panchayat level in India are available from State Government and Central Government under various rural development schemes.

The Gram Panchayat Act as well as related guidelines issued by State Government from time to time provides the basis for planning at the GP level. In Orissa the current guidelines of the Panchayati Raj Department for the preparation of Five-Year “Shelf of Projects” are also directed

towards GP level planning. The PRIs are given the task of identifying, prioritising and planning interventions in the most effective and efficient manner.

This document is the operational manual to be used by the PRI functionaries and officials for the preparation of GP level infrastructure development plans. The document describes the application of a set of tools termed Integrated Rural Accessibility Planning or IRAP.

An important component of these tools is the concept of accessibility

Accessibility

All households, rural and urban, poor and rich, need to have access to facilities, goods and services in order to fulfil their basic, social and economic needs. To address issues of accessibility, the following three elements are analysed:

1. the location of the households
2. the location of the facilities and services
3. the transport system to bring 1 and 2 together

Rural access can be defined as the ability of people to use, reach and/or obtain the necessary goods, services and facilities they need in their daily lives. Access is inversely related to the time, effort and cost people use to reach the locations they need to, to take advantage of said goods, services and facilities.

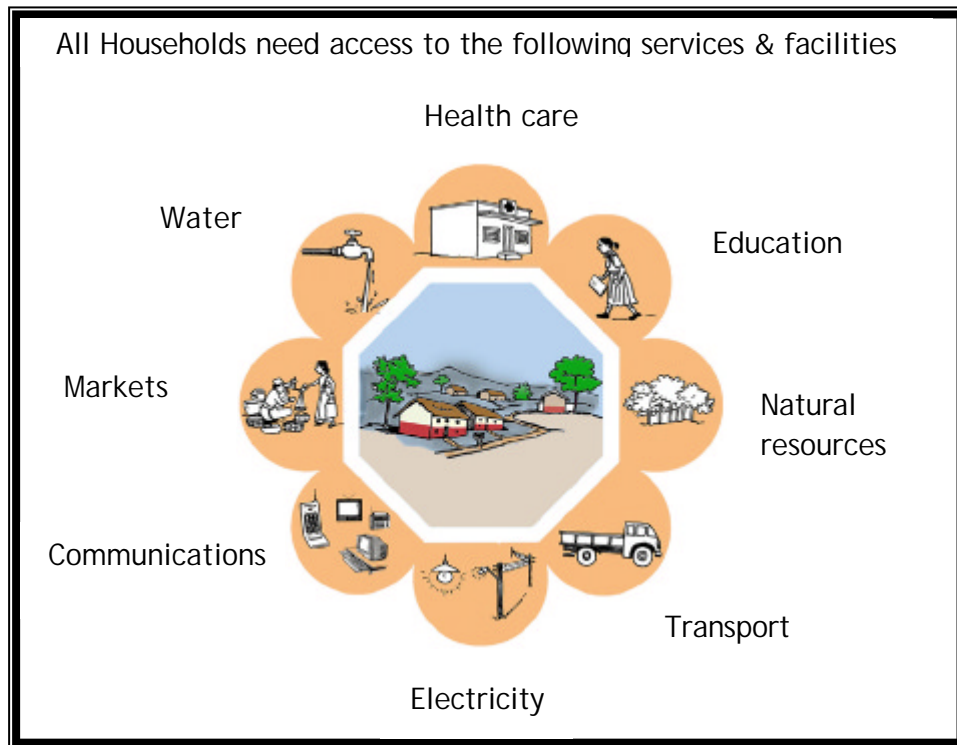
Rural people's access needs can be grouped in three broad categories:

1. Basic needs such as water, fire wood and food security
2. Social welfare aspects of rural life such as health and primary education
3. Economic welfare aspects such as agriculture, live stock and other income generation activities

Access can be improved in two fundamental and complementary ways:

1. Through a better siting of basic facilities and services that rural people need to use (water sources, schools, health centres, markets) which is a non-transport intervention and;
2. Through improving the mobility of rural people so that they can travel faster, easier, more conveniently and less expensively which is a transport intervention (rural roads, tracks, trails, foot bridges, waterways)

Figure 1: Household access wheel



A lack of access generally means isolation and isolation is recognised as a contributing factor to poverty and isolation is a major constraint to development.

A lack of access causes the isolation of communities



Overview of IRAP - Integrated Rural Accessibility Planning

Over the last twenty years, the International Labour Organisation (ILO) has been developing tools and a capacity building process to strengthen the capacity at local government level to better provide the goods, facilities and services that rural people need. This package, often

referred to as IRAP, is a capacity building process that helps local governments' to identify investment priorities to address the access needs of rural communities.

The capacity building process includes the introduction of tools to be used by local planners (in this context the Gram Panchayats) within the existing planning environment. It must be stressed that IRAP does not replace the already mandated planning processes, but strengthens them. Some of the tools used are technical such as questionnaires, mapping and the use of indicators. Others are more participatory e.g. the village meetings, the Gram Panchayat meetings and the linking of villages to the Gram Panchayats' and vice versa.

IRAPs Contribution to Local Level Planning

The different scenarios of development planning currently occurring can be characterised according to their planning environment, and where applicable the planning methodology in use. A planning environment conducive to realistic and responsive planning would have the following three features present:

1. The existence of a planning function at local level
2. The provision for people's direct participation in planning decisions
3. The provision for strengthening planning capabilities of key community members and local-government officials

Key Features of IRAP

- **Improving access to good and services:** The objective of IRAP is to, in a cost effective manner, improve access to goods and services that rural communities need for their social and economic development. IRAP introduces a set of planning procedures, which are based on the access needs of the rural population and seek to maximize the use of local resources.
- **Area approach:** The essence of IRAP is to introduce an area based approach to improving rural accessibility. It identifies specific access needs and seeks to address these through an integrated approach.
- **Bottom-up process for planning:** It enhances participation and promotes an efficient "bottom-up" planning process of rural access in general and rural infrastructure in particular.

IRAP endeavours to address three basic questions that relate to rural accessibility, transport and infrastructure:

1. What should be done?
2. Where should it be done?
3. How should it be done?

IRAP in short, is a local-level, needs-based, area development planning approach. Its main features are its:

1. Simplicity
2. User-friendliness
3. Low-cost application
4. Immediate outputs

IRAP is an integrated approach as it considers all aspects of household access needs (subsistence, social and economic). It enables local people to more actively participate in the process of planning.

IRAP integrates planning at the village level



IRAP Outputs

The outputs of IRAP help to facilitate the work of the district and state level planners, local decision makers and the local self government bodies like the Panchayati Raj Institutions. Outputs include:

- Improved capacity at the local level
- Detailed accessibility database
- Status, priority and projected intervention maps
- List of priority villages
- Action plans and project proposals
- Increased community participation

IRAP provides the basis for developing the capacity of local governments i.e. the PRIs and government officials at the field level in relation to planning and this has a broader impact than on accessibility planning alone.

IRAP creates a comprehensive database that provides inputs for higher-level plans and proposals. It informs the users about the socio-economic and access characteristics of selected areas. The maps produced under IRAP display data for planning purposes and visualises information for presentations. IRAP produces lists of priority villages by sector based on IRAP criteria. Outputs of IRAP are project proposals and action plans. These plans and proposals comprise sector specific interventions or integrated packages which aim to improve rural access. Community participation is an integral part of IRAP and it helps to build the capacity of communities to participate in the development of project planning and implementation. All of which, it is hoped, will lead to the sustainability and ownership of the assets created.

About this manual

IRAP focuses on households and it measures their access needs in terms of the time and effort necessary to gain access to various goods, services and facilities as well as looking at the quality of services provided. The main aim of using IRAP as a planning tool is to identify problems that rural households have in accessing services and goods and to identify and prioritise interventions that will improve peoples' access in rural areas.

This IRAP operation manual has been specifically developed for the State of Orissa in the context of the decentralised planning system in operation through the Panchayati Raj Institutions where the Gram Panchayat is recognised as the lowest mandated government unit responsible for local level planning.

IRAP in Orissa has been developed through pilot demonstrations in the state covering Khallikote Block of Ganjam District. This IRAP process has the potential to be mainstreamed and up-scaled by the Panchayati Raj Institutions for Gram Panchayat level micro planning.

Chapter 2: IRAP Process and IRAP Team

IRAP Activities

IRAP contains 3 steps

Step-1: Preparation of Access Profile

Step-2: Prioritisation of Access Problem

Step-3: Project Identification, Formulation and Intervention Plan.

Table 1: Access Profile: Step-1

Actors	– Elected functionaries, officials & volunteers
Method	– Data collection, compilation & analysis – Mapping
Tools & Techniques	– Village survey questionnaire – Village access situation survey – Map preparation – Data collating – Data analysis
Outputs	Access Profile – GP access database – GP road & building inventories – Infrastructure base maps

Table 2: Prioritisation of Access Problems: Step-2

Actors	– Elected functionaries, officials & volunteers
Method	– Problem quantification – Problem ranking & prioritisation – Mapping
Tools & Techniques	– Accessibility Indicators (AI) – Problem calculation – Problem scoring & ranking – Priority map preparation
Outputs	Priority Profile – GP problem priority sheets – Priority Maps

Table 3: Project Identification, formulation and investment planning: Step-3

Actors	– Elected functionaries, officials & volunteers
Method	<ul style="list-style-type: none"> – Village level project idea generation & screening – Feasibility screening, merging & overlapping – Cost benefit analysis – Final proposal list – Identification of funding sources – Project formulation – Project ranking and prioritisation – Implementation & maintenance plans – Forwarding, lobbying and advocacy – Mapping
Tools & Techniques	<ul style="list-style-type: none"> – Presentation, chairing & facilitation skills – Project identification, screening, merging and ranking techniques – Standard design and cost estimation – Maintenance planning – Map preparation – Data inputting
Outputs	Investment & maintenance plans <ul style="list-style-type: none"> – GP infrastructure investment plan – Infrastructure intervention maps

Team Composition

Under the Panchayati Raj system, the Gram Panchayats, consisting of a cluster of villages, are the lowest level of local self-government with the responsibility for planning and the implementation of socio-economic development programmes. However, at this level resources are limited and the GP must look to the Block (Panchayat Samiti), which, as the intermediary PRI, has adequate infrastructure and human resources (both administrative and technical).

For planning using IRAP procedures at Gram Panchayat level, a trained GP team is required and for supervising and monitoring the whole planning process at GP level, a trained team at Block level is required.

Block Level Team

The expert team at Block level consists of key concerned officials such as the Gram Panchayat Extension Officer (GPEO), Progress Assistant (PA) and if possible the Social Educational Officer (SEO). These are the main actors responsible for undertaking the IRAP process. The Block Development Officer (BDO)/Additional Block Development Officer (ABDO) should be the nodal official. The expert team duly trained at state level will also train GP level team members. At the Block level, the GPEO may coordinate IRAP activities.

GP Level Team

The teams at GP level are the real actors in undertaking the IRAP process. The team consisting of the Sarapanch, Samiti Member, Naib-Sarapanch, Executive Officer, GP Secretary and where available the Anganwadi Worker and supported by potential volunteers from the area carry out IRAP activities. The team is trained by the Block level expert team. At GP level, the Executive Officer coordinates the IRAP activity.

Group discussions



Chapter 3: GP Planning Exercise

Preparation of the Access Profile: Step-1

This phase consists of six key activities

1. Training of GP Team
2. Village level data collection
3. Data compilation
4. Road and building inventories
5. Status map preparation
6. Data analysis

Activity 1: Training the GP Team

The first activity is to train the GP team; this is usually a two day classroom programme.

Guide for Training the GP team

- Duration of training: 2 days
- Level of participation: GP level IRAP team members
- Participants: 25 to 30
- Total training hours: 11 hours
- Modules: 6 modules
- Method of training
 - Learning: theory
 - Doing: practical group exercise, group presentation
- Resource persons: Block level expert team

Table 4: Step-1 Training Contents

Module -1	1 hour
Local level planning & PRIs IRAP concept, process, method, tools and techniques	– Learning - (1 hour)
Module - 2	2 hours
Data Collection:	
– Questionnaire	– Learning - (1 hour)
– Group interview technique	– Group exercise & presentation - (1 hour)
Module - 3	2 .5 hours
Data Compilation	– Learning - 1.5 hours
	– Group exercise & presentation - (1 hour)
Module - 4	3 hours
Maps, Road and Building Inventory:	
– Maps	– Learning - (0.5 hour)
– Road inventory and building inventory and road network map	– Group exercise & presentation - (1 hour)
	– Learning - (0.5 hour)
	– Group exercise & presentation - (1 hour)
Module - 5	1. 5 hours
Data Analysis	– Learning - (0.5 hour)
	– Group exercise & presentation - (1 hour)
Module -6	1 hour
Action plan for conducting IRAP activities in Step -1	– Group exercise & presentation - (1 hour)

Activity 2: Village Level Data collection

Specific information is required to identify the current access situation and access needs of rural communities. This information is not always readily available and therefore the GP level team needs to collect specific village data.

Primary data needs to be collected at the village level. The data is mainly needed to understand the access characteristics of the community, to analyse present levels of access and to get an access profile at large, which will be used in the planning and decision making process later on. As this data forms the basis for future planning decisions it is important that the collected information is accurate and up-to-date. If it is not, it will make any planning decisions inaccurate and irrelevant.

The data is collected through the village questionnaire. Besides demographic information about the village like: population, household composition, categories of farmers, economic sub-groups etc, data on the different social and economic situation is also collected. Infrastructure access data should include data on the number of households accessing it, distance travelled, travel time and the quality of services provided.

The sectors covered in the Step-1 village level questionnaire include:

(a) Social

Education

- ✓ Primary School (1-5)
- ✓ M.E. School (6-7)
- ✓ Upper Primary School (1-7)
- ✓ High School
- ✓ Junior College (+2)
- ✓ Degree College (+3)
- ✓ Vocational Training Centre
- ✓ Public Library

Health

- ✓ Health Sub-Centre
- ✓ Primary Health Centre
- ✓ Community Health Centre
- ✓ Safe Drinking Water
- ✓ Sanitation

(b) Economic

Agriculture

- ✓ Agro Service Centre
- ✓ Agricultural. Input Centre
- ✓ Agricultural. Produce Market Centre
- ✓ Paddy Collection Centre
- ✓ Cold Storage

Minor Forest Produce

- ✓ MFP Collection Centre

Transport

- ✓ Access Road

Cooperatives

- ✓ Service Cooperative Society (Farmers)
- ✓ Weavers' Cooperative Society
- ✓ Fishermen's Cooperative Society
- ✓ Industrial Cooperative Society

(c) Support facilities

- ✓ Firewood Source
- ✓ Bank
- ✓ Post Office
- ✓ Public Telephone
- ✓ Electricity
- ✓ Main Market
- ✓ Cyclone Shelter
- ✓ Fire Station
- ✓ Ice Factory
- ✓ Jetty

- ✓ Milk Collection Centre
- ✓ Livestock Aid Centre
- ✓ Irrigation Potentials

An example of the village questionnaire is found in Annex 1.

GP level trained team members collect village level data through the questionnaire from key informants of the village. This is done by conducting focus group meetings held in a participatory manner. This initial collection of information is the first step in establishing an ongoing process of dialogue between the planning team and the ultimate beneficiaries – the community.

Key informants should be people and representatives from the following: village head, community leaders, SHG functionaries, economic sub-groups, women's groups, youth representatives. Representatives should also participate from the scheduled tribe and scheduled castes as well as those that represent the disabled. It is important to have present at these interviews representatives from the entire community not just the traditional leaders.

The GP team can be divided into 2 or 3 groups where there are many villages within the Gram Panchayat.

During data collection, the IRAP team will introduce the villagers to the GP planning process and how IRAP contributes to it. The IRAP team will also explain the purpose of the village level data collection and how this data is used and what outputs will come from it. Secondary data that is collected has to be cross-checked with other available data from various Government sources.

Group Interview Techniques

The key informant interviews are an important part of IRAP. Encouraging open discussion and debate amongst the village representatives will help the community feel a part of the process and give the IRAP team the important information they require to make access planning more relevant and realistic.

This section provides some brief information on how to conduct group meetings successfully.

Before asking questions introduce yourself or have your guide introduce you. Briefly explain the purpose of the survey; use an informal manner of speaking that is natural to you. This is to put your audience at ease. Know the questions in advance so that you never sound as though you are reading them formally or for the first time.

Never get involved in lengthy explanations of the survey. Use the standard responses that have been provided. Ask the questions exactly as they are written on the questionnaire (or with any minor changes that have been agreed on prior to the survey being carried out). You must ask the questions exactly as the other interviewers do so that results can be compared with each other.

Ask the questions in a respectful way and do not imply that some answers are 'better' than others. When an answer is unclear, repeat the question exactly as written or ask it in a slightly different way being careful not to change the meaning or the question or to lead the respondent to answer in a particular way.

Check over the questionnaire before leaving the interview to make sure all the questions were asked and the answers recorded legibly.

Characteristics of a good interviewer

An interviewer must have:

- The ability to feel at ease and to put others at ease
- The ability to project respect and acceptance of others
- The ability to convey warmth and empathy
- Good verbal and interpersonal skills
- Good listening skills

Activity 3: Data Compilation

After data collection is complete, the GP team has to compile the results into a GP level database using the specially designed data form. This data base includes data on the demography of the village as well as data on the levels of accessibility to the various sectors and services. The GP database is the base document for the whole planning process and is often referred to as the Accessibility Database (AD). An example of the data compilation form is found in Annex 2.

Activity 4: Road and Building Inventories

Road Inventory

Access roads are the key transport infrastructure in rural areas. In order to plan additional and improved roads, the IRAP team needs to know what is already there and so an inventory of the existing road network in the GP is prepared. This inventory primarily records information on individual road links but also includes the entire road network within the GP as well as recording the connectivity situation to the core road network in and around the GP.

Table 5: Gram Panchayat Road Inventory

22/06/2023

Gram Panchayat Road Inventory

Gram Panchayat: *Badhinuapalli*

Block: *Khallikote*

I. BLOCK ROAD

Road Link (Name)	Origin Destination			Approx. length in Kms	Approx. length inside the GP (Kms)	Road Classification	Road Width	Road Condition	Transport Condition
	Starts at:	Via:	Ends at:						
Kendupatta to Jodikumbhisahi	Kendupatta	Ghumusara	Jodikumbhisahi	4kms	4kms	A4B5	3mtr	A4	B5
RD Road to Kushadhipa	RD Road	-	Kushadhipa	1.5kms	1.5kms	A4B5	3mtr	A4	B5
Badhinuapalli to NH-5	Badhinuapalli	-	N.H.-5	6kms	6kms	A4B4	3mtr	A4	B4

II. GP ROAD

Sl.	Road Link (Name) Origin Destination			Approx. length in Kms	Road Classification	Road Width	Road Condition	Transport Condition	
	Starts at:	Via:	Ends at:						
	RD Road to Kendubadi	RD Road	Barapadar	Kendubadi	1km	A5B5	3mtr	A5	B5
	PWD Road to Biswanathapur	PWD Road	Haladipadasahi	Biswanathapur	4kms	A3B3	3mtr	A3	B3

A

1. Earthen Road
2. Gravel Road
3. Metalled Road
4. Black-topped Road
5. Cement Concrete Road

B

1. Only Foot walk
2. Bike only in dry season
3. Bike all-weather
4. 4 - wheeler in dry season
5. 4 - wheeler all-weather

Building Inventory

An inventory of buildings constructed by the PRI system inside the GP is also prepared during Step-1. This helps the team know the status of different buildings that have been constructed by the Block or Gram Panchayat and to plan for their maintenance.

Table 6: Building Inventory Table

Integrated Rural Accessibility Planning								
Building Inventory (constructed by PRIs only)								
Gram Panchayat: <i>Badhinuapalli</i>					Block: <i>Khallikote</i>			
Sl	Name of building	Type of building (Roof)	Location	Constructed by (Block/GP)	Plinth Area (Sft)	Year of Completion	Last maintenance year (old building)	Remarks
1	GP office building	Concrete	Badhinuapalli	Block	450	1967	-	In good condition
2	GP Godown building	Concrete	Badhinuapalli	Block	600	2003	-	In good condition
3	UP School building	Asbestos	Badhinuapalli	Block	700	1980	-	Need repair
4	UP School building	Asbestos	Barapadar	Block	620	1982	-	Need repair
5	UP School building	QBB	Barapadar	Block	1144	2001	-	In good condition
6	UP School & ME School	Asbestos	Kendubadi	Block	900	1965	-	In good condition
7	Anganwadi Center	Asbestos	Kendubadi	GP	300	1972	-	Need repair
8	UP School building	Asbestos	Kushadhipa	Block	720	1994	-	Not in good condition
9	Anganwadi center	Concrete	Kushadhipa	Block	300	1996	-	Need repair
10	UP School building	Asbestos	Kaithapada	Block	200	1980	-	Need repair
11	UP School building	Concrete	Kaithapada	Block	300	1994	-	In good condition
12	UP School building	Concrete	N.Khuntaipalli	Block	300	1992	-	Need repair
13	UP School building	Concrete	K.Jholamala	Block	300	1991	-	Need repair
14	Nodal ME School	Asbestos	Manapalli	Block	600	1975	-	Need repair
15	Nodal ME School	Concrete	Manapalli	Block	600	2001	-	In good condition
16	Anganwadi center	Asbestos	Manapalli	Block	300	1975	-	Need repair
17	ME School	Asbestos	Kendupatta	Block	1200	1974	-	Need repair

Road Network Map

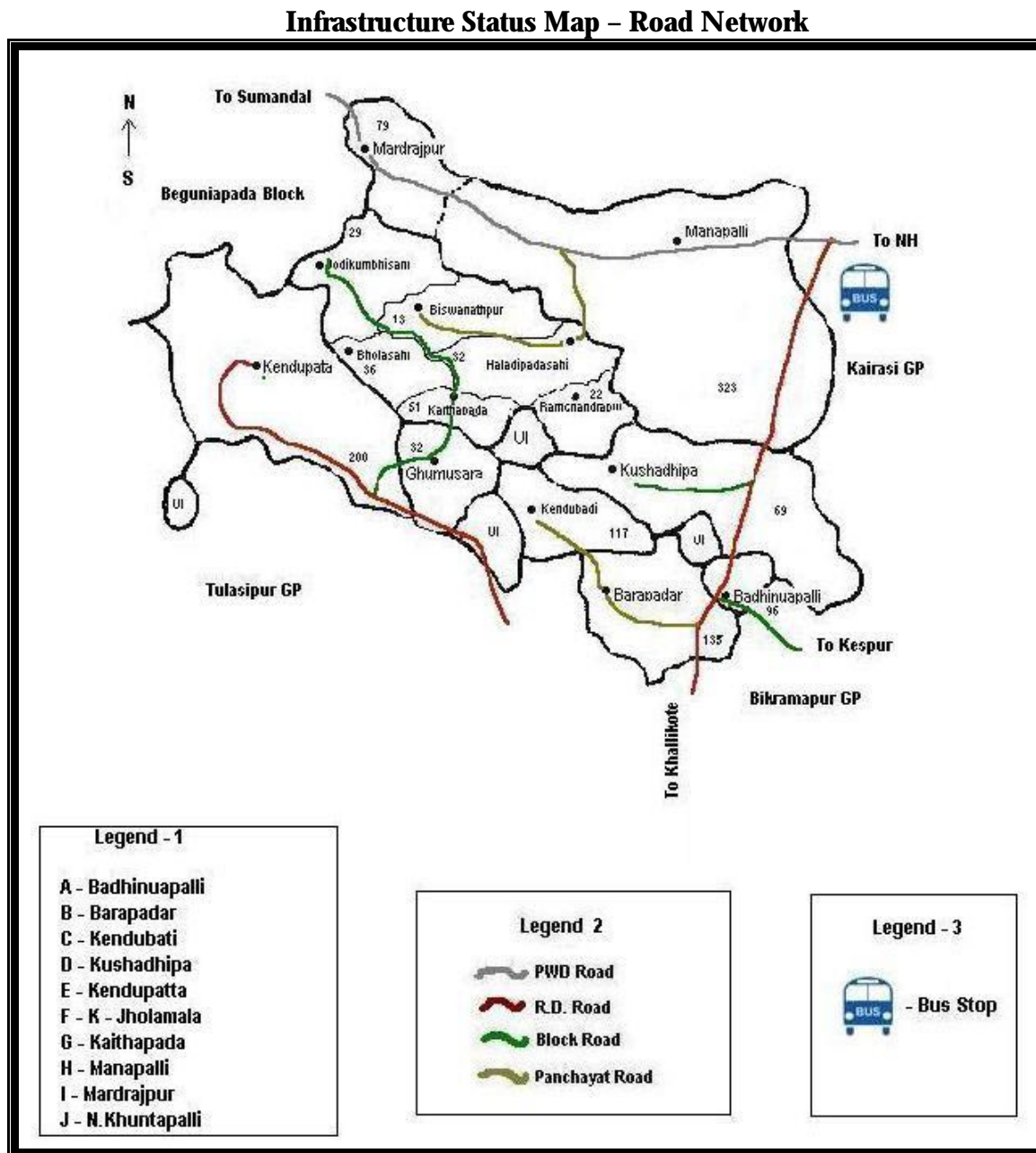
The road network map identifies the different road links and the areas they serve. This map is drawn on the GP base map (with village boundaries clearly marked). Different marks or colours are used to identify the different types of roads present (see following page).

Group Work



Information on GP base map preparation is given in Activity: 5.

Figure 2: Road Network Map -Badhinuapalli Gram Panchayat



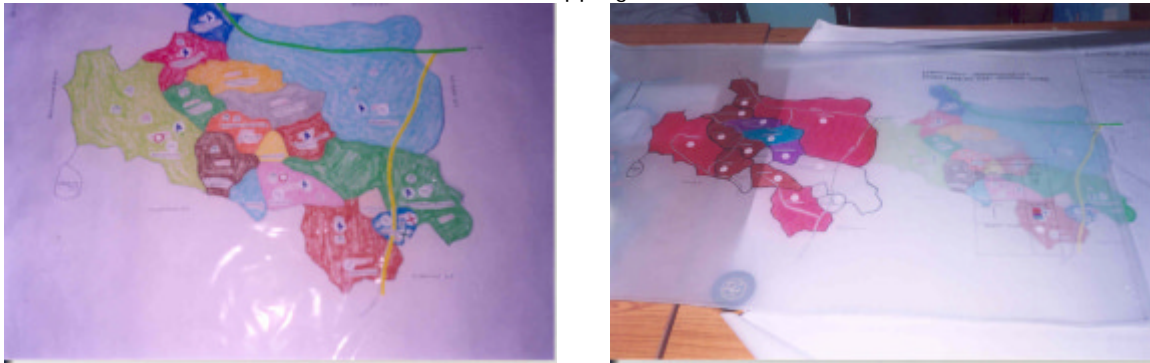
Activity 5: Map preparation

Accessibility maps are an important part of the IRAP procedure. Maps allow the GP staff to visualise the location of villages and infrastructure within the GP. The maps help in the identification and prioritisation of access problems. Colourful and large size maps visualise access conditions and access priorities in a given area. Maps also facilitate discussions and reactions since they enable people to review issues on common ground. Finally, the maps facilitate the formulation of interventions and guide in the selection of the best development options.

Maps enable the integration of different sector analysis and provide a tool to demonstrate how interventions (projects) can be used to solve access problems. Equally, mapping provides a monitoring mechanism for the levels of access within the Gram Panchayat. The IRAP maps need to be based on existing topographic official base maps. It is necessary for the Gram Panchayat mapping team to collect additional information and to verify base maps.

IRAP maps are based on GP maps with village boundaries clearly marked. Handmade accessibility mapping can be developed as a user-friendly process that is easily understood. The team need to prepare good quality accessibility base maps, using inexpensive and locally available materials.

Mapping



As it is not possible to create maps to represent every sector, combined status maps are developed. These combined maps show a group of relevant and/or associated infrastructure and services. These maps show the different locations of said services, facilities and infrastructure present within the GP. Particular symbols for each infrastructure or facility are developed and represented on the map. Infrastructure status maps for different sectors covering a number of relevant facilities are prepared on GP base maps. The following infrastructure status maps are prepared under Step-1.

- Education
- Health
- Utilities
- Other Economic Facilities
- Agriculture
- Irrigation Potentials

GP Base Map

Each GP base map should indicate the boundaries of all revenue villages within the GP. They should also show the location of GP headquarters, major road network, railways/highways and forest and hill areas. Besides forest and hills, rivers, adjacent other GPs, Blocks, Districts etc. also need to be indicated. Where there is no GP map, a GP map with village boundaries has to be prepared.

Table 7: Preparation of the Gram Panchayat Map

- Collect a Tahasil map with village boundary
- Demark the villages of a Gram Panchayat
- Trace out the boundary of all villages within the Panchayat
- Enlarge it with help of either parallel or graphical method to desired scale
- Boundaries should be wide and prominent
- The important features like road, river, stream, canal, hills, forest etc. may be indicated prominently.
- Name the map, write scale, index and directions

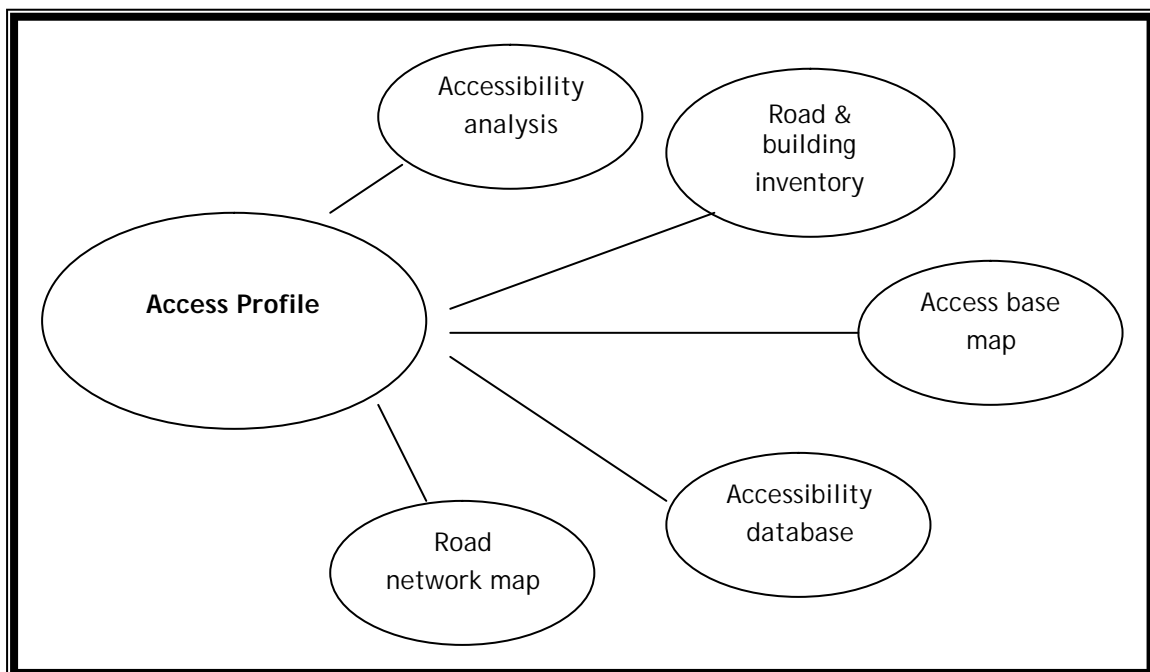
Annex 3 contains two examples of GP maps for agriculture and health and drinking water.

Activity 6: Data Analysis

Multi criteria analysis of the compiled data is carried out for each GP in order to ascertain the accessibility situation as well as the quality situation of different infrastructure and facilities within the GP. The problem severity analysis is based on national/state norms, goals, targets, schemes and programmes as well as the needs of the community for different infrastructure, services and facilities. An example of the Data Analysis Form is in Annex 4

Gram Panchayat Access Profile

During Step-1, the IRAP team compiles an accessibility database from the information collected during the village data gathering meetings. The team also prepare road and building inventories of existing infrastructure in the area. A road network map is prepared as are sector infrastructure maps. These four outputs then make up the Access Profile.

Figure 3: Access Profile

The access profile provides a clear view of that GP's access problems and needs.

Suggested Time Frame for Step-1 Exercise

1. Training	-	1 week
2. Data Collection	-	2 weeks
3. Data Compilation	-	1 week
4. Maps	-	1 week
5. Data Analysis	-	1 week

Total	-	6 weeks
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Prioritisation of Access Problems: Step-2

The Step-2 phase consists of the following key activities:

1. Training to GP team
2. Preparation of GP Problem Priority Sheets
3. Preparation of GP Problem Priority Maps

Step-1 activities resulted in the accessibility situation at the GP level being prepared. This included data on accessibility in terms of household/population numbers affected and the travel time to various facilities and services being recorded and the quality of those services assessed. This resulted in a comprehensive access profile of that particular GP complete with status and accessibility maps prepared.

During Step-2, sector-wise village access problems are calculated. This is done by calculating the Accessibility Indicator (AI). The AI relates to a households ease or difficulty in accessing the various goods, services and facilities they need.

AIs are objective measurements of different levels of accessibility that HH experience in accessing the necessary social and economic goods, services and facilities. The actual level of access is translated into numerical values. AIs enable a comparison of different levels of accessibility between villages and across sectors. This enables the IRAP team to rank villages in order of priority based on existing levels of access.

The AI is a function of different variables such as the number of households in a village; the average time spent to reach each facility/service and selected qualitative variables. The AI is also reflective of existing government schemes, targets and norms for the provision of rural infrastructure. If a village or GP meets these norms or standards then it will not be necessary to design specific interventions to assist these villages or GPs in terms of access. It is recognised that, that particular village or GP does not have a problem in accessing that particular service or facility. In the AI the distance to reach a service or facility is measured in terms of travel time. One km of distance is taken as 15 minutes of walking travel time.

Figure 4: Accessibility Indicator**Problem Scoring Formula:**

$$AI = HH \times [TT \text{ (Travel Time Score)} + Q \text{ (Quality Score)}]$$

Activity 1: Training the GP Team

The first activity is to train the GP team to undertake the activities under Step-2. This is covered in a two day classroom programme.

Guide for training to GP team

- Duration of the training: 2 days
- Level of participation: GP level IRAP team members
- Participants: 25 to 30
- Total training hours: 11 hours
- Modules: 3 modules
- Method of training
 - Learning: Theory
 - Doing: Practical group exercise, group presentation
- Training materials:
 - Learning: Charts, Maps, Formats
 - Doing: Sample formats, Worksheets, Map preparation materials
 - Reference Documents: Step -1 Database, Maps, Road and building inventory & Road map and Access indicators
- Resource persons: Block level expert team

Table 8: Step-2 Training Contents

Introductory Section:	1.5 hours
– Presentation of Step -1 outputs	– 1 hour
– Introduction on Step -2	– 0.5 hour
Module 1: Accessibility Indicators, Problem Scoring, Ranking and Prioritization	
Session - 1:	1.5 hours
Sector : Education Group	
– Learning	– 0.5 hours
– Doing : Group exercise and presentation	– 1 hour
Session - 2:	1 hour 15 minutes
Sector : Health Group	
– Learning	– 25 minutes
– Doing : Group exercise and presentation	– 50 minutes
Session - 3:	1 hour 15 minutes
Sector : Utilities and other Economic Groups	
– Learning	– 25 minutes
– Doing : Group exercise and presentation	– 50 minutes
Session - 4:	1.5 hours

Sector : Agriculture Group & Irrigation Potentials	
– Learning	– 30 minutes
– Doing : Group exercise and presentation	– 1 hour
Session - 5:	1.5 hours
Sector : Access Road	
– Learning	– 30 minutes
– Doing : Group exercise and presentation	– 1 hour
Module - 2: Priority Map Preparation	
Session - 6:	1.5 hours
Map Preparation:	
– Learning	– 30 minutes
– Doing : Group exercise and presentation	– 1 hour
Module - 3: Action Plan for Conducting Step - 2 activities	
Session - 7:	1 hour
Action Plan:	
– Group Exercise and Presentation	– 1 hour

Activity 2: Preparation of GP Problem Priority Sheets

Step-2 sees the GP team prepare the GP problem priority profile using the different sector-wise worksheets which have been developed for this purpose. Using the Accessibility Database (AD), the team will look up the village level access data (such as - household/population numbers; travel time and quality of services) and using this data along with the predetermined AI sector scores (travel time scores and quality scores) the sector access problem score is calculated and recorded on each of the sector sheets.

Once these sector worksheets have been completed an overall picture of the accessibility situation of each village to each sector being assessed is available. The next task is to simply rank each village by sector in order of accessibility score. The higher score the greater the accessibility problem is to that particular service of facility. This profile will indicate the severity of the problem relating to each sector of each village and it will also show the access problem priority of each village.

Annex 5 contains a list of AI problem scores devised for the sectors addressed using IRAP and Annex 6 contains a sample set of sector wise worksheets.

Activity 3: Preparation of Problem Priority Maps

Activity 3 focuses on the creation of the GP problem priority profile using different sector-wise worksheets and priority maps developed in Step-1.

Village level access data like household/population numbers, travel time and service quality is required for problem scoring in the worksheet. This information is available in the accessibility database already prepared. The worksheets for different sectors are separately developed, and these worksheets record the name of the village, the number of households, the travel time

score, service quality and its score and total problem score as per the formula and priority ranking. The priority villages of the GP are ranked according to the higher problem score.

This profile will indicate the level of the access problem relating to each sector of each village and it will also show the priority access problem of each village.

Annex 7 contains two examples of the problem priority maps developed during the Orissa pilot for education and utilities

Suggested Time Frame For Step-2 Exercise

1. Training	-	1 week
2. Priority Sheets	-	1 week
6. Maps	-	1 week
Total	-	3 weeks

Poor access conditions increases people's travel time



Project Identification, Formulation and Investment Planning: Step-3

Step-3 addresses the identification and formulation of projects and the preparation of the five-year GP Project Plan. The plan should address the needs, as identified through using the IRAP tools, of communities access needs. It should address the ways accessibility is going to improve either by bringing the services and facilities close to villages or through the improvement of people's mobility to reach them. This can be done by the construction, upgrading or improvement of new or existing roads, tracks and footpaths. Additionally the plans should also contain suitable and realistic maintenance plans for the assets created.

There are three key activities in Step-3

1. Training to the GP team
2. Preparation of five-year Project Plan including the maintenance plan
3. Preparation of Intervention Maps

Activity 1: Training GP Team

Training of the GP IRAP team is first undertaken. This is usually a two day classroom programme and will train the team on the following:

Guide to GP IRAP Team training

- Duration of the training: 2 days
- Level of participation: GP level IRAP team members
- Participants: 25 to 30
- Total training hours: 9 to 10 hours
- Modules: 12 modules
- Method of Training:
 - Learning: Theory
 - Doing: Practical group exercise, group presentation
- Resource persons: Block level expert team

Table 9: Step-3 Training Contents

Module - 1	
Step-3 Process Chart	– 30 minutes – Learning (30minutes)
Module - 2	
Village level project idea generation and priority setting (Pallisabha)	45 minutes – Learning (15minutes) – Group exercise (30minutes)
Module - 3	
GP level consolidated list of projects with merging, overlapping and feasibility screening (GP)	45 minutes – Learning (15minutes) – Group exercise (30minutes)
Module - 4	
Approval of list of projects (Gramsabha)	45 minutes – Learning (15minutes) – Group exercise (30minutes)
Module - 5	
Project formulation (GP)	45 minutes – Learning (15minutes) – Group exercise (30minutes)
Module - 6	
Project prioritization (GP)	45 minutes – Learning (15minutes) – Group exercise (30minutes)
Module - 7	
Programming of implementation (GP)	45 minutes – Learning (15minutes) – Group exercise (30minutes)

Module - 8	
Maintenance plan	45 minutes – Learning (15minutes) – Group exercise (30minutes)
Module - 9	
Techno-economic feasibility study	30 minutes – Learning (30minutes)
Module - 10	
Forwarding of projects/proposals to other sources	30 minutes – Learning (30minutes)
Module - 11	
Infrastructure investment plan map preparation	45 minutes – Learning (15minutes) – Group exercise (30minutes)
Module - 12	
Meeting facilitation & chairing skills, lobby and advocacy techniques	60 minutes – Learning (30minutes) – Group exercise (30minutes)

Presentation Advice - Chairing and Facilitation Skills

It is not uncommon to be afraid or apprehensive about speaking before a group of people. In brief you should be prepared, know your audience, dress appropriately, make friends and maintain eye contact. It is important that you are well rested and confident, the first few minutes are important as this is when you establish yourself and your audience is fresh and attentive.

Lead your audience

Try and be conscious of your actions at all times. You should be aware of some visual as well as vocal characteristics like moving your hands about too much, shifting from one foot to another. It is also important to maintain strong eye contact with all your audience and have a clear voice at the right level, not shouting at your audience is as important as not talking too quietly. Your voice is the strongest asset for getting and holding the audience. The use of humour can turn a resistant audience into an agreeable one, make a routine speech into a colourful one to avoid boredom (both of yourself and your audience).

Leading group meetings



Knowing and understanding the topic is important to a successful Chairmanship of a meeting, as is taking good notes through the duration so that your conclusions accurately reflect the discussion and process that has gone on.

Remember to speak with authority, as the Chair the audience expects you to lead and manage the process. Assure the audience that you are informed and make sure your comments are focused, relevant and logical. Be warm and relate to the audience, show enthusiasm and be entertaining. Show that you are comfortable with sitting at the head of the room.

Use a strong, well-modulate voice, use energy and authority and use active listening to detect any underlying reasons for resistance or animosity.

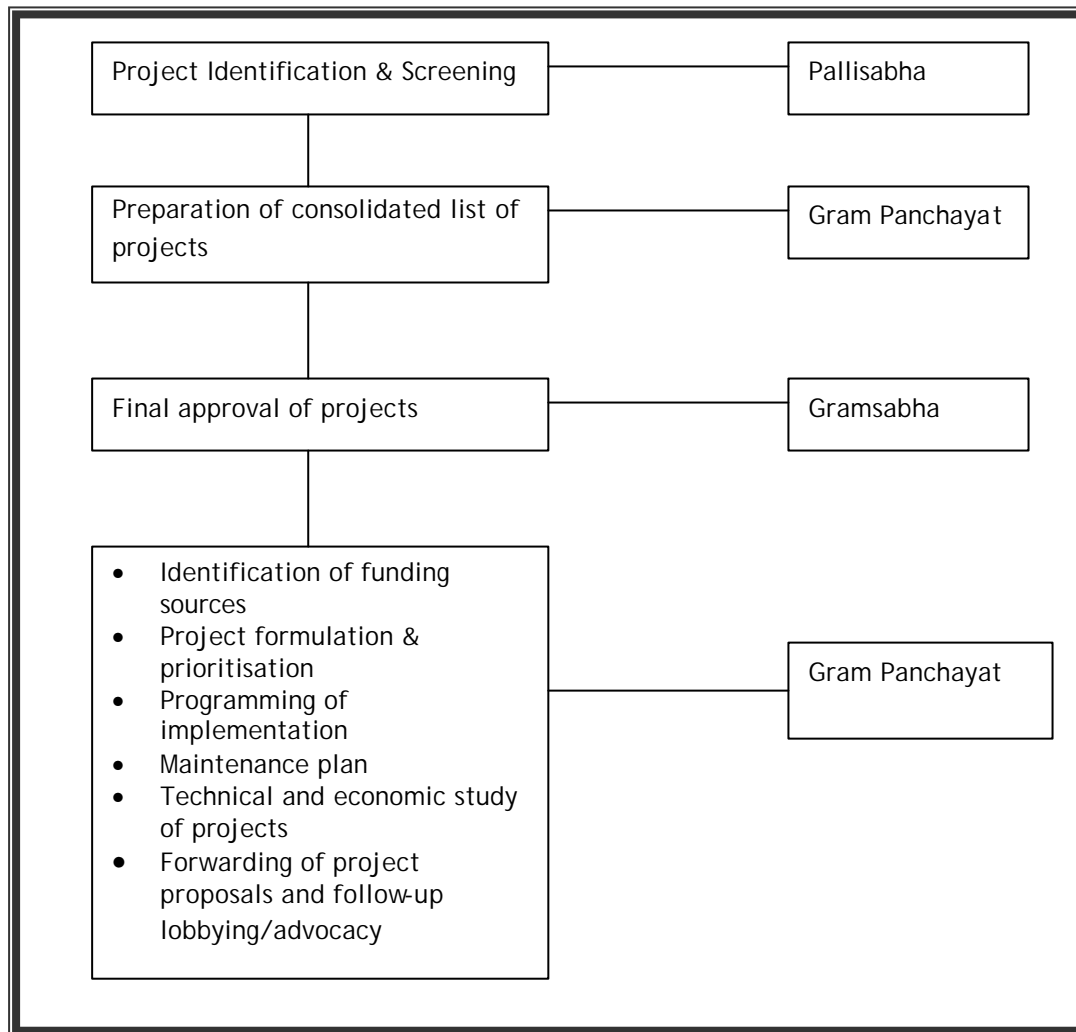
Each time a question is asked, before answering it, rephrase and repeat it back to make sure that everyone understands what is being asked before directing it to the appropriate person to answer it.

Facilitation

Facilitation is different to chairing. A facilitator's role is to support the participants in a meeting or training situation. Their role is to encourage each member of the group or meeting to contribute to it to the best of their abilities. However; many of the skills needed for chairing are relevant and useful for the role of the facilitator.

Activity 2: Preparation of the 5-Year GP Project Plan

To prepare the Project plan, the process flow described in Figure 7 should be followed step-by-step.

Figure 5: Process Flow for 5 Year GP Project Plan

Process-1: Village level project idea generation, screening and priority setting (Pallisabha)

Project idea generation, screening and priority setting for village level projects is carried out in the Pallisabha meeting following the prescribed process at Pallisabha level. There should be broad participation of people from all hamlets of the revenue village in this meeting. It is important that there is representation and participation from the traditionally excluded groups such as women, youth and those from the scheduled caste and scheduled tribe groups.

To begin, participants are informed of the meeting's objectives. The access problem analysis of the GP and village from the GP Access Database prepared during Step-1 is presented along with the access priority profile prepared during Step-2

Sector related project interventions to address prioritised sectors (identified during Step-2) are generated and considered at this stage. In addition, other project ideas that reflect the felt needs of communities can also be included and considered. During this stage, it is important to inform the communities that the project ideas need to be screened, assessed and in some case will be

merged and their ideas will go on to be include, in some form, in the consolidate list of projects from all villages of the GP. It is important to explain that projects should address the access problems to a particular sector and that solutions will provide the maximum benefit to villagers.

Projects should be cost-effective, have no other low-cost alternative and have, as far as possible, no negative impact inside or around the village.

After final approval by the Gramsabha, projects are identified that will be implemented by the GP (dependent on the availability of funds) and others are forwarded to the Block and other concerned departments.

Worksheet-1 has to be filled in during this meeting (Annex 8). A complete set of worksheets 1-8 can be found in Annex 8.

Community Meeting



Process-2: Preparation of the consolidated list of projects (GP)

A consolidated sector wise list of GP level projects is prepared by the GP out of the village level project ideas (from which the relevant screening, merging and overlapping checking has been done).

It is important to ensure that projects in the list:

- Are feasible, viable and relate to the various different government schemes, norms and programmes under which funds are available to GP (see Table 8 for some examples)
- Provide the maximum benefit and offer wide coverage. Execution of a project for the benefit of a particular village should not have any serious negative impact on other villages. Low cost projects maximising the use of local resources and benefiting the most people should be given priority
- Do not waste resources, for example, project ideas from different villages which are similar can be merged into one or several related interventions to make interventions more cost effective and to take advantage of economies of scale

And finally:

- Project ideas for roads, electricity, telephone, irrigation, schools, health centres etc. should benefit multiple villages for cost-effective investments in these sectors.

Road projects require special attention. Road projects improve access to different facilities and reduce travel time. Priority should be given to access roads from a village to GP headquarter or nearest motorable road point and also those to the nearest railway station.

For project feasibility screening, existing government norms and practices for the provision of rural infrastructure should be followed. Such norms and guidelines are subject to change and modifications from time to time, so it will be important to keep up-to-date with this information.

Table 10: Sample of exiting Government norms, targets and standards

- | |
|---|
| <ul style="list-style-type: none"> (1) Livestock Aid Centre - One for each GP (2) All-weather roads - All villages with more than 500 population in plain areas and 250 in hilly / tribal villages to be connected with all-weather roads under PMGSY. (3) Power - All villages to get electricity (4) Post Office - One in each GP (5) Education <ul style="list-style-type: none"> a. Primary School - One within 1km for 300 populations. Minimum of 2 large classrooms and 2 teachers. Provision of one classroom and one teacher for every 40 students. b. Upper Primary School - One within 3kms for 500 population c. High School - One recognized high school in each GP d. +2 College & +3 College - Two recognized +2 colleges and one +3 college in each Block (6) Health <ul style="list-style-type: none"> a. Sub Centre - At least one in each GP with provision of 2 health workers b. Primary Health Centre - One for each 30,000 population in plain areas and 20,000 population in hilly areas c. Community Health Centre: One for each Block (80,000 - 1,20,000 population) |
|---|

Worksheet-2 has to be filled in which contains the list of consolidated proposals, location of projects, benefiting villages and households (Annex 8).

Process-3: Final Approval of Projects (Gramsabha)

The GP level consolidated list of projects prepared by the GP containing project description, project location, benefiting villages and population is presented to the Gramsabha meeting for discussion and final approval by the Gramsabha. The participants are made familiar with the GP planning and IRAP process; furthermore participants need to be informed that out of the approved projects, projects to be executed by the GP will only be included in the implementation schedule after approval by the Gramsabha. Other project ideas/proposals will be forwarded to the Block and other concerned line departments for implementation.

Worksheet-3 containing problem sectors, the approved projects, the project locations and the benefiting villages/households is completed after the finalisation of the project list in the Gramsabha meeting. The funding sources for different projects are identified by the GP. Projects that will be executed by the GP and proposals to the Block are identified separately. Similarly projects and proposals that will be forwarded to other sources and line departments for implementation should also be earmarked separately in the worksheet-3 (Annex 8).

Process-4: The formulation of projects

During this step, brief proposals for projects undertaken by the GP (with PRI funding) are formulated. Each project needs to be prepared on a separate proposal form in Worksheet-4. The form should record the following information: project description, project location, benefiting villages and households, project implementation schedule, source of funds and a broad design and estimate of the project. The approximate cost of each project is worked out and the sample estimates for different projects may be followed.

Experts and technical specialists at the Block level or in the line departments can and should be consulted during this process. Annex 9 contains a set of sample designs and estimates for different projects.

Process-5: Project Prioritisation

Projects executed by the GP have to be prioritised for implementation. The priority will be determined through a simple process of calculating the “effect value”. This is done by dividing the estimated cost with the number of benefiting households. The project benefiting more people with less investment will get priority. So, the lower “effect value” project will get higher priority. In addition, emergency needs like drinking water facilities can be taken as a priority in consultation with the ward members of the GP.

Worksheet-5 is prepared for prioritising projects. This worksheet will have the following information: the problem sector, the approved project, numbers of benefiting households, estimated project cost, effect value and project priority rank.

Process-6: Implementation schedule

A five-year implementation schedule of projects to be implemented by the GP is prepared in worksheet-6 (Annex 8). The yearly investment plan and budget is based on the availability of regular and schematic funds at the GP level.

- The implementation schedule of projects needs to be made according to the priority of the projects based on the availability of funds
- All projects taken-up in the five-year plan have to be completed. Partly executed works during a particular year should get funds during the subsequent years for its final completion.

Process-7: Maintenance Plan

The principle of asset management needs to be incorporated into the GP Plan for the sustainability of the infrastructure assets created by the GP. Proper maintenance of the assets (like roads, buildings, drinking water sources, irrigation projects etc.) needs to be taken up through a regular maintenance budget. A five-year maintenance plan for all existing assets as well as assets that are created during the next five years is prepared in worksheet-7 (Annex 8).

A suggested maintenance and budgeting guideline is given for the maintenance of roads and buildings. Budgets for maintenance of other assets are prepared according to practical needs.

The suggested maintenance plan provides for the minimum maintenance budget required. The plan could be modified from time to time based upon the market rate of maintenance inputs such as labour and materials etc.

The inventory of roads and buildings in the GP has been prepared and included in the GP Accessibility Profile. Inventories of other assets are also prepared by the GP for the maintenance plan. A suggested maintenance guideline for different infrastructure is given in Annex 10, this is based on current government norms, standards and practices.

Process-8: Technical-Economic Feasibility Study

The financial, technical, maintenance and sustainability aspects of some projects need to be studied further. Projects which are technically complicated need to be forwarded to the Block or other departmental experts for technical guidance; projects with high cost estimates need further examination before their implementation. Projects must be completed within the implementation schedule and therefore sources of full funding need to be assured. In the case of partial execution in a year, it should be ensured that final completion is done during subsequent years without any loss or damage to the partly done work. As far as possible, high cost and highly technical projects should be forwarded to the Block/concerned line departments for implementation.

Some projects require a considerable budget for their regular and proper maintenance. Funds available at GP level for maintenance are low and so in this case, it should be ensured that projects requiring high maintenance costs get the maintenance budget regularly. Maintenance funds for such projects could be met out of GP sources and if possible partly from the users collected as user fees.

It is important to remember that projects must be sustainable. Those that are not should not be taken up.

Lists of such projects requiring further technical-economic study are prepared in worksheet-8 (Annex 8) which contains the project description, project cost, required study and investigating agency.

Process-9: Forwarding of Projects/Proposals

Projects and proposals that are not undertaken by the GP need to be forwarded to the Block and other concerned government agencies or line departments.

To forward those projects and proposals the GP needs to send a copy of the Gramsabha resolution along with detailed information about the project/proposal to the concerned departments or agency. Details should include project description, the number of benefiting villages and population, the estimated cost and details about the existing problems that villages have due to the lack of facility or access.

The following list details follow-up action that should be done by the GP to ensure funding:

- Funds are available with the area MLAs and MPs for infrastructure development works. The GPs need to liaise to access these funds for their projects.

- Different rural development programmes like rural electrification by the Energy Department, drinking water and rural roads by the Rural Development Department, educational activities by different State Education Departments, rural telephone by the Telecommunication Department of the Central Government are being implemented by these line departments. GPs need to send proposals to them and liaise with the concerned authorities for implementation.
- Influence and motivate the concerned authorities.
- Follow-up with the concerned authorities with the help of elected representatives like MLAs, MPs, Zilla Parishad and Block Representatives.
- Initiating mass appeals and mass approach to the concerned authorities
- Initiating discussions of the issue in the Block (Panchayat Samiti) and Zilla Parishad meetings
- Taking up necessary other follow-up actions and lobbying, advocacy activities for early implementation of the projects like (i) public meetings and rallies (ii) information leaflets (iii) newspaper articles and press releases and (iv) community meetings etc.

Activity-3: Preparation of Intervention Maps

Infrastructure Intervention Maps are prepared. Seven maps covering: Education, Health, Utilities, Other Facilities, Agriculture, Irrigation and Road Network are prepared under this step.

GP base maps with village boundaries prepared in earlier steps are used to prepare these maps. The maps will show the various projects taken up under the Five-Year Plan and where they are located in different villages. To make the proposed interventions focused in these maps, symbols for different infrastructure projects are shown in different colours.

Discussing the Infrastructure Maps



Annex 11 gives two examples of Intervention maps for education and 'other facilities'.

The IRAP procedure has now been completed. The GPs undertaking this process will now have the appropriate information to enable them to undertake their planning responsibilities fully and ensure that communities' access needs are realistically addressed.

Suggested Time Frame for Step-3 Exercise

1. Training	-	1 week
2. Village Project Idea		2 weeks
3. Consolidated Project List	-	1 week
4. Gramsabha Approval		1 week
5. Other Processes at GP	-	2 weeks
6. Maps	-	1 week

Total - 8 weeks

The following annexes contain the sample worksheets that can be used as templates and sample maps showing what the final output looks like.

Annex 1: Village Survey Questionnaire

1. Demography

Village: _____

Gram Panchayat: _____

G.P. HQ: _____

Block: _____

Block H.Q: _____

District: _____

District H.Q: _____

Geographical Situation

a. Plain ☐ b. Hilly ☐ c. Island ☐

Total Households _____ Total Population _____

Households by Land Ownership

Land less (0 - 0.5 Acre)	Marginal Farmers (0.5 - 2.5 Acres)	Small Farmer (2.5 - 5 Acres)	Big Farmers (above 5 Acres)	Total Farmers

Livelihood Pattern (main occupation only one)

A. Farm Sector

Sl.	Category	No. of Households
1	Cultivation	
2	Animal Husbandry	
3	Pisciculture (fishery)	
4	Fishing	
5	Others	
6	Others	
7	Others	
Total		

B. Non - Farm Sector (Cottage Industry, Handicrafts, Traditional Skilled Occupations, Service, Business, Others)

Sl.	Category	No. of Households
1		
2		
3		
4		
Total		

C. Collection and Processing of Minor Forest Produce

No. of Households	
-------------------	--

Education:

2. Primary School (1st - 5th Class)

No of students attending the nearest School

Boys	Girls	Total

Particulars of the School

Location	Distance (Kms.)	Travel Time (Minutes)	Total Students			Teachers			No. of Class rooms	Type & No. of class rooms	
			Boys	Girls	Total	Male	Female	total		Type	Nos.
										1	
										2	

Classroom Type - 1: RCC roof & AC sheet roof, 2: Tile & other roof

Drinking Water Facility	Yes	No
Toilet Facility	Yes	No

3. Upper Primary School (UGME) (1st - 7th Class)

No of students attending the nearest School

Boys	Girls	Total

Particulars of the School

Location	Distance (Kms.)	Travel Time (Minutes)	Total Students			Teachers			No. of Class rooms	Type & No. of class rooms	
			Boys	Girls	Total	Male	Female	total		Type	Nos.
										1	
										2	

Classroom Type - 1: RCC roof & AC sheet roof, 2: Tile & other roof

Drinking Water Facility	Yes	No
Toilet Facility	Yes	No

4. ME School (6 - 7 Class)

No of students attending the nearest School

Boys	Girls	Total

Particulars of the School

Location	Distance (Kms.)	Travel Time (Minutes)	Total Students			Teachers			No. of Class rooms	Type & No. of class rooms	
			Boys	Girls	Total	Male	Female	total		Type	Nos.
									1		
									2		

Classroom Type - 1: RCC roof & AC sheet roof, 2: Tile & other roof

Drinking Water Facility	Yes	No
Toilet Facility	Yes	No

5. High School (8th - 10th Class)

Total No. of students of the village attending the School

Boys	Girls	Total

Particulars of the School

Location	Distance (Kms.)	Travel Time	Total Students			Teachers			No. of Class rooms	Type & No. of class rooms		Recognition Status	
			Boys	Girls	Total	Male	Female	total		Type	Nos	Yes /No	If No, Why!
										1			
										2			

Drinking Water Facility	Yes	No
Toilet Facility	Yes	No

6. +2 College (CHSE)

Total No. of students of the village attending the College

Boys	Girls	Total

Particulars of the College

Name of College	Location	Distance (Kms)	Travel Time	No. of students	Recognized (Yes/No)	Reason, if not recognized

7. +3 College (University)

Total No. of students of the village attending the College

Boys	Girls	Total

Particulars of the College

Name of College	Location	Distance (Kms)	Travel Time	No. of students	Recognized (Yes/No)	Reason, if not recognized

8. Nearest Vocational Training Centre (ITI/Polytechnic)

Total No. of students of the village attending the nearest Institute

Boys	Girls	Total

Particulars of the Institute

Name of Institute	Location	Distance (Kms)	Travel Time	No. of Trades	No. of Instructors	Recognition Status (Yes/ No)

9. Public Library

Name of the nearest Library	Location	Distance (Kms)	Travel Time (Minutes)	No. of Books	Reading Room Facility (Yes / No)

Health:
10. Health Sub-Centre

Whether Health Sub-Centre is inside the GP (Yes/No) _____

Location	Distance (Kms)	Travel Time (Minutes)	No. of Health Workers		Building Status		
			Male	Female	Own	Rented	Under construction

11. Primary Health Centre / Additional PHC

Location	Distance (Kms)	Travel Time (Minutes)	Availability of services		
			Doctors (Yes/No)	Laboratory (Yes/No)	Beds (Yes/No)

12. Community Health Centre

Location	Distance (Kms)	Travel Time

a. Services Available

Specialist Doctors, Laboratory, X-Ray, Ambulance, Operation Theatre

No. of Specialist Doctors	Laboratory (Yes/No)	X-Ray (Yes/No)	Ambulance (Yes/No)	Operation Theatre (Yes/No)	No. of Beds

13. Drinking Water

- Safe Drinking Water facilities available (only usable sources) (Yes/No) : _____
- Facilities available but not usable (with reason) _____
- Type of Facilities : (1) No. of Tube Wells _____ (2) No. of Stand Posts _____
- (3) No. of Sanitary Well _____ (4) Total Nos. _____

Habitations (Sahi/Pada/ Village)	Population	Type & No. of sources (only usable)				Distance (Kms)	Travel Time (Minutes)	No source	
		Tube Wells	Stand Posts	Sanitary Well	Total			Not available	Available but not usable

14. Sanitation (Latrine & Drainage)

No. of Households	No. of Households with Sanitary Latrine	Drainage provision (inside village)			
		Fully covered	Partially covered		No facilities
			Total length	Length covered	

15. Agro- Service Centre (Hiring & Repair of Implements)

Location	Distance (Kms)	Travel Time (Minutes)	Machinery and Equipments available on hire (Yes/No)	Machinery and Equipments repair (Yes/No)

16. Agricultural Input Centre (Fertilizers, Seeds & Pesticides)

Location	Distance (Kms)	Travel Time (Minutes)	Availability			
			Seed (Sufficient/Insuff icient)	Fertilizer (Sufficient/Insuff icient)	Pesticide (Sufficient/Insuff icient)	Implements (Sufficient/Ins ufficient)

17. Paddy Collection Centre

Location	Distance (Kms)	Travel Time (Minutes)	Storage Capacity (Sufficient / Insufficient)

18. Agriculture Produce Market Centre (Krushak Bazar)

Location	Distance	Travel Time	Facilities Available					
			Approach Road (Yes / No)	Market Shed (Yes / No)	Market Yard (Yes / No)	Drinking Water (Yes / No)	Toilet (Yes / No)	Rest Shed (Yes / No)

19. Cold Storage

Location	Distance (Kms)	Travel Time	Capacity (Sufficient / Insufficient)

20. Milk Route (Milk Collection Centre)

Location	Distance (Kms)	Travel Time	Frequency (Daily / Not Daily)

21. Livestock Aid Centre

Location	Distance (Kms)	Travel Time	Whether LI available? (Yes /No)	Cold Chain facility (Yes /No)

LI - Livestock Inspector

22. Irrigation Potential

Type of Project	Location	Land to be irrigated (in Acre)	Farmers to be benefited			
			No. of Marginal Farmers (0-2.5 Acre)	No. of Small Farmers (2.5-5 Acre)	No. of Big Farmers (above 5 Acre)	Total

23. Jetty (Micro Harbour)

(River, Sea Mouth, Lake, Creek, Large Water Body vicinity villages)

Whether Jetty facility available in village? (Yes/No) _____

Location	Distance (Kms)	Travel Time	Capacity (Sufficient/Insufficient)	Safety (Safe / Unsafe)

24. Ice Factory

Location	Distance (Kms)	Travel Time	Capacity (Sufficient/Insufficient)	Quality (Good /Poor)

25. Bank

Name of Bank	Location	Distance (Kms)	Travel Time	Availability of services (Regular / Irregular)

26. Post Office

Is there Post Office inside the Gram Panchayat (Yes/No) _____

Location	Distance (Kms)	Travel Time	Availability of services (Regular / Irregular)

27. Public Telephone

Is there PCO facilities available inside the village (Yes/No) _____

Nearest Telephone Centre	Distance (Kms)	Travel Time	Hours of service availability			
			Less than 1 hour	1 - 6 hours	6-12 hours	Above 12 hours

28. Electricity

Is the village electrified (Yes/No) _____

No. of Consumers	Supply hours Regular supply					Voltage sufficiency (Sufficient / Insufficient)
	24 hours	12-24 hours	6-12 hours	1-12 hours	Irregular supply	

29. Main Market

Location	Distance (Kms)	Travel Time	Facilities available			
			Public Toilet	Drinking Water	Rest Shed	Access Road

30. Fuel**(a) Fuel wood (Access to Forest)**

Location	Distance (Kms)	Travel Time	Availability (Sufficient / Insufficient)

(b) Cooking Gas Depot

Location	Distance (Kms)	Travel Time	Availability (Sufficient / Insufficient)

31. Cyclone Shelter

Special / Multi purpose (School) *only for Flood, Cyclone affected area*

Whether affected area (Yes/No)	Nearest Location of Shelter	Type of Shelter (special/multi-purpose)	Distance (Kms)	Travel Time	Capacity (Sufficient / Insufficient)

32. Minor Forest Produce Collection Centre (Forest area)

Location	Distance (Kms)	Travel Time	Storage Capacity (Sufficient / Insufficient)

33. Cooperative Society
(a) Service Cooperative Society (Farmers)

Name	Location	Distance (Kms)	Travel Time	Types of facilities		
				Credit	Fertilizers	Mini Bank

(b) Weavers' Cooperative Society

Name	Location	Distance (Kms)	Travel Time	Facilities available				
				Credit	Work shed	Raw materials	Market	Technical Assistance

(c) Fishermen's Cooperative Society

Name	Location	Distance (Kms)	Travel Time	Facilities available			
				Credit	Boat	Net	Market

(d) Industrial Cooperative Society

Name	Type	Location	Distance (Kms)	Travel Time	Facilities available				
					Credit	Work shed	Raw material	Market	Technical Assistance

34. ROAD NETWORK
(a) Access Road to Condition GP Headquarter

(Separate from Access road to motorable road point)

Name of the GP Headquarters	Distance (Kms)	Travel Time	Surface Condition			
			All weather (BT/Metal)	Gravel	Earthen	No Road

(b) Access Road Condition to Nearest Motorable Road Point

Location	Distance (Kms)	Travel Time	Surface Condition				Availability of public transport facility at motorable road point
			All weather (BT/Metal) Kms	Gravel (Kms)	Earthen (Kms)	No Road	

**(c) Access Road Condition to Nearest Railway Station
(where the Railway is main means of transport)**

Location	Distance (Kms)	Travel Time	Surface Condition			
			All weather (BT/Metal) Kms	Gravel (Kms)	Earthen (Kms)	No Road

35. Transport to Important Places

(a) Transport facility to GP Headquarter

Location of GP Headquarter	Distance (Kms)	Travel Time

(b) Transport facility to Block Headquarter

Location of Block Headquarter	Distance (Kms)	Distance to Motorable Road Point (Kms)	Travel Time	Public transport facilities available from motorable road point

(c) Transport facility to nearest Municipality / NAC / Town

Location of Municipality / NAC / Town	Distance (Kms)	Distance to Motorable Road Point (Kms)	Travel Time	Public transport facilities available from motorable road point

(d) Transport facility to District Headquarter

Location of District Headquarter	Distance (Kms)	Distance to Motorable Road Point (Kms)	Travel Time	Public transport facilities available from motorable road point

36. Fire Station

Whether the fire station is inside the Block (Yes/No) _____

Location of nearest Fire Station	Distance (Kms)	No. of Fire service Vehicles		Access of fire service vehicle to the village		
		One	More than One	All weather	Fair weather	No access

Name of Interviewees

Signature

- 1.
- 2.
- 3.
- 4.
- 5.

Signature of Interviewer

Date:

Annex 2: Data Compilation Format

Integrated Rural Accessibility Planning

1. DEMOGRAPHY											
GP	Village	Geographical Situation	Total Households	Population	Farmer Households	Fishermen Households	Traditional Occupation Households	Artisan Households	Businessman Households	Tribal Households	Others

2. EDUCATION : Primary School (1 - 5 Standard)													
GP	Village	Population	Location	Travel Time	Total School Going Children	No of Students at the School	No of Teacher	Class Room		Student/Teacher Ratio	Student/Class Room Ratio	Watsan facilities	
								Quantity	Quality			Drinking Water	Toilet
									1				

3. EDUCATION : UGME School (1 - 7 Standard)													
GP	Village	Population	Location	Travel Time	Total School Going Children	No of Students at the School	No of Teacher	Class Room		Student/Teacher Ratio	Student/Class Room Ratio	Watson facilities	
								Quantity	Quality			Drinking Water	Toilet
									1				

4. EDUCATION : M.E. School (6 & 7 Standard)													
GP	Village	Population	Location	Travel Time	Total School Going Children	No of Students at the School	No of Teacher	Class Room		Student/Teacher Ratio	Student/Class Room Ratio	Watson facilities	
								Quantity	Quality			Drinking Water	Toilet
									1				

5. EDUCATION : Secondary School (8 th to 10 th)									
GP	Village	Location	No of School going Students	Travel Time	Recognition Status		Watson facilities		
					Recognized / Non Recognized	If Not, Why?	Drinking Water	Toilet	
									Yes / No

6. EDUCATION : + 2 Collage (CHSE)						
GP	Village	Location	No of Collage going Students	Travel Time	Recognition Status	
					Recognized / Non Recognized	If Not, Why?

7. EDUCATION : + 3 Collage (University)						
GP	Village	Location	No of Collage going Students	Travel Time	Recognition Status	
					Recognized / Non Recognized	If Not, Why?

8. EDUCATION: Vocational Training Centre (ITI / Polytechnic)							
GP	Village	Location	No of Students attending the Facility	Travel Time	No. of Trades	No. of Instructors	Recognition Status
							Recognized / Non Recognized
							If Not, Why?

9. Public Library					
GP	Village	Location	Travel Time	No. of Books	Reading Room Facility (Yes / No)

10. HEALTH: Health Sub Centre					
GP	Village	Location	Travel Time	No. of Health Worker	Own Building (Yes / No)

11. HEALTH: Primary Health Centre (PHC / New PHC/Additional PHC)						
GP	Village	Location	Travel time	Doctors (Yes /No)	Laboratory (Yes/ No)	Bed (Yes / No)

12. HEALTH : Community Health Centre (CHC)									
GP	Village	Location	Travel Time	Specialist Doctors (Nos.)	Laboratory (Yes / No)	X - Ray (Yes / No)	Operation Theater (Yes / No)	Ambulance (Yes / No)	No. of Beds

13. HEALTH : Drinking Water									
GP	Village	Population	Type & No. of Water Supply (Only Usable Source)			Average Travel Time	Population / Usable source Ratio	No. of Habitations with no source within 500 mtr	Source Available but not usable
			Tube Well	Stand Post	Total				

14. HEALTH : Sanitation : (Sanitary Latrine / Village Drain)						
GP	Village	Household with Sanitary Latrine		Drainage Provision		
		Nos.	%	Fully Covered	Partially covered	No Facility

15. UTILITY: Bank				
GP	Village	Location	Travel Time	Availability of Service (Regular / Irregular)

16. UTILITY: Post Office				
GP	Village	Location	Travel Time	Availability of Service (Regular / Irregular)

17. UTILITY: Public Telephone				
GP	Village	Location	Travel Time	Hours of service availability

18. UTILITY: Electricity				
GP	Village	Electrified (Yes / No)	Supply Hours	Voltage Sufficiency (Sufficient / Insufficient)

19. UTILITY: Fire Station					
GP	Village	Location	Travel time	No. of Service Vehicles	Access of Fire Service Vehicle to the Village

20. OTHER FACILITIES: Main Market								
GP	Village	Location	Travel time	Facilities Available				
				Drinking Water	Public Toilet	Rest Shed	Access road	
21. OTHER FACILITIES: Cyclone Shelter								
GP	Village	Location	Travel Time	Capacity (Sufficient / Insufficient)	Type of Shelter (Special / Multipurpose)			
22. OTHER FACILITIES: Ice Factory								
GP	Village	Location	Travel Time	Capacity (Sufficient / Insufficient)	Quality (Good / Poor)			
23. OTHER FACILITIES: Jetty (Micro Harbour)								
GP	Village	Location	Travel Time	Capacity (Sufficient / Insufficient)	Safety (Safe / Unsafe)			
24. OTHER FACILITIES: Fuel								
(a) Access to Forest								
GP	Village	Location	Travel time	Availability (Sufficient / Insufficient)				
OTHER FACILITIES: Fuel								
(b) Gas Depot								
GP	Village	Location	Travel time	Availability (Sufficient / Insufficient)				
25. OTHER FACILITIES: Service Cooperative Society (Farmers)								
GP	Village	Location	Travel Time	Credit (Yes / No)	Fertilizer (Yes / No)	Mini Bank (Yes / No)		
26. OTHER FACILITIES: Weaver's Cooperative Society								
GP	Village	Location	Travel Time	Credit (Yes/ No)	Work Shed (Yes/ No)	Raw Materials (Yes / No)	Marketing (Yes / No)	Technical Assistance (Yeas/ No)

27. OTHER FACILITIES: Fishermen Cooperative Society							
GP	Village	Location	Travel Time	Credit (Yes/ No)	Boat (Yes / No)	Net (Yes/ No)	Marketing (Yes/ No)

28. OTHER FACILITIES : Industrial Cooperative Society								
GP	Village	Location	Travel Time	Credit (Yes/ No)	Work Shed (Yes/ No)	Raw Materials (Yes / No)	Marketing (Yes / No)	Technical Assistance (Yeas/ No)

29. AGRICULTURE : Agro-Service Centre (Hiring and Repair of implements)					
GP	Village	Location	Travel Time	Machinery& Equipments On hire (Yes / No)	Repairing Service (Yes / No)

30. AGRICULTURE : Agricultural Input Centre (Seed, Fertilizer & Pesticides)				
GP	Village	Location	Travel Time	Inputs Availability (Sufficient/ Insufficient)

31. AGRICULTURE : Paddy Collection Centre				
GP	Village	Location	Travel Time	Storage Capacity (Sufficient/ Insufficient)

32. AGRICULTURE : Agricultural Produce Market Centre (Krushak Bazar)									
GP	Village	Location	Travel Time	Approach Road (Yes / No)	Market Shed (Yes / No)	Market Yard (Yes / No)	Drinking Water (Yes / No)	Toilet (Yes / No)	Rest Shed (Yes / No)

33. AGRICULTURE : Minor Forest Produce Collection Centre (Forest Area)				
GP	Village	Location	Travel Time	Storage Capacity (Sufficient / Insufficient)

34. AGRICULTURE : Cold Storage				
GP	Village	Location	Travel Time	Storage Capacity (Sufficient / Insufficient)

35. AGRICULTURE : Milk Route (Milk Collection Centre)				
GP	Village	Location	Travel Time	Frequency (Daily/ Not Daily)

36. AGRICULTURE : Live Stock Aid Centre (LI Centre)					
GP	Village	Location	Travel Time	L.I. availability (Yes/ No)	Cold Chain (Yes/ No)

37. AGRICULTURE : Irrigation Potential							
GP	Village	Type of Project	Location	Land to be Irrigated	No. of Farmers to be Benefited		
					Marginal Farmer	Small Farmer	Big Farmer

38. ROAD NETWORK: Access Road to Motorable Road Point				
GP	Village	Location	Travel time	Surface Condition (Black Top/ Metal/ Gravel/ Earthen/ No Road)

39. ROAD NETWORK: Access Road to nearest Railway Station (where the Railway is main means of transport)				
GP	Village	Location	Travel time	Surface Condition (Black Top/ Metal/ Gravel/ Earthen/ No Road)

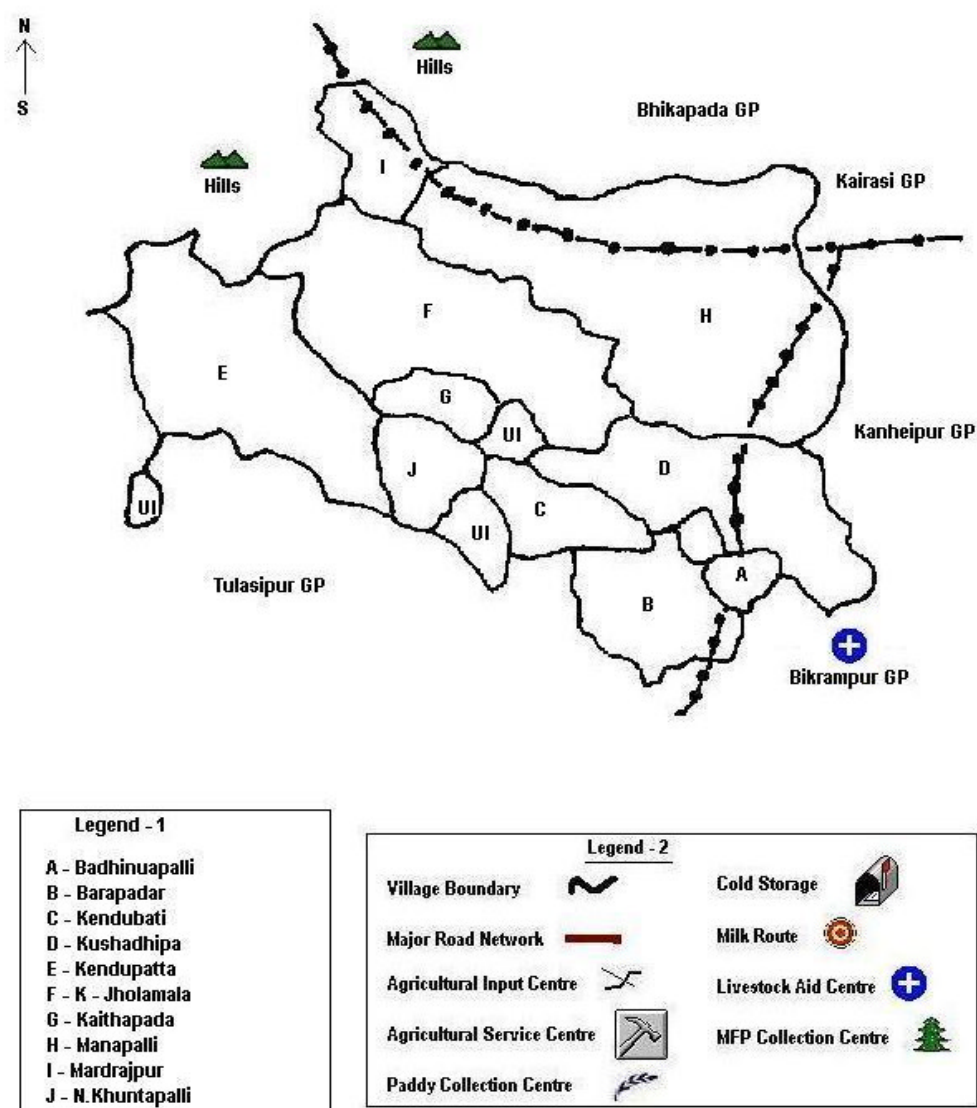
40. ROAD NETWORK: Access Road to GP Head Quarter				
GP	Village	Location	Travel time	Surface Condition (Black Top/ Metal/ Gravel/ Earthen/ No Road)

Annex 3: Step-1 Map Set (examples)

District - Ganjam, Block - Khallikote

Badhinuapalli Gram Panchayat

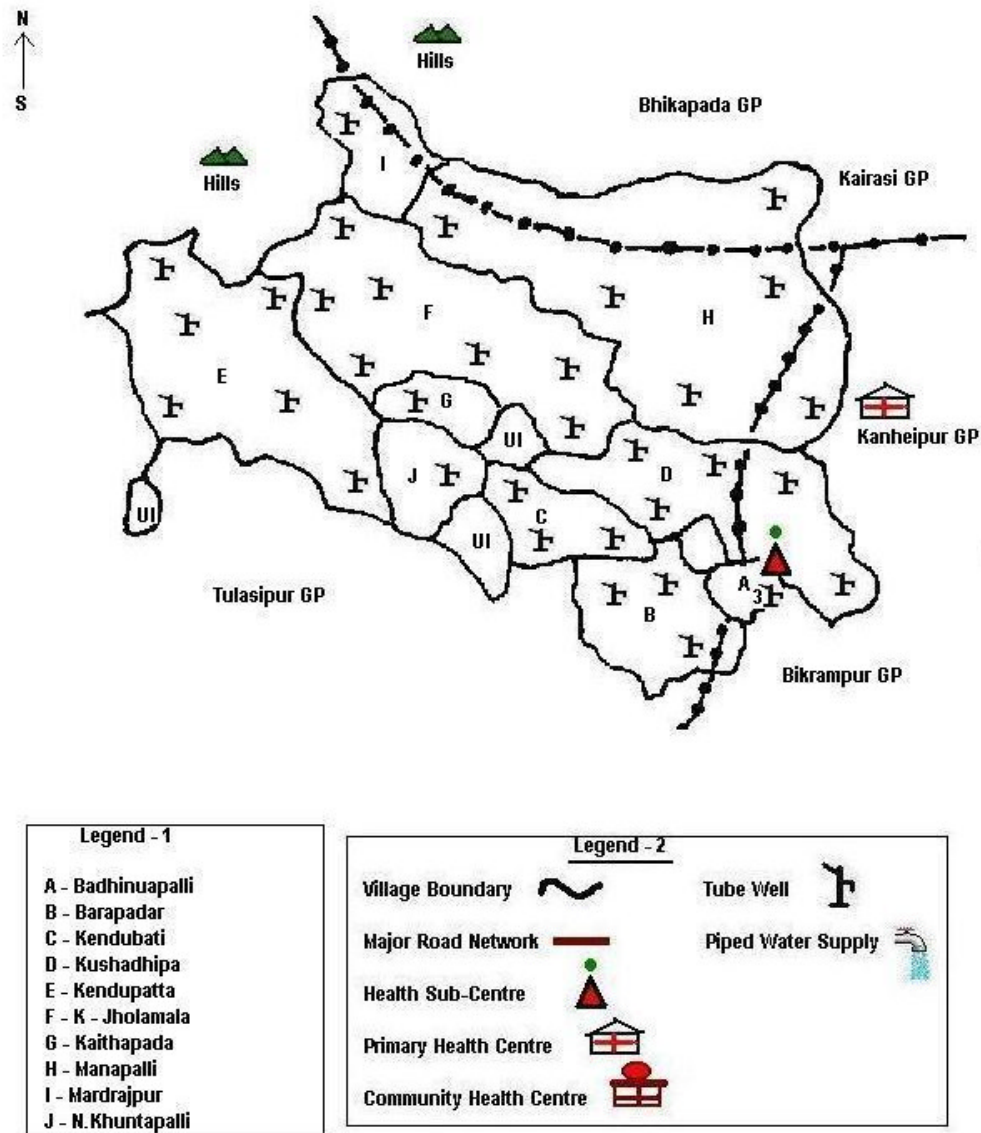
Infrastructure Status Map - Agriculture



District - Ganjam, Block - Khallikote

Badhinuapalli Gram Panchayat

Infrastructure Status Map - Health & Drinking Water



Annex 4: Data Analysis Format

Integrated Rural Accessibility Planning Data Analysis (Basing on problem severity and multi-criteria)

GP: _____

Block: Khallikote

District: Ganjam

Demographic Details														
No. of Villages	No. of Households	Population	Major Economic Group Households											
			Farmer		Fisherman		Traditional Occupation		Artisan		Businessman		Others	
			No	%	No.	%	No	%	No.	%	No.	%	No.	%

Primary School (1 - 5 Class)									
No. of villages	Accessibility Situation			Quality Situation					
	No. of villages with 60 household (300 pop) having school within 1km	No. of villages with 60 households (300 pop) having school within a distance of		Total No. of schools	No. of Schools not with minimum 2 teachers	No. of Schools not with minimum 2 class rooms	No. of Schools not with student/teacher ratio 40:1	No. of Schools not with student/classroom ratio 40:1	No. of Schools not with Drinking Water and Toilet facilities
		1 - 2 kms	2kms +						

Upper Primary School (1 - 7 Class)									
No. of Villages	Accessibility Situation			Quality Situation					
	No. of villages with 100 households (500 pop) having school within 3kms	No. of villages with 100 households (500 pop) having school within a distance of		Total No. of schools	No. of Schools not with minimum 4 teachers	No. of Schools not with minimum 4 class rooms	No. of Schools not with student/teacher ratio 40:1	No. of Schools not with student/classroom ratio 40:1	No. of Schools not with Drinking Water and Toilet facilities
		3 - 4 kms	4kms +						

Integrated Rural Accessibility Planning at the Gram Panchayat Level

M.E. School (6 & 7 Class)									
No. of Villages	Accessibility Situation			Quality Situation					
	No. of villages with 100 households (500 pop) having school within 3kms	No. of villages with 100 household (500 pop) having school within a distance of		Total No. of schools	No Schools not with minimum 2 teachers	No. Schools not with minimum 2 class rooms	No. Schools not with student/teacher ratio 40:1	No. of Schools not with student/classroom ratio 40:1	No. of Schools not with Drinking Water and Toilet facilities
		3 - 4 kms	4kms +						

High School (8 - 10 Class)				
Total School going students	Accessibility Situation		Quality Situation	
	School inside GP/ outside GP	Average Travel Time to nearest School (Minutes)	Reorganization Status	No. of Schools not with Drinking Water and Toilet facilities

+ 2 College (CHSE)			
Total College going students	Accessibility Situation		Quality Situation
	College inside Block/ outside Block	Average Distance to nearest College (Kms)	Reorganization Status

+ 3 College (University)			
Total College going students	Accessibility Situation		Quality Situation
	College inside Block/ outside Block	Average Distance to nearest College (Kms)	Reorganization Status

Vocational Training Centre				
Total Trainees	Accessibility Situation		Quality Situation	
	Inside Block/ outside Block	Average Distance (Kms)	No. of Trades	No. of Instructors

Library						
Total No. of Villages	No. of Library Inside GP	Average distance to nearest Library (Kms)	No. of Libraries		No. of Libraries	
			0-1000 Books	More than 1000 Books	With Reading Room Facility	Without Reading Room Facility

Health Sub-Centre		
Accessibility Situation		Quality Situation
Inside Block/ outside GP	Average Travel Time(Minutes)	No. of Health Workers

Primary Health Centre (PHC) / New PHC / Additional PHC					
Accessibility Situation			Quality Situation		
Inside Block / Outside Block	Average Distance (Kms)	Average Travel Time to nearest motorable road point	Doctors	Laboratory	Beds

Community Health Centre (CHC)								
Accessibility Situation			Quality Situation					
Inside Block / Outside Block	Average Distance (Kms)	Average Travel Time to nearest motorable road point	Specialized Service (Doctors)	Laboratory	X-Ray	Operation Theatre	Ambulance	Beds

Drinking Water					
Total No. of Villages	Accessibility Situation				Quality situation
	Total Habitations (Sahi/Pada/Village)	No. of habitations with no source	No of habitations with no source within 500 mtr distance	No. of habitations without sufficient source in 150:1 within 500 mtrs	No. of Habitations with not usable sources

Sanitations						
Sanitary Latrine			Drainage (Quality Situation)			
Total Households	No. of households with sanitary Latrine	% of households not with Sanitary latrine	Total No. of Villages	No. of villages		
				Drainage facility	Partial drainage facility	No facility

Integrated Rural Accessibility Planning at the Gram Panchayat Level

Bank		
Accessibility Situation		Quality Situation
Inside GP / Outside GP	Average Travel Time (Minutes)	Service availability

Post Office		
Accessibility Situation		Quality Situation
Inside GP / Outside GP	Average Travel Time (Minutes)	Delivery service

Telephone		
Accessibility Situation		Quality Situation
Inside Village (Nos.)	Average Travel Time to nearest facility (Minutes)	Average duration of service

Electricity				
Total No. of Villages	Accessibility Situation		Quality Situation	
	No. of Villages not electrified	No. Villages electrified	Average Supply hours	Voltage sufficiency

Main Market		
Accessibility Situation		Quality Situation
Inside GP / Outside GP	Average Travel Time (Minutes)	Facilities available
		Public Toilet / Rest Shed / Drinking Water

Cyclone Shelter					
Affected Area	No. of villages	Accessibility Situation			Quality Situation
		No. of Cyclone Shelters Inside GP		Average Travel Time (Minutes)	Capacity
		Special	Multi-purpose (School)		

Minor Forest Produce Collection Centre			
Accessibility Situation			Quality Situation
No. of collection centres		Average Travel Time (Minutes)	Storage Capacity
Inside GP	Outside GP		

Access Road Condition to Motorable Road Point								
No. of villages	Road Condition				No. of villages within 2km distance to motorable road point	No. of villages within 2-5 kms distance to motorable road point	No. of villages more than 5kms distance to motorable road point	Availability of public transport facility at motorable road point
	No. of villages with All-weather (BT, Metal)	No. of villages with Gravel	No. of villages with Earthen	No. of villages with no road				

Access Road to Nearest Railway Station (where the Railway is main means of transport)							
No. of villages	Road Condition				No. of villages within 2km distance to Railway Station	No. of villages within 2-5 kms distance to Railway Station	No. of villages more than 5kms distance to Railway Station
	No. of villages with All-weather (BT, Metal)	No. of villages with Gravel	No. of villages with Earthen	No. of villages with no road			

Access Road to GP Headquarters				
Average Travel Time (Minutes)	Road Condition			
	No. of villages with All-weather (BT, Metal)	No. of villages with Gravel	No. of villages with Earthen	No. of villages with no road

Transport Facility to different Headquarters & nearest Town			
	Average Distance to Destination	Average Travel Time to motorable road point (Minutes)	Availability of public transport at motorable road point
1. Block Headquarters			
2. District Headquarters			
3. Nearest Town (Town/NAC/Municipality)			

Agriculture Service Centre		
Accessibility Situation		Quality Situation
Inside GP / Outside GP	Average Travel Time (Minutes)	Services available (equipment hire and repair)

Agriculture Input Centre		
Accessibility Situation		Quality Situation
Inside GP / Outside GP	Average Travel Time (Minutes)	Inputs available (seeds, fertilizers, pesticides, tools and implements)

Paddy Collection Centre		
Accessibility Situation		Quality Situation
Inside GP / Outside GP	Average Travel Time (Minutes)	Service Facility

Cold Storage		
Accessibility Situation		Quality Situation
Inside Block / Outside Block	Average Distance (kms)	Capacity

Milk Route (Collection Centre)		
Accessibility Situation		Quality Situation
Inside GP / Outside GP	Average Travel Time (Minutes)	Frequency of Collection

Integrated Rural Accessibility Planning at the Gram Panchayat Level

Livestock Aid Centre			
Accessibility Situation		Quality Situation	
Inside GP / Outside GP	Average Travel Time (Minutes)	Service and facilities available	
		LI	Cold chain

Ice Factory			
Accessibility Situation		Quality Situation	
Inside Block / Outside Block	Average Distance (Kms)	Quality of Ice	Capacity

Jetty (Micro-harbour)				
Accessibility Situation			Quality Situation	
No. of villages with Fisherman	No. of villages with existing Jetty	Average Travel Time (Minutes)	Capacity	Safety

Irrigation Potential							
Type & No. of projects		No. of villages to be covered	Area to be covered	Farmers to be benefited			
Type	No.			Marginal	Small	Big	Total

Service Cooperative Society (Farmers)			
Accessibility Situation		Quality Situation	
No. of Farmer Households	Inside GP / Outside GP	Average Travel Time (Minutes)	Facilities available
			Credit / Fertilizer / Mini Bank

Weavers Cooperative Society						
No. of Weaver Households	Accessibility Situation		Quality Situation		Technical Assistance	Marketing
	Inside GP / Outside GP	Average Travel Time (Minutes)	Facilities available			
			Credit / Work shed / Raw material			

Fisherman's Cooperative Society				
No. of Fisherman Households	Accessibility Situation		Quality Situation	Marketing
	Inside GP / Outside GP	Average Travel Time (Minutes)	Facilities available	
			Credit / Boat / Net	

Industrial Cooperative Society (Artisan / Traditional Occupation)					
No. of Artisan Households	Accessibility Situation		Quality Situation	Marketing	Technical Assistance
	Inside GP / Outside GP	Average Travel Time (Minutes)	Facilities available		
			Credit / Work shed / Raw Material		

Fire Service Stations				
Accessibility Situation		No. of service vehicles	Quality Situation	
Inside Block / Outside Block	Average Distance (kms)		Access of service vehicles to village	
			No. of villages (all-weather)	No. of villages (fair-weather)

Annex 5: Accessibility Indicators

Integrated Rural Accessibility Planning

Problem Indicators

1. Primary School

Problem Scoring Formula = Household x (Travel Time + Quality (Qia + Qib) + (Qiiia + Qiiib) or (Qia + Qib) + (Qiiia + Qiiib))

(1) Travel Time

Travel Time	Point
0 - 15 minutes	0
16 - 30 minutes	1
31 - 60 minutes	2
Above 60 minutes / NA	4

NA - Not Available

(2) Quality

i) School less than 80 students

a. Teacher

No. of Teachers	Point
2	0
1	2
0	4

b. Classroom

No. of Classrooms	Point
2	0
1	2
0	4

(Classroom with RCC / AC sheet roof)

ii. Schools with more than 80 students

a. Student / Teacher Ratio

Student / Teacher Ratio	Point
0 - 40	0
41 - 60	2
Above 60	4

b. Student / Classroom Ratio

Student / Classroom Ratio	Point
0 - 40	0
41 - 60	2
Above 60	4

(Classroom with RCC / AC sheet roof)

iii. Water facilities

a. Drinking Water

Availability	Point
Yes	0
No	4

b. Toilet

Availability	Point
Yes	0
No	4

2. Upper Primary School (UGME)

Problem Scoring Formula = Household x (Travel Time + Quality (Qia + Qib) + (Qiiia + Qiiib) or (Qia + Qib) + (Qiiia + Qiiib))

(1) Travel Time

Travel Time	Point
0 - 15 minutes	0
16 - 30 minutes	1
31 - 60 minutes	2
Above 60 minutes / NA	4

(2) Quality

i. School less than 120 students

a. Teacher

No. of Teachers	Point
4	0
3	2
Less than 3	4

b. Classroom

No. of Classrooms	Point
4	0
3	2
Less than 3	4

(Classroom with RCC / AC sheet roof)

ii. Schools with more than 120 students

a. Student / Teacher

Student / Teacher Ratio	Point
0 - 30	0
31 - 50	2
Above 50	4

b. Student / Classroom Ratio

Student / Classroom Ratio	Point
0 - 30	0
31 - 50	2
Above 50	4

(Classroom with RCC / AC sheet roof)

iii. Water facilities

a. Drinking Water

Availability	Point
Yes	0
No	4

b. Toilet

Availability	Point
Yes	0
No	4

3. M.E. School (6th & 7th Class)

Problem Scoring Formula = Household x (Travel Time + Quality (Qia + Qib) + (Qiiia + Qiiib) or (Qia + Qib) + (Qiiia + Qiiib))

(1) Travel Time

Travel Time	Point
0 - 45 minutes	0
46 - 60 minutes	1
61 - 90 minutes	2
Above 90 minutes / NA	4

(2) Quality

i. School less than 60 students

a. Teacher

No. of Teachers	Point
2	0
1	2
0	4

b. Classroom

No. of Classrooms	Point
2	0
1	2
0	4

(Classroom with RCC / AC sheet roof)

ii. Schools with more than 60 students

a. Student / Teacher

Student / Teacher Ratio	Point
0 - 30	0
31 - 50	2
Above 50	4

b. Student / Classroom Ratio

Student / Classroom Ratio	Point
0 - 30	0
31 - 50	2
Above 50	4

(Classroom with RCC / AC sheet roof)

iii. Watson facilities

a. Drinking Water

Availability	Point
Yes	0
No	4

b. Toilet

Availability	Point
Yes	0
No	4

4. High School (8th - 10th Class)

Problem Scoring Formula = Household x (Travel Time + Quality (Qi + Qiia + Qiib))

(1) Travel Time

Travel Time	Point
0 - 60 minutes	0
61 - 90 minutes	1
91 - 120 minutes	2
Above 120 minutes / NA	4

(2) Quality

i. Recognition status

Status	Point
Recognized	0
Non - recognized	4

ii. Watson facilities

a. Drinking Water

Availability	Point
Yes	0
No	4

c. Toilet

Availability	Point
Yes	0
No	4

5. +2 College (CHSE)

Problem Scoring Formula = Household x (Travel Time + Quality)

(1) Travel Time

Travel Time	Point
0 - 1.5 hours	0
1.5 - 2 hours	1
2 - 3 hours	2
Above 3 hours / NA	4

(2) Quality

a. Recognition status

Status	Point
Recognized	0
Non - recognized	4

6. +3 College

Problem Scoring Formula = Household x (Travel Time + Quality)

(1) Travel Time

Travel Time	Point
0 - 2 hours	0
2 - 3 hours	1
3 - 4 hours	2
Above 4 hours / NA	4

(2) Quality

a. Recognition status

Status	Point
Recognized	0
Non - recognized	4

7. Vocational Training Centre (ITI)

Problem Scoring Formula = Household x (Travel Time + Quality)

(1) Travel Time

Travel Time	Point
0 - 2 hours	0
2 - 3 hours	1
3 - 4 hours	2
Above 4 hours / NA	4

(2) Quality

a. Recognition Status

Status	Point
Recognized	0
Non-recognized	4

8. Public Library

Problem Scoring Formula = Household x (Travel Time + Quality (Qa + Qb))

(1) Travel Time

Travel Time	Point
0 - 1 hours	0
1 - 1.5 hours	1
1.5 - 2 hours	2
2 hours & above / NA	4

(2) Quality

a. Books

No. of Books	Point
1000 above	0
500 - 1000	2
Less than 500	4

b. Reading Room

Facility	Point
Available	0
Not available	4

9. Health Sub-Centre**Problem Scoring Formula** = Household x (Travel Time + Quality (Qa + Qb))

(1) Travel Time

Travel Time	Point
0 - 1 hours	0
1 - 1.5 hours	1
1.5 - 2 hours	2
Above 2 hours / NA	4

(2) Quality

a. Health Worker

No. of Health Workers	Point
2	0
1	2
0	4

b. Building

Own building	Point
Available	0
Not available	4

10. Primary Health Centre (PHC)**Problem Scoring Formula** = Household x (Travel Time + Quality (Qa + Qb + Qc))

(1) Travel Time

Travel Time	Point
0 - 1.5 hours	0
1.5 - 2 hours	1
2 - 3 hours	2
Above 3 hours / NA	4

(2) Quality

a. Doctors

Doctor	Point
Yes	0
No	4

b. Laboratory Facility

Facility	Point
Yes	0
No	4

c. Beds

Facility	Point
Yes	0
No	4

11. Community Health Centre (CHC)**Problem Scoring Formula** = Household x (Travel Time + Quality (Qa+Qb+Qc+Qd+Qe+Qf))

(1) Travel Time

Travel Time	Point
0 - 2 hours	0
2 - 3 hours	1
3 - 4 hours	2
Above 4 hours / NA	4

(2) Quality

a. Doctors

No. of Doctors	Point
5	0
3 - 4	2
Less than 3	4

b. Laboratory Facility

Facility	Point
Yes	0
No	4

c. X - Ray

Facility	Point
Yes	0
No	4

d. Operation Theatre

Facility	Point
Yes	0
No	4

e. Ambulance Service

Facility	Point
Yes	0
No	4

f. Beds

No. of Beds	Point
30 & above	0
Less than 30	4

12. Safe Drinking Water**Problem Scoring Formula** = Household x (Travel Time + Quality)

(1) Travel Time

Travel Time	Point
0 - 10 minutes	0
11 - 20 minutes	1
21 - 30 minutes	2
Above 30 minutes / NA	4

(2) Quality

a. Population / Usable Source (tube well, piped water stand post and sanitary well where tube well and stand post not possible) Ratio

Population / Source	Point
0 - 150	0
151 - 250	2
Above 250 / No source	4

13. Sanitation - Sanitary Latrine**Problem Scoring Formula** = Household x Quality

Quality

a. Sanitary Latrine

Percentage of Households having sanitary latrines	Point
50 % & above	0
25 % - 50 %	2
Less than 25 %	4

14. Sanitation - Village Drain**Problem Scoring Formula** = Household x Quality

Quality

Village Drain

Coverage	Point
Fully covered	0
Partially covered	2
Not covered	4

15. Fuel (Access to Forest)**Problem Scoring Formula** = Household x (Travel Time + Quality)

(1) Travel Time

Travel Time	Point
0 - 1 hour	0
1 - 1.5 hours	1
1.5 - 2 hours	2
Above 2 hours / NA	4

(2) Quality

Availability

Availability	Points
Sufficient	0
Insufficient	4

16. Fuel (Cooking Gas Depot)**Problem Scoring Formula** = Household x (Travel Time + Quality)

(1) Travel Time

Travel Time	Point
0 - 1 hour	0
1 - 1.5 hours	1
1.5 - 2 hours	2
Above 2 hours / NA	4

(2) Quality

Availability

Availability	Points
Sufficient	0
Insufficient	4

17. Bank**Problem Scoring Formula** = Household x (Travel Time + Quality)

(1) Travel Time

Travel Time	Point
0 - 1.5 hours	0
1.5 - 2 hours	1
2 - 3 hours	2
Above 3 hours / NA	4

(2) Quality
Service Facility

Availability	Point
Regular	0
Irregular	4

18. Post Office**Problem Scoring Formula** = Household x (Travel Time + Quality)

(1) Travel Time

Travel Time	Point
0 - 1 hour	0
1 - 1.5 hours	1
1.5 - 2 hours	2
Above 2 hours / NA	4

(2) Quality
Service Facility

Availability	Point
Regular	0
Irregular	4

19. Public Telephone**Problem Scoring Formula** = Household x (Travel Time + Quality)

(1) Travel Time

Travel Time	Point
Inside village	0
0 - 15 minutes	1
16 - 30 minutes	2
Above 30 minutes / NA	4

(2) Quality
Service Hours

Hours	Point
12 hours & above	0
6 - 12 hours	2
Less than 6 hours	4

20. Electrification**Problem Scoring Formula** = Household x QualityQuality
Electrification

Electrified	Point
Yes	0
No	4

21. Power Supply**Problem Scoring Formula** = Household x Quality (Qa+Qb)Quality
a. Supply Hours

Hours	Point
24 hours	0
12 - 24 hours	2
Less than 12 hours	4

b. Required voltage

Voltage availability	Point
Required	0
Low	4

22. Main Market**Problem Scoring Formula** = Household x (Travel Time + Quality (Qa+Qb+Qc))

(1) Travel Time

Travel Time	Point
0 - 2 hours	0
2 - 3 hours	1
3 - 4 hours	2
Above 4 hours / NA	4

(2) Quality

a. Drinking Water

Facility	Point
Yes	0
No	4

b. Public Toilet

Facility	Point
Yes	0
No	4

c. Rest Shed

Facility	Point
Yes	0
No	4

23. Cyclone Shelter (School / Multi purpose; only for cyclone and flood affected area)**Problem Scoring Formula** = Household x (Travel Time + Quality)

(1) Travel Time

Travel Time	Point
0 - 15 minutes	0
16 - 30 minutes	1
31 - 45 minutes	2
Above 45 minutes / NA	4

(2) Quality

Capacity

Capacity	Point
Sufficient	0
Insufficient	4

24. Ice Factory (Fishery)**Problem Scoring Formula** = Household x (Travel Time + Quality (Qa+Qb))

(1) Travel Time

Travel Time	Point
0 - 1 hour	0
1 - 1.5 hours	1
1.5 - 2 hours	2
Above 2 hours / NA	4

(2) Quality

a. Capacity

Capacity	Points
Sufficient	0
Insufficient	4

b. Quality

Quality	Points
Suitable	0
Unsuitable	4

25. Jetty (Micro Harbour)**(River, Sea mouth, Lake, Creek, Large water body vicinity villages)****Problem Scoring Formula** = Household x (Travel Time + Quality (Qa+Qb))**(1) Travel Time**

Travel Time	Point
0 - 30 minutes	0
31 - 45 minutes	1
46 - 60 hours	2
Above 60 minutes / NA	4

(2) Quality**a. Capacity**

Capacity	Points
Sufficient	0
Insufficient	4

b. Safety

Safety	Points
Safe	0
Unsafe	4

26. Agro - Service Centre**Problem Scoring Formula** = Household x (Travel Time + Quality (Qa+Qb))**(1) Travel Time**

Travel Time	Point
0 - 1 hour	0
1 - 1.5 hours	1
1.5 - 2 hours	2
Above 2 hours / NA	4

(2) Quality**a. Machinery & Equipments availability (on hire)**

Facility	Point
Yes	0
No	4

b. Repairing Service

Facility	Point
Yes	0
No	4

27. Agricultural Input Sales Centre**Problem Scoring Formula** = Household x (Travel Time + Quality)**(1) Travel Time**

Travel Time	Point
0 - 1 hour	0
1 - 1.5 hours	1
1.5 - 2 hours	2
Above 2 hours / NA	4

(2) Quality**Inputs availability (seeds, fertilizers, pesticides & implements)**

Availability	Points
Sufficient	0
Insufficient	4

28. Paddy Collection Centre**Problem Scoring Formula** = Household (Travel Time + Quality)

(1) Travel Time

Travel Time	Point
0 - 1 hour	0
1 - 1.5 hours	1
1.5 - 2 hours	2
Above 2 hours / NA	4

(2) Quality

Storage Capacity

Capacity	Points
Sufficient	0
Insufficient	4

29. Agricultural Produce Market Centre (Krushak Bazar)**Problem Scoring Formula** = Household (Travel Time + Quality)

1. Travel Time

Travel Time	Point
Upto 1 hour	0
1 to 2 hours	1
2 to 4 hours	2
Above 4 hours / Not inside Block	4

2. Quality

Available facilities (drinking water, access road, toilet, rest shed)

Facilities	Point
All facilities	0
Partial facilities	2
No facilities	4

30. Cold Storage**Problem Scoring Formula** = Household x (Travel Time + Quality)

(1) Travel Time

Travel Time	Point
0 - 2 hours	0
2 - 3 hours	1
3 - 4 hours	2
Above 4 hours / NA	4

(2) Quality

Storage Capacity

Capacity	Points
Sufficient	0
Insufficient	4

31. Milk Route (Milk Collection Centre)**Problem Scoring Formula** = Household x (Travel Time + Quality)

(1) Travel Time

Travel Time	Point
0 - 30 minutes	0
31 - 45 minutes	1
46 - 60 hours	2
Above 60 minutes / NA	4

(2) Quality

Frequency of collection

Frequency	Points
Daily	0
Less	4

32. Livestock Aid Centre (L.I. Centre)**Problem Scoring Formula** = Household x (Travel Time + Quality (Qa+Qb))

(1) Travel Time

Travel Time	Point
0 - 1 hour	0
1 - 1.5 hours	1
1.5 - 2 hours	2
Above 2 hours / NA	4

(2) Quality

a. L.I. availability

Availability	Points
Yes	0
No	4

b. Cold Chain

Facility	Points
Yes	0
No	4

33. MFP Collection Centre (Forest area)**Problem Scoring Formula** = Household x (Travel Time + Quality)

(1) Travel Time

Travel Time	Point
0 - 30 minutes	0
31 - 60 minutes	1
61 - 90 minutes	2
Above 90 minutes / NA	4

(2) Quality

Storage Capacity

Capacity	Point
Sufficient	0
Insufficient	4

34. Irrigation Potential**Problem Scoring Formula** = Household x Quality (Qa+Qb)

(1) Quality

a. Area to be irrigated (Ayacut)

Area	Point
1 - 100 acres	1
101 - 500 acres	2
501 - 1000 acres	3
Above 1000 acres	4

b. Benefiting Farmers

Percentage of Farmers (small / marginal)	Point
Upto 25%	1
25% - 50 %	2
50 % - 75 %	3
Above 75 %	4

35. Access Road to Motorable Road Point**Problem Scoring Formula** = Household x (Travel Time + Quality)

(1) Travel Time

Travel Time	Point
0 - 15 minutes	0
16 - 30 minutes	1
31 - 45 minutes	2
Above 45 minutes / NA	4

(2) Quality
Road Condition

Condition	Points
Metalled & Black Topped	0
Gravel (Morrum)	2
Earthen / No Road	4

36. Access Road to nearest Railway Station (where the Railway is main means of transport)**Problem Scoring Formula** = Household x (Travel Time + Quality)

(1) Travel Time

Travel Time	Point
0 - 15 minutes	0
16 - 30 minutes	1
31 - 45 minutes	2
Above 45 minutes / NA	4

(2) Quality
Road Condition

Condition	Points
Metalled & Black Topped	0
Gravel (Morrum)	2
Earthen / No Road	4

37. Access Road to GP Headquarter (Separate from motorable road point)**Problem Scoring Formula** = Household x (Travel Time + Quality)

(1) Travel Time

Travel Time	Point
0 - 15 minutes	0
16 - 30 minutes	1
31 - 45 minutes	2
Above 45 minutes / NA	4

(2) Quality
Road Condition

Condition	Points
Metalled & Black Topped	0
Gravel (Moorum)	2
Earthen / No Road	4

38. Service Cooperative Society (Farmers)**Problem Scoring Formula** = Household x (Travel Time + Quality (Qa+Qb+Qc))

(1) Travel Time

Travel Time	Point
0 - 1 hour	0
1 - 1.5 hours	1
1.5 - 2 hours	2
Above 2 hours / NA	4

(2) Quality (Service Availability)

a. Credit facility

Facility	Points
Yes	0
No	4

b. Fertilizer

Facility	Points
Yes	0
No	4

c. Mini Bank

Facility	Points
Yes	0
No	4

39. Weavers' Cooperative Society
Problem Scoring Formula = Household x (Travel Time + Quality (Qa+Qb+Qc+Qd+Qe))

(1) Travel Time

Travel Time	Point
0 - 1 hour	0
1 - 1.5 hours	1
1.5 - 2 hours	2
Above 2 hours / NA	4

(2) Quality (Service Availability)

a. Credit facility

Facility	Points
Yes	0
No	4

b. Work shed

Facility	Points
Yes	0
No	4

c. Raw material

Facility	Points
Yes	0
No	4

d. Marketing

Facility	Points
Yes	0
No	4

e. Technical Assistance

Facility	Points
Yes	0
No	4

40. Fishermen's Cooperative Society
Problem Scoring Formula = Household x (Travel Time + Quality (Qa+Qb+Qc+Qd))

(1) Travel Time

Travel Time	Point
0 - 1 hour	0
1 - 1.5 hours	1
1.5 - 2 hours	2
Above 2 hours / NA	4

(2) Quality (Facility Availability)

a. Credit facility

Facility	Points
Yes	0
No	4

b. Boat

Facility	Points
Yes	0
No	4

c. Net

Facility	Points
Yes	0
No	4

d. Marketing

Facility	Points
Yes	0
No	4

41. Industrial Cooperative Society
Problem Scoring Formula = Household x (Travel Time + Quality (Qa+Qb+Qc+Qd+Qe))

(1) Travel Time

Travel Time	Point
0 - 1 hour	0
1 - 1.5 hours	1
1.5 - 2 hours	2
Above 2 hours / NA	4

(2) Quality

a. Credit facility

Facility	Points
Yes	0
No	4

b. Work shed

Facility	Points
Yes	0
No	4

c. Raw materials

Facility	Points
Yes	0
No	4

d. Marketing

Facility	Points
Yes	0
No	4

e. Technical Assistance

Facility	Points
Yes	0
No	4

42. Fire Station
Problem Scoring Formula = Household x (Travel Time + Quality)

(1) Travel Time

Travel Time	Point
0 - 2 hours	0
2 - 3 hours	1
3 - 4 hours	2
Above 4 hours / NA	4

(2) Quality

Service Vehicle availability

No. of vehicles	Points
2 and above	0
1	4

Annex 6: Step-2 Worksheets: Problem Scoring and Priority Ranking

Integrated Rural Accessibility Planning

Sector: EDUCATION
a) Primary School (1-5 Class)

Block: Khallikote

Gram Panchayat

Problem Scoring Formula: Households X (Travel Time Score + Quality Score) = Total Problem Score

Village	No of Households	Location	No of Students	Travel Time Score		Quality Score										Household s x (TT Score + Quality Score)	Total Problem Score	Problem Priority Rank		
						Up to 80 students				Above 80 students				Watson facilities						
				Travel Time	Score	Teacher		Classroom		Student/Teacher		Student/Class room		Drinking Water					Toilet	
						No	Score	No	Score	Ratio	Score	Ratio	Score	Avl.	Score				Avl.	Score

Quality Score = Sum Total of Quality Score

Sector: EDUCATION
b) UGME School (1-7 Class)

Block: Khallikote

Gram Panchayat

Problem Scoring Formula: Households X (Travel Time Score + Quality Score) = Total Problem Score

Village	No of Households	Location	No of Students	Travel Time Score		Quality Score												Household s x (TT Score + Quality Score)	Total Problem Score	Problem Priority
						Up to 120 students				Above 120 students				Watson facilities						
				Travel Time	Score	Teacher		Class room		Student/Teacher		Student/Class room		Drinking Water		Toilet				
						No	Score	No	Score	Ratio	Score	Ratio	Score	Avl.	Score	Avl.	Score			

Quality Score = Sum Total of Quality Score

Sector: EDUCATION
c) ME School (6 & 7 Class)

Block: Khallikote

Gram Panchayat

Problem Scoring Formula: Households X (Travel Time Score + Quality Score) = Total Problem Score

Village	No of Households	Location	No of Students	Travel Time Score		Quality Score												Household s x (TT Score + Quality Score)	Total Problem Score	Problem Priority
						Up to 60 students				Above 60 students				Watson Facility						
				Travel Time	Score	Teacher		Class room		Student/ Teacher		Student/ Class room		Drinking Water		Toilet				
						No	Score	No	Score	Ratio	Score	Ratio	Score	Avl.	Score	Avl.	Score			

Quality Score = Sum Total of Quality Score

Sector: EDUCATION
d) High School (8 - 10 Class)

Block: Khallikote

Gram Panchayat

Problem Scoring Formula: Households X (Travel Time Score + Quality Score) = Total Problem Score

Village	No of Households	Location	Travel Time Score		Quality Score						Household x (TT Score + Quality Score)	Total Problem Score	Problem Priority Rank
					Recognition Status		Watson Facility						
			Travel Time	Score	Status	Score	Drinking Water		Toilet				
							Avl.	Score	Avl.	Score			

Quality Score = Sum Total of Quality Score

Sector: EDUCATION
e) +2 College

Block: Khallikote

Gram Panchayat

Problem Scoring Formula: Households X (Travel Time Score + Quality Score) = Total Problem Score

Village	No of Households	Location	Travel Time Score		Quality Score		Households x (TT Score + Quality Score)	Total Problem Score	Problem Priority Rank
			Travel Time	Score	Recognition Status				
					Status	Score			

Quality Score = Sum Total of Quality Score

Sector: EDUCATION
f) +3 College

Block: Khallikote

Gram Panchayat

Problem Scoring Formula: Households X (Travel Time Score + Quality Score) = Total Problem Score

Village	No of Households	Location	Travel Time Score		Quality Score		Households x (TT Score + Quality Score)	Total Problem Score	Problem Priority Rank
			Travel Time	Score	Recognition Status				
					Status	Score			

Quality Score = Sum Total of Quality Score

Sector: EDUCATION
g) Vocational Training Centre (ITI)

Block: Khallikote

Gram Panchayat

Problem Scoring Formula: Households X (Travel Time Score + Quality Score) = Total Problem Score

Village	No of Households	Location	Travel Time Score		Quality Score		Households x (TT Score + Quality Score)	Total Problem Score	Problem Priority Rank
			Travel Time	Score	Recognition Status				
					Status	Score			

Quality Score = Sum Total of Quality Score

Sector: EDUCATION
h) Public Library

Block: Khallikote

Gram Panchayat

Problem Ranking Formula: Households X (Travel Time Score + Quality Score) = Total Problem Score

Village	No of Households	Location	Travel Time Score		Quality Score				Households x (TT Score + Quality Score)	Total Problem Score	Problem Priority Rank
			Travel Time	Score	Books		Reading Room				
					No of Books	Score	Facility	Score			

Quality Score = Sum Total of Quality Score

Sector: HEALTH
a) Health Sub-Centre

Block: Khallikote

Gram Panchayat

Problem Scoring Formula: Households X (Travel Time Score + Quality Score) = Total Problem Score

Village	No of Households	Location	Travel Time Score		Quality Score				Households x (TT Score + Quality Score)	Total Problem Score	Problem Priority Rank
			Travel Time	Score	Health Worker		Own Building				
					No of Health Workers	Score	Facility	Score			

Quality Score = Sum Total of Quality Score

Sector: HEALTH
b) Primary Health Centre (PHC) / New PHC / Additional PHC

Block: Khallikote

Gram Panchayat

Problem Scoring Formula: Households X (Travel Time Score + Quality Score) = Total Problem Score

Village	No of Households	Location	Travel Time Score		Quality Score						Households x (TT Score + Quality Score)	Total Problem Score	Problem Priority Rank
			Travel Time	Score	Doctor		Laboratory		Bed				
					Availability	Score	Facility	Score	Facility	Score			

Quality Score = Sum Total of Quality Score

Sector: HEALTH
c) Community Health Centre (CHC)

Block: Khallikote

Gram Panchayat

Problem Scoring Formula: Households X (Travel Time Score + Quality Score) = Total Problem Score

Village	No of Household	Location	Travel Time Score		Quality Score												Households x (TT Score + Quality	Total Problem Score	Problem Priority Ranking
			Travel Time	Score	Doctor		Laboratory		X-Ray		Operation Theater		Ambulance		Beds				
					Nos	Score	Facility	Score	Facility	score	Facility	Score	Facility	Score	Facility	Score			

Quality Score = Sum Total of Quality Score

Sector: HEALTH

Block: Khallikote

Gram Panchayat

d) Safe Drinking Water

Problem Scoring Formula: Households X (Travel Time Score + Quality Score) = Total Problem Score

Village	No of Households	Location	Travel Time Score		Quality Score		Households x (TT Score + Quality Score)	Total Problem Score	Problem Priority Rank
			Travel Time	Score	Population/ Usable Source Ratio				
					Ratio	Score			

Quality Score = Sum Total of Quality Score

Sector: HEALTH

Block: Khallikote

Gram Panchayat

e) Sanitation (Sanitary Latrine)

Problem Scoring Formula: Households X Quality Score = Total Problem Score

Village	Households	Quality Score			Households x Quality Score	Total Problem Score	Problem Priority Rank
		Households with Sanitary Latrine	% of HH	Score			

Quality Score = Sum Total of Quality Score

Sector: HEALTH

Block: Khallikote

Gram Panchayat

f) Sanitation (Village Drain)

Problem Scoring Formula: Households X Quality Score = Total Problem Score

Village	Households	Quality Score		Households x Quality Score	Total Problem Score	Problem Priority Rank
		Drainage facility	Score			

Quality Score = Sum Total of Quality Score

Sector: UTILITY
a) Bank

Block: Khallikote

Gram Panchayat

Problem Scoring Formula: Households X (Travel Time Score + Quality Score) = Total Problem Score

Village	No of Households	Location	Travel Time Score		Quality Score		Households x (Travel Time Score + Quality Score)	Total Problem Score	Problem Priority Rank
			Travel Time	Score	Service Facility				
					Availability	Score			

Quality Score = Sum Total of Quality Score

Sector: UTILITY
b) Post Office

Block: Khallikote

Gram Panchayat

Problem Scoring Formula: Household X (Travel Time Score + Quality Score) = Total Problem Score

Village	No of Households	Location	Travel Time Score		Quality Score		Households x (Travel Time Score + Quality Score)	Total Problem Score	Problem Priority Rank
			Travel Time	Score	Service Facility				
					Availability	Score			

Quality Score = Sum Total of Quality Score

Sector: UTILITY
c) Public Telephone

Block: Khallikote

Gram Panchayat

Problem Scoring Formula: Households X (Travel Time Score + Quality Score) = Total Problem Score

Village	No of Households	Location	Travel Time Score		Quality Score		Households x (Travel Time Score + Quality Score)	Total Problem Score	Problem Priority Rank
			Travel Time	Score	Service Availability				
					Hours	Score			

Quality Score = Sum Total of Quality Score

Sector: UTILITY
d) Electrification

Block: Khallikote

Gram Panchayat

Problem Ranking Formula: Households X Quality Score = Total Problem Score

Village	Households	Quality score		Households x Quality Score	Total Problem Score	Problem Priority Rank
		Electrification				
		Electrified	Score			

Quality Score = Sum Total of Quality Score

Sector: UTILITY
e) Power Supply

Block: Khallikote

Gram Panchayat

Problem Scoring Formula: Households X Quality Score = Total Problem Score

Village	Households	Quality Score				Households x Quality Score	Total Problem Score	Problem Priority Rank
		Supply Hours		Required Voltage				
		Hours	Score	Availability	Score			

Quality Score = Sum Total of Quality Score

Sector: UTILITY
f) Fire Station

Block: Khallikote

Gram Panchayat

Problem Scoring Formula: Households X (Travel Time Score + Quality Score) = Total Problem Score

Village	No of Households	Location	Travel Time Score		Quality Score		Households x (Travel Time Score + Quality Score)	Total Problem Score	Problem Priority Rank
			Travel Time	Score	Service Vehicle availability				
					No. of vehicles	Score			

Quality Score = Sum Total of Quality Score

Sector: OTHER FACILITIES

Block: Khallikote

Gram Panchayat

a) Main Market

Problem Scoring Formula: Households X (Travel Time Score + Quality Score) = Total Problem Score

Village	No of Households	Location	Travel Time Score		Quality Score						Households x (TT Score + Quality Score)	Total Problem Score	Problem Priority Rank
			Travel Time	Score	Drinking Water		Public Toilet		Rest Shed				
					Facility	Score	Facility	Score	Facility	Score			

Quality Score = Sum Total of Quality Score

Sector: OTHER FACILITIES

Block: Khallikote

Gram Panchayat

b) Cyclone Shelter

Special / Multipurpose (School) *only for Flood, Cyclone affected area*

Problem Scoring Formula: Households X (Travel Time Score + Quality Score) = Total Problem Score

Village	No of Households	Location	Travel Time Score		Quality Score		Households x (Travel Time Score + Quality Score)	Total Problem Score	Problem Priority Rank
			Travel Time	Score	Capacity				
					Capacity	Score			

Quality Score = Sum Total of Quality Score

Sector: OTHER FACILITIES

Block: Khallikote

Gram Panchayat

c) Ice Factory

Problem Scoring Formula: Households X (Travel Time Score + Quality Score) = Total Problem Score

Village	No of Fishermen Households	Location	Travel Time Score		Quality Score				Households x (Travel Time Score + Quality Score)	Total Problem Score	Problem Priority Rank
			Travel Time	Score	Capacity		Quality				
					Capacity	Score	Quality	Score			

Quality Score = Sum Total of Quality Score

Sector: OTHER FACILITIES

Block: Khallikote

Gram Panchayat

d) Jetty (Micro Harbour)

(River, Sea mouth, Lake, Creek, Large Water Body Vicinity Villages)

Problem Scoring Formula: Households X (Travel Time Score + Quality Score) = Total Problem Score

Village	No of Households	Location	Travel Time Score		Quality Score		Households x (Travel Time Score + Quality Score)	Total Problem Score	Problem Priority Rank
			Travel Time	Score	Capacity				
					Capacity	Score			

Quality Score = Sum Total of Quality Score

Sector: OTHER FACILITIES

Block: Khallikote

Gram Panchayat

e) Fuel (Access to Forest)

Problem Scoring Formula: Households X (Travel Time Score + Quality Score) = Total Problem Score

Village	No of Households	Location	Travel Time Score		Quality Score		Households x (Travel Time Score + Quality Score)	Total Problem Score	Problem Priority Rank
			Travel Time	Score	Availability of Fuel wood				
					Availability	Score			

Quality Score = Sum Total of Quality Score

f) Fuel (Cooking Gas Depot)

Problem Scoring Formula: Households X (Travel Time Score + Quality Score) = Total Problem Score

Village	No of Households	Location	Travel Time Score		Quality Score		Households x (Travel Time Score + Quality Score)	Total Problem Score	Problem Priority Rank
			Travel Time	Score	Availability				
					Availability	Score			

Quality Score = Sum Total of Quality Score

Sector: OTHER FACILITIES

Block: Khallikote

Gram Panchayat

f) Service Cooperative Society (Farmers)

Problem Scoring Formula: Households X (Travel Time Score + Quality Score) = Total Problem Score

Village	No of Farmer Households	Location	Travel Time Score		Quality Score						Households x (TT Score + Quality Score)	Total Problem Score	Problem Priority Rank
			Travel Time	Score	Credit		Fertilizer		Mini Bank				
					Facility	Score	Facility	Score	Facility	Score			

Quality Score = Sum Total of Quality Score

Sector: OTHER FACILITIES

Block: Khallikote

Gram Panchayat

g) Weavers' Cooperative Society

Problem Scoring Formula: Households X (Travel Time Score + Quality Score) = Total Problem Score

Village	No of Weavers' Households	Location	Travel Time Score		Quality Score										Households x (TT Score +Quality Score)	Total Problem Score	Problem Priority Rank
			Travel Time	Score	Credit		Work Shed		Raw Material		Marketing		Technical Assistance				
					Facility	Score	Facility	Score	Facility	Score	Facility	Score	facility	Score			

Quality Score = Sum Total of Quality Score

Sector: OTHER FACILITIES

Block: Khallikote

Gram Panchayat

h) Fishermen's' Cooperative Society

Problem Scoring Formula: Households X (Travel Time Score + Quality Score) = Total Problem Score

Village	No of fishermen Households	Locatio	Travel Time Score		Quality Score								Households x (TT Score + Quality Score)	Total Problem Score	Problem Priority Rank
			Travel Time	Score	Credit		Boat		Net		Marketing				
					Facility	Score	Facility	Score	Facility	Score	Facility	Score			

Quality Score = Sum Total of Quality Score

Sector: OTHER FACILITIES**Block: Khallikote****Gram Panchayat****i) Industrial Cooperative Society****Problem Scoring Formula:** Households X (Travel Time Score + Quality Score) = Total Problem Score

Village	No of Artisan / Traditional Occupation Households	Location	Travel Time Score		Quality Score										Household x (TT Score + Quality Score)	Total Problem Score	Problem Priority Rank
			Travel Time	Score	Credit		Work Shed		Raw Material		Marketing		Technical Assistance				
					Facility	Score	Facility	Score	Facility	Score	Facility	Score	Facility	Score			

Quality Score = Sum Total of Quality Score

Sector: AGRICULTURE**Block: Khallikote****Gram Panchayat****a) Agro Service Centre****Problem Ranking Formula:** Households X (Travel Time Score + Quality Score) = Total Problem Score

Village	No of Farmer Households	Location	Travel Time Score		Quality Score				Households x (Travel Time Score + Quality Score)	Total Problem Score	Problem Priority Rank
			Travel Time	Score	Machinery & Equipments (on hire)		Repairing Service				
					Facility	Score	Facility	Score			

Quality Score = Sum Total of Quality Score

Sector: AGRICULTURE**Block: Khallikote****Gram Panchayat****b) Agricultural Input Centre****Problem Scoring Formula:** Households X (Travel Time Score + Quality Score) = Total Problem Score

Village	No of Farmer Households	Location	Travel Time Score		Quality Score		Households x (Travel Time Score + Quality Score)	Total Problem Score	Problem Priority Rank
			Travel Time	Score	Inputs (seeds, fertilizers, pesticides & implements)				
					Availability	Score			

Quality Score = Sum Total of Quality Score

Sector: AGRICULTURE

Block: Khallikote

Gram Panchayat:

c) Paddy Collection Centre

Problem Scoring Formula: Households X (Travel Time Score + Quality Score) = Total Problem Score

Village	No of Farmer Households	Location	Travel Time Score		Quality Score		Households x (Travel Time Score + Quality Score)	Total Problem Score	Problem Priority Rank
			Travel Time	Score	Storage Capacity				
					Required Capacity	Score			

Quality Score = Sum Total of Quality Score

Sector: AGRICULTURE

Block: Khallikote

Gram Panchayat

d) Agricultural Produce Market Centre (Krushak Bazar)

Problem Scoring Formula: Households X (Travel Time Score + Quality Score) = Total Problem Score

Village	No of Farmer Households	Location	Travel Time Score		Quality Score		Households x (Travel Time Score + Quality Score)	Total Problem Score	Problem Priority Rank
			Travel Time	Score	Facility Availability				
					Availability	Score			

Quality Score = Sum Total of Quality Score

Sector: AGRICULTURE

Block: Khallikote

Gram Panchayat

e) MFP Collection Centre (Forest Area)

Problem Scoring Formula: Households X (Travel Time Score + Quality Score) = Total Problem Score

Village	No of Households	Location	Travel Time Score		Quality Score		Households x (Travel Time Score + Quality Score)	Total Problem Score	Problem Priority Rank
			Travel Time	Score	Storage Capacity				
					Capacity	Score			

Quality Score = Sum Total of Quality Score

Sector: AGRICULTURE

Block: Khallikote

Gram Panchayat

f) Cold Storage

Problem Scoring Formula: Households X (Travel Time Score + Quality Score) = Total Problem Score

Village	No of Farmer Households	Location	Travel Time Score		Quality Score		Households x (Travel Time Score + Quality Score)	Total Problem Score	Problem Priority Rank
			Travel Time	Score	Storage Capacity				
					Capacity	Score			

Quality Score = Sum Total of Quality Score

Sector: AGRICULTURE

Block: Khallikote

Gram Panchayat

g) Milk Route (Milk Collection Centre)

Problem Ranking Formula: Households X (Travel Time Score + Quality Score) = Total Problem Score

Village	No of Households	Location	Travel Time Score		Quality Score		Households x (Travel Time Score + Quality Score)	Total Problem Score	Problem Priority Rank
			Travel Time	Score	Collection Facility				
					Frequency	Score			

Quality Score = Sum Total of Quality Score

Sector: AGRICULTURE

Block: Khallikote

Gram Panchayat

h) Live Stock Aid Centre (L.I. Centre)

Problem Scoring Formula: Households X (Travel Time Score + Quality Score) = Total Problem Score

Village	No of Households	Location	Travel Time Score		Quality Score				Households x (Travel Time Score + Quality Score)	Total Problem Score	Problem Priority Rank
			Travel Time	Score	L.I.		Cold Chain				
					Availability	Score	Facility	Score			

Quality Score = Sum Total of Quality Score

Sector: AGRICULTURE

Block: Khallikote

Gram Panchayat

i) Irrigation Potential

Problem Ranking Formula: Household X Quality Score = Total Problem Score

Village	No of Farmer Households	Quality				Households x Quality Score	Total Problem Score	Problem Priority Rank
		Area to be irrigated (Ayacut)		Benefiting Farmers				
		Area (in Acre)	Score	Percentage of Farmers (small / marginal)	Score			

Quality Score = Sum Total of Quality Score

Sector: ROAD NETWORK

Block: Khallikote

Gram Panchayat

a) Access Road to Motorable Road Point

Problem Scoring Formula: Households X (Travel Time Score + Quality Score) = Total Problem Score

Village	No of Households	Location	Travel Time Score		Quality Score		Household x (Travel Time Score + Quality Score)	Total Problem Score	Problem Priority Rank
			Travel Time	Score	Road Condition				
					Condition	Score			

Quality Score = Sum Total of Quality Score

b) Access Road to nearest Railway Station (where the Railway is main means of transport)

Problem Scoring Formula: Households X (Travel Time Score + Quality Score) = Total Problem Score

Village	No of Households	Location	Travel Time Score		Quality Score		Household x (Travel Time Score + Quality Score)	Total Problem Score	Problem Priority Rank
			Travel Time	Score	Road Condition				
					Condition	Score			

Quality Score = Sum Total of Quality Score

Sector: ROAD NETWORK**Block: Khallikote****Gram Panchayat****c) Access Road to GP Headquarter** (Separate from Access Road to Motorable Road Point)**Problem Scoring Formula:** Households X (Travel Time Score + Quality Score) = Total Problem Score

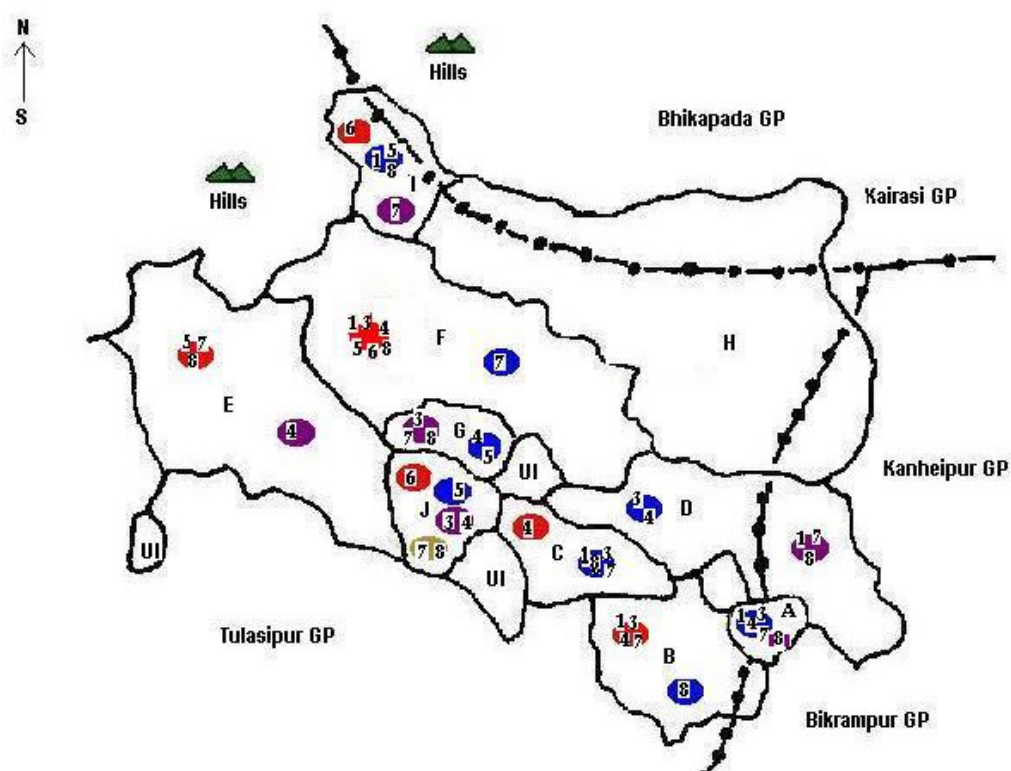
Village	No of Households	Location	Travel Time Score		Quality Score		Household x (Travel Time Score + Quality Score)	Total Problem Score	Problem Priority Rank
			Travel Time	Score	Road Condition				
					Condition	Score			

Quality Score = Sum Total of Quality Score

Annex 7: Step-2 Map Set: Problem Priority Maps (examples)

Badhinuapalli Gram Panchayat

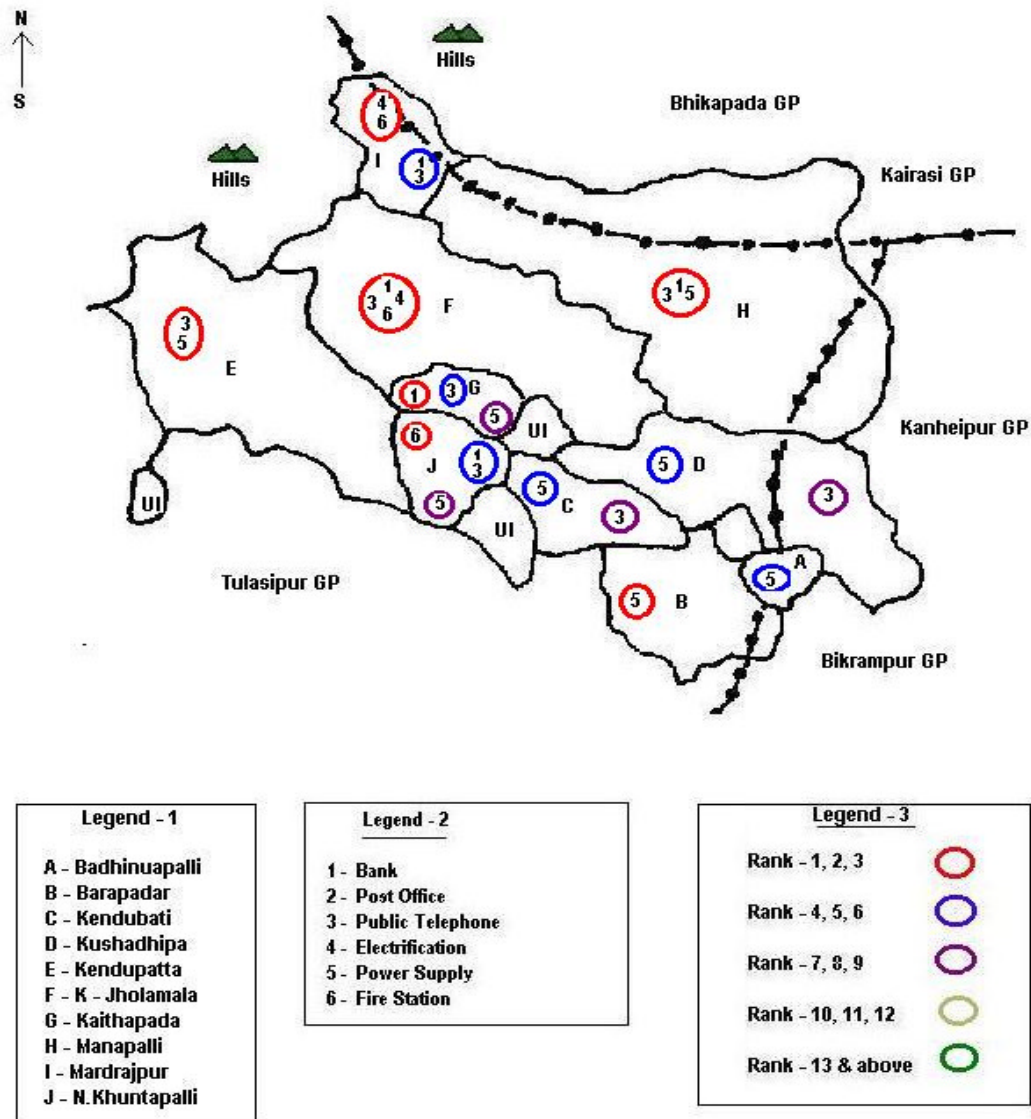
Problem Priority Map – Education



Legend - 1	Legend - 2	Legend - 3
A - Badhinuapalli	1 - Primary School	Rank - 1, 2, 3
B - Barapadar	2 - UGME School	Rank - 4, 5, 6
C - Kendubati	3 - ME School	Rank - 7, 8, 9
D - Kushadhipa	4 - High School	Rank - 10, 11, 12
E - Kendupatta	5 - +2 College	Rank - 13 & above
F - K - Jholamala	6 - +3 College	
G - Kaithapada	7 - Vocational Training Centre (ITI)	
H - Manapalli	8 - Public Library	
I - Mardrajpur		
J - N. Khuntapalli		

Badhinuapalli Gram Panchayat

Problem Priority Map – Utility



Annex 8: Step-3 Worksheets (1-8)

Integrated Rural Accessibility Planning

Worksheet - 1

Village level Project Idea (Pallisabha)

Village: Gram Panchayat: Block: District:

Sl	Problem Sector	Project Idea	Projects Identified	Location	Priority
1					
2					
3					
4					

Worksheet - 2

Gram Panchayat level Consolidate list of Projects

Gram Panchayat: Block: Khallikote District: Ganjam

Sl	Sector	Details of Projects after Screening and Merging	Location	Benefiting Village/s	Benefiting Households

Worksheet - 3

Gram Panchayat level List of Approved Projects (Gram Sabha)

Gram Panchayat: Block: Khallikote District: Ganjam

Sl	Sector	Details of Approved Projects	Location	Benefiting Villages	Benefiting Households	Funding Source (to be filled in GP)	
						GP / Block	Concerned Dept.

Worksheet - 4**Project Formulation Format (to be implemented by Gram Panchayat only)**

Gram Panchayat:

Block: Khallikote

District: Ganjam

Project Details

Project Description	
Location	
Estimated Cost	
Benefiting Villages & Households	

Time Frame

Programme	Year 2005-06	Year 2006-07	Year 2007-08	Year 2008-09	Year 2009-10
Design					
Fund Mobilization					
Implementation					

Funding Source:

--

Estimated Cost and Specification / Design:

--

Worksheet - 5**Prioritization of Projects (to be implemented by Gram Panchayat)**

Gram Panchayat:

Block: Khallikote

District: Ganjam

Sl.	Sector	Approved Project	Location	Benefiting Households	Estimated Cost	Effect (Estimated Cost / Benefiting Households)	Rank

Worksheet - 6**Project Implementation Schedule (Gram Panchayat)**

Gram Panchayat:

Block: Khallikote

District: Ganjam

SI	Project Description	Priority Rank	Location	Estimated Cost	Implementing Years / Annual Expenditure				
					Year-1 2005 - 2006	Year-2 2006 - 2007	Year-3 2007 - 2008	Year-4 2008 - 2009	Year-5 2009 - 2010

Worksheet - 7**Maintenance Plan (Existing and new Assets)**

Gram Panchayat:

Block: Khallikote

District: Ganjam

SI	Asset Description (Existing / New)	Location	Estimated Cost (Maintenance)				
			Year:2005-2006	Year:2006-2007	Year:2007-2008	Year:2008-2009	Year:2009-2010
			Yearly/Periodic/ Regular	Yearly/Periodic/ Regular	Yearly/Periodic/ Regular	Yearly/Periodic/ Regular	Yearly/Periodic/ Regular

Worksheet - 8**Projects requiring more Techno-Economic Study (Projects to be implemented by Gram Panchayat)**

Gram Panchayat:

Block: Khallikote

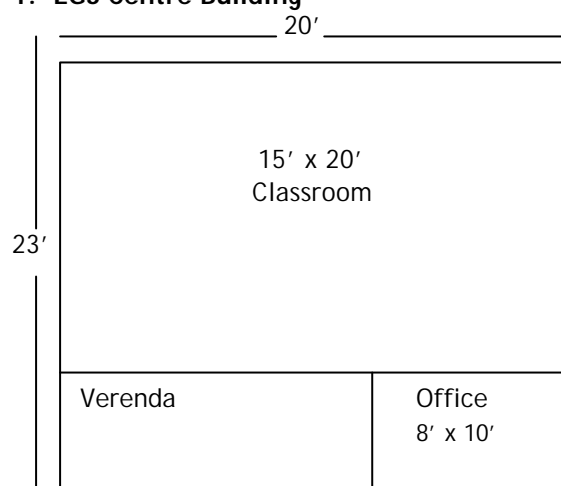
District: Ganjam

Sl.	Project Description	Estimated Cost	Type of Study Required	Concerned Agency

Annex 9: Sample designs and estimates

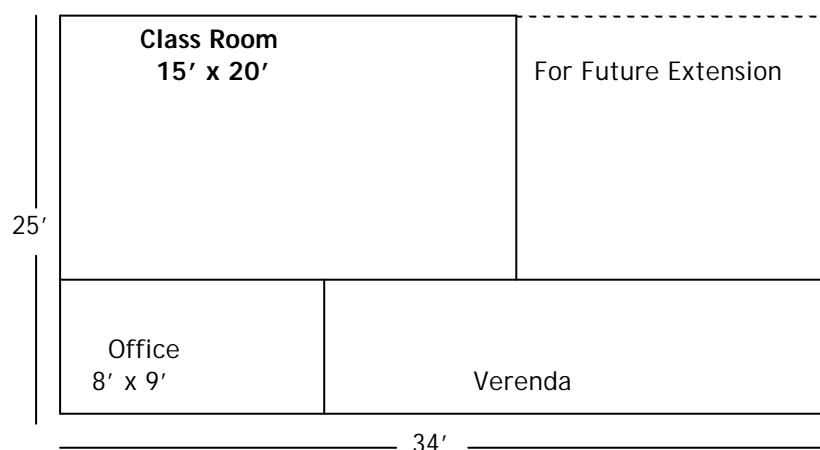
Standard Design

1. EGS Centre Building



Built Area: 23' x 20' = 460 Sft.

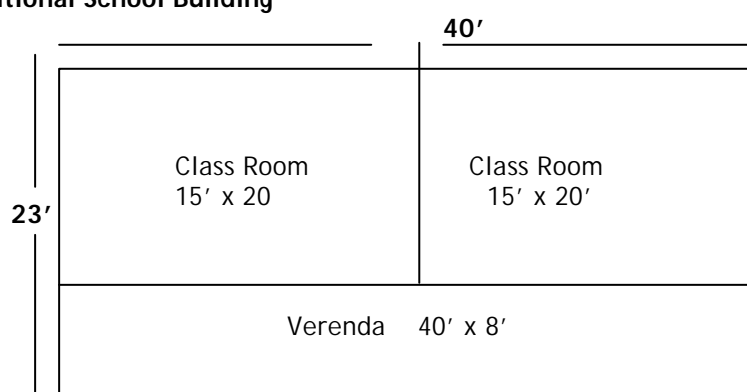
2. Primary School Building



Built Area

Ground Floor	=	572 Sq. ft.
First Floor	=	572 Sq. ft.
Total	=	1144 Sq. ft.

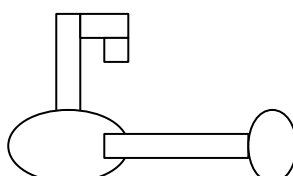
3. Additional School Building



Built Area: 920 Sq. ft.

4. Tube Well

**Total Depth = 60 mtr.
Soak Pit & Platform**



5. Health Sub Centre

10'	15'	8'	10'
Front Compound	14' Bed Room	10' Latrine	Back Compound Wall
	15' Office Room	8'	
10'	12' 10' Labour Room	16' Drawing Room	
16'		11' 10' Laboratory Room	

Bed Room	- 15' x 14'	= 210 Sq. ft.
Toilet	- 10' x 8'	= 80 Sq. ft.
Office Room	- 15' x 12'	= 180 Sq. ft.
Drawing Room	- 16' x 8'	= 128 Sq. ft.
Labour Room	- 12' x 10'	= 120 Sq. ft.
Laboratory Room	- 11' x 10'	= 110 Sq. ft.
Veranda	- 16' x 10'	= 160 Sq. ft.
Total		= 988 Sq. ft.

Suggested Estimate for different Items**Tips for Project Cost Estimation**

- Standard designs and estimate for road construction, installation of tube well, piped water supply, construction of school building and health sub-centre building.
- For estimating road maintenance project attached maintenance plan to be referred.

Education**(1) Primary School**

- New building (OBB): 1144 sft 3,50,000
- Additional classroom (one room with verandah) 15' x 20' 1,25,000

Health

- (1) Health Sub-Centre (1 - rest room, 1 - Office room, 1 - labour room, 1 - Laboratory, Toilet & Verandah) 1000 sft 3,00,000
- (2) Ayurvedic / Homoeopathic service centre (2 rooms with verandah) : 600sft 2,00,000
- (3) Tube Well (with platform and soak pit) 45,000
- (4) Village Drain (per running feet) 100
- (5) LI Centre (2 rooms with verandah) 600sft 3,00,000

Other Facilities

- (1) Community Centre / Public Library building (15' x 20' hall with verandah and a small room at verandah) 1,50,000
- (2) Market Complex (per room) 40,000
- (3) Passenger Rest Shed 1,00,000
- (4) Small Jetty (1,00,000 - 2,00,000)

Agriculture

- (a) Excavation of new pond As per work
- (b) Renovation of existing village pond
- (c) Pipe water supply

Road

(1) Earthen Road (compacted)	1,00,000 per km
(2) Morrum level (15cm thick with compacted)	1,00,000 per km
(3) Metal Road (Gr-1) 10cm thick	1,25,000 per km
(4) Metal Road (Gr-2) 7.5cm thick	1,25,000 per km
(5) Black Top	2,00,000 per km
(6) Cement Concrete Road (12' x 100') Rs. 35,000	

Culvert

(a) Dry Causeway	20,000 (per 6mtr)
(b) Hume Pipe	25,000 (for 3ft width)
(c) Box type	30,000 (per 3ft width)

A. Broad Estimate for Installation of tube well**(a) Specifications:**

1. Total depth of tube well (125mm x 100mm dia)	- 60.00 meter
2. Minimum curing (PVC 125mm) as per Condition	- 30.00 meter
3. Cleaning & developing	- 1no
4. Construction of Soakpit	- 1number
5. Construction of platform	- 1number
6. Hand pump	- 1set
7. Riser pipe	- 80 feet

(b) Standard Estimate

1. Minimum depth of Tube Well (60.00 m)	- Rs. 16,000
2. Casing PVC/GI 125mm dia pipe (30.00m) (provided as per site condition)	- Rs. 14,515
3. Cleaning and developing (1hour)	- Rs. 200
4. IM-III H.P. with CI cylinder & 8nos. BSC Rod (1 set)	- Rs. 4,755
5. 65mm dia GI riser pipe (8pc @ 660)	- Rs. 4,880
6. Construction of soakpit (1no)	- Rs. 2,500
7. Construction of platform	- Rs. 2,150

Total	Rs. 45,000
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B. Broad Estimate for Piped Water Supply (100 metres)

1. For source - sinking of larger dia production well 200 mm (8") dia x minimum depth 100m with 200mm dia PVC casing/slotted pipe	- Rs. 1,20,000
2. Construction of 3.0m x 3.0m pump chamber (1no)	- Rs. 40,000
3. Procurement of 110mm dia rising main pipe (PVC) Including excavation of pipe line trench joining, refilling etc. for 100mtr length @Rs. 188.70/mtr	- Rs. 18,870
4. Cost of fittings and fitting charge (10% of item)	- Rs. 1,877
5. Construction of SV/NRV/AV chamber (3nos. @ 3000 each)	- Rs. 9,000
6. Construction of stand post for public (2nos. @ 2000 each)	- Rs. 4,000
7. Cost of SV,NRV,AV (3nos @ 2000 each)	- Rs. 6,000
8. Providing piping arrangements to pump & motor - LS	- Rs. 20,000
9. Ext. Electrification - LS (3plage with substation)	- Rs. 1,00,000
10. Internal electrification to P/C - LS	- Rs. 15,000
11. Cost of pump & motor	- Rs. 20,000

Total:	Rs. 3,54,757
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C. Broad Estimate for School Building**Ground Floor**

Plinth Area:	Ground floor	(15 x 20)	-	300 sft.
		(34 x 8)	-	272 sft.
				572 sft.
	First Floor	(15 x 20)	-	300 sft.
		(34 x 8)	-	272 sft.
				572 sft.

Total (572 + 572) = 1144sft.

1. Foundation	-	Rs. 57,200
2. Super structure	-	Rs. 85,800
3. RCC Slab	-	Rs. 42,900
4. Finishing	-	Rs. 1,00,100

Sub-total Rs. 2,86,000

5. Electric & PH	-	Rs. 42,000
6. Tube Well	-	Rs. 43,000

Total Rs. 3,71,000

D. Broad Estimate for Health Sub-Centre Building**Building Area**

1. Bed Room (14'.0 x 15'.0)	-	210 sft.
2. Latrine (10'.0 x 8'.0)	-	80 sft.
3. Labour Room (3x10'.0 x 12'.0)	-	360 sft.
4. Office (12'.0 x 15'.0)	-	180 sft.
5. Dressing (12'.0 x 10'.0)	-	120 sft.
6. Verenda (20'.0 x 10'.0)	-	200 sft.

Total: 1150 sft.

Building Cost @500/sft. x 1150sft.	-	Rs. 5,75,000
Electricity 10%	-	Rs. 57,500
PH (water supply)10%	-	Rs. 57,500
Sanitary work 10%	-	Rs. 57,500
Compound wall 300sft. x @100/sft.	-	Rs. 30,000

Total Rs. 7,77,500

Foundation 20%	-	Rs. 1,15,000
Super structure 30%	-	Rs. 1,72,500
Slab 15%	-	Rs. 86,250
Finishing 35%	-	Rs. 2,01,425
Electricity	-	Rs. 57,500
Water supply (PH)	-	Rs. 57,500
Sanitation	-	Rs. 57,500
Compound wall	-	Rs. 30,000

Total Rs. 7,77,500
Rounded up Rs. 7,80,000

Bed Room (15'.0 x 14'.0)	-	210sft.
Toilet (10'.0 x 8'.0)	-	80sft.
Office Room (15'.0 x 12'.0)	-	180sft.
Drawing Room (16'.0 x 8'.0)	-	128sft.
Labour Room (12'.0 x 10'.0)	-	120sft.
Laboratory Room (11'.0 x 10'.0)	-	110sft.
Verenda (16'.0 x 10'.0)	-	160sft.
Total		988sft.

Annex 10:

Rural Infrastructure Maintenance Plan - Orissa

Maintenance of Rural Roads

A. Earthen Road (village roads)

Major damage factors

- ✓ Iron-tired vehicles such as cart
- ✓ Trespassing of cattle in the morning and evening hours
- ✓ Rainfalls & floods
- ✓ Inadequate drainage

Common type of defects

- ✓ Loss of profile
- ✓ Corrugation
- ✓ Rut formation
- ✓ Ditches and potholes
- ✓ Rain cuts
- ✓ Erosion

Annual Routine maintenance (every year after rainy season)

Item	Percentage of cost
Initial cost (100%)	(Say) Rs. 1,00,000 per Km.
Cost of maintenance (5%)	(Say) Rs. 5,000 per km

Details of Cost

Repair of profile loss, ditches, potholes, corrugation and rut formation (40%)	Rs. 2,000
Strengthening surface with Moorum and Sand (20%)	Rs. 1,000
Construction of side drains and cause ways and Cross Drainage (CD) works against erosion etc (40%)	Rs. 2,000
Total	Rs. 5,000

Periodical Maintenance after every 5th year (10% of the cost) Say Rs. 10,000

(Special repair is the same as the routine maintenance work)

B. Morrum Road (Gravel)

Major damage factors

- ✓ Use of iron wheel carts, fast moving pneumatic tyre traffic
- ✓ Corrugation and tyre with depression
- ✓ Sub-surface drainage of rain water
- ✓ Soil type
- ✓ Flow of rain water on the road surface
- ✓ Inadequate CD works

Common defects

- ✓ Loss of profile
- ✓ Rut formation, corrugation and potholes
- ✓ Loss of materials
- ✓ Gully formation and erosion

Annual Routine maintenance (every year after rainy season)

Item	Percentage of cost
Initial cost (100%)	(Say) Rs. 2,00,000 per Km.
Cost of maintenance (5%)	(Say) Rs. 10,000 per km.

Details of Cost

Loss of profile including repair of rut formation, corrugation, potholes and recambering (40%)	Rs. 4,000
Loss of materials (20%)	Rs. 2,000
Construction of CD works such as culverts and side drains (40%)	Rs. 4,000
Total	Rs. 10,000

Periodical Maintenance (after each 5th year) 10% (say) Rs. 20,000/-

Construction of CD works (50%)	Rs. 10,000
Repair of loss of profile, potholes and surface dressing with Moorum and recambering (50%)	Rs. 10,000
Total	Rs. 20,000

**C. Water Bound Macadam Road (WBM)
(Gr-I Metalling road)****Major damage factors**

- ✓ Various stresses due to grinding action of solid-iron wheeled carts
- ✓ Abrasion and pumping action due to fast moving pneumatic tyre traffic
- ✓ Nature of filler material used for WBM surface
- ✓ Sub-surface drainage of rain water
- ✓ Type of soil
- ✓ Flow of rain water on the road surface
- ✓ Inadequate CD works

Common defects

- ✓ Loss of profiles at the shoulders
- ✓ Potholes, corrugation and raveling etc.
- ✓ Insufficient drainage of rain water
- ✓ Loss of materials

Annual Routine maintenance (every year after rainy season)

Item	Percentage of cost
Initial cost (100%)	(Say) Rs. 3,25,000 per Km.
Cost of maintenance (5%)	(Say) Rs. 16,250 (limited to 16,000) per Km.

Details of Cost

Repair of loss of profile including recambering and resurfacing with Moorum (10%)	Rs. 1,600
Repair of potholes, corrugation and raveling etc (30%)	Rs. 3,800
Insufficient drainage (CD work) 40%	Rs. 6,400
Loss of materials (20%)	Rs. 3,200
Total	Rs. 16,000

Periodical Maintenance (renewal coat every 5th year) 10% (say) Rs. 32,500/-

(Process of periodical maintenance is same as that of the construction of new WBM road)

D. Black Topped Road**Major damage factors**

- ✓ Use of iron-wheeled carts and fast moving of pneumatic tyre traffic
- ✓ Soil type
- ✓ Surface drainage of rain water
- ✓ Flow of rain water on the road surface
- ✓ Inadequate CD works

Common defaults

- ✓ Potholes
- ✓ Deformation
- ✓ Cracking
- ✓ Edge damage
- ✓ Raveling and breeding

Annual Routine maintenance (every year after rainy season)

Item	Percentage of cost
Initial cost (100%)	(Say) Rs. 7,00,000 per Km.
Cost of maintenance (2.5%)	(Say) Rs. 17,500 per Km.

Details of Cost

Repair of potholes (30%)	Rs. 5,250
Repair of deformation (40%)	Rs. 7,000
Repair of cracking (10%)	Rs. 1,750
Repair of edge drainage (10)	Rs. 1,750
Repair of raveling and breeding (10%)	Rs. 1,750
Total	Rs. 17,500

Periodical Maintenance

- ✓ Seal Coat every 5th year (10%) Rs. 70,000/- per km
- ✓ Renewal Coat (every 10th year 30%) Rs. 2,10,000/- per km
(Process of renewal coat is the same as that of the new BT road)

E. Cement Concrete Road**Major damage factors**

- ✓ Use of iron-wheeled bullock carts
- ✓ Sub-surface of drainage of rain water
- ✓ Flow of rain water on the road surface
- ✓ Inadequate CD works

Common defects

- ✓ Settlement
- ✓ Cracking
- ✓ Edging

Annual Routine maintenance (every year after rainy season)

Item	Percentage of cost
Initial cost (100%)	(Say) Rs. 10,00,000 per Km.
Cost of maintenance (1%)	(Say) Rs. 10,000 per Km.

Details of Cost

Repair of Settlement (40%)	Rs. 4,000
Repair of Cracking (20%)	Rs. 2,000
Repair of Edging (10%)	Rs. 1,000
Repair of Side Drain and CD works (30%)	Rs. 3,000
Total	Rs. 10,000

Periodical Maintenance (after 10th year) 10% Rs. 1,00,000**Maintenance of Rural Building****Common defects**

- ✓ Annual white and colour washing
- ✓ Door and windows painting

Annual Routine maintenance

Item	Percentage of cost
Initial cost (100%)	(Say) Rs. 1,00,000 (Plinth Area 400 Sq. ft or say 37.2 Sqm.)
Cost of maintenance (2%)	(Say) Rs. 2,000

Details of Cost

White and colour washing over plastering surface (40%)	Rs. 800
Painting to doors and windows (40%)	Rs. 800
Maintenance of electrical and sanitary fittings (20%)	Rs. 400
Total	Rs. 2,000

Periodical Maintenance (after 10th year) 10% Rs. 10,000

White washing and colour washing over plastering surface (10%)	Rs. 1,000
Painting to doors and windows (10%)	Rs. 1,000
Replastering of the damage surface, repair of Chajjas and lintels, roofs, roof plastering against erosion (30%)	Rs. 3,000
Repair of grading over the rain force cement concrete (RCC) against leakage (20%)	Rs. 2,000
Special repair to electrical and sanitary fittings (30%)	Rs. 3,000
Total	Rs. 10,000

Maintenance of Micro-Irrigation Project**A. Minor, Sub-Minor, Field Channels and Water Courses**

Annual maintenance cost = Rs. 200/- per hectare (area irrigated)

Common items of maintenance -

- ✓ Desilting
- ✓ Repair of structures such as falls, siphons, CD works, grade walls and outlets etc.

Component of expenditure

Labour cost (40%)	Rs. 120
Material cost	Rs. 80
Total	Rs. 200

B. Canals and Embankments

Annual Maintenance cost = Rs. 300/- per hectare (area irrigated)

Common maintenance -

- ✓ Strengthening of embankments
- ✓ Desilting of canals
- ✓ Repair of structures

Components of expenditure

Labour cost (60%)	Rs. 180
Material cost (40%)	Rs. 120
Total	Rs. 300

Suggested Maintenance Estimate

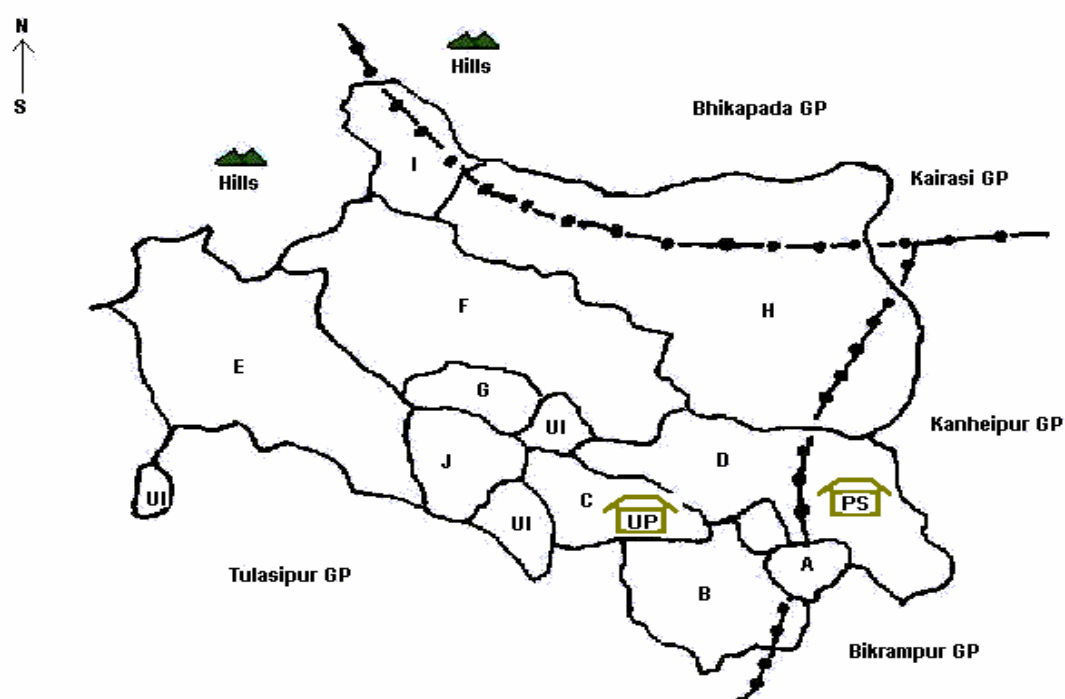
1. Road	Rs. (Per km)
(a) Earthen Road	
• Annual maintenance (after rainy season) 5%	5,000
• Periodical maintenance (every 5 years) 10%	10,000
(b) Morrum Road	
• Annual maintenance (after rainy season) 5%	5,000
• Periodical maintenance (every 5 years) 10%	20,000
(c) Metal Road	
• Annual maintenance (after rainy season) 5%	16,000
• Periodical maintenance (every 5 years) 10%	32,500
(d) Black Top Road	
• Annual maintenance (after rainy season) 2.5%	17,500
• Seal Coating (every 5 years) 10%	70,000
• New coating (every 10 years) 30%	2,10,000
(e) Cement Concrete Road	
• Annual maintenance (after rainy season) 1%	10,000
• Periodical maintenance (every 10 years) 10%	1,00,000
2. Building	
• Annual maintenance (400 sft) 2%	2,000
• Periodical maintenance (400 sft) 10%	10,000

Annex 11: Sample Intervention Maps

Block - Khallikote, District - Ganjam

Gram Panchayat - Badhinuapalli

Project Intervention Map - Education



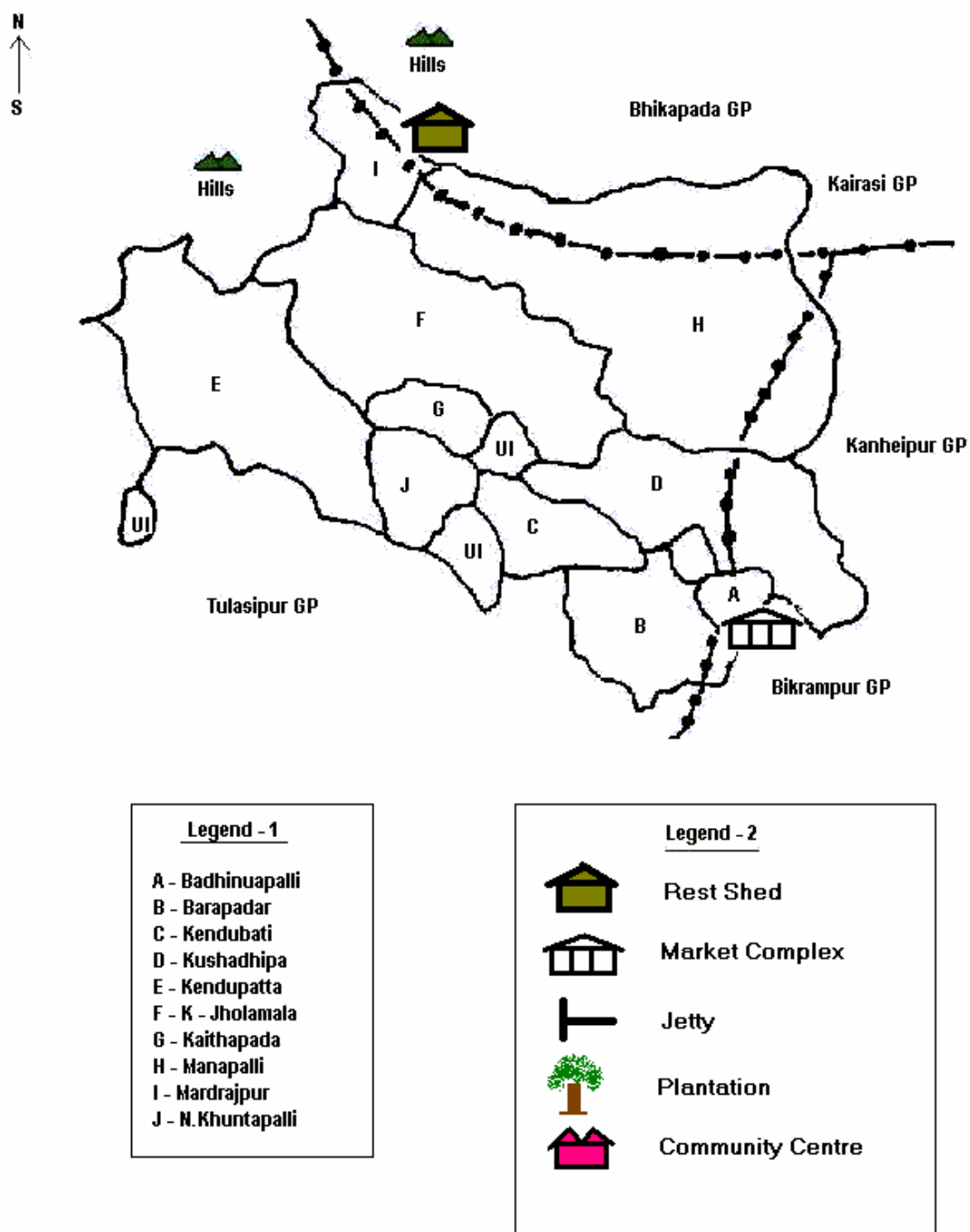
Legend - 1	
A -	Badhinuapalli
B -	Barapadar
C -	Kendubati
D -	Kushadhipa
E -	Kendupatta
F -	K - Jholamala
G -	Kaithapada
H -	Manapalli
I -	Mardrajpur
J -	N. Khuntapalli

Legend - 2	
	Additional classroom for Primary School
	Additional Classroom for UP School
	Additional Classroom for ME School
	Anganwadi centre
	Primary School (1-5)
	UP School (1-7)
	ME School (6 & 7)
	Public Library
	PS Boundary wall for Primary School
	UP Boundary School for UP School
	ME Boundary wall for ME School

Block - Khallikote, District - Ganjam

Gram Panchayat - Badhinuapalli

Project Intervention Map - Other Facilities



International Labour Organization
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