



SIKKIM BIODIVERSITY CONSERVATION AND FOREST MANAGEMENT PROJECT (SBFP)

JICA ASSISTED SIKKIM BIODIVERSITY CONSERVATION AND FOREST MANAGEMENT PROJECT

Government of Japan through Japan International Cooperation Agency (JICA) is providing financial assistance for Sikkim Biodiversity Conservation and Forest Management Project (SBFP) that is being implemented by the Forest Environment and Wildlife Management Department from year 2010-11. The project aims to strengthen biodiversity conservation activities and forest management capacity and simultaneously improve livelihood of the local people who are dependent on forests and are living in forest fringe areas.

Project objectives are to be achieved by promoting sustainable biodiversity conservation, afforestation and income generation activities including eco-tourism for the community development. The project activities will be contributing to environment conservation and harmonized socio-economic development of the state in multifarious ways in the next decade. The project has a financial outlay of Rs 330.57 Crores and is of 10 years duration. The main components of the project are indicated below:

1.1 FOREST AND BIODIVERSITY CONSERVATION:

To enhance the global, social, and economic value of biodiversity and improve livelihoods in and around protected areas (PAs), buffer zones, and reserve forests the Department would seek to achieve this objective through the establishment and implementation of sound management plans and the dissemination of biodiversity information for promoting public awareness on the significance of biodiversity. Development and implementation of the management plans for the Khangchendzonga Biosphere Reserve and the seven wildlife sanctuaries will be strengthened. For effective implementation of the plans the focus would be on:

- The enhancement of the spatial and resource information base for planning, implementation, and monitoring of forest and biodiversity management;
- The establishment and improvement of zoning and of plans for the management of reserved forests and protected areas;
- The promotion of public support for biodiversity conservation through research, ex-situ conservation, and extension; and
- The capacity development of the Forestry Department.

In addition, inter-sectoral linkages will be built among the Forestry Department, State Pollution Control Board, Sikkim University, Wildlife Institute of India, Indian Institute of Remote Sensing, Indian Council of Agricultural Research, and Eco Development Committees (EDCs) and other related institutions. Project would result in enhancement and management of forest and biodiversity information base to safeguard forest and biodiversity resources through scientific and systematic planning.

A modern laboratory for GIS and remote sensing (RS) will be established under the project at the headquarters of the Department. It will create a huge digital database on various aspects of forestry using remote sensing and GIS aspects on day to day aspects basis. The objective is to develop land use topo maps which will assist planners and decision-makers, including government agencies, donors, and private entities, not only in land use and biodiversity conservation but also in development planning.



1.2 INVENTORY AND MONITORING OF BIODIVERSITY

Rapid biodiversity surveys, which would display the ecosystems throughout the state, will be conducted. The outputs will be 1) biodiversity information on four ecosystems to be used in the production of thematic maps for management so that key areas are protected and 2) data to be stored at the GIS/RS laboratory. Survey will be conducted at approximately 1,000 sample plots will be randomly generated throughout Sikkim for quantitative biodiversity study using the digital spatial information base. In addition, known hotspots in forest, alpine, freshwater, and agro-ecosystems will have approximately 300 more plots to present more detailed information

1.3 STUDY OF IMPACTS OF CLIMATE CHANGE AND GRAZING IN THE HIMALAYAN ECOSYSTEM

The objectives of these scientific studies are the followings:

- 1) to analyze and understand the trajectory of ecosystem dynamics influenced by global warming in alpine areas, This information will be used to recommend measures for climate change adaptation and methods for monitoring climate change impacts and
- 2) to analyze and understand human-nature interactions related to grazing in alpine, temperate, and subtropical areas for proposing a model for participatory management of grazing. Though grazing has been banned in the state, it has continued to a lesser extent in certain places such as the alpine areas in North Sikkim. The status of grazing in any given location affects its ecosystem and biodiversity and needs to be studied.

1.4 MANAGEMENT PLANS FOR PAs AND CONSERVATION OF FLAGSHIP SPECIES HABITATS

Rationalization of Protected Area Boundaries and Improvement of the PA Network will be carried out through survey, demarcation, and gazetting of rationalized PAs and reserved forests, establishment of protected area boundary pillars. **New Protected Area will be establishment of at Nimphu Wildlife Sanctuary (approximately 200 km²) and Fairrieatum Conservation Reserve (orchid reserve, and approximately 0.6 km² .** To manage and conserve flagship species studies, especially focusing on Snow Leopard, Red Panda, Musk Deer, survey will be carried out to estimate their population density and ranges and to understand their migratory, feeding, and reproduction patterns, their interaction with humans, and their forestry and agriculture activities.

1.5 Enhancement of working plans and establishment of forest management zones will be considered so that the underlying theme of working plans will remain scientific, technical and democratic management. Surveys will also be conducted to determine the management regime, including the silvicultural regime for each cluster. Public consultation will be conducted before finalizing the zonation.

1.6 INSCRIPTION PROCESS OF KHANGCHENDZONGA BIOSPHERE RESERVE ON THE WORLD HERITAGE LIST:

The objective of the subcomponent is to assist the Department in enlisting Khangchendzonga and the Lepchas for its inscription on the World Heritage List through preparation of a detailed document on the outstanding universal values.



1.7 EX-SITU CONSERVATION AND PROMOTION OF BIODIVERSITY CONSERVATION:

The main activities include :

- a) Establishment of a Butterfly Park in North Sikkim, to ensure environmental and ecological conservation, ecological research, education and awareness, tourism and recreation, and enrich aesthetic experience.
- b) Establish a bird park in Rabdentse in West Sikkim on the State Highway between Geyzing and Pelling. The planned park will have a 19ha area with 50ha for the buffer zone.
- c) Creation and management of propagation nursery and Hi tech nurseries that would be established with focus on regeneration of oaks and other threatened species.
- d) Construction of Main Office Building of Himalayan Zoological Park and Veterinary Care Facility
- e) For the protection of the wild animals, a rescue center and some other equipment will be also established at this zoological park in accordance with the master plan of the zoological park.

1.8 KNOWLEDGE GENERATION AND DISSEMINATION OF BIODIVERSITY AND BEST PRACTICE INFORMATION;

This will be done through

- Establishment of Sikkim Biodiversity Centre
- Production and dissemination of booklets of best practices
- Grant scheme for enhancement of biodiversity research and extension that will provide a window of opportunities not only for the Department but also for universities, schools, local governments, the private sector, NGOs, communities, and individuals to engage in the conservation and management of biodiversity and in raising awareness about sustainable resource use.

2. PROMOTION OF ECOTOURISM:

The ecotourism will be promoted with two principal objectives:

1. Providing income generation opportunities to local communities living in the forest fringe area, and
2. Ensuring that the impacts of developing ecotourism do not damage the environment.

The activities envisaged are as follows:

(a) Ecotourism Policy Consultative Committee

For formulation of Ecotourism Policy a Committee has been constituted under the Forest Minister with expert members from Government and international NGO in field of ecotourism TIES (The International Ecotourism Society of USA), local NGOs, national level NGOs, members from Travel Agent Association of Sikkim (TAAS), Sikkim Association of Adventure Tour Operators (SAATO) etc. The Committee will formulate the



Policy with the public consultations at each district level. The objective is to ensure that all the stakeholders in the state have a common understanding of the concept of ecotourism and that tourism infrastructure is constructed respecting acceptable environmental and cultural standards.

(b) Establishment of an Ecotourism Marketing Cell

Ecotourism Marketing Cell (EMC) will be established under the Project in order to address the weak marketing of ecotourism Sikkim. Tourism professionals, especially Ecotourism specialists, will be recruited from the private sector to form the EMC established under the PMU. The cell will formulate a five-year Ecotourism Marketing Strategy and will be involved in implementing the same. The five-year ecotourism marketing strategy will include the following:

- 1) A promotion and branding strategy targeting selected markets in India and abroad that would be attracted to enjoy ecotourism in Sikkim
- 2) A PR strategy to build up relationships with the media and with suppliers
- 3) An 'ecotourism events and festival' strategy, which will support festivals annually.

2.2 DEVELOPMENT OF TREKKING ROUTES AND DEVELOPMENT OF WILDLIFE-WATCHING AREAS

Trekking opportunities in Sikkim are excellent, but as previously mentioned, traffic is mostly concentrated on one trek. It is proposed that 184km of trails with 16 campsites will be developed or improved to create four international standard trek routes to relieve the over-congested Dzongri trek. Other routes with a total length of 76km will be considered for development. All wildlife areas would be developed as eco-tourism destination.

2.3. CONSTRUCTION OF INTERPRETATION CENTERS:

Nine Nature Interpretation Centers will be created at areas of tourism interest to provide visitors with information on biodiversity available near the site with a small museum and a small library to consult relevant documents. The centers will be built near ecological gardens to exhibit important flora and fauna associated with the locations. Training of local community members to manage and work in interpretation will be provided so that they can function as eco-guides.

2.4 Introduction of a solid waste management at tourist areas linked to the priority villages will be carried out to ensure cleanliness at tourist sites. A waste collection and disposal system will be introduced at and around the prioritized villages. This will improve the living conditions of the local community and may be replicated in other villages along the collection route.

3.1 COMMUNITY PARTICIPATION AND JOINT FOREST MANAGEMENT:

The devolution of power to grassroots level has always been the policy of the Government. In addition to existing Self Help Groups (SHGs) , Joint Forest Management Committees (JFMCs) and Eco-Development Committees (EDCs) new ones will be formed. It will also provide opportunities for these communities to enhance their livelihood through forestry, ecotourism, and other income generation activities. A total of 180 villages will be selected for project intervention which includes 90 new intervention villages where new JFMC/EDC will be established. New afforestation works on 3600 ha of forest blanks will be carried out with full participation of JFM Committees.



3.2 ENTRY POINT ACTIVITIES

The funds will be provided for target JFMCs, EDCs, and PSS's to carry out entry point activities (EPAs) at an early stage of project implementation. EPA refers to small-scale assistance for the creation of community assets and should address the common urgent needs of the entire community. EPAs will be selected in a participatory manner and should be included in the micro plan.

3.3 FOREST MANAGEMENT IN RELIGIOUS AREAS :

The sacred groves and forests bear not only religious and cultural values, but are also highly important in terms of biodiversity because they have long been protected. Conservation of such sacred groves and other religious areas will be done by providing technical services, and enhancing plantation and protection activities by religious institutions.

3.4. INCOME GENERATION ACTIVITIES THROUGH SELF HELP GROUPS

The aim is to diversify the sources of income and improving the microenterprises of the target village residents. It will also encourage SHGs to carry out IGAs. The Project will enable the JFMCs, EDCs, and PSS's to provide microfinance loans to the SHGs through the provision of a block grant. A total of 540 SHGs will be supported.

3.5 SKILL DEVELOPMENT AND EXPOSURE VISITS OF JFMCs, EDCs Members of

JFMCs, EDCs, and PSS's who are responsible for administrative and financial management of their committee will be trained in basic management skills. Skills development of SHG members will be conducted to enhance the productivity, quality, and profitability of the SHGs' production activities or service provision. Selected members of SHGs JFMCs, EDCs will be taken on exposure visits to learn from the experiences of successful SHGs

4. ORGANIZATIONAL STRENGTHENING OF THE FOREST DEPARTMENT :

This will be done to enhance the capacity of the Forest Department to deliver forest management and biodiversity conservation services efficiently by

1. Training of the Forest Department Officers and Frontline Staff members on economic, ecological, technical and sociological issues.
2. New Establishment of Training Facility for capacity development in the field of forest management like Biodiversity Training Centre at Pangthang.
3. Renovation and Improvement of Headquarters with parking facility
4. Securing productive working environment to increase productivity of officials
5. Promoting improved decentralized implementation mechanism
6. Strengthening the capacity of frontline staff members by improving working conditions
7. Improving the mobility of frontline staff members
8. Posting of check posts in strategic points throughout Sikkim
9. Positioning of Forest Guards near reserved forests and protected areas
10. Improving communication net work in the Department
11. Construction of residence and related infrastructure for the Forest Department staff.