

**Title:** Sustainable rural livelihood security through integrated approach in Hingoli and Nanded districts of Maharashtra ( **Proponent: College of Dairy Technology, Pusad under MAFSU, Nagpur**)

**No. of consortium partners: 5**

- College of Dairy Technology, Pusad-445 204(MS) under Maharashtra Animal & Fishery Sciences University, Nagpur – Lead Centre
- Marathwada Agriculture University, Parbhani
- Deptt. of Fishery Science, Dr. BAMU, Aurangabad
- Krishi Vigyan Kendra, St. Namdeo Sevabhavi Sanstha, Hingoli (a NGO)
- Chaitali Shewabhavi Sanstha, Hingoli (a NGO)

**No. of States/UT covered** : One (Maharashtra)

**No. of Districts covered** : Two (Hingoli and Nanded)

**Number of beneficiary farmers** : 5000

**Duration** : Three years and Six months (2008-09 to 2011-12)

**Budget** : Rs. 723.30 lakhs

**Project Objectives:**

- To impart appropriate technologies suitable for improving the productivity of nondescript livestock wealth and establishment of peri urban dairy to augment income.
- To enhance the agricultural productivity and profitability through proven technological interventions.
- To make efficient use of the natural resources for sustainable development,
- To empower the farmers and farm laborers through capacity building and skill up-gradation

**Project Description in brief:**

The project is aimed at sustainable enhancement of livelihood security in rural masses under the most remote villages of Hingoli and Nanded districts of Maharashtra. It is proposed to develop a replicable model of the integrated approaches of farming systems coupled with Animal Husbandry-Dairying, Aquaculture and Human resource

development activities to augment the income and thereby improve their livelihood security. Three clusters from the Hingoli district and one cluster from Nanded district are selected to implement the project. All the villages are dominated by SC, ST, Nomadic tribes and weaker sections. One more characteristics of these villages is they have more than 60% population below poverty line and the villages are poorly connected with roads. The targets of the project will be achieved by the joint efforts of all the consortium partners.

### **Major technological interventions proposed**

1. Improvement of local nondescript livestock wealth by estrus induction and synchronization of estrous,
2. Animal healthcare, nutrient management and value-addition of fodders,
3. Enhancement of milk production, storage facilities at village level for quality management, processing and value-addition of milk,
4. Soil testing and based on soil nutrient profile recommendations of fertilizers,
5. Soil conservation, rainwater harvesting and watershed development for enhancement of area under irrigation and thereby increasing productivity and profit,
6. Plantation of 20,000 teak, horticulture and medicinal plants in the barren land owned by Grampanchayat and the land owned by farmers,
7. Establishment of a live model of integrated fishery-poultry-agriculture model for promotion of income-generating activities,
8. Promotion of composting including vermi-composting, green manuring, INM, etc. for enhancing productivity of agriculture and aquaculture
9. Introduction and improvement in livestock/poultry including nutrition and disease management
10. Introduction of mushroom cultivation and medicinal and aromatic plants,
11. Establishment of Technology Transfer Centres and Kisan Libraries in villages under the project,
12. Establishment and strengthening of women SHGs, skill up gradation and capacity building of farmers and other stakeholders

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

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

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

- 1) Upgradation of local nondescript livestock wealth,
- 2) Inclusion of poor farmers and farm labors,
- 3) The capacity of farmers to adapt and sustain the productivity gains
- 4) Demonstration of economic benefits of the interventions

**Environmental:** Major environmental issues likely to arise on implementation of the project are:

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

**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 (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 any 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 issues 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 eroded and low productive soil. During the first year of implementation 20,000 teak and 3,000 fruit plants will be planted on the barren land under the project implementing area.

II. The total productivity in terms of agricultural crops, fishes and animal products 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 state and the country, 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):**

There will be notable positive impacts on the livelihood security. In addition to the direct impacts 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 under the project. The Associations 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 tree plantation will lead to enrichment of environmental conditions. 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.**

The farm labors, farmers, Grampanchayats, Research Institutes, Govt. Departments, SAU, different Govt. and Non-Govt. organizations, Farmers Associations, 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 were 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**

The subproject designed includes following measures

- i. **Environment:** Unless and until the soil and water resources are judiciously used, there is no sustainable agriculture development possible. The very purpose of the sub project is to sustainably improve the livelihood through improved and integrated agriculture and allied activities. The screening of environmental issues has been done to include possible impacts and appropriate mitigation measures are proposed (enclosure I)
- ii. **Pest management:** Demonstration of benefits of biofertilizers for the major crops and encouraging the use of IPM 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 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, diversification of farming, capacity building, etc. will be more suitable for tribal farmers. The proposed interventions are either through income 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.

**8(b)**

- i. **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 some progressive farmers and some landless labors,
- b. Upper Painganga Project Affected and rehabilitated farmers and farm labors,
- c. Women
- d. SC, VJNT, ST group

**Subproject implementation plan:** It was prepared and agreed with the communities and displayed. Participatory approach and transparency in the implementation would be maintained.

**Gender issues:** Are adequately addressed as several women SHGs are formed and strengthening activities are proposed for them.

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**

So as to maintain transparency each and every activities of the project are thoroughly discussed among the beneficiaries, preliminary discussions have 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 will be made during the implementation of the project. Group meetings, workshops, inter and intra-cluster meetings of the farmers and all other stakeholders will be 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 will also be made use of.

**Consortia PI**

**National Coordinator**

**National Director**

## Enclosure I

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

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

Activities	Issues	Anticipated level of Impacts		Mitigation measures
		Positive	(Negative)	(Negative Impact) <sup>4</sup>
Improving the productivity of Nondescript livestock animals through estrus synchronization and animal health care.	Improved health care will reduce the risk of zoonotic diseases to be carried to the human beings.	(3)		
	Animals will be tied in their sheds and the quantity of FYM to be added to fields will be increased.	(2)		
	Reduction of land for crop cultivation due to use of land for forage crop production.		(1)	Mixed cropping pattern with fodder and agriculture crops will be encouraged. Perennial fodder plants will also be cultivated at the bunds thereby compensating the arable land.
To enhance the agricultural productivity and profitability through proven technological interventions.	Effect of change in cropping pattern on soil health due to Introduction of HYV, crop diversification		(1)	Scientific and balanced use of fertilizer and pesticides, Use of INM and IPM practices. Field demonstration and farmers training on INM & IPM are an integral part of the sub project
	Stress on water due to change in cropping pattern		(1)	Rain water harvesting will ensure water for supplemental irrigation.
	Encouraging the use of biofertilizers,	(3)		
To make efficient use of the natural resources for sustainable development,	Land leveling will remove the fertile upper layer of the soil		(1)	While implementing the land leveling activities, the upper six inch layer of the land will be conserved and spread over the surface after completion of the leveling work.
	Water harvesting and water conservation. Activities related with water shed development	(4)		
	Soil conservation, Soil analysis, Soil health card distribution for judicious use of fertilizers	(3)		
	Teak trees/Medicinal plants and Horticultural crop plantation on barren land	(4)		

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

**Table 2: Social Safeguards: Activities, Issues, Impact and mitigation measures**

Activities <sup>1</sup>	Issues <sup>2</sup>	Anticipated level of Impacts <sup>3</sup>		Mitigation Measures
		Positive	Negative	(Negative Impact) <sup>4</sup>
Improving the productivity of Nondescript livestock animals through estrus synchronization and animal health care.	Improved breeding efficiency. The concept of the calf-a-year will be effectively implemented. Income augmentation through Animal Husbandry & Dairying activities.	(4)		
	Improved health care will reduce the risk of zoonotic diseases to be carried to the human beings.	(3)		
	Local nondescript breeds may get affected		(1)	Measures to preserve the local breeds will be adapted. The high-yielding nondescript animals will be protected.
	Promotion of improved goat farming and backyard poultry practices will lead to employment generation and income augmentation. This will reduce the migration of people in search of employment.	(3)		
To enhance the agricultural productivity and profitability through proven technological interventions.	Enhanced income due to introduction of HYV, crop diversification, fish farming, mushroom cultivation, medicinal and aromatic plant cultivation.	(4)		
	Increased employment and reduced out migration all round the year due to above interventions	(4)		
	Improvement in food and nutritional security due to increased availability of grain, vegetables, fish etc.	(4)		
	Drudgery reduction due to introduction of farm machines	(3)		
To make efficient use of the natural resources for sustainable	Soil testing and soil nutrient profile-based recommendations for fertilizers for various crops. It will lead to controlled application of chemical fertilizers to the soil.	(4)		

development	Water harvesting, water conservation and demonstration on micro irrigation will lead to availability of water for irrigation and drinking purposes for human and livestock.	(4)		
Empowerment through capacity building and skill development of farmers and farm labors.	Effective dissemination of information through establishment of Technology Transfer Centres (TTC) and Kisan libraries. Enhanced skill development for adoption of various interventions through different training programmes, exposure visits etc.	(4)		
	Reduced role of middle men, contractors through formation of SHGs.	(4)		
	Gender empowerment through involvement of women in different committees, formation of women SHGs	(4)		
	Social conflicts among different members		(1)	All the interventions to be decided and implemented in participatory mode through involvement of village level committees, Grampanchayat members