***Title: "Sustainable Rural Livelihood Security in Backward Districts of Maharashtra (Proponent: BAIF, Pune)***

**Template for Environmental and Social Safeguard Management in NAIP**

No of Consortium partners: 06

1. BAIF Development Research Foundation, Pune- Lead Centre
2. Mahatma Phule Krishi Vidyapeeth, Rahuri
3. Dr. Panjabrao Deshmukh Krishi Vidyapeeth, Akola
4. Maharashtra Animal and Fishery Sciences University, Nagpur
5. Bharati Vidyapeeth University, Pune
6. Dr. Hedgewar Seva Samiti, Nandurbar

No of States Covered: one (Maharashtra)

No of Districts covered: 05 (Nandurbar, Ahmednagar, Yavatmal, Chandrapur and Gadchiroli)

Number of beneficiary farmers: 5000

Duration: 5 Years (2007-12)

Total Budget: 2246.39315 lakhs

**Project Objectives:**

"Overall objective is to develop replicable and holistic approach for promoting sustainable livelihood for tribal and remote areas of Maharashtra through integration and blending of tested technologies and strategies of family focused and area based programmes."

The specific objectives are:

1. To impart appropriate technologies suitable for improving the productivity of natural resources and enhance employment opportunities;

2. To improve livelihood systems, devise appropriate mechanisms and build capabilities of people for seeking their entitlements;
3. To document the impact of different technologies for sharing the experience with farmers and development agencies for wider replication in the state.
4. To identify avenues for higher returns and market for the produce through suitable post-harvest technologies and forward linkages.

**Brief Project Description**

The overall Programme design is innovative. In the proposed innovative design the consortium would like to offer a holistic approach with convergence of the successful and tested technologies.

The approaches / technologies:–"Wadi" for orchard based / tree based tribal development, Improved agriculture management, livestock development through doorstep service approach, silvipasture for converting degraded community land into productive asset, decentralized water resource management, family based on-farm/off-farm enterprises for gainful self employment, processing of flax for omega-3 products and giving higher returns to farmers, enrichment of animal nutrition, etc. of the consortium partners will be converged in a cluster by ensuring quality inputs.

The programme will evolve a new approach of holistic cluster development in the selected 05 backward districts of 10 clusters and will have very high replication potential in the backward regions.

**Major technological interventions proposed**

- Development of soil and water conservation structures for enhancing land productivity
- Crop diversification through multiple and diversified crops varieties including horticultural crop with reference to agro-climatic conditions.
- Establishment of Technology Transfer center in clusters at the project sites

- Skill and capacity building of farmers and other stakeholders
- Introduction of forest based taser cultivation for landless and marginal farmers
- Livestock development through doorstep service of cattle management
- Water Resource development to enhance the crop productivity and crop intensity
- Induction of small ruminants for breed improvement and income enhancement
- Promotion of INM, IPM and biological pest control to enhance crop productivity
- Establishment of Peoples organization and Women empowerment through capacity building
- Establishment of forward linkages and promotion of appropriate post harvest management practices
- Integrated crop protection module in cotton for sustainable production
- Promotion of fodder cultivation for livestock development
- Promotion of Pisiculture
- Improvement in livestock nutrition through strategic supplements of critical nutrients in animal feeding system
- Promotion of high yielding disease resistance linseed varieties, its processing and value addition
- Promotion of medicinal plant cultivation and its value addition through post harvest technology and quality assurance

**B *Environmental Category*: B**

2. Issues in the subproject

The project is likely to have a positive impact on both social and environmental area.

The overall Programme design is innovative and proposed innovative design to offer a holistic approach with convergence of the successful and tested technologies only to support more productive and sustainable agriculture system.

- **Social:** The major social issues likely to arise in terms of implementation of the project
    - Demonstration of economic benefits of the interventions
    - The capacity building of farmers through training to adopt and sustain the productivity gains

- Reduce exposure to economic loss
- Inclusion of poor and disadvantaged groups

- **Environmental:** Major environmental issues likely to raise on implementation of the projects are-
    - Protection of local biodiversity resources
    - Technological intervention involving integrated nutrient management, integrated pest management may cause detrimental impact on production base like land, water, ecology etc.

**3. Safeguard Policies Triggered (World Bank Polices): Not Applicable**

| Safeguard Policies Triggered (World Bank Polices) | | |
|---|---|---|
| | Yes | No |
| Environmental Assessment (OP/BP 4.01) | [X] | [ ] |
| Natural Habitats (OP/BP 4.04) | [ ] | [X] |
| Pest Management (OP/BP 4.09) | [X] | [ ] |
| Cultural Property (draft OP 4.11-OPN 11.03-) | [ ] | [X] |
| Involuntary Resettlement (OP/BP 4.12) | [ ] | [X] |
| Indigenous People (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] |

Note: No involuntary resettlement is expected as the area of individual sites is very small and all proposed interventions are within farmer's landholding

*(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 above table, 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 & II)**

The project interventions will mostly have positive impacts, as it will increase the productivity of degraded land by horticulture plantation and low productive soil by using INM based on soil analysis. The productivity in terms of agricultural crops, small and large ruminants, fishes in the selected villages will increase. It will also generate high employment opportunities through water resource development, post harvest technologies, forest based activities such as tasar cultivation and silk processing and livestock management of the rural poor to enhance their livelihood security. The project will also facilitate the income and employment generation for women in the villages through nursery raising, processing of farm produce and livestock management. To ensure the sustainability of the project, the capacity building of farmers and other stakeholder to form a Peoples institution will be envisaged.

**6.** ***Potential indirect and / or long-term impacts due to anticipated future activities in the project areas (Assessment of conflict / complimentarity with the likely anticipated activities current as well as proposed in the next five years):***

The project will target the development of small and marginal farmers focusing on technically appropriate, institutionally feasible, economically viable, environmentally sound agriculture, livestock and allied technologies. The impact of selected technologies when demonstrated in the selected cluster will trigger horizontal adaptation of technologies and generate employment in agriculture, livestock, taser cultivation and allied sectors by generating opportunities of value addition and market linkages. Besides the direct impact the project will have indirect impact on the

socio-economic up-lift of the rural poor which in turn will increase the technical knowledge improvement of the farmers.

**7.** ***Identify the key stakeholders and describe mechanism for consultation/disclosure so far done (widely sharing the documents on the subproject, other mechanisms to get a buy-in with the stakeholders including the farmers).:***

The key stakeholders in the project have been identified from the farmers, Pachayat Raj Institutions, Government Departments, Research institutes and farmers organization etc. Several rounds of meetings, field visits, and group discussions were organized during the project formulation to finalize the objective of the project, operational areas, interventions proposed, expected outcomes and there likely impact, and budget were presented & discussed in details with partner institutes. The full proposal and related information were discussed with the stakeholders in the launching workshop.

**8. (a) Measures to address the environmental and social issues**

In the project the economically viable tested technologies will be selected in consultation with the participants. The interventions will be demonstrated and monitored in cooperation with the field staff involving village level local communities. The benefit of interventions and best practices will be disseminated through several farmers through field days, melas, and exhibitions.

**i) Environmental issues:** The screening of environmental issues has been done to include possible impacts and appropriate mitigation measures are proposed (Enclosure –I)

**ii) Pest management:** In the project under improved agriculture, the integrated pest management and integrated nutrient management based on soil analysis will be demonstrated to avoid excess use of chemical fertilizers and pesticides. Field demonstrations and farmers training on IPM & INM are integral part of project.

**iii) Indigenous people:** The majority of the tribal population in the area is marginal farmers having poor natural resources. The scheduled tribes form the prominent

group in the project area comprising 45% of the total population. In four clusters (Khandbara, Mandane, Etapalli and Indaram) their proportion is within 45 to 100 %, with maximum being in Khandbara (92.38%), Etapalli (99.11%) and Mandane (91.42%). Though other major group in the project area is of OBCs comprising 23% of the population, they exist mostly in four clusters namely Ghatanji (43.51%), Pombhurna (64.66%) and Ralegaon (65.59%). NTs have sizable existence in Jivati (51.49%). In the implementation of the project the priority will be given to marginal farmers. The proposed interventions such as livestock management, improved agriculture, horticulture plantation, tasar cultivation Pisiculture, nursery raising, and capacity building will be more suitable for tribal farmers. All the interventions are either planned based on PRAs and suitable for agro-climatic condition so that it will not cause any major changes in their way of life. The proposed intervention will only improve their income, nutrition and livelihood security through natural resource management.

**(b) Risk related issues**

**i) Interface with the communities:** The selection of the participants will be done through involvement of local institutions and communities. Preference will be given to the marginal farmers who are willing to participate up to the end of the project and spread aims and benefits of the project to other farmers. Local adaptation practices were identified by involving the community in participatory way. The village specific intervention plan is to be prepared in consultation with the participants and the consortium partners. The final intervention plan will be shared with the participants as well as communities. To enhance the transparency each beneficiary will be provided with a copy of family passbook in which all the input given to the farmers will be entered in the pass book at the same time the display board of project details will be displayed at prominent places.

**ii) Gender issues:** The trust will be on integration of women in project activities. Tools will be provided to reduce the drudgery in agricultural operations. Women SHGs will be mobilized for microfinance and income generation activities such as nursery

raising, silk reeling, post harvesting and processing etc. Women's participation in people's institutions will be ensured. Efforts will be made to work on practical gender needs through convergence.

**9. *Consultation/disclosure in future (Local disclosure through mechanism such as launch workshop, interface during the implementation stage of the sub-project for sharing the results of the soliciting the feedback):***

The project envisaged the active involvement of the stakeholders at local level during implementation of the project. There will be launching workshops, regular community meetings, use of display boards, stakeholder's field visit and Melava. The information will also be disseminated through project information pamphlets, web site, news letter, success stories, popular articles etc.

**Safeguard Templates for NAIP Projects**
**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) |
| **Sustainable enhancement of the productivity of land by introducing high yielding verities, diversification of crop, INM IPM** | Nutritional security through food chain | 3 | | |
| | Impact of use of agro-chemicals on environment | | 1 | Balanced use of fertilizers and chemicals through INM and IPM practices. Demonstration and training of the participants on INM and IPM is an integral part of the project |
| | Use of forest | | 1 | Capacity building of participants will be done to use forest for tasar cultivation in consultation with forest department |
| | Preservation of local biodiversity | 3 | | |
| **Livestock development through Artificial insemination, Estrus synchronization, mineral mixture support** | Cross breeding and Nutritional management of large and small ruminants | 2 | | |
| | Use of pro-biotic culture for fish farming | 2 | | |
| **Processing and value addition of linseed and medicinal plants** | Price realization of farm produce through value addition | 3 | | |
| **Construction of water harvesting structures, soil and water conservation measures for** | Soil & water degradation, loss of soil nutrients, soil water holding capacity, improved ground water recharge, increase water availability | 03 | | |

**Enclosure- II**

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

Table 2: Social Safeguard: Activities, Issues, Impact and Mitigation Measures Vulnerability

| **Activities** | **Issues** | **Anticipated level of Impacts** | | **Mitigation Measures** |
|---|---|---|---|---|
| | | Positive | Negative | (Negative Impact) |
| **Sustainable enhancement of the productivity of land by introducing high yielding verities, diversification of crop, INM IPM** | Improvement in productivity of degraded land through INM, IPM, Soil and water conservation measures | 04 | | |
| | Reduce risk of economic loss through crop diversification | 4 | | |
| | More dependence on external resources (seed fertilizers & pesticides) | | 1 | The project intends to support cluster level committee and establish its linkages with external institutions and service centers |
| | Reduce vulnerability to health risk particularly of women through introduction of low cost farm tools | 2 | | |
| **Use of forest for tasar cultivation** | Effect on community ownership of natural resources | | 1 | Plan will be discussed with Panchayt and community before implementation and consent will be taken from forest dept. |
| **Fish farming** | Community participation and conflict | | 1 | Village level committee will be involved to resolve social conflicts if any |
| **Water harvesting equipments, farm machines and tools** | Community participation and conflict | | 1 | Agreement will be done with each participant regarding sharing of equipments and Village level committee will be involved to resolve social conflicts if any |
| | Drudgery reduction due to introduction of farm machines | 4 | | |

| Activities | Issues | Anticipated level of Impacts | | Mitigation Measures |
|---|---|---|---|---|
| | | Positive | Negative | (Negative Impact) |
| **Post harvest and value addition, silk reeling, Vermi-composting, nursery raising** | Employment and sharing of profit | 3 | | The project envisaged for capacity building of participants through training |
| **Construction of water harvesting structures, soil and water conservation measures for** | Increase the ground water level, water available for irrigation, livestock and drinking purpose | 4 | | |
| | Community participation and conflict | | 1 | Agreement will be done with each participant regarding sharing of water and Village level committee will be involved to resolve social conflicts if any |
| Empowerment of participants through capacity building and skill development | Enhanced skill for adaptation of different interventions through different training programmes, exposure visits etc. | 4 | | |
| | Gender empowerment through involvement of women in different committees, formation of women's SHGs | 4 | | |
| | Social conflict among different members | | 2 | All the interventions to be decide and implemented in participatory mode through involvement of village level committee, Panchayati raj members |

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