## **Odisha Tribal Empowerment** and Livelihoods Programme ST & SC Development Department

Government of Odisha



**Empowering Grassroots Democracy** Annual Progress Report 2013-14



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## Preface

Odisha is known for its sizeable concentration of tribal population i.e. 22.85 percent. The scheduled tribe and scheduled caste population in Odisha constitute 39.98 percent of the State's population, which is much higher than the country's average of 23.5 percent. With this backdrop, the Govt. of Odisha took an historical step in implementing focused tribal empowerment programme i.e. Odisha Tribal Empowerment & Livelihoods Programme (OTELP) from 2004-05 covering 30 most backward blocks in seven South-Western districts in phased manner.

The programme serves for 56180 Households in 358 MWSs of 1042 villages. The selection of micro watersheds have been made by reviewing critical parameters like concentration of tribal population, predominance of poverty, extensive degradation of natural resources like land and forest etc. The programme adopts treatment of micro watershed through various soils, water and forest conservation methods and improving the productivity from these natural resources in 7 years of programme cycle. This programme is managed, owned and controlled by the people through community institutions at different levels.

At this juncture, I am glad to publish 10<sup>th</sup> year's progress report for the year 2013-14. The programme has been trying to enable & empower the tribal community to take up different livelihood activities with existing indigenous skills and knowledge. A set of professionals are attached at different levels to provide the technical inputs and incorporate scientific methods with their traditional knowledge to make the programme more successful & sustainable one. The core focus of the programme remains unchanged from the inception.

The success of the programme provides a greater sense of satisfaction as it is appreciated in different fora of the State as well as in Centre. Basing upon the degree of success of the programme, the Govt. of Odisha has been pleased to approve the proposals of 9 districts with an estimated budget of ₹ 59997.63 lakhs in new additional 585 MWS as OTELP Plus.

I express my heartiest gratitude to team members, different stakeholders, FNGO & RNGO partners, and most importantly to the community members who extended all kinds of support to bring the smiles in their face. Though operating this programme in the most remote areas is challenging still the OTELP has accepted it and tried to convert it into opportunities and build upon the same to bring sustainable development.



Srikanta Prusty, IAS Programme Director

## Chapter 1

#### 1.1 Introduction

The Odisha Tribal Empowerment and Livelihoods Programme (OTELP) is being implemented by the Scheduled Tribe & Scheduled Caste Development Department of Govt. of Odisha with financial aid from the DFID, IFAD and the WFP. The programme aims "to ensure that livelihoods and food security of poor tribal household are sustainably improved through promoting a more efficient, equitable, self managed institution and sustainable exploitation of the Natural Resources at their disposal and through off farm/non-farm enterprise development".

There are certain objectives framed to attain the Programme goal. The key objectives are to;

- > Build the capacity of marginalized groups as individual and grass root institution.
- Enhance the access of poor tribal people to land, water and forest and increase the productivity of these resources in environmentally sustainable and socially equitable ways;
- Encourage and facilitate off-farm enterprise development focused on the needs of poor tribal households;
- Monitor the basic food entitlements of tribal households and ensure their access to public food supplies;



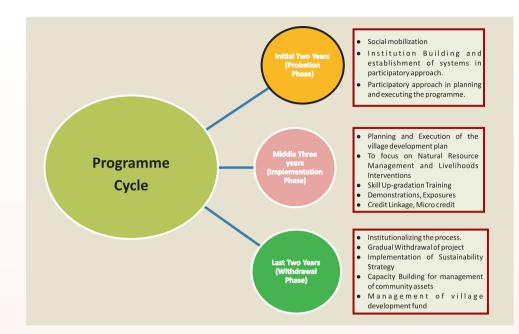
- Strengthen the institutional capacity of government agencies, Panchayati Raj Institutions, NGOs and civil society to work effectively on a participatory mode for poverty reduction with tribal communities;
- Encourage the development of a pro-tribal enabling environment through ensuring that legislation governing control of and access to, development resources by poor tribal households is implemented effectively and recommending other policy improvements;
- Build on the indigenous knowledge and values of tribal and blend these with technological innovations to ensure a speedier pace of development

The programme is being implemented in 3 phases. The Phase I of the programme was completed in 2007. The implementation of Phase II was started from 2008 based on the recommendations of the Phase I Mid Term Review Mission conducted during September, 2006. For both the phases, Hon'ble Chief Minister of Odisha Sj. Naveen Pattnaik lunched the programme on 2<sup>nd</sup> October 2004 and 27<sup>th</sup> March 2007 respectively. Phase II Mid Term Review Mission fielded by IFAD during October 2010 and recommended to move up to the Phase III of implementation from April 2011 till end of the programme (March 2013). Currently the programme is in Phase III of implementation. Subsequently, basing upon the introduction of the programme lately in Phase II districts, the programme was further extended to 31<sup>st</sup> March, 2014. The programme is now under active consideration for extension till December, 2016 keeping in view of the additional top up assistance by IFAD.

| Phase     | Duration    | Closing Date |
|-----------|-------------|--------------|
| Phase I   | Three Years | March, 2007  |
| Phase II  | Four Years  | March, 2011  |
| Phase III | Two Years   | March 2013   |

The programme adopts strategic participatory approach among all stakeholders. Communities are considered as the primary stakeholders who are facilitated by the FNGOs followed by technical backstopping from ITDA & PSU. The programme basically aims upon GO & NGO partnership mode for adding synergetic effect in order to work jointly for enhancing the capacity of the communities to take up sustainable livelihood activities.

The programme adopts an integrated micro watershed management approach covering a cluster of 10 to 12 micro watersheds situated contiguously with an approximate area of 500 ha per micro watershed. The selection of the micro watersheds is made basing upon the boundary of one set of 10-12 micro watersheds which is coterminous with the Gram Panchayat. The programme has adopted a seven year project cycle management which is further divided into three distinct phases. The initial two years are called probation phase, the real implementation phase comes next for a period of three years and the last two years of the programme is known as consolidation phase/ withdrawal/exit phase.



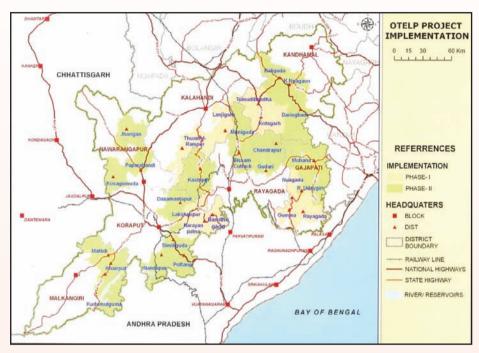
The programme aims to enhance the natural resources based livelihood activities of the poor tribal community with the available skill. The work participation of the tribes in the programme areas include wage labour, agriculture, sale of NTFPs, migration etc. and the intensity of the above activities are different basing upon the family economic status. The programme constantly endeavors to enhance all kinds of livelihood creating wage employment. This boosts them in earning direct cash and part of the cash paid through food grains. This helps in providing food security to the tribes round the year. The programme thrusts upon the development of livelihoods of the poor tribal people based on their natural resource and skill. The livelihood profile of the poor communities in the programme areas covers different activities; like wage employment, Agriculture, Sale of Forest Produces, Migration etc. and the intensity of dependence on the above are different based on the family economic status. However the programme constantly tries to improve each section of the livelihood option of the poor by creating maximum opportunities for wage employment for the poor people, where the people get direct cash and grain income from the wage employment and vis-à-vis created community assets for conservation and development of Natural Resources. The food security, which used to be for about 4 to 6 months per year, has improved due to direct intervention in creating wage employment opportunities and providing food in shape of grains as part of the wage, which directly impacts the food availability at the household level. Besides, efforts have been made for improving the production system at the village level in promoting sustainable agriculture, trying out innovations in Aquaculture, and improving the quality of life through community infrastructure and development initiatives.

#### **1.2 Programme Area and Communities**

The programme is being implemented in 30 backward blocks of seven districts of south west Odisha namely Koraput, Kalahandi, Gajapati, Kandhamal, Malkanagiri, Nawrangpur



and Rayagada. This implementation programme has been made in a phased manner. 10 blocks in 4 districts have been taken up in Phase I, covering 19481 households in 390 villages in Koraput, Kalahandi, Gajapati and Kandhamal districts. From January 2008, Phase II operations have started in additional 9 blocks of the above districts along with additional micro watershed in the Phase I blocks of Kalahandi district. Implementation in Phase I villages are completed and villages under Phase II are now under implementation.



Map of South-West Odisha with programme locations

The total coverage in Phase-II areas of above districts are 9 Blocks covering 15129 Households living in 328 villages. The Phase-II operation in new districts namely Nawrangpur, Malkanagiri and Rayagada started from January 2009 in 11 Blocks covering 21570 Households in 324 villages. The details of the area targeted under the programme are as follows:

| District    | ITDA           | MWS | Village | Area taken up (in Ha.) |
|-------------|----------------|-----|---------|------------------------|
| Koraput     | Koraput        | 70  | 231     | 35482.47               |
| Gajapati    | Paralakhemundi | 60  | 163     | 31939.24               |
| Kandhamal   | Baliguda       | 59  | 174     | 25902.25               |
| Kalahandi   | Th. Rampur     | 59  | 158     | 25800.00               |
| Nawrangpur  | Nawrangpur     | 30  | 55      | 15420.64               |
| Malkanagiri | Malkanagiri    | 30  | 85      | 15804.00               |
| Rayagada    | Gunupur        | 50  | 176     | 25019.68               |
|             | TOTAL          | 358 | 1042    | 175368.31              |

Source: MIS 2013-14



#### **1.3 Demographic Profile**

The programme targets 255661 people out of which half of the populations are women. 75% of these populations are schedule tribe. The major tribes included under the programme are Soura, Lanjia Soura, Kondha, Kutia Kondha, Paraja, Bonda, Bhumija and Koya. Out of the above tribal Lanjia Soura, Kutia Kondha and Bonda are the particularly vulnerable tribal groups (PVTG). Besides, tribal population, the programme also targets 15% of scheduled caste population and 11% of other backward class (OBC) population living in the programme areas.

| District    | Total<br>Male | Total<br>Female | ST<br>Male<br>(%) | ST<br>Female<br>(%) | SC<br>Male<br>(%) | SC<br>Female<br>(%) | Others<br>Male<br>(%) | Others<br>Female<br>(%) |
|-------------|---------------|-----------------|-------------------|---------------------|-------------------|---------------------|-----------------------|-------------------------|
| Koraput     | 28826         | 29296           | 72                | 71                  | 10                | 9                   | 18                    | 20                      |
| Gajapati    | 18333         | 18542           | 99                | 99                  | 1                 | 1                   | 0                     | 0                       |
| Kandhamal   | 16428         | 16486           | 64                | 65                  | 28                | 27                  | 8                     | 7                       |
| Kalahandi   | 13864         | 14216           | 74                | 77                  | 21                | 19                  | 5                     | 4                       |
| Nawrangpur  | 22372         | 22287           | 63                | 62                  | 11                | 11                  | 25                    | 27                      |
| Malkanagiri | 9123          | 8788            | 84                | 84                  | 6                 | 6                   | 10                    | 10                      |
| Rayagada    | 19033         | 18067           | 71                | 73                  | 29                | 27                  | 0                     | 0                       |
| Total       | 127979        | 127682          | 74                | 75                  | 15                | 14                  | 11                    | 11                      |

Source: MIS 2013-14

The regions covered under our programmes are poverty stricken and backwardness. It is characterized based upon land holding and access to various assets. However 68% of targeted families fall in BPL category as per the govt. records but in reality all families lies in the same line. The table also speaks about 24 % of households do not have land. To provide them sustainable livelihood option is the big challenge before programme. Incidence of poverty is very acute in the programme locations. Tribal economics are based on the agriculture and forests. For agriculture land is the most essential asset for production. In the programme area more than 80% of the families have less than one standard hector land holding. Nevertheless, 21% of targeted family's situation is even worst as they do not posses any land. Livelihoods improvements of these families are key challenges before the programme.

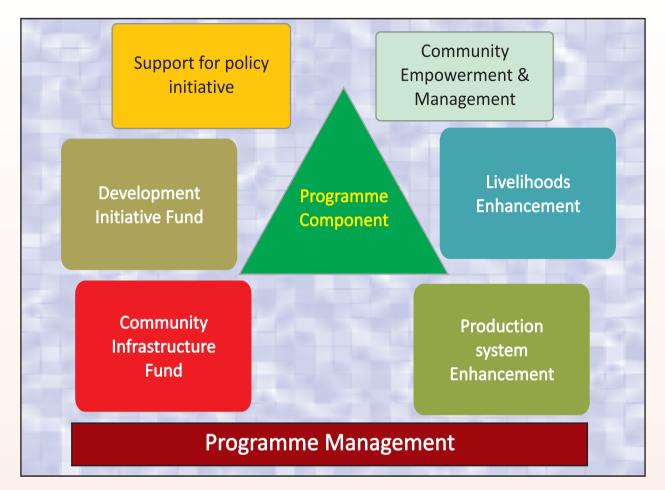
The following table depicts the district wise targeted beneficiaries under OTELP & OTELP Plus.

| Particulars                 |  | OTELP  |   | OTELP Coverage   | OTELP Plus  |  |
|-----------------------------|--|--|---|--|---|--|
|                             | Phase I  | Phase  | e II                                    | Phase -I +   | (2011-2018)   |  |
|                             | (2004-2007)                                      | (2008-   | 2013)                                   | Phase-II   |   |  |
| Districts                   | Koraput,<br>Gajapati,<br>Kalahandi,<br>Kandhamal | Koraput,<br>Gajapati,<br>Kalahandi,<br>Kandhamal | Nawrangpur,<br>Malkanagiri,<br>Rayagada | Koraput,<br>Gajapati,<br>Kalahandi,<br>Kandhamal,<br>Nawrangpur,<br>Malkanagiri,<br>Rayagada | Koraput,<br>Malkanagiri,<br>Gajapati,<br>Nawarangpur,<br>Kalahandi,<br>Kandhamal,<br>Rayagada<br>Keonjhar and<br>Mayurbhanj |  |
| Blocks                      | 10   | 9  | 11                                      | 30   | 32  |  |
| No of Micro-<br>Watershed   | 135  | 113  | 110                                     | 358  | 585   |  |
| No of Villages              | 390  | 346  | 306                                     | 1042   | 1566  |  |
| Treatable area<br>(in ha)   | 63219.43   | 55904.53   | 56244.32                                | 175368.28  | 310157.73   |  |
| TotalHouseholds<br>(HH)     | 19481  | 15129  | 21570                                   | 56180  | 82353   |  |
| ST Households               | 16301  | 10438  | 15462                                   | 42201  | 65076   |  |
| SC Households               | 2360   | 2276   | 3433                                    | 8069   | 10313   |  |
| BPL Households              | 16277  | 10314  | 12883                                   | 39474  | 36446   |  |
| Landless<br>Households      | 4990   | 2935   | 4470                                    | 12395  | 3023  |  |
| Vulnerable/<br>Destitute HH | 3101   | 1546   | 1474                                    | 6121   | 9584  |  |
| No. of FNGOs                | 12   | 11   | 11                                      | 34   | 54+6<br>Consortium  |  |

Source: MIS 2013-14



#### 1.4 Programme Focused



#### 1.5 Institutional Framework for Implementation of the Programme

The programme adopts a public private and community partnership approach in implementation of the activities. In this PPCP mode, community have taken the lead role in planning, executing, monitoring and evaluating the programme where as the government provides the technical assistance and support, and the NGOs play the role of facilitator in mobilizing community and empowering them. The programme is implemented through SHG, UG and CIG.

| Name of stakeholders           | Roles & Responsibility  |
|--------------------------------|---|
| Community                      | Planning, implementation, monitoring & evaluation, governance, documentation.                             |
| Non-Government<br>Organization | Facilitation for planning, technology transfer, capacity building, handholding support for implementation |
| Government                     | Technical Assistance and Support  |
| Donor agency                   | Financial support along with technical inputs & support   |

The programme follows the guidelines prescribed by the MoRD. It gives trace on all the families covered within the geographical boundary of one micro watershed. It consists of two to three villages termed as Village Development Association (VDA) and it needs to be registered under society act 1860 to be treated as VDC where all the adult members are part of this association. VDC is the Executive body of VDA. This executive body comprises of 15-20 members.

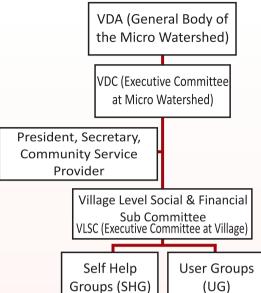
There are various community based organization promoted through the programme such as SHG, VDC, VLSC, UGs, CIGs etc. and managed by the community itself in sustainable manner. In all cases women are included on priority basis to empower

Self Help User Groups Groups (SHG) (UG) them for taking up livelihood activities to lead smooth and better life with dignity. All these institutions are responsible for taking up implementation of developmental activities

#### We Believe in:

at grass-root level.

- 1. Grassroots democracy
- 2. Grassroots action
- 3. Learning by doing
- 4. Building on their Skill & knowledge
- 5. Managed, Owned & Controlled by Community
- 6. Maintain Transparency
- 7. Participatory approach
- 8. Involvement of all stakeholders



Odisha Tribal Empowerment & Livelihoods Programme



## Chapter 2

## **Capacity Building for Empowerment**

The programme focus is to build the capacity of the primary stakeholders. They are primarily responsible for planning and execution of work under the programme. About 85% of total budget of the programme are allocated towards development natural resources, which are transferred to grass-root level institutes to execute the planned activities. The staff of FNGO and ITDA plays a facilitative role to ensure timely implementation of the programme activities directly be the communities.

The capacity building strategy of the programme is a dynamic one which takes the experiences and lessons gathered during implementation of programme across various districts and communities. This strategy underlines the strength of the CBOs and village level volunteers, who are the key factors for successful implementation of OTELP. These community level workers promoted as service providers at the local level to transfer skills to the communities.



To ensure a better and informed community, the Process Guideline of the programme stipulates dedicated phase of 2 years for Community Mobilisation during the beginning of the programme. Adequate Community Mobilisation programme / events, formation / strengthening of existing institutions are the focused interventions during the probation phase. There is a standardized Community Mobilization framework covering activities such as theme based street play, video show, sensitization workshop, health camp, animal health camp, wall writing, observation of important days, high lighting the issues of community based development etc. to increase motivation for improved community participation in implementation of programme. Several trainings on institution building, participatory development processes, leadership, conflict management, issues relating to equity and gender mainstreaming, book keeping and accounts management, convergence, collective marketing etc. are also covered in the package of Community Empowerment and Management.

The programme now has switched from 1<sup>st</sup> phase to 2<sup>nd</sup> phase and then subsequently to OTELP Plus with newer districts and newer blocks of tribal dominated inaccessible remote pockets of Odisha. Success of OTELP largely depends upon the capacity and skill of primary stakeholders in planning, execution and participatory monitoring. Accordingly, the programme underpins the need to build the capacity of the community members on their skill relating to thematic and managerial aspects. So keeping in mind the programme core objectives and varied capacity building (CB) need of different stakeholders for effective



implementation of the programme in a participatory way, the entire capacity building activities has been broadly categorized in to three main domains. These are as reflected below:

- 1. Community Empowerment & Management
- 2. Skill Development of Primary Stakeholders
- 3. Capacity Building for Staffs of FNGOs & Other Support Agencies

#### 2.1 Community Empowerment & Management

The inputs under Community Empowerment and Management have been identified as most significant contribution to ensure community participation in development process. The success of the OTELP entirely depends upon the knowledge, skill, abilities of the members of the communities and their ownership in effective implementation of programme. High level of motivation and commitment of the community members for effective programme implementation has been developed during the initial phases of programme implementation by organising different sensitization camps, trainings, exposure visits and through interaction with other communities, who has practiced the same earlier. Varied inputs on institution building, good governance, participatory processes, Community Property Resource Management, Tribal rights issues, Convergence etc. are also ensured during the initial years of programme implementation to ensure quality participation with assumed responsibilities by the communities.

Based upon experiences and lessons learnt during implementation of programme in past years, Community Mobilization framework was formulated to ensure inclusion of all categories of communities.

The interventions taken up under the Community Empowerment and Management are furnished below:

#### 2.1.1 Community Mobilization & Empowerment

The focus here is to make the community aware regarding their entitlements, which will subsequently create a demand for services, and to improve their capability in implementing the programme as well as participate in other developmental programmes of Govt. Thus, to create awareness, series of community mobilization activities were taken up on various

development issues including the different schemes/ provisions of Govt. and other non govt. organizations. Villagers were oriented on the expected benefit of these mainstream programmes. Training programmes on tribal rights were organized to sensitize them on their responsibilities to avail the entitled benefits. Similarly, series of human health camps, veterinary camps etc. have been organized. Strengthening of existing SHGs and formation of new SHGs with the left over





households was prioritized with campaign mode. Community members were facilitated to draw up the village development and livelihoods plan. Training/ sensitization meetings on land right issues (OPLE, OGLS, FRA, Vasundhara etc.) have been organized for all the programme villages. Communities were also mobilized on the advantages of convergence with the PRIs to ensure continued support from different schemes. Need based exposure visits have been organized at different places for comprehensive understanding.

Similarly, to increase their capability to manage the implementation of the programme various community institutions created such as SHG, VDC, VLSC, VSS etc. were also trained on the areas of leadership, group dynamics, accounts, organisation management, managing convergence. The details of the training programmes and other events conducted during the period are presented in the table furnished below.

| Activities  | During 2013-14 | Cumulative<br>Total Up to<br>March,14 |
|---|----------------|---------------------------------------|
| Community Mobilization (Health, Camp/ Awareness<br>Camp/ Animal Health, Camp/ Video Shows/<br>Cultural Programmes/wall writing etc. | 747            | 5412                                  |
| Training Programme for SHGs (Leadership, Group<br>Dynamics, Accounts, organizational, Management etc                                | 398            | 4987                                  |
| Training Programme for VDCs/ VLSC/ UG<br>(Leadership, Accounts, organizational management,<br>Tribal Rights, Convergence etc.)      | 368            | 5715                                  |
| Total   | 1513           | 16114                                 |

Source: MIS 2013-14

#### 2.2 Beneficiaries Skill Development

Livelihood of the poor is primarily dependent on their skill base. They work as labour particularly in primary sector like agriculture for food production and employment. Besides, they work as unskilled labour in other construction works. The programme has adopted the strategy for adding new skill and upgrading the existing skill of primary stake holders

so as to meet demand employment demand in the local areas. Capacity building inputs under this subcomponent include trainings, exposures, demonstration etc. to upgrade the skills of beneficiaries (primary stakeholders) for execution of different activities under the production enhancement components (L&W, Agri, Horti, Pisci-culture, PFM, CIF etc.) and income generating activities (RFS) etc. Skill based trainings, exposures, demonstrations etc. are being designed







based on the activity plan proposed by the communities under Annual Work Plan and Budget. Capacity Building inputs under this component will be mostly covered during implementation phase (3-5 yrs) of programme cycle. Different resource institutes/ organizations and resource persons have been contracted / tied up to take up capacity building activities under different thematic areas as identified jointly by the staff from ITDA and FNGOs. The

Resource Centers like Soil Conservation Training Institute, Govt. of Orissa, Central Soil and Water Conservation Research and Training Institute, ICAR, Semiliguda, Regional Research Technology Transfer Station, (RRTTS), OUAT, Semiliguda, Koraput, Krushi Vigyan Kendras, OUAT, Community Level Resource Centers (OWDM) and other private owned training institutes were tied up with OTELP programme districts. Besides, Resource Persons from local NGOs and line department has been augmented regularly. The various training programme conducted during 2013-14 are presented in the following table.

| Activities   | During 2013-14 | Cumulative<br>Total Up to<br>March,14 |
|--|----------------|---------------------------------------|
| Training and exposure under Land & Water<br>Management   | 133            | 1600                                  |
| Training and exposure on improved practices of Agri / Horti, PFM                                   | 272            | 2552                                  |
| Training and exposure on improved rearing<br>practices for Livestock & Aquaculture Development     | 121            | 1267                                  |
| Training and exposure on preparation of business<br>plan and implementation of Non Farm Activities | 80             | 1610                                  |
| Vocational Training to Youth   | 24             | 272                                   |
| Total  | 630            | 7301                                  |

Source: MIS 2013-14

## 2.2.1 Skill Development through Placement Linked Vocational Training Progamme for Unemployed Youth of OTELP

About 40% of the targeted population under the programme are youth (age group between 15 to 35 years). They are either employed in the agriculture during the season or works as casual labour in the unorganized sector in local suburban locations. Non availability of skill and relevant information on employment makes this productive age group unemployed or underemployed. With subsistence income from agriculture from their degraded land



and marginal farming, produces from forest and occasional income from wage engagement are the means of living for most of these families. As much as 28% of these families don't own a piece of land, either for homestead or for agriculture. The government defines landless as a family without having one standard acre of agriculture land. In recent years, some of these families have been settled in forest land (which they were cultivating) under the Forest Rights Act 2006.



40% of Youth between the age group of 18 to 35 years of age of total targeted population of OTELP operational area are sometimes seen as disguised unemployed in agricultural field. Therefore, they invariably migrate to urban areas in search of work due to the scarcity of employment opportunities in rural areas. The school dropout rate in these areas is also alarming. Since the dropout rate is high and these youth lack pure academic qualification, there is a limited scope for employability. Rural youth capital is one of the major inputs for the improvement of the quality of life of the rural community but it is not true when they migrate to other areas to earn a measly income of Rs.50 to 60 per day which becomes difficult for them to meet the basic necessities of life.

Thus, under the sub component of skill up-gradation of the primary stakeholders the programme has targeted the youth (18-35 years) to create human resource for the future. Advance agricultural as well as vocational trainings are provided in order to attract the youth be self employed. This was adopted to reduce the incidence of migration during lean seasons. The basic purposes to upgrade the skills of tribal youths in various short/long term vocational courses are depending upon their educational qualification, present economic trends and the market potential. This will enable them to gain suitable employment or to become self employed. Keeping in view of the emerging need to address the unemployment issue and help the youths to tune up their skill, it was planned to train all the unemployed youth in OTELP areas to in vocational training in phased manner. The strategy has been further concentrated for the youths from the landless families to provide them skill development trainings on various trades like Masonry, Gardener, Grafting, Beekeeping, Mushroom production, Mother Chick Unit & Backyard Poultry, Pisciculture, Housekeeping, Hotel Management, Tractor & Power tiller and 4 wheeler driving, Mobile repair, Computer Training, Welding, Lathe, Tailoring, Plumbing, Carpentry, Weaving etc. Many of these youths are now gainfully self-employed locally and in some nearby townships. During the year 8630 tribal youths from the programme areas were identified to be trained in various trades. All these skilful training programmes are conducted in OTELP districts through the convergence with Odisha SC & SC Finance Development Corporation through their empanelled ITI/ ITC. Besides this, associations of Khadi Village Industries Commission and Odisha State Employment Mission through various employable vocational training are being operational. These candidates are trained in a phased manner at various institutions. In the year 2013-14, 518 candidates were trained in various institutions and trades.



OTELP is conducting these training programmes through convergence with the Odisha Scheduled Caste and Scheduled Tribe Financial Development Corporation (OSFDC) through the empanelled training providers. These youth according to their qualification and interest do take part in the training institutions in phased manner depending on the vacancies. This has created a ripple effect with youth from the adjourning villages demanding vocational training with a view to enhance their employable skill. Out of 10,013 nos. of unemployed youth identified from OTELP operational areas with proper counseling & trades of interest, at present a total of 2794 unemployed youth so far have been trained. Details of the training programme are given in the following table district wise.

| ITDA        | Trades                                       | No. of Candidates Trained |
|-------------|--|---------------------------|
| Nawarangpur | Domestic BPO                                 | 10                        |
|             | Desktop and Laptop Maintenance               | 36                        |
|             | Driving                                      | 175                       |
|             | Security Guard                               | 7                         |
|             | Data Entry Operator                          | 46                        |
|             | Electrician                                  | 13                        |
|             | Tailoring                                    | 21                        |
|             | Mason  | 54                        |
|             | Plastic Processing Operator                  | 12                        |
|             | Total  | 374                       |
| Gunupur     | Domestic BPO                                 | 1                         |
|             | Desktop and Laptop Maintenance               | 14                        |
|             | Driving                                      | 30                        |
|             | Electrical and Electronic Home<br>Appliances | 6                         |
|             | Tailoring                                    | 51                        |
|             | Mobile repairing                             | 3                         |
|             | Welding                                      | 33                        |
|             | Electrician                                  | 42                        |
|             | Fitter                                       | 2                         |
|             | Total  | 182                       |
| Th.Rampur   | Tailoring                                    | 11                        |
|             | Driving                                      | 12                        |

#### OTELP VOCATIONAL TRAINING - TRAINED STATUS APRIL, 2014

|                | Nursing                                      | 5   |
|----------------|--|-----|
|                | Total  | 28  |
| Malkangiri     | Driving                                      | 43  |
|                | Tailoring                                    | 85  |
|                | Brick Making                                 | 178 |
|                | Mason  | 230 |
|                | Grafter                                      | 30  |
|                | Petty Contractor                             | 39  |
|                | Total  | 605 |
| Koraput        | Security Guard                               | 55  |
|                | Driving                                      | 67  |
|                | Mason  | 7   |
|                | Desktop and Laptop Maintenance               | 22  |
|                | Electrician                                  | 54  |
|                | Electrical and Electronic Home<br>Appliances | 14  |
|                | Tailoring                                    | 123 |
|                | Petty Contractor                             | 83  |
|                | Total  | 425 |
| Paralakhemundi | Security Guard                               | 34  |
|                | Driving                                      | 180 |
|                | Data Entry Operator                          | 69  |
|                | Tailoring                                    | 91  |
|                | Fitter                                       | 26  |
|                | Mobile repairing                             | 2   |
|                | Electrician                                  | 62  |
|                | Domestic BPO                                 | 12  |
|                | Nursing                                      | 16  |
|                | Mason  | 2   |
|                | Plastic Processing Operator                  | 22  |
|                | Welder                                       | 4   |
|                | Tally  | 3   |
|                | Beauty Care                                  | 3   |



|           | Hospitality Management         | 10   |
|-----------|--------------------------------|------|
|           | Total                          | 536  |
| Balliguda | Data Entry Operator            | 300  |
|           | Fitter                         | 49   |
|           | Welding                        | 61   |
|           | Desktop and Laptop Maintenance | 12   |
|           | Domestic BPO                   | 15   |
|           | Driving                        | 157  |
|           | Electrician                    | 15   |
|           | Tailoring                      | 35   |
|           | Total                          | 644  |
|           | Grand Total                    | 2794 |

Source: MIS 2013-14

#### 2.3 Capacity Building for staff of FNGOs and other Support Agencies

FNGO, ITDA and local Govt. institutions plays key role in facilitating the process of programme implementation with the community. Regular updation of skill, information and knowledge is essential for these staff in their respective subjects for ensuring better facilitation by them. Besides, regular orientation and training on programme perspective, participatory development etc. are essential to make these staff understand the concept of the programme, its implementation processes, objectives and expected outcomes. The PSU has organized number of exposure visit for staff of ITDA and FNGO to ICRISAT,WOTR, MYRADA, WASSAN, BAIF and other Grassroots Institutes and IFAD assisted programme villages were organized to ensure proper understanding of the modalities of community driven implementation, Micro Level Planning, Gender Mainstreaming, Knowledge Management etc for the staff of ITDAs and FNGOs were also organized by the PSU on regular intervals. The details of training organized during last one year of time period to various facilitating agencies are given in the table below:

| Types of Training  | During 2013-14 | Cumulative<br>Total Up to<br>March,14 |
|--|----------------|---------------------------------------|
| No. of Trainings for FNGO staff  | 48             | 359                                   |
| No. of training on Community Mobilization and<br>Institution Building for FNGO Staff | 61             | 389                                   |
| Training for line Dept. Staff /Support Organizations                                 | 12             | 192                                   |
| Total  | 121            | 940                                   |

Source: MIS 2013-14



Series of trainings, workshops, seminars, exposures organized on various thematic areas, policy issues and also facilitated the district team to organize similar training programmes.

PSU has developed different module and manuals on Book Keeping for SHGs, Gender, Communication, MLP, Land & Water Management etc.

Specialized training programmes for staff of FNGOs, ITDAs were organized on various aspects. To mention a few:

- Training Programme on Production Technology & Management of Tuber Crops, Organic Spices and Vegetables under RKVY
- Training Programme on TallyERP.9
- Training Programme on implementation modalities for convergence programme through MGNREGA in OTELP areas at Rambha, Ganjam, Odisha
- Training on implementation of OTELP Plus and sharing of the process guideline
- Training on preparation of Compressed Stabilized Earthen Blocks at ITI, Malkanagiri, Odisha
- Training programme on "Sustainable livelihoods through tuber & fruit crops" at RC-CTCRI(ICAR) and CHES(ICAR), Bhubaneswar, Odisha
- Training programme on Backyard Poultry with assistance of CPDO, Govt. of India, Bhubaneswar
- Training Programme on Community Forest Resource Right
- Training Programme on Rural water Supply
- Training Programme on Integrated Watershed Management in association with OPDSC, Rayagada, Odisha
- Training programme on Farm Mechanisation in association with Directorate of Agriculture & Food Production, Bhubaneswar, Odisha
- Training Programme on Production Technology of Vegetable Crops
- Training Programme on Livelihoods Promotion in Watershed
- Training Programme on Land & Water Management
- Training Programme on Integrated Natural Resource Management(INRM) based VDLP having land & water resource along with farming system development at IMAGE, Bhubaneswar, Odisha
- Training Programme on Mainstreaming Gender in OTELP at CYSD, Bhubaneswar, Odisha
- Training Programme on Operational & Maintenance of Rural Water Supply Schemes in association with ESCI,Govt. of India, Hyderabad



- Training Programme on Comrehensive Land Allocation Programme
- Exposure visit cum Training Programme on Integrated Crop Management in Grain Legumes at ICRISAT, Patancheru, Hyderabad, Andhra Pradesh
- Exposure to International Workshop on sharing knowledge on ready to scale up high potential pro poor Agricultural technologies in India
- Exposure visit to Watershed Organisation Trust, Ahmednagar for OTELP Plus, Paralakhemundi
- International Knowledge Conclave on Good Practices in M & E and Knowledge Management from IFAD Projects in Bhutan , India, Nepal & Srilanka
- State Level Workshop on Knowledge Management & Knowledge Sharing at Hotel Sterling Resorts, Puri, Odisha
- Training cum Exposure of FOs to Tally at CAIM, Maharashtra
- Exposure to Training Programme on Value Addition of Tuber Crops at CTCRI, Trivandrum
- Exposure to International Conference on Tropical Roots and Tubers for Sustainable Livelihood Under Changing Agro-Climate (ICTRT 2013) from 09-12 July,2013 at Hotel Masscot, Thiruvananthapuram, Kerala



## Chapter 3

## Livelihoods Enhancement

Tribals constitute about 75% of total population in the programme area; who were characterized by a lifestyle distinct from agrarian communities. They subsisted on different combinations of shifting cultivation, hunting and gathering of forest products: all activities linked with forest. Dependency on natural resources lies at the heart of the tribal economy but recent decades have seen a process of transition in the tribal livelihoods from forest based to a predominantly land based one.

In tribal dominated areas, ecological degradation, erratic rainfall and high risk of drought have resulted in food insecurity, increasing out-migration, periodic deaths and starvation. A small land base, low agricultural productivity and low-income levels led to rising indebtedness, trapping tribal into a vicious circle of exploitation. The life of tribal is increasingly vulnerable due to persistent lack of assured entitlements to their resource base.

The livelihoods enhancement component of the programme adopts a sustainable livelihoods approach which is people-centric approach to development; supporting people's effort to achieve their livelihoods goal. The programme focuses the development of livelihood assets at the disposal of tribal; namely natural, human, social, financial and physical within a sustainable livelihoods framework.

Livelihoods is 'sustainable' when it can cope with, and recover from stresses and shocks, maintain or enhance its capabilities and assets, and provide sustainable livelihood opportunities to the next generation and which contributes net benefits to other livelihoods at the local and global levels and in the short and long term" (Chamber, R; Conway, G 1992). Tribal livelihoods can be grouped into three categories, namely (i) land based livelihoods (which include agriculture, horticulture and NTFP); (ii) livestock based livelihoods (which include animals fisheries) and (iii) micro-enterprises.

Livelihoods enhancement component of the programme consists of sub-components namely (i) land and water management, (ii) participatory forest management, (iii) agriculture and horticulture development, (iv) livestock and aquaculture production, (v) rural financial services and (vi) community infrastructure addressing the issues on poverty and provides alternative livelihoods options as the tribal people are mostly depends on the available natural resource bases.

The fund under this component is directly invested within the micro watershed villages for development of natural resources base as well as establishing the livelihoods support system for the tribal communities.



#### 3.1 Land & Water Management

Crop production in the programme area is constrained not so much the overall scarcity of rainfall, but by the skewed distribution of rainfall and its extreme unreliability. Almost 80% of rainfall occurs in a single season (June to September) limiting the crop production to a single season; and the rainfall which erratic and sometimes of high intensity puts rainfed crops constantly at high risks. As the rainfed crops are practised mainly in scattered patches situated in a highly undulating terrain; high intensity rainfall damages the crops severely with flash floods and high rate of soil erosion. Similarly erratic distribution of rainfall with dry spell period of more than 10 days is sufficient enough to damage the standing crops.

In this situation, the major focus is to increase the moisture retention and to reduce the soil erosion so as to rehabilitate degraded environments and foster better resource conservation and management with an aim to increase the carrying capacity of watersheds to sustain tribal livelihoods. The positive impacts include improved water Conservation and more environmentally sound and sustainable agriculture, through, among others, the control of run-off, enhanced soil moisture-holding capacity and better vegetative cover on degraded forestlands and hill slopes.

The tribal have a long and rich experience of traditional land and management practices which are also environmentally sound. Blending these enriched indigenous land and water management practices with few adaptable modern technologies; attempts has been made to move from traditional soil and water conservation approach to integrated natural resource management approach focusing on production system enhancement on sustainable basis.

Rather than laying down predefined treatment measures, the programme assists the communities in identifying appropriate interventions on a case-by-case basis through a detailed participatory micro planning exercise and to finalize all site specific activities including mechanical structures and agronomic practices for conservation and restoration of the natural resource base at their disposal to enhance productivity of land on sustainable basis.

#### 3.1.1 Conservation of shifting cultivation patch

The programme area consists of mainly runoff watersheds concentrated with 1<sup>st</sup> order and 2<sup>nd</sup> order streams and mostly having hilly and mountainous terrain with degraded forests. The age old practice of shifting cultivation contributes substantially to the food security of tribal in general. Simultaneously, gradually reducing cycle of shifting cultivation results in massive soil erosion, siltation of reservoir, drying of springs, reduced fertility, heavy flood, water scarcity and deforestation.

For tribal, shifting cultivation is not just a means of their livelihood, but is a way of life as many rituals revolve around it and their culture is built upon it. Since shifting cultivation contributes substantially to the food baskets of tribal, it cannot be avoided completely. Alternatively, various attempts were made by the programme to improve productivity of shifting cultivation patches and to reduce dependency on shifting cultivation which includes



physical, agronomic and socio-economic measures. This attempt not only improves the productivity of degraded lands located at upper reaches; but also reduces the potential threat of floods, soil loss, siltation of reservoir located in middle and lower reaches.



During the programme intervention, various mechanical measures like Stone Bunds, staggered trenches, continuous trenches and water absorption trenches are constructed and reinforced with appropriate biological measures to reduce the run off velocity and soil loss from those patches and to conserve and improve its productivity. The major activities undertaken in hill slopes and shifting cultivation patches are as per the following table:

| Activitiy                           | Unit | During 2013-14 | Cumulative<br>Up to<br>March,14 |
|-------------------------------------|------|----------------|---------------------------------|
| Mechanical Filter Strip/ Stone Bund | ha.  | 181            | 2902                            |
| Trench (CCT/ SCT)                   | ha.  | 192            | 6543                            |
| Water Absorption Trench             | ha.  | 6              | 316                             |

Source: MIS 2013-14

#### 3.1.2 Drainage line treatment

The catchment area treatment measures described above though retain s silt and moisture; are not sufficient enough to handle the entire runoff. This is because the programme area

is located in South western region of Orissa, mostly comprising the hills of Eastern ghats with highly undulating topography having numerous streams of first and second order.

Loose boulder structure in series

During monsoon, instant runoff passes through these streams causing severe erosion of the stream beds. These eroded soil, sand, stone and pebbles etc., damaging low laying fields. Hectares of paddy cultivated, during kharif (Rainy) season in low lands



Loose boulder structure in series



(*bahal and berna*) gets damaged due to sand casting caused by flash floods. This not only damages the crop for the season but also the farmer losses his/ her family labour to reclaim the land, where women from the family suffers most. These low lands over the stream bed are about 10-12% of the total cultivable land, which are mostly productive and fertile in nature. The tribal families mainly depend upon this land to grow paddy for meeting their food requirement.

To considerably arrest the silts and runoff flowing down in the streams and to minimise the crop damage at the lower patches; the programme adopted interventions like gully control structures, retaining wall, guard wall, brush wood check dam etc. in series. These treatments across the streams retain sand, stone, pebbles, silts etc. flowing from the podu areas and deposit in the gully beds. This effort not only stabilises gullies, increases the base flow and flow duration; but also simultaneously creats small fertile patches across the stream bed and sustain vegetative growth. The paddy crop cultivated in the lower patches are also saved and even get adequate water during moisture stress conditions in rainy season. The major activities undertaken are presented in the table below.

| Activitiy  | Unit | During 2013-14 | Cumulative<br>Up to<br>March,14 |
|--|------|----------------|---------------------------------|
| Gully Control Structure (EGP/LBS/<br>LBCD/BWCD)          | nos. | 429            | 80649                           |
| Masonry Gully Plug/ Gabions                              | nos. | 2              | 24                              |
| Masonry Drop Structure                                   | nos. | 64             | 882                             |
| Nalla Bank Stabilization/ Stream Bank<br>Erosion Control | nos. | 16             | 17                              |
| Retaining wall/ Guard wall (Masonry)                     | nos. | 23             | 247                             |
| Retaining Wall/ Guard Wall (Dry)                         | nos. | 26             | 71                              |

Source: MIS 2013-14

#### 3.1.3 Land development intervention

Various land development interventions for the cultivable lands located in the middle reaches for improving productivity of these lands are then attempted to after treatment of upper reaches and drainage lines.

The cultivable lands out of which upland and medium land constitutes about 82% are found in discrete patches in the programme area. These land though unproductive in nature; contributes significantly towards a major proportion of income by growing paddy, Niger, millets, maize, mustard and vegetables etc.

These lands are mostly rainfed and unbunded and generally cultivated once in a year. The lands are cultivated by the tribals with a high risk due to erratic rainfall, soil loss, nutrient



deficiencies, lack of irrigation etc., resulting in poor crop husbandry. Besides, crops grown in these patches are cash crops and also content nutritional values for which it is important to treat these lands to increase its productivity.



5% model



Terracing

30 x 40 model



The programme has facilitated the farmers to adopt various in situ moisture conservation measures to conserve moisture and top soil, retaining the soil fertility. The farmers are also facilitated for bund plantation, compost pit in field and improved farming practices to increase productivity. The major interventions for development of these lands are given in the table below.

| Activitiy                             | Unit | During 2013-14 | Cumulative<br>Up to<br>March,14 |
|---------------------------------------|------|----------------|---------------------------------|
| Contour Bund/ Field Bund/Earthen Bund | ha.  | 151            | 8242                            |
| 30x40 Model                           | ha.  | 0              | 526                             |
| 5% Model                              | ha.  | 0              | 578                             |
| Terracing                             | ha.  | 20             | 71                              |
| Land leveling                         | ha.  | 37             | 1575                            |

Source: MIS 2013-14



#### 3.1.4 Water Resources Development

Though the annual average rainfall is about 1500mm which is more than the state and national average; most of the rainfall passes as runoff due to high intensity of rainfall and erratic distribution over the year, highly sloping terrain and inadequate harvesting measures for productive use. All these parameters force the tribal to depend on rainfed agriculture resulting in uncertainty of crop production and yield.

The interventions for treatment of upper catchment, drainage line treatment, land development in up and medium land are mainly meant for increasing the time of concentration of runoff by lengthening the flow path, providing more time for infiltration and thereby reducing soil loss and runoff intensity. As a result of these interventions, in many cases, there is visible increase in stream flow, flow duration in stream and moisture status in soil.

Programme has adopted the strategy to conserve, divert and harvest this excess runoff both above and underground for productive use. As a part of this strategy, various types of water bodies and irrigation structures were promoted by the programme. Water bodies are meant to provide protective irrigation during kharif. The irrigations structures such as diversion weirs, check dam, canal etc. are constructed/ renovated to ensure protective irrigation during kharif and also support post rain crops cultivated by farmers resulting in increased cropping intensity and volume of production. There are evidences of crop diversification and improved cropping practices due to additional irrigation facility.







Ongoing burried pipe irrigation project



Masonery canal







Besides, water is tapped from perennial springs with filtration arrangement and provided to household through buried pipes. This not only mitigates the household needs, but also the surplus water is used for irrigating the backyards for growing vegetables meeting the family nutritional requirements. This also provides additional income to the tribal families and saves lot of time which was otherwise lost in fetching water from distant sources.

The presence of small mountainous streams and perennial springs in the OTELP operating villages offer a larger scope for diversion based water supply system through buried pipes. The major advantages of buried pipe line system over open canal includes increased irrigation efficiency by minimizing water loss, more economic return per unit of water and much lesser operation and maintenance cost and time.

On recommendation of JRM on OTELP, buried pipe irrigation projects were also taken up in large scale which proved to be advantageous over traditional small scale irrigation systems in terms of durability and cost.



DBI Irrigating vegetable field



Hydraulic ram for upland irrigation

To cover more area under irrigation with the available water i.e. to increase water use and irrigation efficiency, the programme further facilitated micro-irrigation systems out of its own fund and in convergence with National Horticulture Mission, the details of which are discussed in subsequent chapters.

The major interventions made for development of water resources are given in the table placed below:

| Activitiy                                    | Unit | During 2013-14 | Cumulative<br>Up to<br>March,14 |
|--|------|----------------|---------------------------------|
| Check dam (New)                              | nos. | 34             | 498                             |
| Check dam (Renovation)                       | nos. | 2              | 16                              |
| Diversion Weir (New)                         | nos. | 2              | 167                             |
| Diversion Weir (Renovation)                  | nos. | 0              | 23                              |
| Diversion based irrigation structure (piped) | nos. | 18             | 60                              |

| Lift Irrigation projects (river/ open source/<br>bore well/ dug well)                  | nos. | 77  | 439  |
|--|------|-----|------|
| Piped water supply project for domestic use<br>& irrigation (gravity fed)              | nos. | 30  | 384  |
| Piped water supply project for domestic use<br>& irrigation (sanitary well/ bore well) | nos. | 43  | 187  |
| Field Canal / Earthen Canal (New)  | nos. | 24  | 378  |
| Field Canal / Earthen Canal (Renovation)   | nos. | 32  | 176  |
| Masonry canal (new)  | nos. | 47  | 416  |
| Masonry canal (renovation)   | nos. | 0   | 466  |
| Water Harvesting Structure/<br>Irrigation tank (New)                                   | nos. | 20  | 590  |
| Water Harvesting Structure/ Irrigation<br>tank (Renovation)                            | nos. | 10  | 91   |
| Farm Pond  | nos. | 26  | 1233 |
| Percolation tank/ sunken pond  | nos. | 0   | 183  |
| Irrigation well/ chuan (open)  | nos. | 281 | 1163 |
| Hydram project for upland irrigation<br>& domestic use                                 | nos. | 0   | 21   |
| Renovation of Open well / dug well   | nos. | 3   | 277  |

Source: MIS 2013-14

#### 3.1.5 Biological Measures

Biological measures and practices are low cost measures in watersheds and meant for moisture retention and reduction of soil erosion. When combined with mechanical measures, it provides structural stability to the mechanical measures and increases its effectiveness and life span. It addition to, it provides additional income to the farmers. All types of plantations, cover cropping, mulching etc. comes under this category.



Nursery raising by women SHGs for plantation

Mango plantation in hill slopes supported with trench



| Activitiy                               | Unit | During 2013-14 | Cumulative<br>Up to<br>March,14 |
|---|------|----------------|---------------------------------|
| Forestry/ Mixed tree species plantation | ha.  | 0              | 2492                            |
| Horticultural plantation                | ha.  | 5              | 1880                            |
| WADI model plantation                   | ha.  | 157            | 1706                            |
| Backyard Plantation                     | HH   | 0              | 9844                            |
| Bund / Contour Plantation               | rmt. | 0              | 637510                          |
| Avenue plantation                       | km.  | 0              | 90                              |

The major activities under biological measures are presented in the following table.

Source: MIS 2013-14

#### 3.2 Outcomes: Land & Water Management

#### a. Conversion of non-arable land to arable land:

The land development interventions undertaken by the programme during the year benefited 1537 families by converting 622 ha. non-arable land into arable. These families are cultivating paddy, maize, pulses, oilseeds and vegetables etc. and have increased their income. The details of output during the year and since inception of the programme are as per the following table.

| Particulars                               | During 2013-14 | Cumulative<br>Up to<br>March,14 |
|---|----------------|---------------------------------|
| Non arable land converted to arable (ha.) | 622            | 11904                           |
| Farmers benefited (nos.)                  | 1537           | 44443                           |

Source: MIS 2013-14

#### b. Additional irrigation support:

Water resources development helped in providing irrigation facilities to the non-irrigated land as a result of which additional land was covered under irrigation and cropping intensity was also increased.

| Year    | Cum. Area Irrigated (in Ha.) | Cum. Additional Area cultivated (in Ha.) |      |
|---------|------------------------------|--|------|
|         |                              | Kharif                                   | Rabi |
| 2005-06 | 464                          | 25                                       | 2    |
| 2006-07 | 2126                         | 768                                      | 272  |
| 2007-08 | 6308                         | 1639                                     | 1350 |

#### Empowering Grassroots Democracy



| 2008-09 | 9746  | 3306  | 2621 |
|---------|-------|-------|------|
| 2009-10 | 11425 | 4592  | 3826 |
| 2010-11 | 12058 | 8862  | 5419 |
| 2011-12 | 13974 | 14197 | 6756 |
| 2012-13 | 17131 | 18634 | 7405 |
| 2013-14 | 18789 | 20914 | 7865 |

Source: MIS 2013-14

The below table indicates that 3881 farmers are benefited by the irrigation infrastructures developed which created irrigation facility for 1658 ha. of land during 2013-14.

| Particulars               | Unit | During 2013-14 | Cumulative<br>Up to<br>March,14 |
|---------------------------|------|----------------|---------------------------------|
| Additional area irrigated | ha.  | 1658           | 18789                           |
| Farmers benefited         | nos. | 3881           | 27069                           |

Source: MIS 2013-14



## Chapter 4

### **Production System Enhancement**

#### 4.1 Agriculture and Horticulture Development

Odisha is an agrarian state with Agriculture & Animal husbandry contributing 17.2% (2012-13) to Gross State Domestic Product. It provides employment & sustenance, directly or indirectly to more than 60% of the population & forms the single largest employment sector of the state. Agriculture economy being basic livelihood provider to masses has to be understood not only in terms of its productivity but also in terms of its sustainability. Priority has been given for household level food security through land use planning of different land capability classes which are illustrated below:

#### Key activities through programme initiation:

#### 4.1.1. Cropping Strategy:

#### a. Diversification of Cropping:

Major thrust has been given on mitigation of moisture stress or drought condition and to grow non-paddy crops in the rainfed up land. Crops like coarse cereals (Maize, Jowar, Ragi & Minor millets), Pulses (Pigeon pea, Black gram, Cowpea, Horse gram), Oil seeds (Groundnut, Niger), Vegetables, Tuber crops, Spices (Ginger, Turmeric) are promoted alone or in combination instead of paddy crop. Based on the experience of last year so far 1462 ha (Koraput-636 +



Paralakhemundi -310 + Balliguda – 134 + Th.Rampur – 236 + Malkangiri-146 ) of upland paddy has been diverted to non paddy crops by 6325 farmers in different programme districts during rainy season, 2013.

#### b. Inter Cropping system

Two or more crops are promoted simultaneously in same piece of land under rainfed high



lands for acting as an insurance against the crop failure. A combination of legume & cereal crops (pigeon pea + paddy in 2:5 ratio) are promoted as this system reduces input of nitrogen and give partial substitution of paddy wherever, farmers insist for paddy. Besides other inter cropping systems like pigeon pea + ragi (2:4), maize + cowpea (2:2), yam + maize (1:2) and maize + runner bean (2:2) have been promoted for giving higher income in aberrant weather, in the non



irrigated highlands instead of mixing 4-5 crops and going for mixed cropping by the farmers traditionally. Based on the demonstration programme of previous years, so far 1833 ha (Koraput -143 + Paralakhemundi-856 + Balliguda-109 + ThRampur-72 + Nawarangpur-526 + Malkangiri-120 + Gunupur-7) of upland area covering 7022 farmers in different programme districts have been up scaled during rainy season, 2013.

#### c. Sequential Cropping:

In sequential cropping ,two or more crops are promoted in same piece of land in succession one after another. Farming system & location wise details are placed below:

Under rain-fed ecosystem: This is decided as per availability of length of growing i) period (length of rainy season + period for which stored soil moisture meets the crop water requirement after cessation of the rainy season). Field pea /black gram / mustard / chickpea is promoted after paddy in medium and lowlands instead of keeping fallow of the lands after harvest of Kharif paddy for increasing income at household level. Besides mustard/ black gram/ kulthi is also grown after harvest of kharif maize. Field pea/ black gram is also sown 15-20 days before harvesting of medium land paddy in the programme areas of Kalahandi, Koraput & other districts. In such situation, after harvest of the kharif paddy the field pea crop is successfully grown under residual soil moisture condition. The above 2nd crops under rain-fed situation are harvested successfully availing residual moisture and few showers of rain in the post rainy season and farmers get additional income from these crops. Based on the experience of previous year 7741 farmers have taken up 2nd crop in an area of 2336 ha (Koraput 396 + Paralakhemundi 468 + Balliguda 85 + Th.Rampur 710 + Nawarangpur 263 + Malkangiri 296 + Gunupur 118) in the rainfed ecosystem during post rainy season 2013-14.

ii) Under irrigated ecosystem: Irrigation facilities have been developed in most of the

villages through interventions under land and water management component. The popular two crop patterns in the programme areas are: rice-mustard/black gram/vegetables/chick pea, monsoon potato-winter vegetables, kharif tomato/ cauliflower./cabbage/radish-winter vegetables, maize - vegetables/mustard. Besides three crop patterns like rice - vegetable - vegetable and vegetable - vegetable - vegetable are also done in Koraput and other areas. Based



on the experience of previous years 6401 farmers have taken up 2<sup>nd</sup> crop/3<sup>rd</sup> crop in an area of 1525 ha (Koraput 181 + Paralakhemundi 497 + Balliguda 155 + Th.Rampur 28 + Nawarangpur 307 + Gunupur 165 + Malkangiri 192) in the irrigated ecosystem during post rainy season 2013-14.



#### d. Introduction of new crops and varieties

New crops and improved varieties of Paddy (Khandagiri, Lalat, Naveen, Swarna, Jajati, MTU 1010, Surendra), Maize (Navjot), Ragi (Bhairabi) Pigeon pea (Asha), Chick pea (ICCC37 (desi) & KAK 2 (kabuli)), Black gram (PU94-2), Ground nut (Devi), Niger (GA-10), Turmeric (Lakadong), Ginger (Suprava), Yam (Orissa Elite), Elephant foot yam (Gajendra), Pineapple (Queen), Orange flesh sweet potato, Brinjal (Green star, Blue star), Off season cauliflower (Pusa early, Pusa deepali), Offseason cabbage (Konark, Deepa), Runner



bean (Pottangi local, Udayagiri local, Radish (Pusa Chetki), Tomato (Utkal Pallavi, Utkal Dipit, Utkal Kumari), Okra (Utkal Gourav), Chilly (Utkal Abha), Monsoon potato (Kufri Jyoti), Onion (Nasik red, Agri found light red) have been promoted in the programme areas.

| Sl No | New crop          | Area (ha) | Farmer (nos) |
|-------|-------------------|-----------|--------------|
| 1     | Ragi              | 1586      | 4968         |
| 2     | Niger             | 2590      | 3819         |
| 3     | Sunflower         | 359       | 1423         |
| 4     | Mustard           | 1082      | 2443         |
| 5     | Yam               | 131       | 5154         |
| 6     | Elephant foot yam | 46        | 4576         |
| 7     | Cassava           | 35        | 1940         |
| 8     | Turmeric          | 113       | 5305         |
| 9     | Monsoon Potato    | 17        | 1760         |
| 10    | Onion             | 286       | 4605         |
| 11    | Radish            | 116       | 3182         |
|       | Total             | 6361      | 39175        |

The details of areas under introduction of new crops during 2013-14 are as follows:

Source: MIS 2013-14

#### 4.1.2. Informal seed production and linkage with village seed banks

Farmers have realized that productivity of different crops increase significantly due to use of quality seeds. Basing on the learning experience of the previous years, a systematic programme was drawn up for informal seed production during Kharif, 2013 and linking the same to village seed bank. The idea of operationalisation of the concept of 'village seed



bank', (VSB) is to make village self-sufficiency in production and distribution of quality seeds. Accordingly, 45 village level seed banks were established during 2013-14. 1356 qtls of seeds (paddy 1192 qtls, Ragi 50 qtls., Niger 76 qtls., Kodo 38 qtls.) were procured by women SHGs of village level seed banks from the seed growers & sold to 6860 farmers after processing, bagging and stitching of the bags. New 20 kg capacity HDPE bags were used for the



purpose of packing of paddy seeds where as new 4 Kg capacity cloth bags were used for packing ragi & niger seeds.

#### 4.1.3 Vermi composting (Recycling wastes into valuable organic fertilizers):

| areas as stated below during 2013-14. |           |               |  |  |
|---------------------------------------|-----------|---------------|--|--|
| ITDA                                  | Unit (no) | Quantity (kg) |  |  |
| Koraput                               | 45        | 13600         |  |  |
| Paralakhemundi                        | 15        | 3800          |  |  |
| Nawarangpur                           | 154       | 36000         |  |  |
| Total                                 | 214       | 53400         |  |  |

214 Vermi compost units were established and 53400 kg vermin compost produced in different programme areas as stated below during 2013-14.



Source: MIS 2013-14

#### 4.1.4 Promotion of farm mechanization:

Farm mechanization is the process of using Agricultural Machineries for increasing production & productivity of land, return & profitability to the farmer and comfort & safety by timeliness of operation, saving labour requirement, cropping intensity and reduction in human drudgery. In OTELP, Farm Mechanization is taken up by way of owning Agricultural Machineries (Tractor, Power tiller & other equipments) by SHGs. These machineries are being utilized for summer ploughing & other agricultural



operations on custom hiring to fellow farmers. This has been introduced as an income generating activities of SHGs. Summer ploughing helps to kill weeds hibernating insects and disease causing organisms by exposing the soil to summer heat. Besides summer ploughing improves soil structure due to alternate drying and cooling. Soil permeability is increased by breaking the compacted layers. For owning tractor, power tiller and other





implements / equipments, the source of funding is from contribution by the SHGs, assistance under SCA to TSP and subsidy from Agriculture Department.

So far 56 SHGs have owned 49 (Koraput 7 + Paralakhemundi 6 + Balligdua 3 + Th.Rampur 7+ Nawrangpur 23 + Malkangiri 2 + Gunupur 1) power tillers and 7 (Balliguda 5 + Nawarangpur 2) tractors by end of 2013-14. These are used on custom hiring for fellow farmers.

On an average each SHG has earned a net profit of Rs.19258.00 during 2013-14.

#### 4.1.5 Practice of low cost technology:

Ploughing across the slope, Summer ploughing, seed treatment, timely sowing & planting, growing of short duration variety of crops in upland & medium lands, application of organic manure (vermin compost / green manuring), use of bio-fertilizers, pest surveillance & identification of beneficial's, preparation of neem seed extract solution & its application against pest, use of bio- pesticides & micro- nutrients are low cost technologies & had no environmental hazards, thus accepted by the farmers. The details of practice of low cost technology during 2013-14 are as follows.

| Sl No | Low cost technology        | Area (ha) | Farmer (Nos) |
|-------|----------------------------|-----------|--------------|
| 1     | Summer ploughing           | 12805     | 7774         |
| 2     | Ploughing across slope     | 1289      | 3405         |
| 3     | Seed treatment             | 2326      | 8821         |
| 4     | Timely sowing / planting   | 6115      | 9825         |
| 5     | Green manuring             | 183       | 793          |
| 6     | Bio-fertilizer application | 829       | 13714        |
| 7     | Mulching                   | 461       | 6560         |

Source: MIS 2013-14

#### 4.1.6 Ragi Development

Ragi is a popular crop in the tribal areas as because it provides a major part of food security to them. It is also highly nutritious. In the programme areas of Kalahandi, Koraput, Gajapati districts the tribal mostly consume ragi at least once or twice daily. Bhairabi variety of ragi developed and released by State Agriculture University, Bhubaneswar gives on an average 40 - 50% higher yield than the traditional varieties. Bhairabi variety of ragi has been taken up in an area of 796 ha (Koraput 526 + Paralakhemundi 155 + Th.Rampur 65 + Nawarangpur 12 +Malkangiri 34 + Gunupur 4) covering 3272 famers.



### 4.1.7 Cultivation of Hybrid Maize

Hybrid maize in an area of 5079 ha (Koraput 169+ Paralakhemundi 1430 +Balliguda 40 + Th.Rampur 135 + Nawarangpur 3000 + Gunupur 305) covering 8195 farmers has been taken up successfully during 2013-14.

### 4.1.8 System of Rice Intensification (SRI) & Line Transplanting of Paddy



### a) SRI :

Innovation in the agricultural sector can come from a variety of sources. SRI is a fascinating case of rural innovation that has been developed outside the formal rice research establishment. This has been taken up in an area of 1445 ha covering 3611 farmers during 2013-14. The details are as follows:

| ITDA           | Area (Ha) | No of farmers |
|----------------|-----------|---------------|
| Koraput        | 185       | 495           |
| Paralakhemundi | 294       | 738           |
| Balliguda      | 231       | 1120          |
| Th.Rampur      | 8         | 40            |
| Nawarangpur    | 62        | 175           |
| Malkangiri     | 645       | 993           |
| Gunupur        | 20        | 50            |
| Total          | 1445      | 3611          |

Source: MIS 2013-14

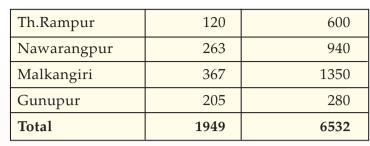
Many farmers have felt that there is increase of root system in both volume and weight and increase of tillers. The ultimate result is increase of productivity by 20-25 % compared to traditional practice.

### b) Line transplanting of Paddy

This has been taken up in an area of 1949 ha covering 6532 farmers during 2013-14. The details are as follows.

| ITDA           | Area (Ha) | No of farmers |
|----------------|-----------|---------------|
| Koraput        | 252       | 684           |
| Paralakhemundi | 715       | 2621          |
| Balliguda      | 27        | 57            |





Source: MIS 2013-14

The productivity is also increased by 20-25 % like SRI compared to traditional practice. Mr. Bret Nigel, CPM, IFAD visited line transplanting of paddy fields in Rabi season 2013-14 taken up in Gumma block of Gajapati district during March, 2014 & highly appreciated the performance of the crop.

### 4.1.9 Growing of Orange flesh sweet potato

Sweet potato is an important crop taken up for food, feed and raw materials for industries. Vines can be used as fodder for cattle during off season. Malnutrition is a serious threat to health & productivity of people in most of the tribal areas. Vitamin A deficiency increases the risk of night blindness. One possible solution for addressing vitamin A deficiency is through a food based approach using orange-fleshed sweet potato as an inexpensive source of beta-carotene (the pre-cursor to vitamin A). Access to planting



materials for orange-fleshed sweet potato is a challenge for growers. There is a need for rapid multiplication method and the establishment of community nurseries to meet the demand of the community. An area of 21.5 ha was covered by 209 farmers during 2013-14 as detailed below.

| ITDA           | Area (Ha) | No of farmers |
|----------------|-----------|---------------|
| Koraput        | 15        | 80            |
| Paralakhemundi | 6.5       | 129           |
| Total          | 21.5      | 209           |

Source: MIS 2013-14

### 4.1.10 Promotion of Pineapple:

Queen variety of pineapple was introduced in 5.74 ha covering 267 households in 28 villages of the programme areas of ITDAs (Th.Rampur in Kalahandi & Paralakhemundi in Gajapati districts) during 2011-12. Subsequently this queen variety of Pineapple was introduced in



new areas under intercropping in WADI plantations, in an area of 79.2ha (Gajapati 53.07+ Kandhamal 16.40+Kalahandi 9.7) covering 710 households under NHM during 2012-13. Pineapple planted during 2011-12 came to fruiting during May-June, 2013. But 60-65% of the plants gave fruiting. Each fruit size weighs about 800gm as compared to 500gm weight of the traditional variety. The cost of production of pineapple (var: queen) per 200 M<sup>2</sup> area is Rs.3100. The value of



produce is Rs.6000 (300kg X Rs.20.00/kg) from an area of 200 M<sup>2</sup>. Hence, the net profit received by each farmer from an area of 200 M<sup>2</sup> each Rs.2900 (6000 - 3100). Farmer will also get additional income from the suckers & subsequent fruiting from next year onwards.

### 4.1.11 Backyard Kitchen Gardening for nutrition and supplementary income:

Back yard kitchen garden (Home garden) generally referred to the gardens occupying a small area located near the residence used mainly for vegetables required daily for the kitchen. Fresh fruits and vegetable from home garden provide carbo hydrate, proteins, vitamins, minerals & fats that are essential to our body. Hence home garden provides convenient and economic source of nutritious and balance diet for the rural and tribal family. Cultivation of improved vegetables are taken up in the backyards during 2013-14 covering 5110 households (Koraput 400 + Malkangiri 1300 + Balliguda 250 + Nawarangpur 1250 + Paralakhemundi 1575 + Th. Rampur 335) to meet the nutritional requirement of the tribal families.

### 4.1.12 Poly House :

Crops/Seedlings are grown in protected environment. Hence poly green house regulates temperature, ventilation, light intensity, humidity etc & facilitates for raising of quality seedlings. 39 poly nurseries (Nawarangpur 6 +Balliguda 15+ Koraput 10 + Gunupur 8) each 160 m<sup>2</sup> area have been constructed by the women SHGs by end of 2013-14. Programme staff facilitates Women SHGs for procurement of quality seeds for raising seedlings in the poly houses and supply the same to the farmers. These poly nurseries



have already been linked to 1430 (Balliguda 638 +Nawarangpur 178 +Koraput 378 + Gunupur 236) farmers each for 1000 m<sup>2</sup> area for commercial vegetable cultivation during rainy season, 2013. Around 5.16 lakh of seedlings have been raised in the above poly houses during 2013-14 through women SHGs. On an average ,each women SHG has got a net profit of Rs.13654 by selling vegetable seedlings from one poly house.



### 4.2 Specialized Interventions under Agriculture & Horticulture Promotion

# 4.2.1 Impact of IFAD 954 ICRISAT Project and IFAD – EC- ICRISAT Project (CECG 44)

Both the above IFAD assisted project continued in the programme village of OTELP till end of 2012-13 resulting enhanced productivity and production of legume crops through scaling of better adapted cultivars and management technology in relevant cropping system. As per the learning experience the preferred varieties of legumes were taken up in different districts during 2013-14 is placed below:

| ITDA           | Ground nut<br>(var:Devi) |                 | Pigeor<br>(var: A | -               | Chickpea (var: KAK 2,<br>ICCC 37, JG 14, JG 11 |                 |
|----------------|--------------------------|-----------------|-------------------|-----------------|--|-----------------|
|                | Area<br>(ha)             | Farmer<br>(nos) | Area<br>(ha)      | Farmer<br>(nos) | Area<br>(ha)                                   | Farmer<br>(nos) |
| Koraput        | 60.00                    | 204             | 24.00             | 75              | 4.00   | 12              |
| Paralakhemundi | 116.00                   | 378             | 424.00            | 936             | 53.00  | 223             |
| Balliguda      | 4.00                     | 35              | 250.00            | 812             | 5.00   | 21              |
| Th. Rampur     | 0                        | 0               | 210.00            | 640             | 48.00  | 210             |
| Total          | 180.00                   | 617             | 908.00            | 2463            | 110.00   | 466             |

Source: MIS 2013-14

### 4.2.2 IFAD assisted Food Security Through Asian Roots and Tubers (Food START)

The overall goal of the Programme is to improve food security for rural communities in the Asia-Pacific region from sustainable RTC production and utilization. The purpose is to promote the role of roots and tuber crops (RTCs) in the farming systems of the Asia-Pacific region in building a more diverse and robust regional food system in the face of possible shocks and climate change.

Its specific objectives are (a) to map areas, where a high incidence of food insecurity and poverty overlap with RTCs production and consumption;



(b) to understand and document current roles of RTCs in contributing to food & nutritional security, income generation, identify opportunities and challenges in enhancing this contribution; (c) to prioritize and introduce relevant R&D and capacity strengthening actions that promote RTCs; and (d) to support relevant local and national policy and programming processes in selected countries that promote research and development of RTCs and improve poor people's access to knowledge and support services.



### Time Frame of the Project

The project is designed to have two phases; assessment phase and implementation phase spread over a period of five years from 2011 - 2015. The first two years of the project is assessment phase and the remaining three years implementation phase.

The focus sites in India are in the states of Odisha and Meghalaya. In the focus sites in India, assessment phase have been completed and is now moving to the implementation phase. In Odisha, the focused districts are Koraput (OTELP district) & Ganjam & Gajapati (Non-OTELP districts). For the implementation phase collection of detailed empirical data on the role of roots and tuber crops in food security and income generation among the communities have been collected through (1) Participatory Rural Appraisal (2) Household Surveys (3) Food Intake Assessment.

The detailed analysis of data obtained from these socio-economic analyses has been done and a detailed report on the role of roots and tubers in the food security status of households in the focus sites is being prepared by the CIP. The results of the assessment phase was presented by International Potato Centre located in the campus of Regional Center, CTCRI in the annual review meeting held at Bhubaneswar, Odisha. The preliminary observations in focused area of Odisha are as follows:

### General food and RTC consumption pattern and trends

- The major RTCs in the focus districts is sweet potato. They also grow potato, taro and yams. Some villagers are learning to grow other RTCs like elephant foot yam and cassava.
- Food grains and pulses form the major constituents of food among villagers. RTCs are also consumed but not in substantial quantities. Potato stands first among all the RTCs consumed.
- The dependency on RTCs, except potato is mainly seasonal. The period of harvesting of sweet potato is the peak period of consumption, mainly in January-February.
- There is need to improve the awareness levels about the nutritional aspects of RTCs and this can improve the RTC intake among the communities.

### Markets and value chains of RTCS

- In Odisha, sweet potato is the major RTC which is marketed. There are various agents involved in this marketing chain, ranging from farmers to small traders, middle man and representatives of credit agencies. There are areas where large commercial cultivation of sweet potato is undertaken to cater to the needs of urban market.
- There is no major value addition in RTCs, particularly sweet potato. Sometimes the fresh tubers are crushed and mixed with rice flour or flour made of a mix of rice and pulses for making certain food items.
- Proper marketing and value addition are the major constraints.



### RTCs productivity and uses

- In Odisha the yield levels of major RTCs are very low, lower than the State/National level yields for which official estimates are not available. This is largely due to two major factors:
  - i. Lack of training among the producers on commercial cultivation of RTCs.
  - ii. Non availability of quality planting material.

### Knowledge network on RTCs

- The knowledge network on RTCs in Odisha are very limited.
- This is confined mostly to traditional knowledge, methods of cultivation as well as on benefits of RTC consumption.
- Absence of knowledge networks related to production, utilization and nutritional status of RTCs is a major problem in Odisha, but at different levels and scales among tribal and non-tribal areas.

### **Cropping Calendar**

- There are two major types of cropping systems in the focus sites of Odisha.
- In the oldest and traditional system like *jhum* cultivation, RTCs are grown along with other crops, as in mixed cropping systems. This mainly extends from January-February with the planting, to October-December, the harvesting period. This is confined to hilly areas and in most cases done by community.
- The second cropping system is mainly in plain lands in sequence with food grains/ pulses. The timing is largely dependent on the duration of the crops in the mixed cropping system and the pattern of occurrence of monsoon.

### Crop and varietal diversity, availability and uses

- In Odisha, the diversity of RTCs, specifically varietals diversity of taro and yams is enormous, especially in the tribal belt. This is grown mainly by indigenous people there and is less documented.
- With respect to availability, there is a general problem with linking of production centers with centers of consumption mainly to absence of marketing linkages and absence of storage and value addition techniques.
- The main form of use of RTCs is after boiling or cooking and in fresh form in the case of cassava. The only form of substantial value addition if any is by making chips out of them after cutting, drying and frying.

### Households: occupation, literacy levels

• In Odisha majority of the (60 % - 80%) households in the focus villages were dependent on agriculture for their livelihood.



- The dependency on forest produce was also equally important due to the agro-ecological nature of their habitats.
- In Odisha, the proportion of households dependent on agriculture is lesser than Meghalaya.
- In recent years, during periods of less agricultural related activities the households are fully engaged in wage employment programmes, which is mostly non-agricultural work. The major wage employment programme of MGNREGA (Mahatma Gandhi National Rural Employment Guarantee Act) has been a major contributor to household incomes.
- The literacy levels in both the focus sites were much lower than the district as well as the State averages.

### Household ownership and operational holdings

- There were wide differences in the nature of ownership and operational holdings of households in Odisha and within the villages in the focus sites.
- In sites where indigenous communities are a majority, most of the land is owned by the community and there is no individual ownership of land. The ownership and operational pattern vary with the type of cultivation, crops grown, and the type of communities in particular locations.
- In Odisha the nature of land ownership and tenures are more of that of commercial agriculture in the plain areas and traditional in nature in tribal areas.

### Input use for RTC cultivation

• In Odisha, in the plains where there is relatively more access to markets and institutions involved in technology transfer, modern inputs like fertilizers and plant protection chemicals are used by households who grow RTCs. Even this also is confined to sweet potato and potato.

### Sources of extension services, awareness and problems of RTC cultivation

• Extension services are very poor in Odisha. The level of awareness about RTC production, value addition opportunities and options and nutritional qualities of RTCs were very low or almost absent among the households.

### Post harvest utilization of RTCS by the cultivator

- In Odisha the major form of consumption of tubers is in fresh form or after boiling and roasting.
- The leaves and stem of taro is used as a vegetable and is cooked along with other vegetables and spices.
- Cassava leaves and tubers are fed to pigs, in fresh form as well as after boiling.



### Income

- For majority of the households in Odisha, the major share of income comes from agriculture production.
- The next important contributor to household incomes is from livestock, particularly pig rearing in tribal districts of Odisha and cattle rearing in plain districts of Odisha.
- The third important contribution is from non-agricultural labouring out, particularly participation in wage employment programmes which is implemented in the focus sites in Odisha.

### Perception of farmers about RTCs

- In Odisha farmers feel that RTCs are poor man's crop and help them in achieving food security, particularly during months of scarcity.
- They do not understand the nutritional qualities of RTCs, but feel that they are beneficial for health.

### Value Chain studies

All the value chain studies planned for Odisha, Kerala and Tamil Nadu have been completed.

From these results, the following opportunities related to RTC production for intervention and innovations have been identified.

- 1. Popularisation of OFSP varieties in tribal areas of focus districts
- 2. Value addition opportunities for sweet potato, mainly by product diversification
- 3. Production and distribution of quality planting materials, particularly for sweet potato, yams and elephant foot yam.

### Annual Review Meeting and stakeholder's workshop conducted

The 2<sup>nd</sup> Annual Review meeting of the Food START project was conducted at Bhubaneswar from 06-07, November, 2013. A three day workshop of the stakeholder's was also conducted at Bhubaneswar. Experts from OTELP participated in the workshop. It was decided that establishment of quality planting material production unit in collaboration with OTELP will be done under the project.

### R & D Interventions

- Farmer's participatory sweet potato variety evaluation demonstrations were conducted in Gajapati and Koraput districts.
- Training on Entrepreneurship development conducted in Koraput. Wafer production from Cassava wet starch demonstrated and fully functional unit established.

Four community planting material production units in Koraput and two in Gajapati district of Odisha are being established



### 4.2.3 IMPACT OF IFAD ASSISTED SCAMPIS -Micro Irrigation Project

The project successfully demonstrated the improved water use efficiency in enhancing productivity of vegetable and other crops in 469 villages of programme areas of Gajapati and Koraput district by providing 15105 units of micro irrigation system covering 11500 households. The project already completed during 2012-13. The up-scaling programme during 2013-14 is given below:

| ITDA           | No of micro irrigation kits used |     |     |  |  |  |
|----------------|----------------------------------|-----|-----|--|--|--|
|                | Bucket kit Drip kit Treadle pur  |     |     |  |  |  |
| Koraput        | 147                              | 161 | 48  |  |  |  |
| Paralakhemundi | 760                              | 608 | 852 |  |  |  |
| Total          | 907                              | 769 | 900 |  |  |  |

Source: MIS 2013-14

# 4.2.4 Enhancing livelihood of tribal through Gravity based drip irrigation for vegetable cultivation on raised beds.

The agro climatic zone of the programme areas of OTELP is very much suitable for vegetable cultivation especially off-season vegetables. Vegetables are low in fat but content good amounts of vitamins and minerals. The tribal farmers of the programme areas mostly do not take required quantities of vegetables. Many tribal farmers consume only carbohydrates for which there is acute mal nutrition. Emphasis has been given for production of vegetables. Productivity & profitability from vegetable cultivation is increased by use of low



pressure drip irrigation system as compared to traditional flood irrigation. Poly house is very suitable to provide favorable climate for germination of seeds and protection of seedlings from adverse weather conditions and quality seedlings are raised. Considering the above facts 1487 (Balliguda 539 +Nawarangpur 178 +Koraput 432 + Gunupur 186 + Paralakhemundi 47 + Th.Rampur 105) farmers each with having 1000 M<sup>2</sup> area have taken



up commercial vegetable cultivation in the raised beds after laying pressure compensated drip kits by end of 2013-14. 1325 farmers from Balliguda , Koraput, Gunupur & Nawarangpur ITDAs areas have been linked to two vegetable cooperatives through facilitation of RNGO – Harsha Trust. Annual crop planning, arrangements of agro inputs, capacity building & market linkage to 60% (after meeting the requirement of the farmer) of the produce of each

Empowering Grassroots Democracy



farmer were ensured through vegetable cooperatives with facilitation of Harsha Trust. Funds required for capacity building of the vegetables grower were arranged from convergence under SCA to TSP. Agro inputs as per requirement of the beneficiaries were supplied by the vegetable cooperatives before sowing of the crop on credit for a period of four months. Funds required for the purpose was given from OTELP to vegetable cooperatives as interest free for four



months only. During marketing of the produce the farmers repay back the outstanding amount towards supply of the agro inputs by the cooperatives. TDCCOL facilitated supply of different fertilizers (DAP 120 MT & Urea 70MT) for the vegetable growers at the govt. approved rate through vegetable cooperatives. Funds required for establishing market linkage given by the vegetable cooperatives of the 60% produce of the farmers was provided from OTELP on interest free loan for a period of 3 months only. Each famer has got a net profit of Rs.8000 – 30400 with average of Rs.15000 from one crop from an area of 1000 M<sup>2</sup>. The achievements of the few farmers under the above programme are placed below:

| Farmer's name  | Village     | Block/ ITDA                 | Crops grown                           | Net profit (Rs)            |
|----------------|-------------|-----------------------------|---------------------------------------|----------------------------|
| Pipa Hikaka    | Begalguduni | Bissamkatak/<br>Gunupur     | Tomato +<br>Brinjal +<br>Bitter gourd | 30,400 from<br>one season  |
| Nikapoi Hikaka | Jambuguda   | Bissamkatak/<br>Gunupur     | Tomato +<br>Bitter gourd              | 18,040 from<br>one season  |
| Rasa Pradhan   | Gudrumala   | Balliguda                   | Cabbage                               | 24,000 from<br>one season  |
| Thabira Bhatra | Sirisi      | Papadahandi/<br>Nawarangpur | Chilly                                | 33,000 from<br>two seasons |

Vegetable cooperatives facilitated the vegetable growers for market linkage in Bissamkatak & Balliguda areas through RNGO – Harsha Trust. One sale centre was opened at Balliguda & sale of cabbage, tomato, cauliflower & beans was done directly by the famers eliminating middleman. Similarly, vegetables like tomato, brinjal, bitter gourd were procured from Bissamkatak areas by the cooperative and were transported in hired vehicle and market linkage was done through the bigger traders.

### 4.2.5 RKVY

On the basis of the learning of 2011-12 & 2012-13, a project on Sustainable Livelihood for Tribal of Odisha through production of Tuber Crops, Organic Spices and Vegetables including off season vegetables with a cost of Rs.339.27 lakh has been placed with OTELP for implementation of the programme under RKVY.



The programme envisages in enhancing the production and productivity of tuber crops, spices and vegetables by introduction of new varieties of these crops with better use of agro inputs and dissemination of technology with the tribal farmers. The crop, varieties, unit area & no. of house hold included in the above programme are indicated below:

| Crop              | Variety              | Unit area          | Household (nos) |
|-------------------|----------------------|--------------------|-----------------|
| Yam               | Odisha Elite         | 250 M <sup>2</sup> | 4910            |
| Elephant foot yam | Gajendra             | 100 M <sup>2</sup> | 4976            |
| Tapioca (Cassava) | Vellayani Hrushwa    | 100 M <sup>2</sup> | 1420            |
| Turmeric          | Lakadong             | 200 M <sup>2</sup> | 7430            |
| Monsoon Potato    | Kufri Jyoti          | 400 M <sup>2</sup> | 1000            |
| Brinjal           | Green Star/Blue star | 400 M <sup>2</sup> | 4811            |
| Tomato            | Utkal Kumari         | 400 M <sup>2</sup> | 7250            |
| Onion             | Nasik red            | 400 M <sup>2</sup> | 4000            |
| Radish            | Pusa Chetki          | 400 M <sup>2</sup> | 3550            |
| Total             | 39347                |                    |                 |

OTELP is promoting cultivation of these crops organically as because the tribal farmers of Odisha are mostly habituated with organic farming. No chemical fertilizer has been recommended for application in these demonstrations programme. However, the farmers in the programme areas have applied less dose of chemical fertilizer in vegetables only. The organic inputs supplied to the farmers for conducting the demonstrations are Trichoderma Viride, Azospirilium, Potash Mobilizing Bacteria, Phosphorus Solubulising Bacteria and De-oiled Neem cake.

### • Economics of RKVY demonstration

a) Crop wise cost of cultivation & average yield

| Details   | Turmeric | Yam   | Elephant<br>Foot Yam | Brinjal | Tomato | Radish | Onion | Monsoon<br>Potato |
|---|----------|-------|----------------------|---------|--------|--------|-------|-------------------|
| Cost of agro inputs<br>(Rs/ha) from<br>Agriculture Deptt.         | 46302    | 51122 | 123405               | 20226   | 22882  | 7150   | 11651 | 32864             |
| Cost of labour (Rs/<br>Ha) borne by<br>beneficiary                | 40000    | 30000 | 30000                | 40000   | 40000  | 20000  | 30000 | 30000             |
| Manures/fertilizer/<br>pesticides (Rs/Ha)<br>borne by beneficiary |          | 10000 | 10000                | 10000   | 10000  | 8000   | 10000 | 17000             |



| Total cost of<br>cultivation (Rs/Ha) | 96302  | 91122  | 163405 | 70226  | 72882  | 35150  | 51651  | 79864 |
|--------------------------------------|--------|--------|--------|--------|--------|--------|--------|-------|
| Average yield<br>(Qtls/ha)           | 122.08 | 122.86 | 304.57 | 117.68 | 118.50 | 109.50 | 142.43 | 96.5  |

### b) Benefit Cost Analysis

| Сгор                 | House<br>hold<br>(nos) | Area<br>(ha) | Average<br>yield<br>(Mt/ha) | Total<br>yield<br>(Mt) | Total<br>value of<br>produce<br>(Lakh Rs) | Total<br>cost of<br>production<br>(Lakh Rs) |         | BC<br>ratio |
|----------------------|------------------------|--------------|-----------------------------|------------------------|---|---|---------|-------------|
| Turmeric             | 7430                   | 148.6        | 12.2                        | 1812.92                | 326.33                                    | 143.10                                      | 183.22  | 2.28        |
| Yam                  | 4910                   | 122.75       | 12.28                       | 1507.37                | 301.47                                    | 111.83                                      | 189.65  | 2.70        |
| Elephant<br>foot yam | 4976                   | 49.76        | 30.45                       | 1515.19                | 303.04                                    | 81.31                                       | 221.73  | 3.73        |
| Brinjal              | 4811                   | 192.44       | 11.76                       | 2263.09                | 339.46                                    | 135.09                                      | 204.37  | 2.51        |
| Tomato               | 7250                   | 290          | 11.85                       | 3436.50                | 515.48                                    | 211.41                                      | 304.07  | 2.44        |
| Radish               | 3550                   | 142          | 10.95                       | 1554.90                | 155.49                                    | 49.98                                       | 105.51  | 3.11        |
| Monsoon<br>Potato    | 1000                   | 40           | 9.65                        | 386.00                 | 77.20                                     | 31.96                                       | 45.24   | 2.42        |
| Onion                | 4000                   | 160          | 14.24                       | 2278.40                | 227.84                                    | 82.72                                       | 145.12  | 2.75        |
| Cassava              | 1420                   | 14.2         | Crop not yet harvested      |                        |   |   |         |             |
| Total                | 39347                  | 1159.75      |                             | 14754.38               | 2246.31                                   | 847.40                                      | 1398.91 |             |

Source: MIS 2013-14

### Capacity building

- Trainers training of Agriculture Experts of ITDAs and Livelihood Experts at FNGO level were done on production technology of tuber crops, organic spices and vegetables at CTCRI / CHES, Bhubaneswar
- At village level 6930 farmers & farm women have been trained on improved technology of different crops taken up under RKVY through 231 training camps. The scientists from ICAR Institute & SAU, senior specialists from Agriculture Deptt. & retired scientist / specialist on the relevant subject imparted the training.

### 4.2.6 Promotion of WADI Model of Orchard

A fruit based agro-forestry system of plantation under upland situation comprises of a combination of perennial & annual plant species in same piece of land for maximum productivity from the unit area. Fruit trees like mango, cashew, litchi, orange etc are sufficient enough in providing higher economic return even under stress conditions as compared to



annual crops like paddy, pulses, oil seeds & even vegetable and spices. The different combination of fruit species and pure crop covered under the programme areas are mango + cashew, Mango + Litchi, Mango + Orange, and pure crops. The details of achievements are as follows:

| ITDA           | Coverage during<br>2013-14 (ha) | 2 <sup>nd</sup> Year Maintenance<br>2013-14 (Plantations of<br>2012-13) (ha) | 3 <sup>rd</sup> Year Maintenance<br>2013-14 (Plantations<br>of 2011-12) (ha) |
|----------------|---------------------------------|--|--|
| Koraput        | 0                               | 260.5  | 386.5  |
| Paralakhemundi | 42.9                            | 62.0   | 101.2  |
| Balliguda      | 100.5                           | 18.4   | 0  |
| Th. Rampur     | 40.0                            | 0  | 0  |
| Nawarangpur    | 343.6                           | 97.2   | 0  |
| Gunupur        | 205.0                           | 137.0  | 0  |
| Malkangiri     | 0                               | 0  | 160.0  |
| Total          | 732.0                           | 575.1  | 647.7  |

Source: MIS 2013-14

### 4.2.7. Inter cropping in WADI

1151 WADI farmers have taken up intercropping with vegetables and spices in the programme areas or OTELP during 2013-14. On an average each WADI farmer has got a net profit of Rs.5250.

### 4.2.8. Promotion of technologies / innovations under changing climate

- a) Promotion of SRI: Anaerobic decomposition of crop residues under submerged situation significantly contributes to green house gas production through emission of methane. In SRI preventing submergence of water & creating aerobic condition reduces green house gas emission (Dr. PK Roul, 2009, Souvenir Resource Management in crops & cropping system under changing climate, Indian Society of Agronomy, Odisha).
- b) Management of rainfed crop: Rainfed agriculture is mostly affected by climate change. Hence, rain water management is promoted in rainfed farming. Moisture is conserved in situ for rainfed cropping after contour bunding in the field. Besides, ploughing across the slope is promoted for conservation of moisture. 5% model, farm ponds are constructed in the programme areas for supporting the crops during failure of monsoon. Promotion of short duration varieties of different crops, growing of non paddy crops in upland, timely sowing of crop are to be encouraged for increase of productivity in agriculture under climate change.
- **c) Promotion of micro irrigation techniques:** To meet crop water demand optimally & cope up with climate change, higher water use efficiency is required which are achieved



by adopting micro irrigation techniques. Micro irrigation systems covering bucket kit, drum kit and drip kit have been used in the programme areas especially for vegetable crops for increase of productivity.

### 4.3 Livestock and Aquaculture Production

In OTELP operation villages about 75% households are below the poverty line (BPL) & 24% are absolute landless. These tribal families depend on subsistence agriculture. OTELP adopts micro watersheds as a unit of planning & implementation with community participation for livelihood promotion including farm, off farm & nonfarm enterprise interventions. The income from traditional agriculture being low due to seasonal (rain fed) is unable to provide full employment for working class. The major issues for the poor & landless tribal are food security & risk spreading through subsidiary income. Therefore, there is dependency on non-farm activities like poultry & goatery for supplementary income. Backyard poultry farming requiring hardly any infrastructure set-up is a potent tool for upliftment of the poorest of the poor. Small-scale poultry production through individual broiler farming also has the potential to stimulate economic growth of resource poor households. In order to overcome this problem, it may be necessary to take up scientific rural poultry production by introduction of low input technology dual purpose birds & improved broiler farming so as to meet the requirement of the rural sector where the poultry farming constitute a source of subsidiary occupation, generating subsistence income to boost the nutritional standards, income levels and health of rural masses.

The income from this activity, equivalent to 200 wage days reduces outward migration and helps the family to invest in existing resources-most notably in her land (arable or homestead) further augmenting the sufficiency in the hither to deficit house hold.

Looking into vast scope of Poultry farming both in terms of backyard poultry farming with low input technology & dual purpose birds & improved broiler farming amongst the rural poor & tribal families in OTELP operational area, poultry was taken as focused livelihood intervention in OTELP operational area with the assistance under SCA to TSP & SCA to SCSP. The intervention were as follows:

- Establishment of day old chick rearing units (mother units) by the women SHGs.
- Backyard poultry & Duckery farming by the tribal families
- Improved broiler & layer farming by the individual tribal families

The programme also focused on goat rearing and pisci-culture in an improved manner for sustainable livelihood of the tribal farmers in OTELP blocks of tribal districts of the state. Each of these programme are elaborated below:

# 4.3.1 Establishment of day old chick rearing units (mother units) by the women SHGs:

As the day old chicks are vulnerable to predators in free range conditions, the day old chick rearing units were established so as to rear the day old chicks in a reasonably controlled



### **Empowering Grassroots Democracy**

condition with proper brooding facility, balanced feeding, vaccination & medication up to 28-30 days and thereafter provided individual tribal households to be reared in open range conditions. The poultry birds Vanaraja, Colour plus, Rainbooster & Kuroiler etc are reared under backyard poultry programme.



They are multi coloured birds with high egg



laying capacity like exotic layers and high weight gain like those of broilers. The SHG managing the mother chick unit for a period of 28 days makes an additional income of Rs. 9000 to 10000 per cycle & there by a SHG receives an additional income of Rs.45000 to 50000 per annum in 5 cycles. As on 31<sup>st</sup> March,2014, 92 Nos of Mother Chick Units are functional under OTELP

operational area and around 61 nos of MCUs functional under Non-OTELP villages within the jurisdiction of 9 ITDAs of ST & SC Development Department totalling to 153 functional Mother Chick Units.

### 4.3.2 Improved Broiler Farming:

Under rural poultry farming , improved broiler farming has been introduced by individual tribal households in small units of 400 chicks capacity. The tribal family is provided assistance to build a shed of 400 sq.ft. for rearing 400 nos day old broiler chicks (Cobb 400 ) for a period of 35 to 40 days. Efforts are also made to build the capacity of the tribal famers in shed management, chick management, feeding, vaccination & water management etc. 380 nos. individual broiler units are already in place and functioning as on 31<sup>st</sup>



March, 2014.Each tribal family earns on an average additional income of Rs.4000/- per cycle and thus earns Rs.20,000/-per annum from this livelihood activity by devoting 1 to



2 hours per day. In addition to this the Poultry Cooperative also transfers a part of its profit as dividend at the end of the financial year as per quantity of chicken supplied to the Co-Operative. The poultry Co-Operative has passed on Rs.2/- per Kg as additional incentive to the members managing broiler units. The improved poultry farming (Broilers) is facilitated by SwornaJyoti Womens' Poultry Co-Operative Federation Ltd.(SWPCFL).The Federation provides the backward



& forward linkages for broiler farming through its district level co-operatives in ITDAs Koraput, Nawarangapur & Gunupur. The following no of broiler units have been established as on 31<sup>st</sup> March,2014 in the ITDAs mentioned below:

| Sl.No. | Name of the ITDA | No. of Broiler Units<br>(400 chicks' capacity) established |
|--------|------------------|--|
| 1      | Koraput          | 150  |
| 2      | Gunupur          | 50   |
| 3      | Nawarangpur      | 180  |
|        | Total            | 380  |

Source: MIS 2013-14

### 4.3.3 Supply of Chickens to ITDA Schools:

The quality chickens are supplied by the poultry Co-operative & the SHGs to the residential school hostels of ITDAs & Ashram Schools of the ST & SC Development Deptt. on regular basis at weekly intervals. As per norm each schoolchildren staying in the residential hostel is provided 100gms chicken once in a week and eggs twice in a week. Out of these 158 nos of ITDA residential schools with student strength of 30,709 are provided chickens once in a week preferably on Sunday. By promotion of poultry activities as an important livelihood intervention, this has not only increased the per capita income of the tribal families but also provides nutritional supplement to the poor tribal household and high quality protein rich diet to the school going children. The priority has been given for supply of quality chickens to the ITDA residential school hostels on regular basis. This initiative would ensure high quality protein rich diet to the school going children. The priority enterprise will provide a sustainable livelihood for the poor landless, small and marginal farmers of the tribal areas of Odisha. The status of supply of chickens to ITDA Schools is as follows:

| Sl.No. | Name of the ITDA | No. of ITDA schools supplied<br>chicken during 2013-14 |
|--------|------------------|--|
| 1      | Koraput          | 43   |
| 2      | Gunupur          | 106  |
| 3      | Nawarangpur      | 37   |
| 4      | Malkangiri       | 12   |
| 5      | Paralalkhemundi  | 13   |
| 6      | Th.Rampur        | 5  |
|        | Total            | 216  |

Source: MIS 2013-14

### 4.3.4 Establishment of Vanaraja Layers Parent Stock Farm:

In order to meet the demand of day old chicks for the Mother Chick Units, fund has been sanctioned under SCA to TSP during 2011-12 through the ST & SC Dev. Deptt. for establishment of Vanaraja Parent Stock farm with a capacity to rear 16000 Vanaraja layers out of the incentive grant of Rs.238.38 lakhs in ITDA, Koraput. An area measuring 28.00 acres in village Dimiriput of Koraput block has been provided with advance possession in favor of ITDA, Koraput and the civil



works construction is in full wing. Further Rs.102.58 lakhs has also been sanctioned under article 275 by MoTA during 2013-14 for establishment of a Goat Breeding cum Training Centre at the same place.

### 4.3.5 Poultry Co-operatives:

The SwornaJyoti Women's Poultry Co-operative Federation Ltd.(SWPCFL), with its office at Jeypore, Koraput and HARSHA TRUST have made agreement with OTELP and the ITDAs to look after the poultry and Goatery activities being established in the tribal districts of Koraput, Nawarangapur & Rayagada and provide the backyard and forward



linkages to the tribal families rearing broilers as well as Vanaraja /Kuroilers/ Rain booster variety poultry birds under backyard poultry farming. The Federation through its district level poultry co-operatives provides the day old chicks, feed, medicines, and vaccines at the doorstep apart from providing the marketing facility to the beneficiaries. There is a plan to promote poultry cooperative in each OTELP functional district. The SWPCFL has also been entrusted to facilitate poultry & goatery projects in ITDA, Koraput,

Nawarangapur sanctioned under SCA to TSP during 2014-15. Mean while a Poultry company has been established namely "Kandhamal Poultry Development Corporation Ltd.(KPDCL) registered under Company Act during May,2012 under ITDA, Balliguda in the district of

Kandhamal..Similarly OPOLFED shall facilitate rural backyard & layer poultry farming projects in ITDA, Parlakhemundi in Gajapati District.

Duck rearing (Indian Runner) gives on an average 150 to 200 eggs per year has also been started as a pilot project in the night shelters established under backyard poultry programme covering 79 nos. of households under ITDA, Koraput. The result from these activities quite encouraging as the tribal family earns an





additional income of Rs.50/- to Rs.60/- per day by selling duck eggs. The poultry cooperative has also placed advance with Central Avian Research Institute (CARI), Govt. of India, Bhubaneswar to supply 2000 nos. of day old Khaki Campbell ducklings during May, 2014. This variety of ducks (Khaki Campbell) gives on an average 250 to 300 eggs per year.

The SWPCFL has also started layer farming in the individual broiler units of 400 sqft. in 7 tribal households under ITDA, Koraput and in 3 MCU under ITDA, Nawarangpur by providing 200 nos. layer birds (BV – 300) to each household which are being reared in the broiler units. The birds are now 5 months of age and laying 100 to 120 eggs per day. It is estimated that each family rearing layer shall get additional income of Rs.15,000/- to Rs.18,000/- in a year from 200 birds. In a similar way the cooperative has also introduced a dual purpose bird called "Gramapriya" to be reared in the night shelters under scavenging condition. This bird has the capacity to lay 160 to 180 nos. of eggs upto 72 weeks. 48 tribal household have been covered under this programme during 2013-14.

### 4.3.6 Fund Flow under SCA to TSP:

ST & SC Development Deptt has sanctioned Rs. 1405.94 lakhs during 2013-14 for implementing backyard poultry, broiler & layer poultry farming, improved goatery activity and establishment of a Poultry pellet feed mill at Jeypur in the district of Koraput.

### 4.3.7 Fund Flow under SCA to SCSP:

In order to enhance the livelihood of Scheduled Caste Community under SCA to SCSP through various Livestock related interventions i.e. poultry, goatery, dairy, duckery & fishery, an amount of RS.2198.09 Lakhs has been sanctioned by the ST & SC Development Departmrent to benefit 5203 SC & BPL beneficiaries under OTELP,ITDAs. Rs. 658.89 lakhs has been sanctioned by ST & SC Development Deptt. during the year 2013-14. The guidelines for implementing livestock activities along with the incentive based payments on activity wise to paravets & livestock Inspectors to be paid by the ITDAs, FNGOs, Poultry Cooperatives, Producer groups & VDC have also been communicated to all ITDAs along with transfer of fund required towards the investment cost, CB and Incentive to be paid to the paravets and livestock inspectors for the first 2 quarters.

### 4.3.8 OTELP Intervention under Improved Goatery Farming:

The present goat rearing practices amongst the tribal is very traditional and unscientific.

Kid mortality and mother mortality are as high as 40 % and 30% respectably. Hardly any tribal family avails veterinary service available from the government's veterinary department. OTELP plan is to further strengthen the services like regular health check up at the doorstep and regular vaccination, medication provided by the trained Para-veterinarians along with improvement of the local breeds by supply of improved quality Bucks. Thus it will restrict the kid mortality



and mother mortality to 15% and 10 % respectively. Improved shed construction, enhanced knowledge of tribal about improved rearing practice, with crèche for kid goats, and feed supplement for pregnant and lactating mother goats will help in mitigating the risks in production. Proper feeding practice (preparation of dry fodder and silage, azolla cultivation also helps in increasing the immunity in goats and in increasing their body weight within a short duration. With the



existing skill a tribal can easily rear 6 to 8 mother goats to get additional annual income of Rs.15,000 from the 3<sup>rd</sup> year of involvement in this activity.

In view of this goatery projects were sanctioned by the ST & SC Development Department for 900 ST families under ITDA, Balliguda and Gunupur for a projected cost of Rs.337.50 lakhs under SCA to TSP during 2012-13. Similarly, Rs.240.01 lakhs has also been sanctioned during 2012-13 under improved goatery programme for 1200 Nos. poorest of the poor tribal families under ITDA, Koraput, Malkangiri and Nawarangpur. Apart from this Rs.637.12 lakhs has been sanctioned to cover 1600 tribal families for OTELP Plus Blocks under ITDA, Paralakhemunid, Nawarangpur and Koraput under SCA to TSP by the ST & SC Development Department during 2013-14. Through this project each tribal family is provided 5 to 6 mother goats and one buck for every 4 to 5 families. Till date 946 nos. of goat sheds have been constructed and 2970 female goats & 108 nos. of improved bucks for breed up-gradation have been provided in OTELP project areas.

The existing goat cooperative will help the tribal by providing services like regular medication, vaccination, timely castration, imparting training on improved goat rearing, grooming of paravets, arranging feed, insurance and sale of goats at a fair price etc. The focus will be on women rearers involved in goat *rearing and sustainably* even after the end of the project.

### 4.3.9 OTELP Intervention Under Pisci Culture through DHAN Foundation:

Thus OTELP planned to promote inland fishery to maximize the utilization of existing water bodies & generate additional income for the farmers in Koraput & Nawarangapur district through DHAN Vayalagam (Tank) Foundation (DVTF). The DVTF is giving



importance to conservation of minor rain fed water bodies such as Tanks and Ponds to receive water through rain water runoff during South west and North east monsoon period, only from their free catchments area without any other supplemental source. Normally these water resources are used for irrigation as well as for percolation. DHAN is giving importance to develop community Inland fisheries development in these rural minor rainfed water bodies by providing "dead



storage" in these water bodies. Dead Storage is the stored water below the sill level of Sluice which cannot be taken by gravitational force for irrigation. This will help to store water for two more months which help to rear fishes additional for two months and also helps as drinking source to cattle. The main objectives are to utilize existing water bodies, Supplement food & nutrition security through fish consumption in tribal villages and additional income by developing skills in Pisciculture.

*In order to implement improved fish farming an agreement was executed* between the OTELP and DHAN Vayalagam (Tank) Foundation, a public charitable Trust, Madurai, Tamilnadu since September 2012 for piloting inland fishery in 10 village ponds and 20 farm ponds as



additional livelihood and added nutrition activities in Dasmantpur Block of Koraput district under ITDA, Koraput at a projected cost of Rs.11.58 lakhs. During 2012-13 inland fishery was piloted in 24 individual farm ponds & 10 community ponds under ITDA, Koraput with community approach covering about 140 households through two primary producers' group (PPG).

After seeing promising prospects it is decided to expand inland fishery in 50 community managed tanks

& 70 individual ponds under ITDA Koraput & Nabarangpur under SCA to TSP during 2013-14. Nabarangapur is highly feasible for fish rearing as large numbers of village ponds are available in the district. Apart from that second crop was also geared up in thirty water bodies as continuation of previous Piloting project under ITDA, Koraput. After piloting fish rearing activities in OTELP areas of Dasmantpur block last season, some lessons learnt which are helpful in designing the course of action for fish rearing in the new project. The steps were taken up towards organizing the community. The fish growth & production is also an important instrument which highly motivates the community to continue this activity in a scientific way. Total 61 farm ponds & 29community/ SHG managed ponds in four blocks of Nabarangpur and 38 individual farm ponds & 21 community/ SHG managed ponds are supported by ITDA, Koraput were taken up for fish rearing activities in three blocks of Koraput. More than 600 ST households were covered in this project. In short about 750 poor tribal families have been covered through 176 water bodies during the season in 2013-14 in both projects under ITDAs Koraput & Nabarangpur.

| Sl No | Activity        | ITDA, Koraput | ITDA, Nabarangpur | Total |
|-------|-----------------|---------------|-------------------|-------|
| 1     | No of Blocks    | 4             | 4                 | 8     |
| 2     | No of villages  | 34            | 17                | 51    |
| 3     | Farm ponds      | 56            | 61                | 117   |
| 4     | Community ponds | 30            | 29                | 59    |
| Total |                 | 86            | 90                | 176   |



### Major Project Activities Undertaken

- Five primary producers' group (PPG) in Koraput Dist. formed and six primary producers' group (PPG) are in process in Nabarngpur Dist
- All the ponds pre stock liming is done @100 to 200 kg/acre as per the pond condition and Post stock liming ensured during winter
- 350 finger lings stocked in farm ponds and 1000 to 2000 finger lings stocked in community tanks as per the water area.
- Raw cow dung applied regularly pre stock as well as monthly once post stock.
- Pro biotic used for disease control and growth of plankton
- At least three partial harvests per season were ensured to train the farmers about multiple stocking and harvest for better yield.

### Impact of Pisciculture in Tribal Area

### Financial

- Income from individual farm pond ranges from Rs.5000 to Rs.10000
- Income from community tank ranges from Rs.12000 to RS.30000
- Money earned through pisci culture partially used for agriculture (Summer Paddy Harvest) & Special Saving for coming season fish rearing.

### Social & Environmental

- Awareness was Created on Systematic Fish Rearing
- More Farmers are coming forward to take up Fish Rearing
- More ponds were created with focus on Inland fishery
- The farmers realized their responsibility resulting increased production and Income

### Way Forward

In undivided Koraput district water resources are plenty in form of tanks and reservoir. There is a need to have context specific design and up scaling based on the experience gained. Most important is to build social capital and groom them as entrepreneurs .The

inland fishery will definitely become a source of income as well as food and nutrition security for tribal households.

### 4.4 Rural financial services

Rural financial services ensure financial inclusion of the vulnerable groups. It provides financial services at door step. As per financial inclusion policy, Govt. of India, all households are to be covered under formal







banking institutions. In spite of all efforts, the banking services could not reach to the targeted families who are deprived since ages as because the banking infrastructures in the programme areas are very poor. One Regional Rural Bank caters services to the whole block covering more than 200 villages. People face recurring problems in accessing banking services like saving, loan etc.

Analyzing the peripheral environment, the programme

was designed to include rural financial services as a sub component of livelihoods enhancement component. Self Help Groups are promoted taking 10 to 12 women members through which these micro financial services were provided. RFS has two major areas of support. First, providing the seed capital support to the newly formed SHGs or dysfunctional SHGs to stabilize their internal process of thrift and credit. Second, revolving fund support is given to SHG to take up various income generating activities by the women SHGs.

| Particulars   | Coverage |
|---|----------|
| Total No of SHGs  | 4273     |
| No of Groups conducting meeting regularly                       | 3846     |
| No of group following rotational leadership                     | 1137     |
| No of Groups undertaking savings regularly                      | 3846     |
| Cumulative Savings Rs. In Lakhs                                 | 1208.03  |
| Average Savings per SHG Rs. In Lakhs                            | 28271    |
| No. of SHGs taking Loan from RFS                                | 2145     |
| % of Members of SHGs taking loan from these groups              | 50.2%    |
| Amount of Loan Taken by these groups from RFS Fund Rs. in Lakhs | 346.59   |
| Per capita loan by SHGs Rs. In lakhs                            | 16158    |
| Amount Repaid by these groups Rs. In Lakhs                      | 64.71    |

Source: MIS 2013-14

### 4.4.1 Gradation details

The programme has adopted the strategy to assess the performance of the SHGs on half yearly basis. The Performa indicators are developed for categorizing the groups. It helps in taking up appropriate steps in providing capacity building and financial support to these groups. Efforts are taken for the poor performer SHG to bring them up. The details are given in the table.



Empowering Grassroots Democracy

| SHG Gradation | No of SHG |
|---------------|-----------|
| А             | 2242      |
| В             | 1439      |
| С             | 404       |
| Non-Graded    | 188       |
| Total         | 4273      |

Source: MIS 2013-14

### 4.4.2 SHG Federation & Apex Federation

Institutions are highly essential for sustainable of the programme. As the institutions are promoted at grass root level and managed by the community, hence after withdrawal of the programme these communities based organizations will keep supporting for all



aspects. SHG federations are promoted at VDC level where



all SHGs are part of this institution. This will provide technical guidance & monitoring the activities being taken up by SHGs. These SHG federations are responsible for the management of the Rural Financial Services. Besides, these institutions are also working as a pressure group at the village level for taking up

various social causes like education, health and sanitation etc.

Apex federations are promoted at block level within the programme operational areas. It provides both technical and managerial services to SHG & SHG federation. The details are as follows;

| Name of ITDA   | No of MWS | No of SHG Federation<br>Promoted | No of Apex cooperative promoted |
|----------------|-----------|----------------------------------|---------------------------------|
| Baliguda       | 59        | 50                               | 2                               |
| Koraput        | 70        | 50                               | 0                               |
| Nabarangpur    | 29        | 29                               | 0                               |
| Malkanagiri    | 30        | 30                               | 0                               |
| Paralakhemundi | 60        | 60                               | 4                               |
| Th.Rampur      | 60        | 57                               | 1                               |
| Gunupur        | 50        | 49                               | 0                               |
| Total          | 358       | 325                              | 7                               |

Source: MIS 2013-14



### 4.4.3 Linkage with financial institutions

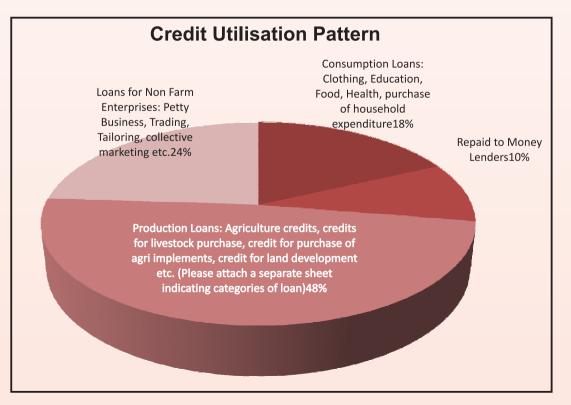
It is not just a support from the project rather; mainstreaming these groups was the priority for the programme. To avail financial linkage from the formal financial institutions is the core objective of the programme. RFS triggers these groups in supporting micro credit to demonstrate access and management of micro finance operations. Subsequently these groups are linked with banks for higher credit linkage for taking up income generating activities. The details of the SHG bank linkage made with facilitation of the programme are given below:

| Linkage with banks                 | Rs. In lakh. |
|------------------------------------|--------------|
| No. of SHG in cumulative           | 1982         |
| Cumulative fund mobilization       | 1149.62      |
| No. of SHG during the year         | 187          |
| Fund mobilization during last year | 105.32       |

Source: MIS 2013-14

### 4.4.4 Credit utilization pattern

Credit always plays a pivotal role in enhancing livelihoods option of the poor. As it is mentioned above that access to the formal banking institutions are difficult on the part of poor tribal due to poor banking infrastructure facilities, remoteness etc. hence, SHG movement was emphasized and it plays crucial role in providing financial support to the poor for all kinds of activities in inaccessible areas.





### 4.4.5 Microenterprise activities

The programme is eyeing on promoting large numbers of feasible microenterprise through SHG and its federation. It is key pin for enhancing livelihood activities of tribal poor leading to a better livelihoods



option. The SHG and its federation has availed loan for taking up different types of



business activities particularly value addition of surplus agriculture produces and Non-timber forest products. It helps them to be empowered in terms of socially, economically and politically. The different kinds of microenterprises are preparing tamarind cake,

turmeric powder, flour mills, oil extraction unit, chick feed unit, nutritional food processing unit, leaf plate making unit etc. The credit utilization pattern indicates that maximum loan is meant for business and productive purposes. Above pictures depict SHGs involvement in different micro enterprise activities.



### Chapter 5

### Community Infrastructure Fund (CIF) & Development Initiatives Fund (DIF)

# 5. Community Infrastructure Fund (CIF) and Development Initiatives Fund (DIF)

The programme area is characterized by hilly terrain, scattered small settlements and low density of population. As a result, the area lags behind in the provision of rural infrastructure though significant resources are being allocated by Government.

Therefore, in addition to general watershed treatment and livelihoods based approach, provision has been made by the programme for additional components like Community Infrastructure Funds and Development Initiatives Fund to meet community needs and to support and strengthen the interventions under livelihoods support activities.

### 5.1 Community Infrastructure fund (CIF):

The Community Infrastructure Fund is meant to finance community infrastructure needs identified by the community. The principal aim is to fill critical gaps for small and remote communities which may not be covered in near future under other mainstream rural infrastructure development programme as available funds are allocated first to communities with higher population.

Programme adopted a strategy to access CIF through a demand driven approach with communities identifying critical infrastructure constraints. The priority area under this component are- (i) improving the linkages to market for those communities which are producing significant surplus, particularly during the monsoon season (ii) reducing the workload of women by ensuring supply of safe drinking water close to the habitations, (iii) improving the access to food supply through PDS (iv) child care (v) health care, (vi) supplementing educational infrastructure etc. Besides, economic activities like creating work sheds for the communities for income generating activities like NTFP processing unit, storage centers, mills etc. can also be covered. These facilities are used by the communities and managed by the VDCs through the common user groups. Emphasis has been given on community responsibility for maintenance of the infrastructures so developed and women are encouraged to take up this responsibility. The major activities taken up so far under this sub-component are given in the table below:

| S1. | Activity                      | Unit | During 2013-14 | Cumulative<br>up to 2013-14 |
|-----|-------------------------------|------|----------------|-----------------------------|
| 1   | Multipurpose community center | nos. | 16             | 162                         |
| 2   | Storage godown                | nos. | 23             | 449                         |

| 3  | Drying Yard  | nos. | 31  | 203  |
|----|--|------|-----|------|
| 4  | Threshing Platform   | nos. | 5   | 7    |
| 5  | Work shed  | nos. | 12  | 36   |
| 6  | Villages under piped water supply project for (gravity fed)          | nos. | 3   | 154  |
| 7  | Villages under piped water supply projects (sanitary well/bore well) | nos. | 1   | 40   |
| 8  | Toilet & Bathroom  | nos. | 426 | 8093 |
| 9  | Chuan / Open well  | nos. | 12  | 76   |
| 10 | Agricultural Pump set  | nos. | 0   | 38   |
| 11 | Village approach road/causeway/<br>culvert                           | nos. | 0   | 5    |
| 12 | Oil extraction mill  | nos. | 5   | 6    |
| 13 | Poultry Firm   | nos. | 4   | 11   |
| 14 | Community animal Shed  | nos. | 1   | 7    |
| 15 | Rice / flour / dal/ turmeric processing unit                         | nos. | 1   | 7    |
| 16 | Saloon   | nos. | 0   | 1    |
| 17 | Solar Lantern  | nos. | 0   | 111  |
| 18 | Water storage tank   | nos. | 6   | 12   |
| 19 | Solar Street Lights  | nos. | 62  | 132  |
| 20 | Bore well  | nos. | 0   | 1    |

Source: MIS 2013-14

### 5.2 Development Initiative Fund:

As an innovative strategy in programme design, Development Initiative Funds provides an additional funding with adequate flexibility to address to areas of demand as expressed by communities through the participatory processes during the course of programme implementation. This fund also supplements to those components / interventions of the programme which yields very good results. It also enables the communities to implement activities which are not accommodated in other programme components. Under this component, provisions has been made for targeting the traditionally excluded households e.g. single women headed households, landless, destitute, physically challenged and those who are unable to be part of the SHG or other income generating activities.

The activities under DIF are broadly divided into four categories such as;

• Supplementary funding to other programme component

- Experimenting / up scaling innovative activities for livelihoods
- Promotion of low cost, time & labour saving technologies for reduction of drudgery
- Support to the vulnerable and destitute households living in the programme villages.



Gravity fed water supply system



Smokeless chulla



Individual toilet & bathrooms



Community managed storage go-down

| <b>C1</b> | ٨                  |              |         | Unit      | During  | 0012 14  | Cumulat      | ino  |
|-----------|--------------------|--------------|---------|-----------|---------|----------|--------------|------|
| The act   | ivities undertaken | so far under | this su | ıb-compon | ent are | given in | the table be | low: |

| S1. | Activity                           | Unit     | During 2013-14 | Cumulative<br>up to 2013-14 |
|-----|------------------------------------|----------|----------------|-----------------------------|
| А.  | Supplemental funding to other prog | ramme co | omponents      |                             |
| 1   | Multipurpose Community Center      | nos.     | 1              | 77                          |
| 2   | Storage godown                     | nos.     | -              | 47                          |
| 3   | Mother chick Unit                  | nos.     | -              | 37                          |
| 4   | Backyard Poultry                   | hh       | 243            | 1,990                       |
| 5   | Diary unit                         | nos.     | -              | 1                           |
| 6   | Goatery shed                       | nos.     | 93             | 319                         |
| 7   | Backyard kitchen garden            | hh       | 5              | 6,575                       |
| 8   | Nutritional garden (schools)       | nos.     | -              | 351                         |

| 9  | Drying yard  | nos.        | 32                 | 191   |
|----|--|-------------|--------------------|-------|
| 10 | Bathing ghat/ river steps  | nos.        | 20                 | 54    |
| 11 | Village drain  | nos.        | 21                 | 23    |
| 12 | Market yard  | nos.        | 5                  | 18    |
| 13 | Introduction of Buck   | nos.        | -                  | 18    |
| 14 | Tube well Platform   | nos.        | 171                | 223   |
| 15 | Night shelter  | nos.        | 382                | 764   |
| 16 | Yam Seed Production  | hh.         | -                  | 931   |
| 17 | Retaining Wall/ guard wall   | nos.        | -                  | 8     |
| 18 | Extension of Cement Canal to the existing one                      | rmt.        | 210                | 1,718 |
| 19 | Gully Control Structures   | nos.        | -                  | 12    |
| 20 | Renovation of well   | nos.        | -                  | 2     |
| 21 | Supply of Sunflower seeds to<br>Households                         | hh.         | -                  | 125   |
| 22 | Earthen canal  | rmt.        | -                  | 107   |
| 23 | Earthen check dam  | nos.        | -                  | 7     |
| 24 | Renovation of D/W and canal  |             | -                  | 5     |
| 25 | Earthen bund   | nos.        | -                  | 1     |
| 26 | Well/ Chuan  | nos.        | 1                  | 14    |
| 27 | Lift Irrigation projects (river/ open source/ bore well/ dug well) | nos.        | 1                  | 2     |
| 28 | Poly greenhouse nursery  | nos.        | 8                  | 17    |
| 29 | Masonry Drop structure   | nos.        | -                  | 2     |
| 30 | Gravity Flow Irrigation Structure                                  | no.         | -                  | 6     |
| 31 | Gravity Fed Drinking Water Project                                 | no.         | 6                  | 77    |
| 32 | Drip Irrigation System   | nos.        | 7                  | 29    |
| 33 | Well   | nos.        | 4                  | 12    |
| 34 | WADI model plantation  | ha.         | -                  | 133   |
| 35 | Vegetable Cultivation (By Group)                                   | nos.        | 43                 | 79    |
| 36 | Bore well  | nos.        | -                  | 1     |
| В. | Experimenting / up-scaling innovativ                               | ve activiti | es for livelihoods |       |
| 37 | Grain storage bin (Silo)   | nos.        | -                  | 3,966 |
| 38 | Work shed  | nos.        | 2                  | 41    |



### Empowering Grassroots Democracy

| 20 | Arimalahad                                      |           |                  | 10           |
|----|---|-----------|------------------|--------------|
| 39 | Animal shed                                     | nos.      | 6                | 18           |
| 40 | Cashew processing unit                          | nos.      | -                | 6            |
| 41 | Fruit processing unit                           | nos.      | -                | 1            |
| 42 | Rice / flour / dal processing unit              | nos.      | -                | 23           |
| 43 | Tamarind processing unit                        | nos.      | 1                | 29           |
| 44 | Medicinal plant unit                            | nos.      | -                | 1            |
| 45 | Bee keeping box                                 | hh.       | -                | 19           |
| 46 | Sanitary napkin unit                            | nos.      | -                | 1            |
| 47 | Tailoring unit                                  | nos.      | -                | 16           |
| 48 | Leaf plate stitching                            | nos.      | 3                | 12           |
| 49 | Drug bank                                       | nos.      | -                | 2            |
| 50 | Turmeric boiling Drum                           | nos.      | 231              | 492          |
| 51 | Power tiller with accessories                   | nos.      | 1                | 6            |
| 52 | Farmers information center                      | nos.      | -                | 1            |
| 53 | Oil Extracting Unit                             | nos.      | 15               | 41           |
| 54 | Brick Making Machine                            | nos.      | -                | 5            |
| 55 | Agricultural pump set                           | nos.      | 529              | 1,123        |
| 56 | Television set with accessories                 | nos.      | 2                | 4            |
| 57 | Refrigerator                                    | nos.      | 1                | 11           |
| 58 | Barbed wire fencing                             | ha.       | 2                | 4            |
| 59 | Vermi compost                                   | nos.      | 14               | 558          |
| 60 | Mobile Charging Station                         | nos.      | -                | 3            |
| 61 | Hydram  | nos.      | -                | 6            |
| 62 | Grain storage bin (Silo)                        | nos.      | -                | 3,966        |
| C. | Promotion of low cost, time & labor<br>drudgery | ar saving | technologies for | reduction of |
| 63 | Smokeless Chula                                 | hh.       | 259              | 2,859        |
| 64 | Toilet & Bathroom                               | nos.      | 26               | 2,000        |
| 65 | Water Filter                                    | nos.      | -                | 998          |
| 66 | Farm equipments                                 | hh.       | 34               | 4,113        |
| 67 | Solar lantern                                   | nos.      | 28               | 867          |
| 68 | Water storage tank                              | nos.      | 5                | 31           |
|    |   |           |                  |              |

| D. | Support to the Vulnerable and Destitute Households               |      |     |       |  |  |
|----|--|------|-----|-------|--|--|
| 69 | Support to vulnerable groups<br>(goatery, poultry, roofing etc.) | hh.  | 747 | 3,313 |  |  |
| 70 | Saloon   | nos. | -   | 4     |  |  |
| 71 | Cycle Mart   | nos. | -   | 5     |  |  |
| 72 | Grocery shop   | nos. | 57  | 140   |  |  |
| 73 | Sound box with generator set                                     | nos. | 2   | 9     |  |  |
| 74 | Stretcher  | nos. | -   | 1     |  |  |
| 75 | Small Business (Vending)   | nos. | 99  | 340   |  |  |
| 76 | Roofing for Landless HH  | hh.  | 87  | 324   |  |  |
| 77 | Tribal music group   | nos. | 8   | 13    |  |  |
| 78 | Off farm Equipments (carpentry, blacksmith, masons)              | nos. | 65  | 103   |  |  |

Source: MIS 2013-14

The major outcomes of activities are detailed in the following table:

| Outcomes  | During 2013-14 | Cumulative<br>Total Up to<br>2013-14 |
|---|----------------|--------------------------------------|
| Villages served with piped drinking water                                     | 73             | 571                                  |
| Villages covered with complete sanitation<br>(individual toilet and bathroom) | -              | 210                                  |
| Households covered with Total Sanitation<br>(individual toilet and bathroom)  | -              | 8564                                 |
| Vulnerable/ Destitute Household supported with livelihood activities          | 1,429          | 5,059                                |
| Covered with storage facilities (Multipurpose<br>centers and storage go-down) | 108            | 654                                  |

Source: MIS 2013-14



## Chapter 6

### **Support for Policy Initiatives**

The Odisha Tribal Empowerment & Livelihoods Programme (OTELP) in order to further extends its livelihoods and food security agenda, identified land as a critical area of intervention. While proactively organizing various workshops, focussed group discussion etc, OTELP has been coming out with measures which can be implemented by the Government as part of its policy to improve the existing livelihoods of the tribal population at large. However, land has been focal to such initiatives under the support for policy initiative component.

Therefore, it has been one of the prime objective of OTELP to cover all the absolute landless households in the Programme village by facilitating in grant of land titles. Through various proactive measures and with the active collaboration of Revenue & Disaster Management Departmet Govt. of Odisha, lands have been provided to the landless families under OPLE (Odisha Prevention of Land Encroachment) Act, 1972, OGLS (Odisha Government Land Settlement) Act, 1962;



Mo Zami Mo Dhia programme and Vasundhara Schemes. These combined with restoration of land under Regulation 2 of 1956 as well as Grant of individual land titles under Forest Rights Act, 2006 have helped 26038 families to get land titles as per the table given below:

| Sl. No. | Schemes/Programme/ Provisions | No. of Families Settled with Land |  |
|---------|-------------------------------|-----------------------------------|--|
| 1       | OGLS                          | 2905                              |  |
| 2       | OPLE 9773                     |                                   |  |
| 3       | Vasundhara                    | 3515                              |  |
| 4       | Mo Jami Mo Dhia               | 638                               |  |
| 5       | FRA                           | 8611                              |  |
| 6       | Regulation-2                  | 596                               |  |
|         | Total                         | 26038                             |  |

Source: MIS 2013-14

Also to ensure land to the landless, OTELP scaled a model that Landesa (Rural Development Institute) had designed and piloted. The model uses a trained local youth to provide additional capacity to the field level Revenue Officials. These local youths called as the Community Resource Person are working in all the 1042 villages and as on date have facilitated grant of close to 13000 land titles in last two year other than the one indicated



above. This land allocation programme has become a community led process and the Government of Odisha have extended this to 18000 villages in the 118 Tribal Sub-Plan Blocks of 12 districts in the State. The status of land allocation programme in OTELP operational villages with the support of **LANDESA** is placed below:

| Status of Land Allocation Programme in OTELP Operational Areas (with help | of |  |  |  |  |  |
|---|----|--|--|--|--|--|
| LANDESA)  |    |  |  |  |  |  |

| Name of<br>the District | No of<br>Villages | No. of<br>HHs | Absolute<br>Landless<br>(Zero House<br>site and Zero<br>Farmland) | Households<br>allotted<br>House sites | Households<br>allotted<br>Farm land | Total |
|-------------------------|-------------------|---------------|---|---------------------------------------|-------------------------------------|-------|
| 1                       | 2                 | 3             | 4   | 5                                     | 6                                   | 7     |
| Nabarangpur             | 49                | 10267         | 2009  | 1831                                  | 245                                 | 2076  |
| Malkangiri              | 85                | 4624          | 1690  | 592                                   | 8                                   | 600   |
| Koraput                 | 244               | 12467         | 2473  | 6507                                  | 123                                 | 6630  |
| Gajapati                | 163               | 7627          | 916   | 638                                   | 643                                 | 1281  |
| Kondhamal               | 167               | 7963          | 805   | 355                                   | 0                                   | 355   |
| Kalahandi               | 172               | 6732          | 1715  | 1505                                  | 31                                  | 1536  |
| Rayagada                | 176               | 8596          | 2570  | 1250                                  | 0                                   | 1250  |
| Total                   | 1056              | 58276         | 12178   | 12678                                 | 1050                                | 13728 |

Source: MIS 2013-14

550 CRPs' facilitated the programme in OTELP, where as, 334 CRPs' are working in OTELP Plus area and are facilitating in providing land titles to the homesteadless and landless families.







The programme also facilitated community as a whole to avail community forest rights (CFR) under FRA, 2006. Necessary steps are taken to identify the land, demarcate the traditional boundary following due procedure for getting right over the forest by the community. The table below reflects the ITDA wise claims filed and title received under CFR:

| Name of ITDA   | Total no of CFR claims filed | Total no. of CFR titles received |  |
|----------------|------------------------------|----------------------------------|--|
| Baliguda       | 154                          | 56                               |  |
| Koraput        | 9                            | 0                                |  |
| Paralakhemundi | 38                           | 6                                |  |
| ThuamulRampur  | 18                           | 2                                |  |
| Gunpur         | 42                           | 5                                |  |
| Mallkanagiri   | 163                          | 4                                |  |
| Nawarangpur    | 23                           | 1                                |  |
| Total          | 447                          | 74                               |  |

### Status of land title given to community under CFR

Source: MIS 2013-14

The Grant of CFR under FRA 2006 has been facilitated by various civil society organizations working in the project district and management plan by converging various community managed practices are being incorporated to manage these forests sustainably.



## Chapter 7

### **Financial Progress**

The programme prepares Annual Work Plan and Budget for every year which is being approved by the government against which fund allocated and spent. The year wise approved annual work plan and budget from 2003-04 to 2011-12 and expenditure as details against each component is given below.



| Financial Year | Approved AWP & B<br>Rs. In Lakh. | Exp. As per audited account<br>Rs. In Lakh |
|----------------|----------------------------------|--|
| 2003-04        | 4.00                             | 4.38                                       |
| 2004-05        | 4.00                             | 57.96                                      |
| 2005-06        | 1016.97                          | 273.07                                     |
| 2006-07        | 3588.76                          | 1209.69                                    |
| 2007-08        | 4184.45                          | 2231.35                                    |
| 2008-09        | 5013.16                          | 3982.07                                    |
| 2009-10        | 5358.9                           | 4214.42                                    |
| 2010-11        | 4400                             | 4121.77                                    |
| 2011-12        | 5600                             | 5486.87                                    |
| 2012-13        | 5069.12                          | 5123.01                                    |
| 2013-14        | 5038.69                          | 2848.68<br>(Provisional & Unaudited)       |

Source: MIS 2013-14



### Programme Component wise Expenditure for the Financial Year 2013-14

The below table and pie chart indicates that maximum fund goes for livelihoods enhancement.

| Sl. No | Programme Component               | Amount in Rs. |
|--------|-----------------------------------|---------------|
| 1      | Programme Management              | 608.61        |
| 2      | Capacity Building For Empowerment | 362.85        |
| 3      | Livelihood Enhancement            | 1428.54       |
| 4      | Participatory Forest Management   | 2.95          |
| 5      | Support for Policy Initiatives    | 15.00         |
| 6      | Community Infrastructure fund     | 142.56        |
| 7      | Development Initiative Fund       | 288.17        |
| 8      | WFP Food Consumption              | -             |
| 9      | Food Handling                     | -             |
|        | TOTAL Expenditure In Rs.          | 2848.68       |

Source: MIS 2013-14



## Chapter 8

### **Programme Management**

#### 8. Programme Management

#### 8.1 Monitoring & Evaluation

Monitoring & Evaluation system plays important role in impacting on livelihoods in the lives of targeted audience. It has developed means and ways to monitor its activities in regular interval through various agencies at different level. This method also ensures the involvement of community at their disposal. The tools and techniques used for it are given below:



#### A. Maintenance of Books of account for Community **Based** Based Organization (SHG/VLSC/VDC/Federation/Cooperative)

- A standardized set of books/registers are developed and maintained to keep each and every record. This includes a set of books meant for accounting purposes and other set is for minute's i.e. the discussion of the organization to be recorded along with decision taken.
- This gives very good transparent records and built the confidence among all stakeholders.
- > This helps in tracking success or failure and built upon from there.
- B. Voucher based Monitoring System
- Any payment or expenditure needs to be supported by payment voucher and in same way any fund received requires receipt slip from the organization.
- The payment made for wage labouer is recorded in muster roll.
- A single muster roll format has been developed for all payments and shared in the meeting



All the entries are summed up in the report and the final figure along with the related documents (case record) are presented before the Village Social & Financial Audit Committee which is the Palli Sabha of the Village for approval of the expenditures made in each month from 22<sup>nd</sup> to 25<sup>th</sup> of each month.



- On approval of the same the original and duplicate copy (generated using carbon paper) sent to the VDC keeping the triplicate for record.
- The VDC receives the reports from each village within the micro watershed and consolidates the expenditures against each programme component and reports to the FNGO and ITDA.
- Accordingly the FNGO and ITDA consolidate the information and add the expenditure incurred at their level and submit the reports.
- All these expenditure reports are being accepted as utilization certificate of the funds spent.
- c. Physical Progress Reporting (Output & Outcome reporting)
- The FNGOs and ITDAs prepare Half Yearly Progress Reports against the Annual Work Plan & Budget for the year presenting the outputs achieved during the period and cumulative achievement.
- Besides, the ITDAs based on these reports, prepares Half yearly and Annual Performance Report which is an output linked outcome report presenting the change in various physical indicators for both RIMS and log frame.
- d. Concurrent Evaluations
- Mid Term Review (MTR) for phase II conducted by IFAD completed during October 2010.
- Joint Review Mission (JRM) for the year 2013 conducted by IFAD completed during August 2013.

#### 8.2 Web Based M&E Software

The web based M&E Software designed and implemented in the programme have been further upgraded based on the use and information need at various level. Due to low infrastructure availability at the remote project locations, it has become difficult to update data in the software in a real time manner. Subsequently, the planning and M&E module along with the SHG module has been delinked and made standalone desktop based software where the data entry can be done offline at the FNGO level and integrated with the web based software at the ITDA/ PSU level depending upon the availability fo the internet.

Tally ERP 9 has been provided to keep track of the Financial accounts, which is further customized to get the MPR reports and the standardized accounting reports and also synchronized by the accounts section to get the data of the ITDA's at PSU level.

Land Allocation and Management System has also developed and implemented for the effective management of the land title allocation and distribution system with the help of RDI. This system has kept the information on the landless families and follows up the steps for allocation of land titles.



Besides, a field monitoring system tool has been developed and piloted to track the field movement of the staff at ITDA and FNGO level.

#### 8.3 Implementation of RIMS

The other method applied in the field is result impacted management systems (RIMS). Basically it is conducted to know the status of programe in the field. It is conducted in sample basis. Proper methodology is being followed for identifying the sample villages as per the criteria set by the IFAD. This gives an interval picture of the programme to strengthen or replicate wherever possible. This year the RIMS report has been prepared and submitted to IFAD based on the field level data collected and consolidated.

#### 8.4 Annual Outcome Survey

The project has conducted its annual outcome survey for the year 2013-14 during April, 2014. This survey was conducted based on a predefined questionnaire administered to a randomly selected sample households from both programme and control villages. 900 programme and 450 sample households were interviewed by a team of enumerators. Qualitative data were also collected and incorporated in the report. The final report is to be published and circulated.



# Chapter 9

### OTELP plus: An Up-scaling strategy by the Govt. of Odisha to reach out more tribal community

Odisha Tribal Development Programme has been appreciated as one of the best programme of Govt. of Odisha. It created it's identity because of bottom of planning, execution and monitoring process by the community facilitated by the NGOs at the field and ITDA at district level. This programme purely managed, owned and controlled by the people forming different cadres of people institutions at different level. The success of this programme smelled across the



stakeholders during the implementation period of OTELP in Phase-I & II.

Basing on the degree of success of the programme, the chairperson of DPMC across all existing OTELP submitted strategic paper to operate the Extended OTELP in new additional MWSs with the existing mode of operation. There are nine proposals submitted to Govt. for necessary approval. The Govt. of Odisha has pleased to approve those entire proposals with an estimated budget of Rs. 59997.63 lakhs. This extended OTELP in new additional MWS is termed as OTELP Plus which is formally inaugurated on 2<sup>nd</sup> October 2011. There are 585 MWSs are covered under OTELP Plus areas in nine districts. The details of the programme coverage under OTELP Plus are mentioned below.

| Sl. No | District    | ITDA           | No. of Micro Watersheds<br>to be taken up under<br>OTELP Plus | Proposed Area<br>(in Ha.) for<br>treatment |
|--------|-------------|----------------|---|--|
| 1      | Koraput     | Koraput        | 102   | 65824                                      |
| 2      | Gajapati    | Paralakhemundi | 80  | 40959                                      |
| 3      | Kandhamal   | Baliguda       | 51  | 25500                                      |
| 4      | Kalahandi   | Th. Rampur     | 38  | 19000                                      |
| 5      | Nawrangpur  | Nawrangpur     | 50  | 27077                                      |
| 6      | Malkanagiri | Malkanagiri    | 102   | 56621                                      |
| 7      | Rayagada    | Gunupur        | 50  | 25000                                      |
| 8      | Keonjhar    | Keonjhar       | 53  | 31376                                      |
| 9      | Mayurbhanja | Karanjia       | 59  | 18800                                      |
|        | Total       |                | 585   | 310157                                     |

Source: MIS 2013-14



Here emphasis has been given on the convergence linked implementation programme of the Govt. It is a purely convergence programme. Fund will be leveraged from MGNREGA, BRGF, BKBK, Biju Gajapati & Biju Kandhamal, RKVY, NHM, SCA to TSP, SCA to SCP, Art.275, and State Plan. The State Plan is meant for Management cost & Capacity Building and rest of the programme cost will be sourced from convergence. The details are mentioned below.

| Programme Component   | Source of fund                      | Total budget (Rs. in lakhs) |
|---|-------------------------------------|-----------------------------|
| Capacity Building For<br>Empowerment                        | Govt. (State Plan)                  | 2705.3                      |
| Livelihoods Enhancement                                     | Convergence &<br>Govt. (State Plan) | 31277.0                     |
| Development Initiative Fund                                 | Govt (State Plan)                   | 2818                        |
| Assistance to community for<br>enhancement of food security | Govt (State Plan)                   | 10120.13                    |
| Programme Management  | Govt (State Plan)                   | 13077.2                     |
| Grand Total   | 59997.63                            |                             |

Component and Source wise Total Budget for Nine districts in OTELP Plus

Though OTELP Plus was launched in 2<sup>nd</sup> October 2011 but it was operationalised from December 2012. Initially, it was started in Koraput and Malkanagiri district. Within these two years of time period all



time period all nine tribal dominated districts have submitted their proposal and approved by



the govt. of Odisha. As it is already mentioned it was started in Koraput and Malkanagiri districts, the progress of these two districts is also better as compare to others. Both the districts have prepared their VDLP

a vision document prepared by the community to built upon their livelihoods strategy with available resources.

The best coping mechanism for sustainable development in inaccessible tribal domain

a) Promotion of different cadres of people institutions such as SHG, SHG Federation, Apex Federation, VDC, VLSC UG & CIG (Community Mibolisation)



- b) Proper planning through preparing a vision documents called "Village Development Livelihoods Plan" is prepared by the community itself facilitated by a team of professional
- c) Involvement of community at large in terms of planning, execution and monitoring
- d) Unemployed local young youths are trained to extend their support for programme implementation
- e) Funds vested in their hand
- f) Facilitations of NGOs having their presence within the community
- g) Programme emphasizes upon the holistic development of the triabl poor through watershed approach
- h) A team of dedicated professionals placed at district level for facilitation and to take this programme forward
- i) Special emphasis has also been given for different category of vulnerable families so that nobody should be excluded from the programme
- j) Social audit system is also developed where community members do the audit of all expenditure
- k) Different monitoring mechanism criteria are also in place to provide necessary support for best way of implementing the programme

All these above mentioned aspects make programme more successful and reach to the tribal people. More importantly they have been capacitated enough to do all these activities after withdrawal of the programme.



#### List of Implementing Agency working with OTELP in different ITDAs

| Sl No | Name of<br>District | Phases | Name of Block          | Name of FNGO                                      |
|-------|---------------------|--------|------------------------|---|
| 1     | Koraput             | II     | Nandapur               | Tagore Society for Rural Development              |
| 2     | Koraput             | II     | Semiliguda             | Tagore Society for Rural Development              |
| 3     | Koraput             | II     | Pottangi               | Life Academy of Vocational Studies                |
| 4     | Koraput             | II     | Dasmantpur             | Center for Youth & Social<br>Development          |
| 5     | Koraput             | Ι      | Narayanpatana          | Harsha Trust                                      |
| 6     | Koraput             | Ι      | Bandhugaon             | Foundation for Ecological Security                |
| 7     | Koraput             | Ι      | Laxmipur               | Center for Youth & Social<br>Development          |
| 8     | Koraput             | Plus   | Lamtaput               | Professional Assistance for<br>Development Action |
| 9     | Koraput             | Plus   | Boipariguda            | CHETNA Organic Farmers<br>Association             |
| 10    | Koraput             | Plus   | Boipariguda            | HARSHA TRUST                                      |
| 11    | Koraput             | Plus   | Boipariguda            | Center for Youth & Social<br>Development          |
| 12    | Koraput             | Plus   | Nandapur &<br>Pottangi | Tagore Society for Rural Development              |
| 13    | Koraput             | Plus   | Narayanpatana          | VIKASH  |
| 14    | Koraput             | Plus   | Narayanpatana          | Foundation for Ecological Security                |
| 15    | Koraput             | Plus   | Bandhugaon             | PRAGATI   |
| 16    | Koraput             | Plus   | Bandhugaon             | HARSHA TRUST                                      |
| 17    | Kandhamal           | II     | Balliguda              | Professional Assistance for<br>Development Action |
| 18    | Kandhamal           | II     | K. Nuagaon             | Professional Assistance for<br>Development Action |
| 19    | Kandhamal           | II     | Daringibadi            | Integrated Tribal Development<br>Agency (ITDA)    |
| 20    | Kandhamal           | Ι      | Kotagarh               | Jagurti   |
| 21    | Kandhamal           | Ι      | Tumudibadha            | Social welfare agency and training institute      |
| 22    | Kandhamal           | Plus   | Tikabali               | Professional Assistance for<br>Development Action |

|    |             |      |               | Empowering Grassroots Democ  |
|----|-------------|------|---------------|--|
| 23 | Kandhamal   | Plus | Tikabali      | Social welfare agency and trainin institute                              |
| 24 | Kandhamal   | Plus | Raikia        | KALPAVRIKSH  |
| 25 | Kandhamal   | Plus | Chakapad      | Organization for Rural reconstruct<br>& Integrated Social Service Activi |
| 26 | Kandhamal   | Plus | Chakapad      | HARSHA TRUST   |
| 27 | Malkangiri  | II   | Mathili       | Organization for Development<br>Coordination                             |
| 28 | Malkangiri  | II   | Kudumulgumma  | PARIVARTTAN  |
| 29 | Malkangiri  | II   | Khairput      | HARMONY  |
| 30 | Malkangiri  | Plus | Korukonda     | Sahid Laxman Nayak Developme<br>Society                                  |
| 31 | Malkangiri  | Plus | Kudumulgumma  | Malkanagiri Organization for<br>Development & Education                  |
| 32 | Malkangiri  | Plus | Korukonda     | Sisu O Mahila Kalan Samiti   |
| 33 | Malkangiri  | Plus | Kalimela      | SAMUHA VIKAS   |
| 34 | Malkangiri  | Plus | Kudumulgumma  | Integrated Tribal Development<br>Agency (ITDA)                           |
| 35 | Malkangiri  | Plus | Korukonda     | Tagore Society for Rural Developm  |
| 36 | Malkangiri  | Plus | Kalimela      | Gopabandhu Development Societ  |
| 37 | Malkangiri  | Plus | Podia         | Utkal Minorities Weaker Section<br>Development Society                   |
| 38 | Malkangiri  | Plus | Khairiput     | Integrated Tribal Development<br>Agency (ITDA)                           |
| 39 | Malkangiri  | Plus | Mathili       | Organization for Rural reconstruct<br>& Integrated Social Service Activi |
| 40 | Malkangiri  | Plus | Kudumulgumma  | Watershed Support Services &<br>Activities Network                       |
| 41 | Nabarangpur | II   | Papdahandi    | Institute of Rural Development & management Studies                      |
| 42 | Nabarangpur | II   | Kosagumuda    | Regional Center for Development<br>Co-operation                          |
| 43 | Nabarangpur | II   | Jharigaon     | Integrated Tribal Development<br>Agency (ITDA)                           |
| 44 | Nabarangpur | Plus | Tentulikhunti | Association of Volunteer Action  |
| 45 | Nabarangpur | Plus | Tentulikhunti | Integrated Agency for Education<br>Environment & Technology              |



| 46 | Nabarangpur | Plus | Tentulikhunti  | Bharatiya Agro Industries Foundation                |
|----|-------------|------|----------------|---|
| 47 | Nabarangpur | Plus | Dabugaon       | Institute of Rural Development & management Studies |
| 48 | Rayagada    | II   | Kashipur       | SHAKTI Organization                                 |
| 49 | Rayagada    | II   | Bissam Cuttack | Adivashi Krushi Swathya Sishkya<br>Unyan Samiti     |
| 50 | Rayagada    | II   | Gudari         | Bharat Integrated Social Welfare<br>Agency          |
| 51 | Rayagada    | II   | Chandrapur     | Integrated Tribal Development<br>Agency (ITDA)      |
| 52 | Rayagada    | II   | Muniguda       | Friends Association for Rural<br>Reconstruction     |
| 53 | Gajapati    | II   | R. Udayagiri   | Society for Welfare of Weaker Section               |
| 54 | Gajapati    | II   | Mohana         | Gram Vikash   |
| 55 | Gajapati    | Ι    | Gumma          | Centre for Community Development                    |
| 56 | Gajapati    | Ι    | Nuagada        | Jana Kalyan Pratistan                               |
| 57 | Gajapati    | Ι    | Rayagad        | Society for Welfare of Weaker Section               |
| 58 | Gajapati    | Ι    | Nuagada        | Jana Kalyan Pratistan                               |
| 59 | Gajapati    | Plus | Nuagada        | Jana Kalyan Pratistan                               |
| 60 | Gajapati    | Plus | Mohana         | Social Action for Community<br>Alternative Learning |
| 61 | Gajapati    | Plus | Mohana         | Suraksha  |
| 62 | Gajapati    | Plus | Gumma          | Centre for Community Development                    |
| 63 | Gajapati    | Plus | R.Udayagiri    | Institute of Social Action and research activities  |
| 64 | Gajapaati   | Plus | R.Udayagiri    | Society for Welfare of Weaker Section               |
| 65 | Gajapati    | Plus | Rayagada       | Gram Vikas  |
| 66 | Gajapati    | Plus | Mohana         | Suraksha  |
| 67 | Kalahandi   | II   | Th.Rampur      | Gram Vikas  |
| 68 | Kalahandi   | II   | Lanjigarh      | Gram Vikas  |
| 69 | Kalahandi   | Ι    | Th.Rampur      | Gram Vikas  |
| 70 | Kalahandi   | Ι    | Th.Rampur      | Antodaya  |
| 71 | Kalahandi   | Ι    | Lanjigarh      | Integrated Tribal Development<br>Agency (ITDA)      |
| 72 | Kalahandi   | Plus | Th.Rampur      | Professional Assistance for<br>Development Action   |



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|----|------------|------------|----------------|--------------------------------------|
| 73 | Kalahandi  | Plus       | Th.Rampur      | Gram Vikas                           |
| 74 | Kalahandi  | Plus       | Lanjigarh      | Professional Assistance for          |
|    |            |            |                | Development Action                   |
| 75 | Kalahandi  | Plus       | Lanjigarh      | Lutheran World Service International |
|    |            |            |                | Trust                                |
| 76 | Keonjhar   | Plus       | Banspal        | PRAKALPA                             |
| 77 | Keonjhar   | Plus       | Banspal        | Professional Assistance for          |
|    |            |            |                | Development Action                   |
| 78 | Keonjhar   | Plus       | Banspal        | Foundation for Ecological Security   |
| 79 | Keonjhar   | Plus       | Harichandanpur | Women Organization for Socio         |
|    |            |            | _              | Cultural Awareness                   |
| 80 | Keonjhar   | Plus       | Harichandanpur | Foundation for Ecological Security   |
| 81 | Mayurbhanj | Plus       | Thakurmunda    | Professional Assistance for          |
|    | (Karnjia)  |            |                | Development Action                   |
| 82 | Mayurbhanj | Plus       | Bangiriposhi   | Lutheran World Service International |
|    | (Karnjia)  |            |                | Trust                                |
| 83 | Mayurbhanj | Plus       | Jashipur       | Sambandh                             |
|    | (Karnjia)  |            |                |                                      |
| 84 | Mayurbhanj | Plus       | Siluapada      | Development of Humane Action         |
|    | (Karnjia)  |            |                | Foundation                           |







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