

CLIMATE CHANGE INITIATIVES

North-East Climate Change Adaptation Programme (NECCAP) for Sikkim:

- **Preparation of Project Design Document for submission to KfW, Germany (Financial Cooperation):**

Background

Following the Feasibility Study of the proposals presented by the five states including Sikkim, the KfW Mission and the State government agreed on the framework for implementation of NECCAP in Sikkim (Minutes of Meeting, October 2010), The MoM outlined the broad focus and the structure, and highlighted the need to elaborate the feasible climate-change relevant proposals / measures in the form of Project Design Document (PDD). A team of consultant was appointed by KfW to assist the nodal agency in each state for the purpose.

A multi-department core team constituted by the nodal agency (DSTCC) constituting representatives of DSTCC; RMDD; FSADD, HCCDD, FEWD, and SIMFED discussed and finalized the project design. For the purpose a series of core team meetings, department level meetings and district as well as cluster level stakeholder consultations were undertaken between Dec 11, 2011 and Feb 17, 2012 with the help of the KfW Consultant.

Broad Features of NECCAP

- Programme Area: **5 States (Sikkim, Meghalaya, Assam, Mizoram, Nagaland)**
- Total Financial Cooperation (FC): **Euro 76 million (INR 456 Crore)**
- Initial FC Commitment for each State: **Euro 5 million (INR 30 Crore)**
- Programme Duration: **7 years**
- Nodal Agency: **Ministry of DONER (Central); Sikkim Council for Science & Technology (for Sikkim)**
- FC by KfW supported with **additional**

investment through Technical Cooperation (GIZ)

- Focus on sectors, regions and target groups which are most vulnerable to climate change
- Mixed Portfolio: **Micro-plan based Interventions** as well as **Stand-alone Investments; CCA-proofed topping-up** of ongoing government programmes
- Stakeholder Contribution: **GoS 15%, GoI / DoNER 10%, Beneficiaries (5-30%)**

Goal and Objectives of NECCAP Sikkim

NECCAP seeks to contribute to the implementation of National Action Plan for Climate Change (NAPCC), its related missions and State Action Plan for Climate Change (SAPCC).

Goal: Strengthen adaptive capacities of the target (rural) communities and reduce their vulnerability to climate change through sustainable Climate Change Adaptation (CCA) measures.

Objectives:

1. Develop and implement an integrated and participatory community-based process for planning and implementation of sustainable CCA measures.
2. Improve the natural resource base to reduce vulnerabilities associated with water scarcity and agriculture-based livelihood in selected clusters.
3. Improve livelihood security through climate proof and diversified agriculture and improved marketing infrastructure for farm products. .
4. Improve capacities for planning, implementing, and monitoring CCA measures through capacity building and knowledge management.

Proposed Project Areas for NECCAP Sikkim

NECCAP proposes to focus on most climate change vulnerable regions, sectors and population in the state. Based on findings of earlier studies South and West districts were agreed upon as potential project districts. The Core Team

identified 15 Gram Panchayat Units (GPUs) falling in the Darjeeling rain shadow, divided in three clusters for implementation of NECCAP in Sikkim with focus on reducing vulnerabilities associated with water and agriculture sectors.



	Cluster 1: Seti-Kannam Khola	Cluster 2: Reshi Khola	Cluster 3: Tendong	Total
District	South	West	South	
Block	Namthang	Kaluk	Namchi	
No. of GPU	3	4	8	15
No. of Wards	21	22	45	87
No. of HH	1439	1921	6294	9654
% BPL	30%	36%	17%	23%
Area (ha.)	4279	4199	6445	14923
% Farm Land	41%	69%	71%	62%
% of Population dependent on farming	65%	64%	46%	53%

Proposed Investments <i>Microplan Based Investments</i>		
Component	Activities	Scope
A. Enhancing Rural Water Security through Rain Water Harvesting, Spring Revival and Strengthening Water Storage Infrastructure	Spring Recharge Groundwater recharge to	50 Springs
	improve base flow in streams	675 ha
	Household Tanks	1000 Tanks
	Community Tanks	100 Tanks
	Village Tanks	5 Tanks
B. Climate Secure and Climate Adapted Farming Practices	Promotion of CC resilient crops Bench terracing Rural / Vermi / EM Composting Green Manure (Azolla) Reclamation of Acidic Soils	20% of farm land
	Integrated Pest Management	15 GPUs
	Drip & Sprinkler Irrigation	750 + 150 Units
	Greenhouse	350 Units / 7 GPUs
C. Biodiversity & Water Resource Conservation Through Oak Forest Rehabilitation	Oak Plantation	600 ha.
TOTAL FOR MICROPLAN BASED INTERVENTIONS		

Stand-alone Investments

Component	Activities
D. Improved Livelihood Security	
1. Marketing Infrastructure for Value Addition to Farm Products	Study on value chain and market development
	Market Intelligence Cell
	Primary Agri Marketing Centres (8)
	Secondary Agri Marketing Centres (3)
	Transport facility
	Multi-chamber cold storage (2)
	Brand development
	Training & Capacity Building
Total SIMFED	
2. Improved Infrastructure & Arrangements for Procurement of Milk	Strengthening lab facilities
	Bulk Cooling Facilities
	Transport Facilities
	Chaff cutters
	Estb. Village milk collection centres (110)
	Milk Collection Utensils
	Milk Transportation Cans
	Training & Capacity Building
TOTAL SIKKIM MILK	

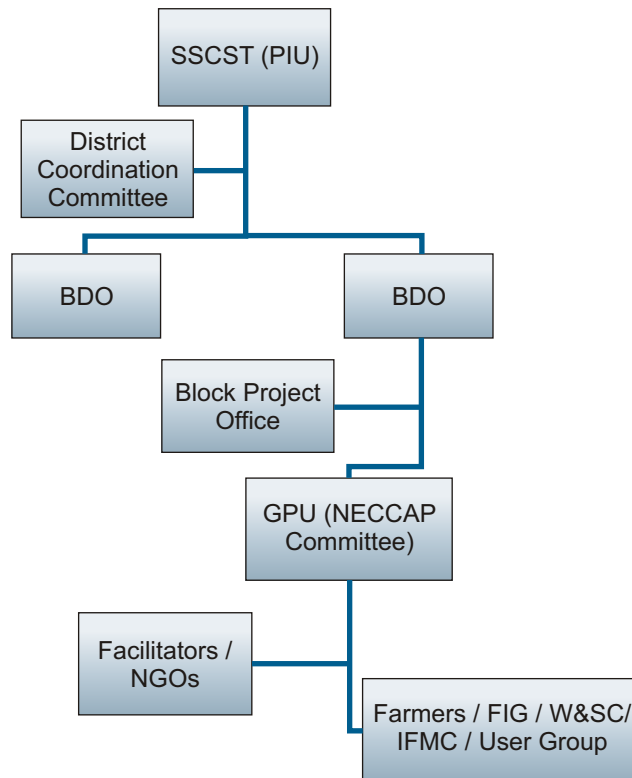
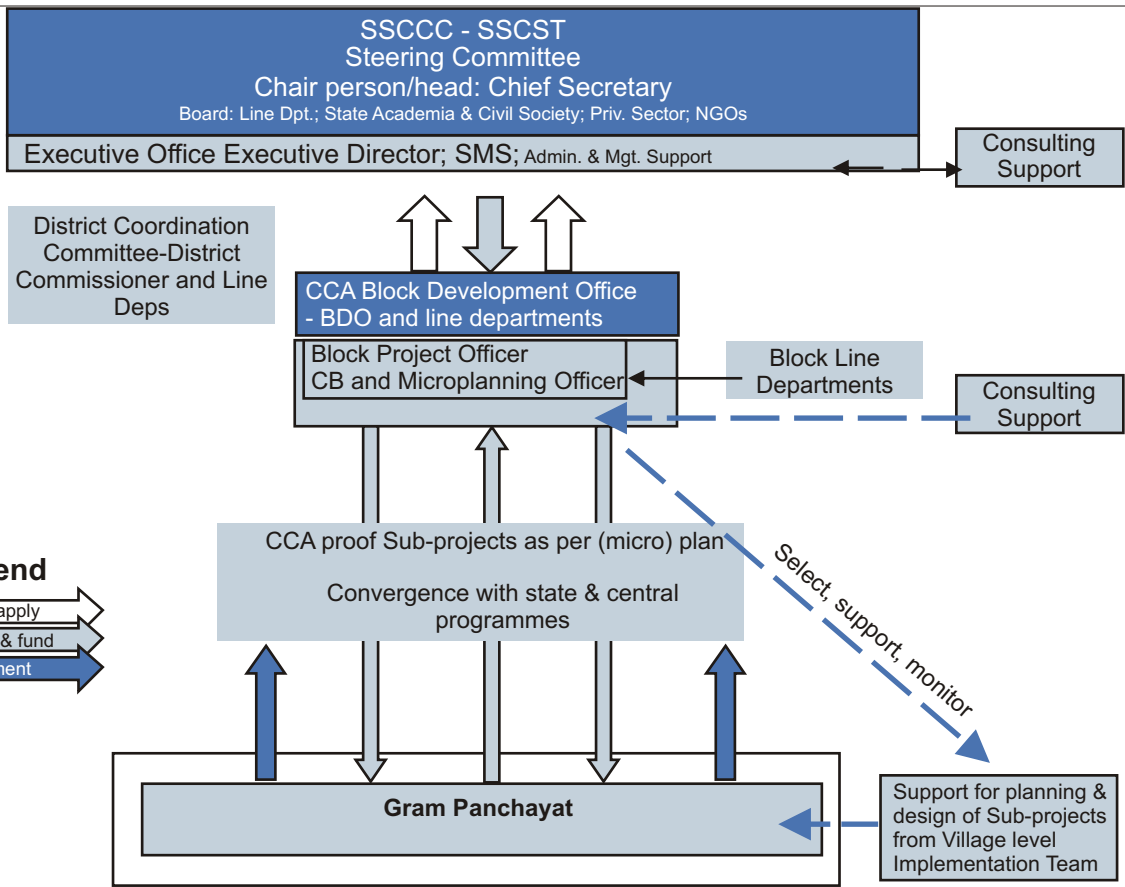
Other Proposed Investments

- Entry Point Activities
- Climate Change Adaptation Innovation Fund
- Studies and Action Research
 - Weather Indexed Crop Insurance
 - Rehabilitation of Lakes
 - Harnessing streams for domestic use and irrigation
 - Value chain development for CC resilient crops
- Capacity Building & Training for stakeholders
- Knowledge Management

NECCAP Implementation Structure

To implement the programme, a Project Implemented Unit (PIU) would be established

with experts deputed from line departments as well as recruited from market. The PIU would report to Secretary, SSSCST. At the district level a District Coordination Committee (DCC) under the chairmanship of District Collector and with representation of relevant departments would be created to approve the microplans and monitor the implementation of the programme. The BDO office would have the main responsibility for field implementation of micro-plan based investments in collaboration with staff of relevant line departments. It would be supported by a Block Project Office with staff recruited from the market for the purpose of the project. GPU would be the basic unit for microplanning and implementation under the supervision of the BDO / BPO. Existing community based institutions would be involved in planning and implementation process.



Detailed Planning & Project Design Document Drafting

- Core Team Meetings (4)
- Cluster level Stakeholder Consultations (2)
- GPU level Community Consultations (4)
- District Consultation Meetings (2)
- Department level meetings to refine investment proposals wrt Climate Change Adaptation focus and design (15)
- Collection and analysis of secondary data on clusters, proposed investments, and on going development programmes.

Preparation of State Action Plan for Climate Change (SAPCC):

Preparation of State Action Plan for Climate Change has been completed and approved by Ministry of Environment and Forests, Government of India.

● Entry Point Activities on Climate Change with GIZ, Germany

GIZ CCA NER initiatives in Sikkim (Technical Cooperation)

- 1 Assessing the hydrological potential of Tendong Mountain and preparation of Village Water Security Plan, South Sikkim in coordination with the RMDD.
- 2 Study on Sacred preserves of Sikkim: Enhancing their Significance in Kabi, Phensong Monastery and Labrang Monastery, in coordination with the Forest Department.
- 3 Number of Trainings has also been provided as below;
 - a) Climate Change Adaption and disaster risk management training to two media persons of Sikkim at Shillong.
 - b) Master Resource Person training on “Climate Change adaptation Disaster Risk Management and Biodiversity” at New Delhi to two officials each from Forest, Science & Technology, Land Revenue Department, Simfed etc.
 - c) Training on Management of Ground Water at ACWADAM, Pune etc.

Project: Cane/Rattan Conservation and Promotion of Cane handicrafts for Sustainable Livelihood”

In order to revive dwindling population of canes to its original glory State Council of Science & Technology has initiated a project titled “*Cane/Rattan Conservation and Promotion of Cane handicrafts for Sustainable Livelihood*” funded by the Dept. of Science & Technology, Govt. of India. The team working under the Cane project has been successful in locating 6 species within Sikkim viz. *Calamusacanthospathus* (*Gauribeth*), *Calamusinermis* (*Bruhl*), *Calamus flagellum*, *Pelctocomia Himalayana* (*phakrey*), *Daemonoropsjenkisiana* from Dzongu region and *Calamus erectus* (*rhim*) from Sangkhola.

OBJECTIVES OF THE PROJECT:

Creation of Cane propagation nursery.

- Introduction of improved techniques for propagation of cane through seeds.
- Value addition and diversification of local traditional cane products for sustainable livelihood.
- Awareness generation and conservation of cane species through training of farmers.
- Creation of “*Germplasm*” for rattan diversity of Sikkim.
- Formation of a Co-operative Society of Tribal of the Region and transfer of equipments/

assets to the Society after completion of the Project

ACTIVITIES UNDER THE PROJECT:

- A three day training programme on Cane Propagation and its value addition was held at Hee-Gyathang, Lower Dzongu, North Sikkim with participants involving Self- help Groups, NGOss, progressive farmers and craftsmen of Dzongu.
- Introduction of newly created machine on Cane & Bamboo treatment 'JAGRUTI' by the R.F.R.I, Assam with distribution of advanced tools to 35 trainees.
- A trial propagation on *Calamusacanthospathus* and *Calamuserectus* is being initiated at Sajong, Rumtekak Sikkim Sate Bio-technology Research and Application Centre.
- Two numbers of research articles on Cane has been published in research compiled book named “Sikkim Biodiversity (Significance and Sustainability).”
- A short research article on distribution and diversity of *Calamusinermis*, endemic to Sikkim is already accepted for publication.



a.) Introduction of newly introduced Cane Treatment Technique “Jagruti”



b.) Field survey by the Project Staffs.

Documentation of the Ethno-Veterinary and its Formulations in Sikkim Himalayas:

Objective of the project

1. Resource survey and documentation of the ethno-veterinary and its formulations.
 2. Database creation on ethno-veterinary and its formulation.
 3. Awareness generation on ethno-veterinary amongst the tribal of the reserved areas
 4. Creation of Digital library for ethno-veterinary.
- 1) The execution of the project is being initiated with the field survey cum documentation of ethno-veterinary practices and its formulations of all parts of Sikkim. During research survey numerous ethno-veterinary practices and its formulation has been recorded for the three ethnic communities of Sikkim viz. *Lepcha*, *Bhutia* *Nepalese*. These informants were mainly traditional healers, *Jhakris*, *Bijuwas*, farmers and other elderly persons.
 - 2) Total 150 villages are covered under four districts and more than 200 traditional

practitioners have been successfully interviewed and the informant's audio visual record of these practitioners has been made accordingly. The plant which is being used for the veterinary purposes is completely recorded with its basic formulations.

- 3) Collection of specimen and the herbarium sheets is being created. Additional data base is being updated. The digitization of data base is already being initiated of 200 species.
- 4) Till now 90% of the area of the state has been covered for the documentation of the ethno-veterinary practices and its formulations. Many of the uses especially plants species as traditional treatment for cattle are recorded for the first time, which deserves to be patented for the benefit of the farmers.
- 5) The field records and other allied information are being converted into a digital based library for wide range of use. The complete report of the project will also be publishing in a hard copy book.



Plate 1: A village women treating her cattle traditionally



Plate2: Local practitioner demonstrating the local at Assam-Lingzey *Costusspeciosus* use in treatment of cattle.