

**Title: Achieving Improved Livelihood Security through Resource Conservation and Diversified Farming Systems approach in Mewat (CCSHAU, Hissar)**

Environmental and Social Safeguards Management

**No. of consortium partners: 7**

- Department of Agronomy, CCS Haryana Agricultural University, Hisar-125004, Haryana-**Lead Center**.
- National Centre for Agricultural Economics and Policy Research (NCAP), Library Avenue, Pusa Campus, New Delhi.
- Society for Strategy, Technology & Delivery for Development (Society STADD), A-6 DDA, Shahpur Jat, New Delhi, 110049.
- Centre for Advancement of Sustainable Agriculture (CASA), NASC complex, DPS Marg, Pusa, New Delhi 110012.
- Division of Agronomy, IARI, New Delhi.
- Central Institute for Research on Goats (CIRG), Makhdoom P.O. Farah-281122, Mathura(UP).
- International Maize and Wheat Improvement Center (CIMMYT), NASC Complex, DPS Marg, Pusa campus, New Delhi 110012.

No. of States/UT covered: One

No. of Districts covered : One

Duration: Three years and three months (April 2009 to June 2012).

Budget: Rs. 266.5149 lakh

**Project Objectives:**

The specific objectives of the project are:

1. Implement resource conserving practices in agriculture to develop optimal production system.
2. Improve the socio economic condition of marginalized farmers of Mewat region through science led interventions in agriculture.
3. Strengthen local capacity of community and the institution system for long term sustainability.
4. Help establish a new paradigm of field linked research and redefined extension system.

**Brief Project Description:**

The district has made little progress in terms of improvement in livelihoods of its predominantly rural population (95.3%) as recorded in the Census of India, 2001. The district has been identified as geographically and socio-agro-ecologically the disadvantaged region of the country (Planning Commission, 2005; Khan, 2003), represented by numerous biophysical and socio-economic forces affecting rural dynamics. Problems in the districts are not only numerous but also complex and only a multi-stakeholder, multi-disciplinary and multi-pronged approach can help achieve goals of promoting livelihood and ensuring its sustainability. Within this approach the role of

science and society issues will assume the highest importance, given the existent situation.

This project aims to improve livelihoods that involves understanding and addressing needs of farmers in natural (i.e., technical) and socio-economic (i.e., human) environment in which farm households operate. The aim is to identify constraints limiting farm productivity and production and hindering improvement in the welfare of farm households themselves. Through this approach, not only will the community internalize their problems and needs, but will also take improved ownership of project efforts along with other stakeholders, such as researchers, extension and support service staff, and/or policy makers.

The project will cost a sum of Rs. Rs. 266.5149 lakh . The project shall ensure supply of inputs in the project site; and offer improved management practices and market linkages. The Lead Centre shall arrange procurement of goods and services for all the partners and ensure verification of quantity and quality of the goods and services.

### **Major technological interventions proposed**

- Introduction of resource conservation technologies(zero-tillage, bed planting, and laser land leveler)
- Diversification(crops including, cover crops varieties like *Chikori*, increased animal component with small and marginal farmers)
- Introduction of varieties/hybrids, perennial grasses, with more stay green character.
- Soil amendment in problematic soils including water saving technologies like bed planting and diversified multiple land use system
- Increasing animal productivity through better livestock management including mineral mixture, deworming, and introduction of better yielding breeds of goats which offer higher meat and milk productivity.
- Initiatives including subsidiary occupations like, mushroom cultivation, bee keeping, vermicompost etc.
- Traditional knowledge and rural based innovations in post harvest management will be utilized for value added products of cereals, oil seeds, milk, meat and vegetables etc.
- Introduction of micro irrigation measures
- Improved storage, packaging and market linkages

### **B. Environmental Category: B**

#### **2. Major issues in the subproject:**

**Social:** The subproject thus aims to use an innovative approach by establishing a New Paradigm of Livelihood Pursuit Based on Tenets of Conservation Agriculture for Improved Economics and Resource Regeneration in Mewat region of Haryana. 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 –

1. Protection of local biodiversity resources
2. Impact of use of agro chemicals on environment

Overall, efforts will be directed at building capacity and enablement of processes through a scientific and innovative approach to bring about a desirable change in the socio-economic condition of beneficiaries.

Approaches applied will be directed at involving community members on a “learning by doing” basis.

The project will increase sustainability resulting in increased number of subsidiary occupations. This will eventually improve social (including health conditions of rural farmers and urban consumers)

### 3. Safeguard Policies Triggered (World Bank Policies)

<b>Safeguard Policies Triggered (World Bank Policies)</b>		
	<b>Yes</b>	<b>No</b>
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/BP 4.37)	[ ]	[ X ]
Projects in Disputed Areas (OP/BP 7.60)	[ ]	[ X ]
Projects on International Waterways (OP/BP 7.50)	[ ]	[ X ]

4. Risk related Issues  
The project is to increase income, reduce poverty, improve the quality of life and conservation of natural resources involves no risk.
5. Impact Assessment (Enclosures –I and V)
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).

Mewat continues to struggle with the problem of extreme poverty that are largely dependent on low productivity agriculture. Increasing productivity is a critical element and that even with the use of less natural resources. Hence no indirect adverse effect leading to conflict of interest.

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 stakeholders, stakeholders' workshop before formulating the full proposal, discussing the full proposal with some stakeholders before submission to the PIU.

The project is build on pre-project consultation with partners and also with farmers. Interactive workshops were organized for discussion. CCS-HAU and CIMMYT have been leading players and will provide a platform for mutual understanding with other partners and scale out.

8 Measures to address issues in point 3

The subproject designed includes following measures

- i. **Environment**- The screening of environmental issues has been done to include possible impacts and appropriate mitigation measures are proposed (enclosure I)
- ii. **Pest management** – Pest management would be done through field demonstrations and training of farmers on IPM and INM. These are integral part of the subproject.
- iii. **Indigenous people**

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.

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 has been built up in the project

**Consortia PI**

**National Coordinator**

**National Director**

**Enclosure I**

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

<b>Safeguards Template for NAIP Projects</b>				
<b>A: Environmental Safeguard: Activities, Issues, Impact and Mitigation Measures</b>				
<b>Table 1: Environmental Safeguard: Activities, Issues, Impact and mitigation Measures</b>				
<b>Activities</b>	<b>Issues</b>	<b>Anticipated level of Impacts</b>		<b>Mitigation Measures (-ve Impact)</b>
		Positive	Negative	
Implementing resource conserving practices in agriculture to develop optimal production system.	Conservation of natural resources, through introduction of Zero tillage, minimum tillage, bed planting, laser leveling, multiple land use, intercropping, residue retention, cover crops, small machinery, new crops including short duration varieties and diversification	4		
	Improved soil health will sustain agriculture	4		
Promotion of appropriate farming systems and income generating activities to strengthen the livelihood, economic security, equity and social capital	Improvement in agro biodiversity, animals and microbes through IFS model	4		
	Reduced soil erosion through in-situ soil and moisture conservation	3		
	Use of pesticides and other chemicals		1	Through INM and IPDM
	Conservation of ground water through SWC, Recharge pits, Drip Irrigation	3		
Increasing animal productivity through better livestock management	Less spread of animal diseases in the area through health care and improved feed of livestock	2		
	Effect on soil health due to grazing by the animals		2	Improvement in CPR fodder resources
Application of organic manure	Improvement in soil health due to application of FYM and vermi- compost	4		
	Better utilization of farm waste through biogas plants	2		

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

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

Activities	Issues	Anticipated level of Impacts		Mitigation Measures (Negative Impact)
		Positive	Negative	
Modification and participatory evaluation of RCTs (Zero tillage, minimum tillage, bed planting, laser leveling,	Improved system productivity with less labor, water, energy will generate more income for farmers including small farmers. It will facilitate early planting of crops leading to more intensification and more socio-economic benefits.	4		
	Improved soil health will sustain agriculture with large scale economic gains to stake holders.	2		
Promotion of appropriate farming systems and income generating activities to strengthen the livelihood, economic security, equity and social capital	Increase in income, increased employment, reduced out migration due to IFS and IGA models	4		
	Change in occupational patterns		1	Capacity building Market forces to take care of higher wages in agriculture,
	Reduced drudgery for women	2		
	Improved nutritional security due to higher productivity and value addition	4		
	Reduced social conflicts due to increase work	3		
	Higher income through Agro-forestry for fodder			
Development of appropriate public-private partnerships and to improve market linkages IFS and IGA innovations; SHG formation	Reduced role of middlemen	3		
	Marginalization and increasing disparities		4	IGAs for landless and marginal farmers
	Reduced dependence on external resources through HRD for local human resource skills	2		
	Reduced drudgery, increased productivity through mechanization	2		