



INDO-DANISH
COMPREHENSIVE WATERSHED
KORAPUT AND MALKANGIRI DISTRICT OF ORISSA,
INDIA PROJECT COMPLETION REPORT
1995 - 2004
KUKUDANALA WATERSHED
(IInd Phase)
BAIPARIGUDA BLOCK,
KORAPUT, ORISSA.



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PREFACE

Indo-Danish comprehensive watershed Development Project was implemented in the KUKUDANALA watershed during 1994-95 covering 10 Villages and 18 hamlets. During this tenure land based activities were executed followed by agricultural and Horticultural activities to develop the economic condition of the farmer. Besides these the land less poor and women were targeted through income generating activities for the betterment of their social and economical life.

Village level institution like self help groups, management groups and village development association has been established and the sustainability aspects have been taken care.

Village meetings, participatory rural appraisal, field days were conducted to built awareness among the villagers. Training was imparted to the target group for human resource development.

Surveys and impact studies were carried out to document the impact of the activities. At the phasing out scenario it was felt that the studies and lessons learned should be documented for learning and farther studies. It has been tried to document few important lessons and outputs that the project has been produced' during its implementation.

G.C. BEHERA
(Team Leader)

KUKUDANALA WATERSHED, BOIPARIGUDA-1

ABBREVIATION

AAE	Assistant Agriculture Engineer
AAO	Assistant Agriculture Officer
ARD	Animal Resource Department
ASHP	Agro-Silvi-Horti-Pasture
BCK	Barani Chetana Kendra
DANIDA	Danish International Development Assistance
EAS	Employment Assurance Scheme
FMD	Field Man Demonstrator
G.O.	Government Organization
G.P.	Gram Panchayat
GOI	Government of India
GOO	Government of Orissa
IDCWDP	Indo-Danish Comprehensive Watershed Development Project
IGS	Income Generating Support
ILDp	Integrated Live Stock Development Project
ITK	Indigenous Techniques Know how
J.S.C.O	Junior Soil Conservation Officer
JHO	Junior Horticulture Officer
K.B. PUMP	Krusak Bandhu Pump
MOU	Memorandum Of Understanding
NGO	Non Government Organization
O.C.	Other Caste
ORG	Operation Research Group
PMS	Planning and Monitoring Specialist
PRA	Participatory Rural Appraisal
RPEP	Revised Project implementation Plan
S.C	Scheduled Caste
S.C.S.O	Soil Conservation Section Officer
S.T.	Scheduled Tribe
SHG	Self Help Group
SMS	Subject Matter Specialist
SRMS	Sunken Runoff Management Structure
VA.W	Village Agriculture Worker
VAS	Veterinary Assistant Surgeon
VDA	Village Development Association
WID	Water Impounding Device

KUKUDANALA WATERSHED, BOIPARIGUDA - 1.
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KUKUDANALA WATERSHED
BOIPARMUDA - 1**

I.D.C.W,D, PROJECT, JEYPORE
PREPARED BY STAFF OF
BOIPARIGUDA - I

**SALIENT FEATURE OF KUKUDANALA WATERSHED
BOIPARIOUDA - 1**

BLOCK BOIPARIGUDA, DIST. KORAPUT.

01. VILLAGE LIST	Name of Revenue Village	Name of Hamlets
	1. Tola	1. Bebartaguda. 2. Kudumguda. 3. Pukaguda. 4. Maliguda.
	2. Umuriaguda	Nil.
	3. Madi	5. Kaliaguda. 6. Dumuriguda. 7. Pandriguda. 8. Kharaguda. 9. Maliguda.
	4. Lenja	10. Kandiguda. 11. Kumbhiguda. 12. Meraguda. 13. Entaguda.
	5. Bapaniguda	Nil
	6. Paral	14. Kenduguda.
	7. Gunji	15. Hataguda.
	8. Godaput	16. Bilaguda.
	9. Kuspar	17. Maliguda.
	10. Kurkuti	18. Adwanaguda.
02.	Total Number and Name of the Panchayat	2 Nos. Mohuli, Bodaput
03.	Name of 'the Block	BOIPARIGUDA.
04.	Total Geographical area in hectares	5434.160 Ha.

Contd

PRESENT LAND USE PATTERN

05.	Total Agricultural land in hectares	1225.256 Ha.
06.	Total Cultivable wasteland in hectares	74.296 Ha.
07.	Total uncultivable wasteland in hectares	3792.512 Ha. Hills)
08.	Total forest land in hectares	94.032(Revenue),1315.840 (Reserved)
09.	Total Gochar Land in Hectares	92.348 Ha.
10.	Total upland in Hectares.	483.042 Ha.
11.	Total Medium land in hectares	:310 ' 181 Ha.
12.	Total Low land in hectares.	432.033 Ha.
13.	Total Homestead land in hectares.	79.670 Ha.
14.	Total Orchard in hectares	12. 1 00 Ha.
15.	Total Drainage line	:77 Km.

LAND OWNERSHIP

16.	Total Agriculture Labors	674
17.	Total Land less Farmers	439
18.	Total small & marginal farmers	595
19.	Total Medium farmers	64
20.	Total Large Farmers	66

DEMOGRAPHY

21.	Total Population	4435 Nos.	Male - 2209, Female - 2226.
22.	Total household	II 64	SC- 1 09, ST-719, OC - 336
23.	Type of ST		Paraja, Bhumian, Gadba.
24.	Type of SC		Damba, Harijan.
25.	Type of OC		Carpenter, Rana, Gouda, Mali, Brahmin, Blacksmith
26.	Primary occupation		Agriculture labour.
27.	Secondary Occupation		Labor, Livestock, Business.
28.	Migration		Nil.

CRAFT AND SKILLS

29.	Type of Skills	No. of families.
	1. Blacksmith	09
	2. Leaf plate making	20
	3. Carpentry	12
	4. Pottery	40
	5. Bamboo work	58

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AGRICULTURE

30.	Cropping pattern	Double and mixed cropping
31.	Crop produces per Ha.	Paddy - 20 - 35 Bags. Ragi - I - 3 Bags. Nizer - I - 3 Bags.

32.	Marketing	Suan (in high land) -I - 2 Bags. Local, within village, Nearby village, Boipariguda.
33.	Food balance in the watershed	Balance.
34.	Total No. of livestock	Cow - 1672, Sheep & Goat - 92 1, Pig - 93, Buffalo - 460
35.	Fodder balance available in the village	Deficient

WATER AVAILABILITY

36.	No. of open well	83
37.	No. of Tube well	22
38.	Water sufficiency in the village	

Particulars	Water sufficient (Village)	Water deficient (Village)
Summer	08	02
Winter	10	-
Rainy	10	-

EDUCATIONAL FACILITIES

39.	No. of Schools	M.E. School - Nit. No. of U.P. Schools - 09
40.	No. of literate Male Adult	:415
41.	No. of literate women	193
42.	No. of literate children	.310
43.	Percentage of literacy	- 20 %

OTHER FACILITIES AVAILABLE

44.	Anganwadi center	Yes.
45.	Nearest P.H. Center	Boipariguda.
46.	Nearest L.I. Centre	Mohuli & Dasmantapur.
47.	Distance from the Block Headquarter	10 - 20 k.m.
48.	Any other Government programme is going on there:	S.H.G. by Agriculture & I.C.D.S.

BASIC PROJECT DATA

"Title of the Project	KUKUDANALA WATERSHED.
Block,	BOIPARIGUDA.
District	KORAPUT
State	ORISSA.
Donor Agency	Danish International Development Assistance (DANIDA)
Recipient Country, INDIA.	
Implementing Agency	Department of Agriculture and Co-operation, Govt, of Orissa.
Technical Assistance	Department of Soil Conservation, Agriculture, Horticulture & Animal Husbandry.

1.1 Date of Agreement

Comprehensive Watershed Development Project (Orissa) was appraised by DANIDA in January/February - 1989 and the formal agreement Government of India and Government of Denmark was signed in October - 1992.

1.2 Project Period 1995 - 200'-).

Physical Execution Work 1995 - 2002 (March
Awareness /NGO Activities Extended for another two years - 2004 , March.

1.3 Objectives

a) Long Term Objective

The land use system are sustainable and ecologically sound, which enable the poor & rural communities to improve their living conditions and their supply of food, and other essentials, without exposing the natural resources to harmful stress.

b) Intermediate Objectives:

Preserve the resources base by introducing improvements which are feasible, effective and attractive to the target groups in the area by combining elements of Soil Conservation, crop production, horticulture, animal husbandry and tree planting in such a manner that sustainable use is made for every inch of land within the watersheds.

Ease the pressure on non-arable lands by increasing the productivity of lands, which is suitable for more intensive use without risk of loss in soil fertility.

Provide marginal farmers and landless people with assets which yield essentials of generate income possibilities.

Income generating support to poor:

A) Self Help Groups:

Self-help groups are naturally formed as they are trade based. To strengthen the SHG, training has been imparted to the president and secretary. They saved grain and money to fulfill the immediate need of the members. Therefore the sustainability of the groups are secured.

B) Support to 10 poorest households:

Due to the existing social system and the attitude, it often happens that the poorest of the poor are out of reach of any development programme. Looking into the matter 10 poorest of the poor household have been identified and are assisted under income generating support of the poor households through PRA and village meeting has evolved In this project and could be a policy for any poverty reduction programme.

C) Replication and Spread Effect:

The low cost soil and moisture conservation activities executed were simple and low cost. Due to we aware of the activities these are highly accepted and replicated by the farmers. The successful models like integrated farming system and hole with K.B. pump package highly appreciated by the other agencies and spread in their respective watersheds.

Sustainability:

The assets created in government lands have been handed over to the village development association and later the VDAs were registered. The management and user groups have been formed to look after the care and maintenance of the assets.

2.1 Support to 10 poorest Households:

Due to the existing social system and the attitude of the people, it often happens that the poorest of the poor are out of reach of any development programme. This new idea has evolved in the project and could be a policy for any poverty reduction programme .

Besides this the sustainability of most of the assets created by the project is secured due to formation of successful management groups, user groups and village committees.

i. Gender: The gender aspect of the project is highly appreciated to bring the women into the main stream of the project activity as well as to improve their social and economical status. A number of activities has been carried out that includes Mahila kisan nursery, women self help groups. Lady youth facilitator and lady field organizer are appointed to involve the women into the project activity.

Emphasis has been given for selection of women beneficiaries. More women self help groups have been formed based on traditional skills. Mahila Kisan Nursery was raised through self-help group with technical and financial assistance.

ii. Involvement of NGO: Given the present government set up and the heavy work load of field officers, it may not be possible for the technical staffs to participate in the long drawn process of awareness building. For the task voluntary organization "Sarvodaya Samiti" which has expertise in working with tribal people has been engaged.

There NGOs were given responsibility or awareness and participation aspect resulting', in a satisfactory people participation and sustainability of the assets.

The project has been highlighted and appreciated by the funding agency, other Outside agencies nodal agency and district administration for its work as well as its ,approach.

3. PROJECT BACKGROUND

3.1 The need for the Project

Orissa is one among the poorest State of India and Koraput, is the largest District of Orissa being the most backward, with 90 percent of households having income below the official poverty line and only 10 percent of the population is literate. Koraput has also the highest Scheduled Tribe population of the Districts in the State.

Dry land farming "is the predominant activity in the area and therefore any programme for poverty alleviation has to aim at increased agricultural productivity and employment. However, the soils in the district suffer from severe land degradation and erosion problems need protection and preservation measures.

3.2 Initiation of Project Proposal

Pursuant to discussions in mid 1986 between the Government of India, Government of Orissa and DANIDA . The Government of Orissa (GOO) presented a project proposal to the Government of India (GOI) in December 1986 for a DANIDA supported Soil & Water Conservation Project in three of the six sub-divisions of Koraput District. Later it was agreed that a possible project should initially be limited in its area coverage and thus only two sub-divisions (Malkangiri & Jeypore) divided into 12 development Blocks, be prioritized.

3.3 Pre Appraisal Mission

In January 1988, a DANIDA Pre-Appraisal Mission visited two sub-divisions and had preliminary discussions with the government officials.

The pre-appraisal report recognized that there was scope for a project covering 12 watersheds (one in each of the 12 development Blocks in the two sub-divisions of Jeypore and Malkangiri) of 2000 to 5000 hectares each for comprehensive watersheds development including improved agricultural practice.

It stressed the essentiality of mobilization of the beneficiary group (those below the poverty line) for participation in the project. It also recommended that the usufruct rights of beneficiaries on government land must be legally secured.

The Directorate of Soil Conservation, GOO was recommended for being responsible for project implementation and coordination.

For follow-up, the pre-appraisal report recommended that the Directorate of Soil Conservation, GOO, should carry out watershed surveys in each of the proposed 12 watersheds to be assessed by an appraisal mission.

By end 1988, the Directorate of Soil Conservation, GOO selected and completed surveys of 12 watersheds including suggested measures. Also socioeconomic information for the selected watersheds had been collected by the Operations Research Group (ORG), Bhubaneswar.

3.4 Appraisal Mission

There after, a DANIDA Appraisal Mission visited the proposed watersheds in January / February 1989. After their draft report was submitted in June 1989 and discussed by DANIDA, GOI and GOO. Bunding and leveling activity was significantly reduced in keeping with governments current soil conservation policy, while pasture and fodder development received more emphasis but still on a trial/demonstration basis., considering the soil risks.

In February 1990 the Mission submitted its finalized Appraisal report.

Watershed in operation

After scrutiny and recovery of the proposed watershed on the basis of cultivable area, irrigation facilities the following watershed were taken up for implementation.

Watershed	Block	Watershed	Block
Kanagoan	Birugumma	Potagu-gaarh	Malkangiri
□ Sindhiguda Manikpur	Kudumulugumma	Tamsanala	Korkonda
Randapalli	Jeypore	Tamurupali	Mathili
Phupugam Mohantiput	Kotpad	Kukudanala	Boipariguda
Damadei	Khairput	Bamanijorhi	Kundra
Nilii,-uda	Podia	Kalimenala	Kalimela
Kurlunadi	Boipariguda.		

3.7 AGRICULTURE

Agriculture is the main occupation of the tribal. They grow crops to meet the requirement and occasionally sell to purchase other necessity of life. The total agricultural land put to agriculture is 1225.25 hectares out of which 483.04 hectares are up land. They grow traditional varieties of Ragi, Arhar, niger, horse gram, Suan as mixed cropping to act as insurance against crop failure. The cultivation practices are very traditional. Lack of use of proper fertilizers, application on timely inputs (pesticides), improved seeds, new technologies and cultivation practice leads to low yield of crops, there by affecting the Socio economic condition of the farmers.

3.8 HORTICULTURE:

The fruit plantations are of not yet for commercial purpose, a few hectares of cashew plantation were raised by the Dept. Of Soil Conservation in the Government land. But the unproductive private \wastelands have great potentiality for fruit and cashew Plantation to support economic condition of the farmers.

Few farmers grow vegetable for their own consumption and for a ver small scale for marketing that to during rainy season. The traditional varieties, disease and pest attack as well as lack of technologies and lack of knowledge of the farmers -are the main constraints of commercial vegetable cultivation.

3.9 POVERTY AND GENDER:

More than 90 percent of people were below the poverty line. The poverty among the people was due to lack of literacy, small landholding or landless, low productivity of land and lack of awareness about the development programmes.

Due to illiteracy, it has been found that the tribals response slowly to development activities. So the development programmes implemented were very slow due to the lack of awareness among the villagers. Out of 1164 families, 439 families are land less and 595 are

small and marginal farmers. 70% of the total land resources are with the large farmers and 30% with the small and large farmers. The landless people are agricultural laborers depend fully on the landlords for work and food.

□

for the social and economic development of the people. Though women have been playing very important role in their families, they have been playing little role in community development.

3.10 SOCIAL SYSTEM

The society is predominant with tribal out of total 1164 households. 719 households are belonging to ST category, constitutes 62% and the caste composition is Paraja, Gadava, Bhumian and Penthia. The scheduled castes families are of 109 and 336 families are of general category.

The village landlord controls the village economy as the tribals are ignorant of market practices and needs and illiterate, thus unable to negotiate with middlemen.

There was no effective village level institution. The community only gathered during pujas or religious ceremonies. There were no self-help groups or community works.

4. PROJECT STRATEGY

Technologies adopted should be simple and low cost for their adoption and replication.

- ◆ replicate these technologies.
- ◆ People's participation in planning, implementation, upkeep, maintenance and operational stages of the project through involvement of local NGOs.
- ◆ Imparting training and assisting IO poorest households from each village with sustainable livelihoods supports.
- ◆ Establishing SHGs in each villager and ensuring availability of cash and grains with every SHG to prevent starvation death in the project area.

As the problems within the watersheds are interlinked, components employed by the project emphasized all aspects of land use. These components are:-

- i. Soil and Water conservation measures.
- ii. Improved agricultural practices promoted through training and extension and
- iii. Awareness building for target group participation.

4.1 Soil and water conservation measures.

While implementing Soil and Water conservation intervention, the project has put emphasis on treating the land from ridge to valley. Basin, on the project objective. The strategy of the project has been made to achieve those. To execute the land and water conservation activities effectively, the technical staff of the department of soil conservation are given responsibility through the watershed team headed by the team leader (a Jr. S.C.O) and the S.C.S.O and F.M.D . A village agricultural worker included in the watershed team to follow-up the agricultural production aspect of the land.

4.2 Awareness building for target group participation

People's participation in the development programme has been limited, as the government agencies have not been able to spend adequate time and effort in community mobilization. To ensure greater acceptability and replicability NGOs were brought on board to take charge of awareness campaigning. The NGOs have been given responsibility for

- ◆ Formation of village committees.
- ◆ Selection of youth facilitators.
- ◆ Formation of Watershed Committee.
- ◆ Involvement of people in to the planning and execution of works.
- ◆ Organize the people to User's group.
- ◆ Mobilizes Contribution.
- ◆ Selection of landless and women beneficiary for transforming benefits
- ◆ Formation of SHG and follow up for strengthening.
- ◆ Formation of village development institution for handing over of assets created in government land.

4.3. Improved Agricultural practices through training.

The soil Conservation Training Institute, Koraput is mainly given responsibility to impart training to the farmers. The training aims at enabling the farmers to adopt improved agricultural practices in their own lands as well as their neighbors.

Besides this the training institute imparts training to the village youth facilitators regarding the programme and their human resources development. This training programme includes classroom training as well as exposure visits.

The project and NGO staff also provided with training by SCTI and abroad for their capacity building.

4.4 Target group Benefited :

4.4.1 *Small and marginal farmers :*

The small and marginal farmers have been benefited from the land Soil moisture conservation activities, crop demonstration and vegetable kit distribution programmes. Also the fruit and cashew plantations on private lands has been much appreciated.

4.4.2 Landless:

The landless are the direct beneficiaries of works involving a labour component, though the benefit was temporary. But for sustainable income most of the landless people are covered under Households productions system and assisted by the project through sheep rearing, Goatherds, dairy , mudhi making etc.

Numbers of village artisans having traditional skill like carpentry, blacksmith, BBM and pottery were provided necessary inputs under household production system. Out of which 80 male and 02 are female.

4.4.4 Women:-

345 Women were supported through self-help groups. Formation of 18 numbers of Mahila Kisan nurseries by women groups have provided them additional income.

4.4.5 In addition project have benefited to: -

- ◆ additional training from the project.
- ◆ Village youth facilitators have been trained and work in the village. Rural workers were employed by the project for construction work, which added to their immediate income and also provided marketable skills, for the long-term.

4.4.6 Design: -

In the original planning document it was envisaged that the project would get necessary technical support from the line department. This planning was not effective in reality. As a result the project got the support of 3 Subjects Matter Specialist, SMS (Agronomy), SMS (Horticulture) and SMS (Veterinary). The detail project design has been given in Annexure - I

6.5 Technical Inputs:

DAN IDA has provided technical input for strengthening and capacity building of the Team leader and Field Organizer by sending them abroad for Management training. The DAN IDA Adviser and Project Director give constant technical guidance during their field visit. The project management unit, which consists of PMS, SMS(Agronomy), AAE give technical inputs as and when required.

7. Field Activities:

7.1 NURSERIES:

a) Composite Nursery: Composite nursery of Kukudanal watershed was located in the village Tola on the Government land. The venture was started after receiving the necessary permission from the Revenue Authority (Tehsildar) Jeypore. The Nursery was established with an objective to:

- Make it a demonstration for watershed activities.
- To develop a scion bank for further multiplication of desired quality plants
- To raise seedlings for plantation in watershed area

So the nursery is designed to grow dry land horticultural plants where effective soil and moisture conservation activities have been taken. Desired forest species are planted suitable for fuel wood, timber and agricultural purposes.

A huge biomass has been created so to help to improve the ecological condition of the area. The basic activities of the composite nursery started during 1995-1996. The infrastructure development of Nursery includes a well and a Barani Catena Kendra with some irrigation network. The well is meant for irrigation purpose.

Different meetings including watershed meetings, youth facilitators meetings, trainings conducted regularly in the BCK regarding the watershed.

The physical activities including maintenance of the Nursery were over by 31" M.---:h 2002. During the watershed meeting held on 22.09.2001 the maintenance responsibility is handed over to the Tola Village. A management committee consists of 12 members is now maintaining the nursery smoothly. The income generated from the Nursery through selling of fruits like Mango, Guava, Custard apple, Cashew nut are not sufficient enough to meet the expenditure of the Nursery. Hence the Tola Nursery is trying to generate more income through vegetable and crop cultivation.

Now the Nursery is attracting more visitors due to its greenery and fresh environment to enjoy picnic parties during winter.

The Tola Village Development Association (VDA) secures the sustainability of the Nursery due to its smooth management.

The status of the nursery has been given in Annexure - iii.

Mahila Kisan Nursery: - The objective of the Nursery was to raise fruit vegetable like Papaya and drumsticks through Mahila Mandals. The Nursery helped in two ways, first is to form Mahila Mandals and the other is to train them to know the techniques of Nursery raising. In this way 18 numbers of Mahila Kisan Nursery has been raised by 12 Mahila Mandal and all these Mahila Mandals are working as self help group. Through these Nurseries 27,400 Nos. of Papaya, Drumstick and Cashew seedlings were raised and distributed among the villagers, which gave additional income to the beneficiaries.

7.2 SOIL AND WATER CONSERVATION MEASURES: -

Drop structure/loose Boulder Structure: -

In the ridge to valley approach, the ridge points are first treated with the soil and moisture conservation activities. The loose boulder checks/drop structures are placed at the initial contributory drainage line to check the speed of runoff water. The structures are constructed in a series manner so to minimize the runoff velocity. The up streams and down streams of the structures are treated with vegetative measures to stabilize the structures. After assessment of the speed of the runoff water few bigger size loose boulders are placed in the drainage line. It helps in more infiltration of rainwater to recharge the ground water. In this way the drainage lines are stabilized. The farmers construct through locally available stones and with the simplest technology that is easily replicable these loose boulders.

Earthen Check Dam/ Brush wood check Dam.

These soil conservation activities were found to be more beneficial to control the reel and sheet erosion in the uplands. The earthen checks are also helpful for retaining moisture so as to allow more water to infiltrate into the ground.

Vegetative bonding with 'V' ditches.

'V' ditches across the contour are constructed and bunds are made out of the excavated earth from the 'V' ditch. The 'V' ditches are discontinues with bundt. The 'V' ditches are helpful for more infiltration of water into the soil where as the hedges are helpful for retention of silt and helped as a filter for silt and water.

This has been found to be more beneficial in the unbounded uplands. To check soil erosion and retention of moisture for longer time in the land as to facilitate good crop growth and yield. In this way 835 hectares land are brought under treatment where the crop growth is found significantly improved.

Stone Wall Terraces: -

During the initial period of project in the high sloppy areas stonewall terraces were constructed over 25 ha. Of which helped in soil erosion and formation of small plots for agricultural purpose. But it was found to be not cost effective. Later this measure was not encouraged.

Drainage Line Treatments: -

After the treatment of the initiation points of the drainage lines through loose boulders structures, the banks of gullies and ravines are treated with vegetative ways to control the erosion permanently. The stream banks are planted with vertices, sisal, bamboos and broomsticks to bind the soil tightly. Both sides of the drainage lines are planted with forest plants, which serve to control further bank erosion and create huge biomass for better ecology.

Sunken Runoff Management Structures: -

In the upper ridges small sunken management structures are constructed and the end of one or more small drainage line with inlet and outlet facilities. The structures are sunken type and the runoff water is allowed to remain below ground level. This type of structure allows more water to infiltrate into the soil therefore enhances ground water table at the lower points. These structures are helpful for small-scale vegetable cultivation during Ravi. 6 SRMS has been constructed in the project area. During rainy season the farmer utilized the land for vegetable cultivation. Even during summer season the farmer cultivated pumpkin, Tomato & Brinjal on the lower part of the ARMS.

Water Impounding Device

The WID has been constructed in the village Kuspar with 20 percent people's contribution. The need of the pond was assessed and the entire villagers were motivated for contribution.

Now the device contributing a number of benefits: -

It meets the social need of the people.

It encourages vegetable cultivation In its embankments,

It helps in ground water recharging in the down stream.

Facilitates Pisci-Culture.

7.3 TREE PLANTING AND PASTURE DEVELOPMENT

Miscellaneous Tree Plantation: -

Most of the hills of the watershed were denuded forestlands. Due to lack of awareness among the people the forest growth was cut. Therefore measures were taken to plant around 50 hectares of land with forest species. The plantations have been handed over to the villagers and well maintained by the management committee of the concerned villages.

Development of Pastureland: -

The Project has not only give importance on the development of the people but also the cattle population of the area. With a objective to feed more nutritious grass/fodder to the cattle, improved pasture cultivation has been given importance.

These pasture lands are scientifically designed to supply grass as well as tree fodder to the cattle's following two-tier system. The ground flora are planted with stylo grass where as the upper flora consist of tree fodder i.e. Subabool (Leucosine) is new introduction to the area and found to be a successful fodder tree in these areas. The leaves, twinges are highly nutritious to feed the cattle.

Cashew Plantation: -

240 hectares of degraded uplands are covered with cashew plantations. The plantations have been handed over to the villagers and will maintained by the management committee by the concerned villages.

Private Cashew Plantation and backyard horticulture: -

One hundred hectares of degraded uplands with suitable S.C. measures are covered with cashew plantation. The beneficiaries were supplied with cashew seedling and fertilizers for manuring. In this way 30 hectares were covered in the watershed. It includes, 103 beneficiaries. Now the cashew plants are on fruiting stage and yields cashew nuts amounting to an average of Rs. 2000/- per ha. and become a stable source of income for the beneficiaries.

Under backyard horticulture program grafted, Mango, guava, sapota, lemon, ber, pomegranate were supplied covering a total of 608 households and the yield from these fruits plants also helpful for supporting the economic condition of the people.

Agro-silvi-Horticulture:

This is an integrated approach to obtain food, fodder, fruits and firewood from a small unit of land. This has been designed by the project seeing the need of a farmer. In principle a minimum of 5 ha. of land surrounded by three rows of bamboo with live fencing and 120 Nos. of fruit plants and 450 Nos., of forest species are planted in the land leaving enough space for crop cultivation. The unsuitable land and bunds are sown with grass seeds and suitable soil and moisture conservation activities are taken for good crop growth. This system has been evolved in this project and given new dimension to the integrated approach for land development.

This system helps in bringing additional area into cultivation and helps the farmers to go sustainable income to support their livelihood. In this way one ASHP has been established and 5 hectares of land are brought under cultivation in a sustainable way. This system has been able to provide short term and long term benefits from Agriculture and tree crops to the farmer.

Waterhole and K.B. pump an effective means of vegetable cultivation: -

During the prospective planning 1998, a Indigenous Technique Know-how (ITK) was identified. In the mercy point small water retention structures locally called "Chua" was found and few people were cultivating vegetables by using a local water lifting device "Tenda"

With a little modification small package has been prepared which includes for digging of water hole of depth 6 to .7 feet's with a radius of 5 feet (Rs. 270/-). a KB pump (manual operated low lift paddle pump), (Rs. 727/-) and a vegetable kit (Rs. 150/-

The suitable sites and the iterated farmers were identified and supplied with K.B. pump and vegetable kit. It was found to be a highly effective means vegetable cultivation in the Ravi season and is being rapidly replicated by the farmers. In this way 82 water hole has been created and 25 has been replicated.

The additional area brought under vegetable cultivation through this process is to the extent ' of 7 hectares. In addition to this 8 water holes in low land are used for reserve tank for Azolia

Crop Demonstration: -

The logic behind the soil and moisture conservation is to improve the land status for better yield of crops to develop economically the farmers. Therefore after suitable land treatment measures, it was found essential to introduce new crops and management practices through demonstration. Through crop demonstration inputs like improved seeds, pulse crops fertilizer for basal doses, bio-fertilizer etc are supplied. The new methodologies like contour cultivation, inter cropping, and line sowing , green manuring with Dhanicha and Glyrcidia , Azolia cultivation were demonstrated. These demonstrations are found to be more beneficial to increase the crop yield significantly.

Vegetable Cultivation:-

To encourage vegetable cultivation, vegetable minikits are supplied to the farmers. Vegetable seeding were raised in the vegetable Nurseries and seedlings were distributed among the vegetable growers in addition to this the water retention structure like water for vegetable cultivation. In this way the vegetable cultivation area increased from 15 hectares during initial project period to 53 hectares at the end of the project. The detail status of vegetable cultivation is given in Annexure-11.

7.4 Income generating activities: -

Since majority of the people were landless, they received limited benefits from this land-based activity. Hence income gradually activities were initiated specially to benefit the poor section on the community.

Self Help groups: The self-help groups are formed basing on the traditional skills. The responsibility of formation of SHGS were given to the 'NGO' and more emphasis has been given to form women self-help groups. The main trades are Bamboo basket making, muddy making, Goat cry, vegetable cultivation, grain bank etc. most of the groups linked with Banks and has been provided loan from the Banks The details of SHGS formation assisted by the project is given in Annexure-III.

Support to individual household. The people those are having traditional skills like pot making, carpentry, black smith etc has been assisted by the project basing on their need. In this way 213 beneficiaries were assisted and the survey shows that families is being sustainable improving. The village wise position of individual assistance are given in Annexure-IV

Assistance to 10 poorest households: From each village 10 poorest of poor household have been identified through PRA and village meeting and were assisted from the project by supplying them sheep, Goat etc an 102 poorest household were supported -and people found develop sustain ably. The details of the assistance are given in Annexure-V.

Social Activities:-

The social activities are carried it by the NGO Sarvodaya Samiti.

Village meetings:-

After the involvement of NGOs the watershed committee members were selected from each village through village meeting. Each month a meeting is held in every village where the different project activities are discussed. The village wise action plans were prepared in these meetings.

The resolution for income generating support are prepared in the meetings.

Participatory Rural Appraisal:-

During the initial period of the project the P.R.As were conducted to collect social data's for planning and implementation of the project. Afterwards P.R.As were conducted to identify the assets created in the village, their maintenance aspect and to conduct impact studies.

Mahila Mandal Meeting:-

The project has formed 33 women self help groups. Each and every month the Mahila Mandal Meeting conducted for each S.H.G where the problems and prospectus of the S.H.G are discussed. The details of member fees collected, loan disbursed requirement of external funds were also discussed in the monthly meeting. Impact of the Groups near by area also discussed in the meetings. The member who attained Training programme conducted by the project explain to other members how to strengthen the groups.

User's Group Meetings/Management Committee Meetings:-

After handing over of assets to the concerned villagers, the management committee meetings are regularly conducted for smooth management of the assets like pasture development, casher plantation., sisal and pond. The income flow from different sources and expenditure in management of the assets were discussed in the meeting.

Watershed Committee Meeting:-

Watershed Committee Meeting was conducted 4 times in a year to discuss the annual action plan and the on going activities. The resolution made by the village committee are scrutinized and passed for final assistance. Then only the assistant was provided to the beneficiary. The Watershed Committee also monitors the activates conducted during the past. They are playing a vital role for the sustenance of the project.

Registration of Village Development Association

The Assets created in the Govt. land need aftercare of the project period and it will sustain only a interested group can take the charge and it also need financial assistance. Looking all these things in view the Registration of the Village Development Association came in to the picture. Village Development Associations were formed taking all the villagers as members of the Association. Out of them 12 persons represent the Managing Committee, comprising 6 male member and 6 female members. Then their Association were registered as per the Societies registration Act 1860. 10 Nos. of Village Development Associations were formed and registered.

Cost sharing

To develop the ownership of the assets, 20% contribution were mobilized during the pond construction at KUSPAR. In plantation Activities like Cashew plantation seedling and fertilizers has been supplied to the cashew beneficiaries for planting in the private plot and other operations were contributed by the beneficiaries.

Replication

Replication of low cost soil and moisture conservation activities were given importance. The low cost activities were highly appreciated by the people of the Watershed area as well as outside the watershed area. Low cost technology like Waterhole with KB pump is replicated by the farmers. Details of replication status is given in Annexure -VI.

GO-NGO Co-operation

In the beginning of the project problem arose for GO and NGO to sit on a common platform. This problem has solved after one year when the project co-operation committee was formed where the DANIDA advisor become the convener and project director the chairman. All GO field staffs, NGO staff, GO head became the member. All meet in every two months to resolve the conflict and prepare directives for future action plan. Attitudinal changes, outlook and thinking of Govt. Staffs have shown considerably improvements. At present their combine efforts have brought great success to the project, creating good atmosphere of community participation.

Women Participation :-

During the initial period of the project the women were not in a habit of attending meetings or training. They hesitate to interact with outside male members. As they were consist of one of the major target group, steps has been initiated by adding a women organizer and lady youth facilitators in the project to bring them in to the main stream of the project work. Emphasis was given to form more women self help group and women beneficiaries given assistance under individual house hold production, Mahila Kisan Nursery. In this way 33 women Self Help Groups have been formed covering 345 women and 55 under individual households. Eighty-three women developed leadership quality form this project.

The details of women participation has been given in Annexure - VII.

7.6 Training

Training is one of the most important components of the project. Training has been imparted to the farmers regarding improved agricultural practices, promotion of Self Help Groups, Conservation of soil and moisture, Management of the assets created in the Govt. land etc. The village committee members and the youth facilitator have been trained regarding watershed activities. The president and Secretary of Self Help Groups have been trained to strengthen the S.H.Gs. Besides these training, training on grafting, interactive training courses in the 10 poorest families in each village were also conducted. Out of these trainings the grafting training and the vaccination training to the YF produced skilled manpower to earn additional income.

The details of the training- imparted to the beneficiaries has been given in Annexure - VIII.

8. Project Outputs: -

1. Seventy percent of treatable lands are treated under soil and moisture conservation activities. The villager wise treatment status has been given Annexure - IX.
2. Cashew plantation is established in private as well as govt. wastelands to an Extent of 280 hectare.
3. Fifty hectares of denuded forestlands were planted with miscellaneous trees.
4. Low cost soil and moisture conservation activities well accepted and replicated by farmers.
5. Two hundred thirty hectares of wasteland brought under cultivation through soil and moisture conservation activities.
6. Pasture land developed to an extend of 12.5 hectares and stall-feeding practiced by the farmers.
7. ITK's (e.g. water hole) are identified and implemented by little modification.
8. Improved vegetable cultivation practices are well accepted by the people and vegetable production in the watershed area increased. San additional area brought under vegetable cultivation.
9. Farmer practices Green manuring, used improved seeds, hence increase in productivity of crop. The details of the improved technology management practices and crop coverage is given in the Annexure - X.
10. Thirty-three Self Help Groups established and linked with banks for further assistance.
11. Seven management groups have been formed for asset maintenance.
12. Ten VDAs were registered and village assets handed over to them.

13. Women participation in the project increased and 83 women developed leadership quality. The details of the women participation given in the Annexure - VII.
14. Poorest of the poor households supported under income generating activities.
15. Sustainable management of community assets attained.
16. Good co-operation between G.O & N.G.O. obtained. (As per the observation and comments of Review Mission)
17. Farmer and youth facilitators trained.

During the initial period of the project, it was too difficult to make aware of the people due to their resistance to any government programme and there was a fear among the people about the ownership of the activities. But later due to the involvement of NGO and special focus on awareness building results in good participation of people.

So far as the treatment of land is concerned due to lack of funds at the later part of the project the rest of land remain untreated. But due to well acceptance and replication of the low cost technologies the rest of area is likely to be covered.

9. EFFICIENCY:-

a) Preparation of annual action plan

The Broad outline of the action plan has been prepared in the project report. But from time to time the action plans are detailed out and changed basing on the need of the people.

So to make a need based appropriate and participatory action plan. It was essential to prepare the action plan every year to execute the activities in the coming year, which will suit the community immediately.

Village meetings P.R.A. and prospective planning are the foundation on which final action plans are built., During planning exercise two separate teams like technical and social move from plot to plot together with these villagers and house to house to take make socioeconomic survey and need assessment. The demands/options so collected from the above exercises were put into the watershed committee for detail discussions. The watershed committee approve action plane are scrutinized in the project level through workshops. There after it was finally approved by the State Level Empowered Committee meeting, after final scrutiny by the budget committee meeting. The, approved action plans discussed on the project co-ordination committee meeting for execution in the watersheds.

b) Most of the outputs produced during the project period in order to develop socially and economically of the rural community is qualitative. But from successful case studies it is revealed that the cost incurred in the project justifies the outputs. For example, under cashew plantation in private land around 30 hectares of area covered and 30 families have been benefited and the expenditure of the project is about seventy thousand hut every year the income is Rs. 7,000/- per hectare which amounts to a total of Rs. 2 lakhs per year. Like wise additional area brought under vegetables cultivation and agricultural crops due to the project activity observed significant improvement in the economic condition of the people.

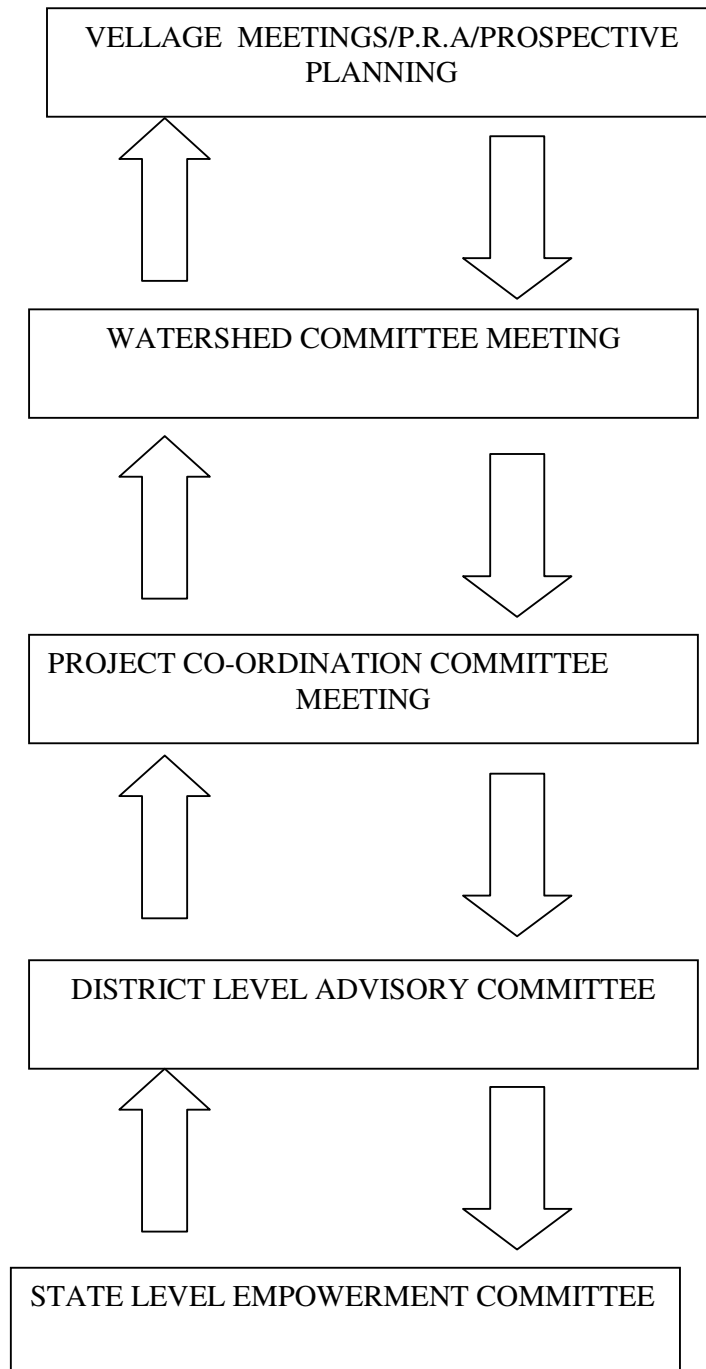
The economic condition of the poorest family sustainable improved due to support from income generating activities, which is well observed from the success stories.

Due to the awareness building among the villagers the low cost soil the farmers replicate moisture conservation activities. This shows that project activities are highly acceptable by the farmer.

C) Impact Parameters: -

During the initial planning benchmark surveys were conducted by the project and at the end of the project the impact studies have been carried out through survey and P.R.A. The detail parameters are given in Annexure - XI.

FLOW CHART FOR PREPARATION OF ACTION PLAN



Fulfillment of objectives

The development objectives are still relevant as only seventy percent of lands are treated under soil and moisture conservation activities. Each and every landless Door and women is still to be brought under sustainable economical development. But the awareness campaigning during the project period has its own impact on fulfillment of development objective through replication and spread effect.

Objectives showing relevant indicators.

Objectives	Indicator
Establishment of Locally acceptable land use system.	Replication and spread effect of activities
People's participation in project. work	Management of assets by community, contribution in community work.
Social Development	SHGS formed, Management groups and VDAS formed.
Economical Development	Sustainable Development of beneficiaries through –

	3) Benefit through income generating activities.
Sustainable Development of poor family	Assistance to 10 poorest family
Establishment of successful models	Spread effect of models to other watershed area.
To increase women participation.	Number of women formed SHGS, women developed leadership quality.
Development of wastelands	Waste land brought under cultivation.
Human resource development	Training and follow up action by the farmers and Youth Facilitators.
Increase in cattle population and cattle care	Pasture development, first aid and poultry vaccination training

11. SUSTAINABILITY:

Sustainability of the project activities could be assessed by: -

- a) Management of sets created in community land by the VDA/Management Committee.
- b) Sustainability of Self Help Groups.
- c) Sustainability of Village level institution.
- d) Replication and spread effect of project activities.

11.1 Assets Created In Government Land

A number of activities like composite nursery, miscellaneous tree plantation, community pond (WID) Sisal plantation and cashew plantation have been taken up by the village development associations. These VDAs formed management committees to manage the assets smoothly to secure the future sustainability.

11.1.1 Management of the composite Nursery:-

The composite nursery has been raised in the government land with prior permission from the Revenue Authority (Tehsildar Jeypore). After completion of its maintenance, the nursery has been handed over to the TOLA VDA from 1st April 2002. The group is able to maintain the nursery smoothly by keeping watch and ward provision. They raise the funds for the nursery by selling fruits, cashew nuts, cultivation vegetables and raising seedlings.

11.1.2 Management of miscellaneous. tree plantation

Around 50 hectares of miscellaneous tree plantation have been raised under the revenue village of MADI. These plantation have been handed over to VDAs of the village, for maintenance after the project has been completed.

In village MADI each family is responsible for watch and ward in a rotational basis.

11.1.3 Regeneration of Forest growth

Around 105 hectares of degraded forest take under regeneration of forest growth in village KUSDPUR, PARAL & TOLA MALIGUDA. These area have been handed over to the V.C. of concerned village after completion of the maintenance by the project. Each family of the villagers is responsible for watch & ward in rotational basic. A joint pass Book opened by the name of the committee for future.

11.2 Management of Village Pond

The contributed WID (pond) created in KUSPUR Village handed over to V.D.A. KIJSPUR in the village resolution. The pond is managed by those who have contributed labour for construction. Now the VDAs handed over the pond to the ten poorest family groups on a lease. They have undertaken pisci-culture in that pond.

11.3 Sustainability of Self Help Group: -

The Self Help Groups are sustainable because- . –

- ◆ The Self Help Groups are naturally developed, as they are trade based.
- ◆ Training imparted to the President and Secretary with gibing special emphasis to strengthen the group.

The village youth facilitators follow-up their activities.

- ◆ Self Help Group deals with cash and kind to meet immediate need of the members.

11.4 substantially of village level institution:

The village level institutions are sustainable because:

The village-developed association is registered under social registration act.

The VDAs have taken charge of the management of the assets created on Government land. Management committees, carry out the day-to-day work.

The youth facilitators who have undergone a series of trainings by the project are members of the VDAs.

11.5 Replication and spread effect:-

The low cost activities implemented by the project are highly acceptable by the people.

Successful models are spreading to adjacent areas.

12. Alternatives: -

"The approach of the project to address the problem of the people is very effective. The NGO & go given responsibility of awareness and execution of field work separately, resulting in increasing people participation and technical sound execution of physical works. The project has under gone changes in the activities annually due to its flexibility. There has been ample scope for experiment of different alternatives. Hence there have been no efficient relevant ways to approach the problems being addressed by the project.

13. Further Analysis:-

It is also important to assess the impact studies of the activities imitated by the project at the letter part. For example the income generating support to the poorest households. The beneficiaries are now developing economically which need further evaluation and analysis. Village to village impact studies through PRA techniques may be necessary to make further analysis.

14. Need for the furthers assistance--

The project has been able to create the base and social network for the improvement of the rural community. But in certain cases SHGs need further assistance.

The management groups are struggling with limited funds. So further assistance of funds and technology are required for sustainability. VDAs need additional initiatives.

CASE STUDY OF A SELF HELP GROUP KUKUDANALA WATERSHED OF BOIPARIGUDA-1,BLOCK (Indo- Danish Comprehensive Watershed Development Project, Koraput, Orissa.)

Tola is a tribal village in Kukudanala watershed of Boipariguda -1 block, Koraput District, Orissa. The village is home to 160 families. 145 families live below poverty line. 12 women members from these poor families form a Self-Help Group in 1996. Annual income for the families was ranging from Rs.3,000.00 to 4,000.00. Sources of income were mainly from daily labour, agriculture income, selling of poultry and forest product collection. The indebtedness was ranging from Rs. 500.00 to Rs.1,000.00 annually. The repayment was with high interest.

The process: -

The NGO associated with the project initiated leaf plate making activity among the members since two to three members learnt this skill. They collected Rs. 5.00 per month as member fee and opened a joint passbook in the name of President and Secretary of the Group. The members were encouraged to start Mahila Kissn Nursery to raise the seedlings. They earned Rs. 2,000.00 by doing this activity twice. Then the members took up vegetable cultivation in common and got income of Rs. 800.00. The project assisted the group Rs. 15,000.00 in a phased manner for leaf plate making and other business dealing with forest products.

The NGO has provided eight plate stitching machine for training purpose. The group has been able to produce quality plates more in numbers and they do not find difficulties for marketing them since local businessmen buy them. Now the Self Help Group has raised total funds Rs. 28,000.00 for revolving purpose. Recently the women members have taken up Horticulture after getting necessary inputs and training from the Horticulture Department of Orissa.

Present situation of the members of the self help group:

- ◆ No loan from the outside.
- ◆ No seasonal unemployment.
- ◆ Learnt the skill of money transaction with the local bank.
- ◆ Members have improved their housing.

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Vegetable Cultivation at waterhole and use of K.B. Pump, Kududanala Watershed, Boiparguda – 1

SL. No.	Name of the Village	No. of water hole created			Total No. of Effective water hole as on date	Status of K.B. Pump			Vegetable grown with K.B.+W.H.				Remarks
		Project Support	Through Replication	Total		Project support	Replication	Total	Type of Veg.	Area in Ha	ROD in Qntls	Total no. of w.h. used for Azolla bank	
1	Madi	6	2	8	4	3	-	3	Onion, Garlic, Brinjal, Chilli	0.08			
2	Lenja	7	1	8	3	2		2	Tomato, Chilli, Brinjal	0.0			
3	Bapaniguda	3	2	5	3	2		2	Tomato, Chilli	0.06			
4	Paral	7	1	8	2	1		1	Tomato	0.05			
5	Gunji	2	2	4	1	1		1	Tomato	0.04			
6	Bodaput	10	3	13	7	5	1	6	Oniion, Chilli, Tomato	0.20			
7	Kuspar	11	3	14	12	13	1	14	Brinjald, Tomato, Chilli, Brinjal	0.80			
8	Kurkuti	13	4	17	14	14	1	15	Tomato, Chlli, Brinjal, Onion	0.95			
9	Tola	19	6	25	18	15	1	16	Tomato, Chilli, Brinjal, Knol Khol	1300		3	
10	Umuriaguda	6	1	7	5	5		5	Tomato, Chilli, Brinjal	0.20			
	Total	84	25	109	69	61	4	65		3.44		3	

Self Help Group of Kududanala Water shed,Biopariguda – 1

S N	Name of Village	Total Group				Total Membrs			Category of work													Tota l Amo unt Assi st
		Ma le	Fem ale	Mix ed	Tota l	Mal e	Fem ale	Tota l	Mud hi maki ng	B.B. mak ng	Pott ery	Goat ery	Rice cake mak ng	Veg. cult.	A.E.	Duc kery	Leaf palte maki ng	Roo pe maki ng	Mas ala maki ng	Grai n bank	Tota l	
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1.	Madi	01	03		04	10	31	41	3			1									04	3810 0
2	Lenja	02	03		05	20	31	51		02		03									05	2630 0
3	Bapaniguda	-	03	02	05	17	37	54	01		03	01									05	3979 0
4	Parala		01	02	03	18	07	25		02		01									03	1850 0
5	Gunji		01	01	02	09	14	23		02											02	1100 0
6	Bnodapat	01	03		04	10	23	33	01			01	01						01		04	2670 0
7	Kuspar	01	04	02	07	15	40	55	01	01		01		02	01		01				07	4000 9
8	Kurukuti		06	03	09	14	70	84	02	01		02		01	01	01				01	09	5180 9
9	Tola	06	07	04	17	72	77	149		04		04	01	01	02	01	01	01		02	17	9240 0
10	Umuriaguda		02	01	03	07	15	22				02	01								03	2550 0
	Total	11	33	15	59	192	345	537	08	12	03	16	03	04	04	02	02	01	01	03	59	3701 28

Income Generation support of Kukudanala watershed, Boipariguda – 1

Name of Village	Category			Sex			Category of works														Total Amount Assist	
	Lend less	MF	S F	Male	Female	Total	BB M	Cap entry	Black smith	Pott ery	Veg. Cult.	Mud hi maki ng	Rop e maki ng	AE	KB Pum p	Goat ery	Poul .	Duc k	SB	G B		LPM
Madi	22	05	03	24	06	30	11	01	05			02		01	03	02	01			03	01	41905
Lenja	11	06	05	17	05	22	02	04	01					01		13	01					47872
Bapaniguda	10	05	05	15	05	20		01		10			01	01	01	04	02					39157
Paral	04	03		03	04	07		01	01						01	04						12202
Gunji	1003	02	10	05	15				01						01	13						33895
Bodaput	11	12	02	20	05	25	12	03					01	01	04	04						27005
Kuspar	11	12	05	22	06	28	07	02	02		03			01	07	05			01			31936
Kurukuti	09	07	04	13	07	20		05			02		01	01	05	03		03				31930
Tola	11	11	15	25	12	37	02	02	01			01	01	02	07	18			01	02		57063
Umuriaguda	05	04		09		09	02					03		01	02	01						10500
Total	104	68	41	158	55	213	36	19	11	10	05	06	04	09	31	67	04	03	02	05	01	333465

Status of 10 poorest in Kukudanalad Watershed, Boipariguda – 1

S/N o.	Name of the Village	IGS	CD	Assets	Others	Balance	Criteria basis selection
1	Madi	4	3	2	-	4	1. Selected in village meeting 2. Identify through PRA 3. Joint pass book opened in mini bank 4. Develop saving status
2	Lenja	1	3			9	1. Selected in village meeting 2. Identify through PRA 3. Joint Pass Book Opened in the mini bank
3	Bapaniguda	2	3			8	1. Selected in village meeting 2. Identify through PRA 3. Develop saving status
4	Paral	1	4			9	1. Selected in village meeting 2. Identify through PRA 3. Develop saving status
5	Gunji	2	4			8	1. Selected in village meeting 2. Identify through PRA 3. Develop saving status
6	Bodaput	1	3			9	1. Selected in village meeting 2. Identify through PRA 3. Develop saving status
7	Kuspar	10		10			1. Selected in village meeting 2. Identify through PRA 3. Develop saving status 4. User group rights of WID through VDC
8	Kurkuti	1	4			9	1. Selected in village meeting 2. Identify through PRA 3. Develop saving status
9	Tola	10					1. Selected in village meeting 2. Identify through PRA 3. Develop saving status
10	Urnuraguda	1	3			9	1. Selected in village meeting 2. Identify through PRA
	Total	33	37	12		65	

Replication of low cost soil & Water conservation measures, Kukudanala watershed, Boipariguda-1

Sl. No.	Name of the village	Activities	Unit/Area	Cost in Rs.	Project Assistance			Assistance by NGO
					Financial	Material	Technical	
1	Madi	1. Stone bonding	8 nos.	8000			yes	guidance
		2. Veg. Cultivation	0.5 Ha	-			yes	
		3. Stone Wall terracing	5 Nos.	7000			yes	
2	Lenja	1. Drop Structure	10 no	12000			yes	guidance
		2. Stone Bonding	02 nos.	2600			yes	
3	Bapaniguda	1. Field Bonding	225 mtr	1125			yes	
		2. Drop Structure	02 units	2000			yes	
4	Paral	1. Stone wall terracing	03 mtr	4500				
		2. GCM	05 nos	5000				
5	Paral	1. Stone wall terracing	30 mtr	3000				
		2. Field Bunding	03 nos	1000				
6	Bodaput	1. Drop Structure	09 unit	4500				
		2. ECD	02 nos	1000				
		3. GCM	02 nos	2000				
7	Kuspar	1. ECD	20 metres	3000				
		2 Drop Structure	03 units	9000				
		3. Cashew Plantation	08 ha	1500				
		4. BWCD	10 nos	1200				
		5 Veg. Cultvation	0.25 ha	2000				
8	Kurkuti	1. Stone bonding	40 meters	7000				
		2. Veg. Cultivation	05 ha	3000				
		3. Waterhole	01 no	500				
9	Tola	1. ECD	20 meters	2000		Vertiver		
		2 Cashew plantation	08 ha	3000		seedling		
		3. Water hole	02 nos.	1000			yes	
		4. Plantation (MTP)	30 ha	900	seeds			
10	Umuriaguda	1 BWCD	5 nos	1760			yes	
		2 Drop Structure	06 Units	3000		Vertiver		
		3 Vertiver Bunding	10 meters	400				

Women participation of Kukudanala Watershed, Boipariguda – 1

S N	Name of the Villate	No. of Housse holds	No .of femlae headed family	Total No. of Adult women					Total target ed wome n	No. of wome n in 10 poores t family	NO. of women Benefited by the project						NO. of women trained till 31.03.2000	
				LL	MF	SF	BF	Total			SHG	HHPS	LYF	MKN	CD	Total	SCTI	NGO
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
1	Madi	139	16	04	100	37	09	150	141		08		02	01	02	13	03	05
2	Lenja	111	23	49	40	24	22	135	113	01	10	-	01	01	02	14	03	05
3	Paral	60	08	21	20	05	15	61	46	01	05		01	01	01	08	03	05
4	Bapaniguda	71	15	44	21	06	06	77	71	02	35	01	01	03	01	41	03	07
5	Gunji	58	08	36	19	04	03	62	59	01	14		01	01	02	18	03	05
6	Bodaput	103	24	59	29	18	12	118	106	02	19		01	01	01	22	03	07
7	Kuspar	149	24	50	63	37	36	186	150	01	23		01	01	02	27	03	07
8	Kurukuti	236	30	80	41	89	15	225	210	01	47	02	02	02	02	55	03	13
9	Tola	180	38	86	82	40	12	220	208	01	63	03	01	05	02	74	06	25
1 0	Umuriaguda	57	13	10	47	08		65	65	02	12		01	02	01	16	03	07
	Total	1164	199	439	462	268	130	1299	1169	12	236	06	12	18	16	288	33	86

Annexure – VII (continued)

S.No	Name of the Villatge	No. of women developed		No. of women associated in social mobilization, anti liquor, education, & others	Balance women to be covered in remaining period	Success Story	
		Socially	Economically			Socially	Economically
20	21	22	23	24	25	26	27
1	Madi	02	01	Literacy – 9 Anti liquor – 11	128	SHG mudhi mking	
2	Lenja	03	01	Aniti Liquor – 12	99	SHG BB making	
3	Bapaniguda	04	02	Literacy – 3 Anti liquor – 10	30	SHG Pottery & Mudhi making	individual mudhi making
4	Gunji	02	01	-	41	-	-
5	Paral	01	01	Anti Liquor – 8	38	-	-
6	Bodaput	02	01	Literacy – 5 Anti liquor – 6	84	-	-
7	Kuspar	12	04	Literacy – 8 Anti liquor – 15	123		SHG Vegetable cultivation
8	Kurukuti	06	06	Literacy – 13 Anti liquor – 20	155	SHG contribution work in pond	SHG vegetable cultivation
9	Tola	18	12	Literacy – 10 Anti liquor – 19	134	SHG Leaf plate making	Individual making
10	Umuriaguda	02	02	-	49	SHG Leaf plate making	-
	Total	52	31		881		

Crop coverage yeield/ha., Kukudanal Watershed, Boipariguda – 1

S.N	Name of the Crop	Kharif			Yield Qnt/ha		Rabi			Yield Qnt/ha	
		Inception year in ha	During 2001-2002	Total Area Increased	Inception year	During 2001-2002	Inception year in ha	During 2001-2002	Total Area Increased	Inception year	During 2001-202
1	Paddy of land	55	75	20	24	4					
2	Paddy medium land	301	308.6	7.6	15	21.75					
3	Paddy low land	422.4	430	7.6	16	22.5	10	17	7	17.5	25
4	Ragi	135	142	7	3.75	5.8	3	4	1	3.5	5.7
5	Niger	51	50	-1	1.5	2.82					
6	Arher	8	18	10	1	1.25					
7	Black gram	15	20	5	1.25	1.75					
8	Horse Gram	13.85	13.85	-	1	1.25					
9	Ground nut						8.25	13.5	5.25	4	6.5
10	Ginger	3	8	5	90	120					

**Technology management practice / improved Technology Adopted
(pre / Present) Kukudanala Watershed, Boipariguda – 1**

Sl. No	Practices/ Technology	Total No. of SF & MF	No. of SF/MF Farmers Adopted			Total No. of Farmers aware of the practice	Area covered n Hect/ Production in Qntls.			Remarks
			With project support	Through Replication	Total		From project fund	Replication	Total	
1	Line sowing	25	16	09	25	07	8 ha	4.5 ha	12.5 ha	
2	Ploughing Method	107	85	22	107	107				
3	Model Compost Piit	24	14	10	24	24				
4	Model Fym. Pit	58	15	43	58	58				
5	Green Manuring									
	1. Dhanicha	15	08	07	15	08	4 ha	3.5 ha	7.5 ha	
	2. Gloricia	02		02	02	02		0.5 ha	0.5 ha	
	3. Azolla	02		01	02	02		1.0 ha	1.0 ha	
	4. Bio fertilizer	13	10	03	13	05	4 ha	1.05 ha	5.5 ha	
6	Crop rotation with pulses	22	17	05	22	18	8.5 ha	3 ha	11.5 ha	
7	Mixed cropping with pulses	153	115	38	153	153	57.5 ha	19 ha	76.5 ha	
8	Use of Pitches	280	263	17	280	55				
9	Half moon half basin	95	42	53	95	50				

Impact parameters , Boipariguda 0 1**1. Average level of water**

Sl. No.	Name of the villate	Before the project			After the project			Increase or decrease			Remarks
		Ridge	Middle	Valley	Ridge	Middle	Valley	Ridge	Middle	Valley	
1		5.03	5.72 m	5.06 m	4.60 m	4.43 m	0.43 m	0.52 m	0.63 m		

2. Area cultivated under different crops in ha:

Sl. No.	Name of the crops	Before the project		After the project		Increase or Decrease		Remaks
		Kharif	Rabi	Kharif	Rabi	Kharif	Rabi	
1.	Paddy, Ragi, Niger, Arhar, Black gram, Horse gram, Ground nut & Ginger	1001.25 ha	63.50 ha	1106 ha	180 ha	104.75 ha	116.5 ha	

3. Three Principal crops and Production

Sl. No.	Name of the Crops	Before the proejet	After the project	Increase or Decrease	Remark
1	Paddy	778 ha	1106 ha	328 ha	
2	Ragi	135d ha	142 ha	07 ha	
3	Oil seeds	51 ha	55 ha	04 ha	

4. Population of lives stocks :

Sl. No.	Name of live stock	Before the proeject	After the project	Increase or decrease	Remarks
1	Cattle	1524	1755	231	Increased
2	Sheep	264	393	129	
3	Goat	432	821	389	
4	Pig	59	93	34	
5	Poultry	2050	2950	900	

5. Nos. of Person Migrated for labour to other area during Jan to May

Sl. NO.	Watershed	Before the proeject	After the project	Increase or decrease	Remarks
1	Kukudanala	152	25	127	Decreased

6. Additional Agriculture land brought under cultivation in ha

Sl. NO.	Watershed	Before the proeject	After the project	Increase or decrease	Remarks
1	Kukudanala	1225.25 ha	1330.25 ha	105 ha	Increased

7. Area under vegetable cultivation

Sl. NO.	Watershed	Before the proeject	After the project	Increase or decrease	Remarks
1	Kukudanala	10 ha	25.5 ha	15.50 ha	Increased

8. NO. of women development leadership qualty:

Sl. NO.	Watershed	Before the proeject	After the project	Increase or decrease	Remarks
1	Kukudanala	-	22 nos	22 nos.	Increased

9. No. of person were literate

Sl. NO.	Watershed	Before the proeject	After the project	Increase or decrease	Remarks
1	Kukudanala	80	435	355 up	

10. Status of SHG of Boipariguda – 1

Sl. NO.	Watershed	During the project period	Amount of savings	Increase or decrease	Remarks
1	Kukudanala	59	2,01,000		

11. Amount of Voluntary contribution made for village deveopment:

Sl. NO.	Watershed	During the project period	Total Contribution	Increase or decrease	Remarks
1	Kukudanala	21000/-	21000/-		

12. Successful Activities :

Sl. No.	Name of the activities	During the project period	Replicated by the farmer	Remarks
1.	Water hole	60 nos	30	
2.	Earthen Check Dam	73 nos	76	
3.	Compost pit	25 nos	33	
4	Drop Structures	533 nos.	42	
5	Brush Wood check dam	56 nos.	60	

13. No. of plant planted:

Sl. No.	Name of the Watershed	During the project period	Survived after the project	Remarks
1	Kukudanala W/S	128520 nos	58813 nos	

14. Sustainable village level institution in nos. :

Sl. No.	Name of watershed	Before the project period	After the project	Remarks
1	Kukudanala W/s	-	69 nos.	

15. No. of School dorp-outs:

Sl. No.	Name of watershed	Before the project period	After the project	Remarks
1.	Kukudanala	435 nos	162 nos	

16. No. of Families associated with different activities:

Sl. No.	Name of watershed	During the project period	After the project	Remarks
1	Kukudanala W/s	213 Nos	83 nos.	With lasting improvement

