

Developing Sustainable Farming System Models For Prioritized Micro Watersheds in Rainfed Areas of Jharkhand (Proponent : BAU, Ranchi)

Template for Environmental and Social Safeguards Management

No. of consortium partners: 4

1. Birsa Agricultural University, Ranchi (Lead Centre)
2. Central Rainfed Upland Rice Research Station, Hazaribagh
3. Horticulture and Agro-forestry Research Programme, Ranchi
4. Indian Institute of Natural Rasins and Gums , Ranchi

No. of States/UT covered : One (Jharkhand)

No. of Districts covered : 2 (Dumka & Jamtara)

Number of beneficiary farmers : 1567

Duration: 5 Years (19th September, 2007-08 to 2011-12)

Budget: Rs. **635.75550** lakh

Project Objectives:

- ❖ To develop appropriate land & water use plan in the selected micro-watersheds for conserving natural resources.
- ❖ To improve productivity of crops, promote horticulture, animal husbandry fisheries & lac cultivation for livelihood security.
- ❖ To promote entrepreneurship for value addition to reduce migration & employment generation at farm level.
- ❖ To develop sustainable farming system models for the micro-watershed & improve market linkages

Brief Project Description

The Project is being implemented in Dumka & Jamatara Districts. Of two micro water sheds from each district (covering 500 ha. area in each micro-watershed). A multi pronged and multidisciplinary work plan has been developed in a participatory mode for implementation to have a measurable impact.

Major technological interventions under taken

1. Ensuring proper and judicious use of land and water resources for intensifying farming activities
2. Developing life saving irrigation water bodies in farmers fields for rainwater harvesting and enhancing productivity of low, medium and upland situation
3. Cultivation of multiple and diversified crops including horticultural crops and their improved varieties.
4. Integrated cultivation of crops and fishes (freshwater)

5. Promotion of composting including vermi-composting, green manuring, INM, etc. for enhancing productivity of agriculture and aquaculture
6. Introduction of low cost farm machineries for drudgery reduction and economic farm operations
7. Introduction and improvement in livestock/ poultry including nutrition and disease management.
8. Introduction of mushroom cultivation.
9. Skill and capacity building of farmers and other stakeholders
10. Promoting employment generation through entrepreneurship development at local level with trained manpower.

B. Environmental Category: B

2. Major issues in the subproject:

Social: Major social issues likely to arise on implementation of the projects are –

1. Inclusion of poor and disadvantaged groups
2. The capacity of farmers to adapt and sustain the productivity gains
3. Demonstration of economic benefits of the interventions

Environmental: Major environmental issues likely to arise on implementation of the projects are –

4. Protection of local biodiversity resources
5. Impact of use of agro chemicals on environment

3.Safeguard Policies Triggered (World Bank Policies)

Safeguard Policies Triggered (World Bank Policies)		
	Yes	No
Environmental Assessment (OP/BP 4.01)	[X]	[]
Natural Habitats (OP/BP 4.04)	[]	[X]
Pest Management (OP 4.09)	[X]	[]
Cultural Property (draft OP 4.11-OPN 11.03 -)	[]	[X]
Involuntary Resettlement (OP/BP 4.12)	[]	[X]
Indigenous Peoples (OP 4.10)	[X]	[]
Forests (OP/BP 4.36)	[]	[X]
Safety of Dams (OP/BP 4.37)	[]	[X]
Projects in Disputed Areas (OP/BP 7.60)	[]	[X]
Projects on International Waterways (OP/BP 7.50)	[]	[X]

- No involuntary resettlement is expected as The area of individual sites is very small and all proposed interventions are within farmers boundaries.

(Measures to address these issues is given in 8(a)

4. Risk related Issues (not covered under 3 above but perceived to be important in the sub-project):

In addition to the issues covered in the table above, the issue of interface with the communities is also important to the subproject. Measures to address this issue is given in 8(b)

5. Impact Assessment (Enclosures- I and II):

I. The project will mostly have positive impacts, as it will increase the productivity of degraded and low productive soil.

II. The total productivity in terms of agricultural crops, horticultural crops, fishes and animal products, lac production of the area will increase. It will generate high employment opportunities of the rural poor and will enhance their livelihood security. The total production of agriculture and allied commodities of the area, as a whole will increase. The project will also facilitate the income and employment generation for women farmers and will reduce their drudgery. The capacity building of the farmers and other stakeholders will further increase the livelihood security of the rural people and productivity of the region/ country as a whole.

6. Potential indirect and / or long-term Impacts due to anticipated future activities in the project areas (assessment of anticipated conflict / complimentarily with the current as well as those proposed for the next five years) in the areas of activities of the sub-Project):

Besides the direct impact the project will have indirect impact on the socio-economic upliftment of the rural poor which in turn will increase the educational and technological knowledge improvement of the distressed rural people of the most disadvantaged areas. The different Goshthis/ associations/SHGs of the farmers created for implementation of the project will be in the long term helpful for the development of the whole village/ region. The environment and soil health of the area will be better conserved which in the long run will increase the agricultural productivity as whole and maintain the ecological balance.

7. Identify the key stakeholders and describe mechanisms for consultation with and to them done / disclosure so far done including pre-project consultations with the stake holders, stakeholders' workshop before formulating the full proposal, discussing the full proposal with some stakeholders before submission to the PIU

Farmers, Pachayat Raj Institutions, Research Institutes, Govt. Departments, SAU, different Govt. and Non-Govt. organizations, Farmers Goshthis, voluntary organizations etc. who are engaged in improving rural livelihood are the key stakeholders for this project. Several rounds of discussion, exchange visits, field visits, group discussions were organized during the project formulation. After launching the project, the interaction meeting of the workshop involving all the stakeholders, allied departments, and banks are continuously being organized in each cluster. At each cluster level possible interactions were carried out involving all the stakeholders including men and women farmers to identify issues to be addressed and relevant interventions to be undertaken.

8 Measures to address issues

(a) The subproject designed includes following measures

- i. **Environment**- The very purpose of the sub project is to sustainably improve the degraded environment existing in Dumka and Jamtara districts of Jharkhand. The screening of environmental issues has been done to include possible impacts and appropriate mitigation measures are proposed (enclosure I)
- ii. **Pest management** – Encouraging the use of Integrated pest management practices will discourage the use of chemical pesticides. This will provide advantage of environment and health security to the farmers. Field demonstrations and training of farmers on IPM and INM are integral part of the subproject.

iii. **Indigenous people**

The tribal population in the project area is around 64 %. The majority of the tribal people in the area are land less/ marginal farmers having very poor livelihood and educational status. In the tribal families the women are more active while men are relatively lazy. In the implementation of the project priority will be given for landless and marginal tribal farmers. The interventions like, livestock management, fish cultivation, mushroom cultivation, nursery raising, diversification of farming, capacity building, etc. will be more suitable for tribal farmers

The proposed interventions are either through augmenting or making adjustments in the livelihood system of the indigenous people without causing any major changes in their way of life. It will only improve their income, nutrition and livelihood security. However, planned efforts would be made to ensure that tribals are included and derive full benefit from the projects intervention.

(b) **Interface with the communities**

The selection of beneficiaries will be made through involvement of local institutions and communities; preference will be given to a willing partner. The selection of the families would have proportionate representation from the following groups:

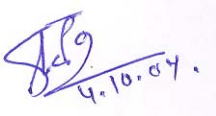
- a. Small, marginal and landless farmers
- b. Women
- c. SC and ST group

Subproject implementation plan was prepared and agreed with the communities and displayed. Participatory approach and transparency in the implementation is being maintained as far as possible.

Gender issues would be adequately addressed

- 9. Consultation / disclosures to be done in future: Local disclosure through mechanisms such as launch workshop, interfaces during the implementation stage of the sub-project for sharing the results and soliciting feedback, circulating project brochures and implementation progress from time to time, putting up annual reports on the web site and annual stakeholder workshops wherever feasible**

Preliminary discussion has been made with the beneficiaries in the target sites of the project. Situation analysis has been made in the project sites and found favourable for implementation of the project. However, every means of formal and non-formal local communications is being made during the implementation of the project. Group meetings, workshops, inter and intra-cluster meetings of the farmers and all other stakeholders is/ being organized for sharing the experiences and exchange of views for successful implementation of the project in participatory mode. In addition websites, popular articles in electronic and print media is also being made use of.

A handwritten signature in blue ink, followed by the date '4.10.04' written below it.

National Director

Consortia PI

National Coordinator

Enclosure I

A: Environmental Safeguard: Activities, Issues, Impact and Mitigation Measures

Table 1: Environmental Safeguard: Activities, Issues, Impact and mitigation measures

Safeguards Template for NAIP Projects

A: Environmental Safeguard: Activities, Issues, Impact and Mitigation Measures
Table-1: Environmental Safeguard: Activities, Issues, Impact and mitigation Measures

Activities ¹	Issues ²	Anticipated level of Impacts ³		Mitigation Measures ⁴ (Negative Impact)
		Positive	Negative	
On Farm Water Management	Improved Water logging, Soil & Water erosion through harvesting and proper management of rainwater	4		
Use of HYV & Improved Package of Practices	Improved health due to food chain	4		
	Soil pollution due to pesticide fertilizers etc		2	Balance use of fertilizer, INM and IPM strategies as per crop needs will help
	Loss of bio diversity		1	locally suitable cultivars will preferably be used
Introduction, of Piggery, Poultry and Goats	Less spread of disease and improved production through better health care and improved feed nutrition	4		
	Waste management,		1	Integrating waste management for fisheries, manure etc
Fruit, Vegetable Cultivation	Occurrence of new disease & pests		1	Regular disease survey and resistant cultivars will be used.
Lac Cultivations and Processing	Waste management	4	3	Lac mud will be used as organic supplement & thus recycled.

Enclosure-II

B. Social Safeguard : Activities, Issues, Impact and mitigation Measures

Table-2: Social Safeguard : Activities, Issues, Impact and mitigation Measures

Activities ¹	Issues ²	Anticipated level of Impacts ³		Mitigation Measures (Negative Impact) ⁴
		Positive	Negative	
On Farm Water Management	Enhanced availability of water	3		
	Social conflicts		1	Farmers participatory approach will help
Use of HYV & Improved Package of Practices	Enhanced income, employment	3		
	More dependence or external resources		1	ITKs will be improved,
Introduction of Piggery, Poultry and Goats	Enhanced nutritional security, income and employment	4		
	Fodder and grazing area shortage		1	Measures like agro-forestry, fodder crops, manger feeding, UMMB, Mineral Mixture, etc. would be employed.
Fruit, Vegetable Cultivation	Enhanced income, reduced Vulnerability to economic loss	4		
Lac Cultivations and Processing	Enhanced income, reduced Vulnerability to economic loss	4		
	Role of middlemen/contractors		1	Market linkage will help