

## **Concept Note for JICA funding for treatment of fringe forests and adjoining non-forest lands for conservation of water, biodiversity sustainability of Joint Forest Management and poverty alleviation.**

**Introduction:** Forests are repository of the bio-diversity, gene pool resources, sequester carbon and provide lot of other environmental services. They play a very vital role in sustaining the life of people and are crucial for the food and water security. The first and foremost objective of forest management in any country is to ensure livelihood security. This is ensured through better management practices and sustainable utilization of forestlands. In India, the sustained flow of water in our rivers, streams and rivulets and recharge of ground water is necessary for the food security and drinking water availability. The hydrological functions of forests include interception of rainfall and regulating the stem flows, binding soil to prevent soil erosion and conserving the soil moisture. The forests are the source of major water resources both surface, subsoil and ground water in the country. Forests supply nutrients to agriculture crops through runoff water with much other complementariness with agriculture ecosystem.

***In the past fragmented attempts have been made in the treatment of fringe forests and non-forestlands to enhance their synergies in an integrated and sequential manner.*** In the absence of operational planning and convergence degradation of forests and adjoining lands continued which seriously affected the sustainability of crops and natural vegetation. Due to continuous degradation of land resources, depletion of precious biodiversity and conservation functions of forests the food grain production and availability of the drinking water is getting reduced gradually causing serious ecological concerns in many parts of the country. The poverty alleviation programmes can only succeed if these areas are tackled on priority and the natural

resources are managed in an integrated and holistic manner. There are however, many examples set by the pioneering individuals and grass root level organisations in bringing convergence in the development of land based resources. At present the success of JFM in the country is related to dealing with these issues in an emphatic manner and the country need to learn from many success stories.

The working group of Planning Commission on Natural resources Management for 11<sup>th</sup> Five Year Plan had observed that the forests are the natural resource infrastructure for agriculture/primary production/ rural economic growth. The group in their report in Para 2.5.24 stated ***“Considering that integration of the land based activities of Agriculture, Animal Husbandry, Rural Development and Forests is essential for holistic and effective natural resource planning and development, it is suggested that the National Rainfed Area Authority may coordinate and monitor the efforts. It may also take up the task of formulating a grazing and fodder policy for addressing the problem of unregulated grazing in forests leading to damage to regeneration and degradation.”*** The group further recommended that the National Rainfed Area Authority (NRAA) should find ways to solve the problem of treatment of degraded forest areas under the control of forest department to support the livelihood of the local people.

The NRAA was set up in November 2006 at the behest of Prime Minister as an inter-ministerial body to work for the integrated and holistic development of the rainfed areas of the country. The authority has been mandated to bring convergence in the workings of schemes and programmes of the five ministries of the government of India viz. Agriculture, Rural Development, Environment & Forests, Water Resources and Panchayati raj. The new watershed guidelines

issued by the NRAA in 2008 have made a provision of adopting ridge to valley approach and involvement of Joint Forest Management Committees (JFM) in the treatment of watersheds. However, considering the past experience of exclusion of forests on the top the watershed programmes were not successful in many cases. The importance of complementariness of forests in maintaining the food, water, livelihood, and environmental security of the people particularly in the rural areas, it is necessary that fringe forest areas are treated in a focused and integrated manner. This will also strengthen the JFM programme as the people would get benefits and the forests will be conserved better with full cooperation from the people. It is a win-win situation both for the upstream forest land and downstream private arable land.

**JICA Funding in India:** The JICA has been a liberal partner in funding the forestry and poverty alleviation programmes in India as is described in the Japanese ODA loan forestry projects. At present projects are in ten states and SWAN involving 93107 JPY Mil. There is however, a mismatch in achieving the targets of ecology and livelihood due to fringe forest areas remaining neglected because in most cases areas up to 2 to 3 km radius from villages remained neglected as no appreciable investments were made on such lands in an integrated manner. The forests situated on the fringes bear the brunt of biotic pressure particularly firewood collection, other usufructs and uncontrolled grazing by the domestic cattle leading to degradation and perpetuation of the vicious cycle of poverty-degradation and more poverty and more and more degradation. Many of the ground water resources in these villages are getting depleted slowly. It is therefore, necessary that an attempt is made to treat the fringe forests and non-forestlands in tandem and in a holistic manner to ensure conservation of forests and biodiversity as well as

reduction in poverty through promotion of micro rural resource based enterprise.

**Proposal:** There are about 22 million ha of forests being managed through 106482 JFM committees in the country in 2006 as per the latest estimates of the Ministry of Environment & Forests. Most of the JFM committee members are from the poorer sections of the society belonging to tribal, scheduled caste, including landless, asset less and, marginal farmers who are heavily dependent on forests. The main problem in forest fringe villages relates to uncontrolled grazing by the domestic cattle which degrades the forests. This results in soil erosion and faster run off losses leading to depletion of ground water and availability of drinking water. Both these problems can be tackled if the watershed approach is adopted in treating the fringe forests areas in tandem with the private other common lands to harness complementariness of joint treatment.

It is therefore, proposed that the forests lands in the JFM areas treated with priority with a separate scheme consisting of following elements of work.

1. In situ moisture conservation by staggered contour trenching, contour bunds, gully plugs, check dams etc for recharging the ground water and downstream irrigation.
2. Construction of water harvesting structures likes, gully plugs, check dams, ponds, contour trenches, pits etc
3. Construction of engineering structures to prevent soil erosion and reduced flow of water
4. Construction of embankments, lakes etc for storage of water for use by the wild animals
5. Planting of grasses and medicinal shrubs and multipurpose tree species

The JFM committees will work through a properly prepared work plan a MOU to be signed between the forest department and the villagers. The MOU will have the following provisions:

- a) A joint plan of action for the treatment of the fringe forests and adjoining lands and the roles and responsibilities of the forests/ project implementing agencies/other government agencies and JFM committee members shall be prepared. The plan would also contain the manner of sharing of goods and services flowing from the treated area. There shall be a special provision for creation of self help groups for the village women, vulnerable marginal and landless people so that livelihood creation and diversification of employment opportunities can be created with micro-enterprising.
- b) The villagers will have to opt for stall feeding in a phased manner. The cattle in the initial months will be allowed in designated areas and once the grasses are available for harvest there will be total ban on the grazing. The villagers would be allowed to cut and carry the grasses and forage on payment of nominal charges and the funds so collected would be used as a corpus for reinvestment. There shall be a programme linked to cattle improvement to ensure better and optimum productivity of livestock resources.
- c) The villagers will be allowed to cut grasses at a nominal fee to be deposited with the JFM Committee. The funds so collected will be ploughed back to the forests next year through a well prepared plan to be approved by the forest department and the JFM committee.
- d) The water bodies to be created shall be utilized for fish culture and irrigation through self help groups to be created by the JFM committee and the proceeds shall be shared by the group in equal proportion. A

certain percentage of the revenue to be generated shall be deposited with the JFM committee for further investment.

- e) For hilly areas & high rain fall areas special emphasis would be given to raising medicinal plants, horticulture, promotion of fish culture and other such activities.
- f) Promotion of employment opportunities through villages based resources especially micro and medium enterprises, cottage industries based on NTFPs etc.
- g) Drying of springs is a major issue. In key fringe forest areas hydrological assessment of all water uses and users shall be worked out to ensure sustainability of treated areas by the stakeholders
- h) The promotion of environmentally sustainable ecotourism.
- i) Promotion of micro-credit, crop diversification and creation of SHGs for livelihood creation through NTFPs, village industries , private and common land management etc
- j) Promote innovative farming systems

It is proposed to take up these works in the rainfed areas of the country in different agro-climatic regions. A few distress prone districts dominated by tribal/poor and marginal farmers and facing ecological problems due to degradation of fringe forests/ wastelands shall be selected in the five zones of the country each representing an agro-climatic zone.

**Implementing Agency:** The project action plan will be prepared jointly by the forest department, JFMCs, project implementing agencies, or concerned state agencies. The plan shall be approved by the Panchayat. The scheme at the field level shall be implemented by the State Forest Development Agencies and the DRDAs/ credible NGOs under the guidance of NRAA. The areas shall be identified by the implementing agencies in consultation with the local officials

of Ministry of Environment & Forests, Ministry of Agriculture and NRAA and projects prepared and approved accordingly. The NRAA will lay the broad parameters for approval of the projects and shall monitor the work. The funds shall be placed directly at the disposal of respective FDAs/DRDAs/NGOs in the States. At the district level convergence will be ensured by the District Planning Committee or by a committee of line departments headed by the respective District Magistrates. NRAA will monitor the work and will also commission studies for the impact assessment. The National Afforestation and Eco-development Board of the Ministry of Environment & Forests shall be the administrative Ministry for implementation of the scheme and the NRAA of the Ministry of Agriculture shall be the partner in the project implementation.

### **Proposed components of the project**

**Total Fringe Forest Area under JFM: 20 million ha**

**Proposed area to be treated: 1.0 million ha**

**Proposed cost norms/ ha: Rs.16000**

**Proposed breakup of cost**

<b>a. Administrative cost: 10%</b>	<b>= 160.0 crores</b>
<b>b. Survey of Fringe forest area to be treated: 1.0%</b>	<b>= 16.0 crores</b>
<b>c. Formation of JFMCs/ User Groups/ SHGs etc: 0.5%</b>	<b>= 8.0 crores</b>
<b>d. Entry point activities: 0.5%</b>	<b>= 8.0 crores</b>
<b>e. Capacity Building 1.0%</b>	<b>= 16.0crores</b>
<b>f. Works Component: 35%</b>	<b>= 560.0 crores</b>
<b>g. Livelihood component through Animal husbandry activities: 11%</b>	<b>= 176.0 crores</b>
<b>h. Development of water harvesting structures and indigenous fish culture: 7.0%</b>	<b>= 112.0 crores</b>
<b>i. Afforestation / Pasture development/NTFP activities: 30.0%</b>	<b>= 480.0 crores</b>
<b>j. Technology transfer/ demonstration etc.: 2.0%</b>	<b>= 32.0 crores</b>
<b>k. Promotion of micro enterprise and skill development: 2.0%</b>	<b>= 32.0 crores</b>
<b>Total cost of the project crores</b>	<b>= 1600.0</b>

	<b>Component</b>	<b>Amount (Rs. in crores)</b>
<b>1</b>	<b>Survey of fringe forest area for planning of activities</b>	<b>16.00</b>
<b>2</b>	<b>Community mobilization and Formation of Community groups</b>	<b>8.00</b>
	a. Joint Forest Management Committees (JFMCs)	

	b. Self Help Groups	
	c. User Groups	
	d. Others	
<b>3</b>	<b>Entry Point Activities and micro planning support</b>	<b>8.00</b>
<b>4</b>	<b>Work components(civil structures)</b>	<b>560.00</b>
	<b>A. Soil and moisture conservation work</b>	
	a. Gully Plugs	
	b. Contour & graded Bunds / contour trenches	
	c. Bench Terracing	
	d. Field Bunding	
	e. Others	
	<b>B. Water harvesting structures</b>	
	a. Water bodies	
	b. Nallah Bandh	
	c. Check Dam	
	d. Percolation Tank	
	e. Others	
<b>5</b>	<b>Afforestation and Pasture development</b>	<b>480.00</b>
	a. Vegetative barriers	
	b. Farm forestry / agroforestry	
	c. Community Land development	
	d. Plantation of fruit, timber and fuel wood tree species	
	e. Plantation of indigenous Forest grass	
	f. Non Forest Timber (NTFP) / Medicinal plants	
	g. Others	
		<b>Amount</b>
		<b>(Rs. in</b>
		<b>crores)</b>
	<b>Component</b>	
<b>6</b>	<b>Livelihood through Animal Husbandry activities</b>	<b>176.00</b>
	a. Breed improvement / induction of animals	
	b. Artificial Insemination coverage	
	c. Fodder Bank establishment	
	d. Dry forage enrichment / enriched feed blocks	
	e. Health coverage / livestock immunization	
	f. Establishing producer societies	
	g. Value addition / market linkages	
<b>7</b>	<b>Indigenous Fish culture</b>	<b>112.00</b>
	a. Fish hatcheries establishment	
	b. Promotion of integrated fish farming systems	
	c. Value addition / market linkages	
<b>8</b>	<b>Promotion of Natural Resource based Micro enterprises / skill development/ value addition</b>	<b>32.00</b>
<b>9</b>	<b>Capacity building</b>	<b>16.00</b>
<b>10</b>	<b>Technology transfer/ demonstration etc.</b>	<b>32.00</b>
<b>10</b>	<b>Administrative Cost</b>	<b>160.00</b>
	<b>Total</b>	<b>1600.00</b>