

Improving Livelihood Security in Salt-Affected Watersheds of Muzaffarpur and Sheohar Districts of Bihar (RAU, Pusa)

Environmental and Social Safeguards Management

1) Basic information :

- **Project Statistics** : No. of consortium partners : 2
 1. Rajendra Agricultural University, Pusa, Bihar
 2. ICAR-RCER, PatnaNo. of districts covered: 2 (Muzaffarpur and Sheohar)
Duration: 4 years (2008-09 to 2011-12)
Budget: Rs.4.8427 Crore
- **Project Objectives** :
 1. To improve the productivity and profitability of rice-wheat and sugarcane based farming systems in salt-affected watersheds;
 2. To enhance employment opportunity through allied agricultural activities and post-harvest technology; and
 3. To increase the skill of farmers for livelihood security through entrepreneurship development and knowledge empowerment.
- **Brief Project Description** : This is a multi disciplinary consortium project with an aim to improve the livelihood security of the rural people in backward districts of Bihar through application of proven agro-technology and providing employment and income generation opportunities through allied activities.

Interventions for improving the livelihood prospects

1. Land reclamation with organic and inorganic materials in upland and midland conditions.
2. Introduction of short duration salt tolerant rice varieties.
3. Direct seeded rice +Fish culture / Late rabi crop in Upper portion of lowland
4. Integrated Pest Disease and Nutrient Management
5. Replacement of prevalent cultivars of wheat, sugarcane, pulses and vegetables with more suitable ones
6. SHGs formation
7. Livestock management
8. Other income generating (allied) activities
 - A. Bee keeping
 - B. Mushroom production
 - C. Fisheries in suitable water bodies

D. Management of litchi orchard

E. Post-harvest management

- B) Environmental Category : B
- 2) Major issues in the sub-project
- Social :
 - 1) The probable major social issues involved which may arise relate to targeting the deserving beneficiaries, that is, landless labourers and marginal farmers who are socially and economically weak.
 - 2) The capacity of farmers to adapt and sustain the productivity gains
 - 3) Demonstration of economic benefits of the interventions
 - Environmental : 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 (OD 4.20)		X
Forests (OP/BP 4.36)		X
Safety of dams (OP/BP4.37)		X
Projects in disputed areas (OP/BP 7.60)		X
Projects on international waterways (OPBP 7.50)		X

Measures to address this issue 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)
	The project mostly will have positive impact as it involves improving the soil health and enhancing the crop and animal productivity through improved agricultural practices and allied activities. Wherever negative impact is perceived through individual interventions, appropriate mitigation measures have been

	planned which are detailed in Enclosures I and II.
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.
	The state line departments serve the target areas on a regular basis. However, the current project will target interventions focusing on the landless and poorest of the poor farmers, improving the livelihood security of the project area. Since the Gramasabha (village general body) and Panchayati Raj institutions (local self governance) will be involved from the beginning in all the interventions, the possibility of conflicts within the community are minimum. A good deal of complementarity is envisaged between this project and other initiatives of the central and state governments programme.
7)	Identify the key stakeholders and describe mechanisms for consultation with and to them done/disclosure so far done including pre-project consultation with the stakeholders, stakeholders' workshop before formulating the full proposal, discussing the full proposal with some stakeholders before submission to the PIU.
	Farmers, Panchayat Raj Institutions, government and non-government institutions engaged in improving rural livelihoods are the key stakeholders for this project. Several rounds field visits to farms and rural households, discussions and meetings with stakeholders and workshops were organized during the pre project consultation. After the launching also a stakeholders interaction meeting involving all the line departments and banks is being organized in each cluster. At the cluster level, a structured PRA in identifying issues and possible interventions was carried out which involved all the stakeholders including farmers, land less, village artisans and women.
8	<p>8 (a) The subproject designed includes following measures</p> <ul style="list-style-type: none"> i. Environment- The very purpose of the sub project is to sustainably improve the salt-affected areas existing in target districts. 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. <p>8(b)</p> <ul style="list-style-type: none"> i. Interface with the communities <ul style="list-style-type: none"> a. 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

	<p>proportionate representation from different groups.</p> <p>Subproject implementation plan would be prepared and agreed with the communities and displayed. Participatory approach and transparency in the implementation would be maintained.</p> <p>Gender issues would be adequately addressed.</p>
9)	<p>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 website and annual stakeholder workshops wherever feasible.</p> <p>The results of the project implementation will be shared with the line department's functionaries for better use. It may also be shared through various means with NGOs, financial and technological institutions in the interest of the farmers</p>

Consortia PI

National Coordinator

National Director

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		
		Positive	Negative	
Reclamation of salt-affected soil	Amelioration of salinity and alkalinity of soil through ponding/gypsum/pyrites treatment	✓(4)		
Mushroom production	Crop residue recycling	✓(2)		
Promotion of high yielding cultivars of crops	Improved agro-biodiversity	✓(3)		
	Impact of use of agrochemicals		✓(1)	Measures like balanced use of fertilizers and IPM would be employed through field applications and trainings
	Soil health improvement through Integrated Nutrient Management	✓(2)		
Incorporation of rice-fish culture in low-land Fisheries in suitable water bodies	Improved agro-biodiversity	✓(2)		
	Improved aquatic fauna exploration through fish breeding	✓(3)		

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	
Sustainable enhancement of the productivity of salt-affected soil	Improvement in productivity of degraded land through land shaping, proper land management etc	✓(4)		
Promotion of high yielding cultivars of crops	Enhanced income, around employment and nutritional security through introduction of improved cultivars and allied activities	✓(3)		
	More dependence on external resources		✓(2)	Linkage with Financial institutions
SHGs formation	Improvement in social status through empowerment specially of women	✓(4)		
	Social conflict		✓(1)	All the interventions to be decided and implemented in participatory mode through involvement of village level committees, panchayati raj members
Training of rural youths and farmers groups for entrepreneurship development	Enhancement in knowledge based activities for higher income and self dependence	✓(4)		