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ANNUAL REPORT 2006-07

SIKKIM STATE COUNCIL OF SCIENCE & TECHNOLOGY
DEPARTMENT OF SCIENCE & TECHNOLOGY
GOVERNMENT OF SIKKIM

Shri S. B. Subedi, Hon'ble Minister, Science & Technology releasing the report on National (Natural) Resource Information System

Scientists attending the BTIS net meets

Valedictory Function XVIIIth All India BTISnet Coordinators' Meeting

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FOREWORD

The Sikkim State Council of Science and Technology, an autonomous organization under the aegis of the Department of Science & Technology, Government of Sikkim was established in 1996. Since inception, it has continued to foster, nurture, conceptualise, improve, develop and implement various programmes and projects in the field of Remote Sensing, Biotechnology and transfer of various appropriate technologies.

The Technological interventions so far are concentrated in four major sectors viz, Biotechnology, Remote Sensing, Transfer of Appropriate and Rural Technology and communication & popularization of Science. The Council has continuously strived to work in close coordination with various line departments, non governmental organizations and major R & D institutions.

The Sikkim State Council of Science & Technology and the Science and Technology Department with limited manpower has remained proactive and have successfully undertaken many programmes in 2006-07. One of the major achievement was successful orgainsation of the 14th National Children's Science Congress in Sikkim with participation of more than fifteen hundred children/scientists/delegates. We were privileged to have His Excellency the President of India as the Chief Guest on invitation of the Hon'ble Chief Minister.

We have received continued support from the Ministry of Science and Technology, Government of India both in terms of grants-in-aid (secretarial support) for the Council and various scientific projects and programmes. Similar support from the Department of Space, the Ministry of Environment & Forests, the Department of Biotechnology, Government of India and other premier R&D institutions are gratefully acknowledged.

We sincerely thank, the Hon'ble Chief Minister, Dr. Pawan Chamling, and Chairman of the Sikkim State Council of Science & Technology for his vision and guidance in the field of Science & Technology and his continued support in identifying Science and Technology as the major thrust area in the state. We are also thankful for continued guidance of Shri S.B. Subedi Hon'ble Minister Science & Technology and Vice Chairman of the Sikkim State Council of Science & Technology.

The untiring effort of Shri. O.P. Singhi, the then Secretary, Science & Technology for organizing various programmes and projects are sincerely acknowledged. We wish him happy retired life.

I sincerely appreciate the sustained efforts of the Officers and Staff of the department of Science & Technology and Council for bringing out this report.

I do hope that the work undertaken by the Department and the Council are useful to the user groups. We welcome suggestions for taking up various programmes and joint collaboration projects.

Date : August 31, 2007
Place : Gangtok

31/08/2007
M.L. Arrawatia, IFS
Secretary
Department of Science & Technology
Member Secretary
Sikkim State Council of Science & Technology

OBJECTIVES OF THE COUNCIL

The development of science and technology is vital for the world to sustain increasing populations and their activities. Science and technology hold answers to questions of how to make human actions more efficient and eco-friendly to the to improve quality of life. These are powerful tools for the prosperity of the state. We can't imagine of a good life without the support of modern technologies. To promote development and application of science & technology in the state, the Sikkim State Council of Science and Technology was established and registered as an autonomous body under the Department of Science & Technology, Government of Sikkim in August 1996 with the following objectives.

a. To increase the science & technology infrastructure for meeting the challenging demands in basic research, technology development, and scientific services.

b. To identify the areas where science and technology intervention could significantly improve the existing socio-economic conditions.

c. To identify areas of long-term development of the state by ensuring application of science and technology developed so far.

d. Pilot scale demonstration projects.

e. Replication of success models and undertaking pilot scale demonstration projects.

f. Develop appropriate mechanisms for reducing the time lag between an invention and its commercialization.

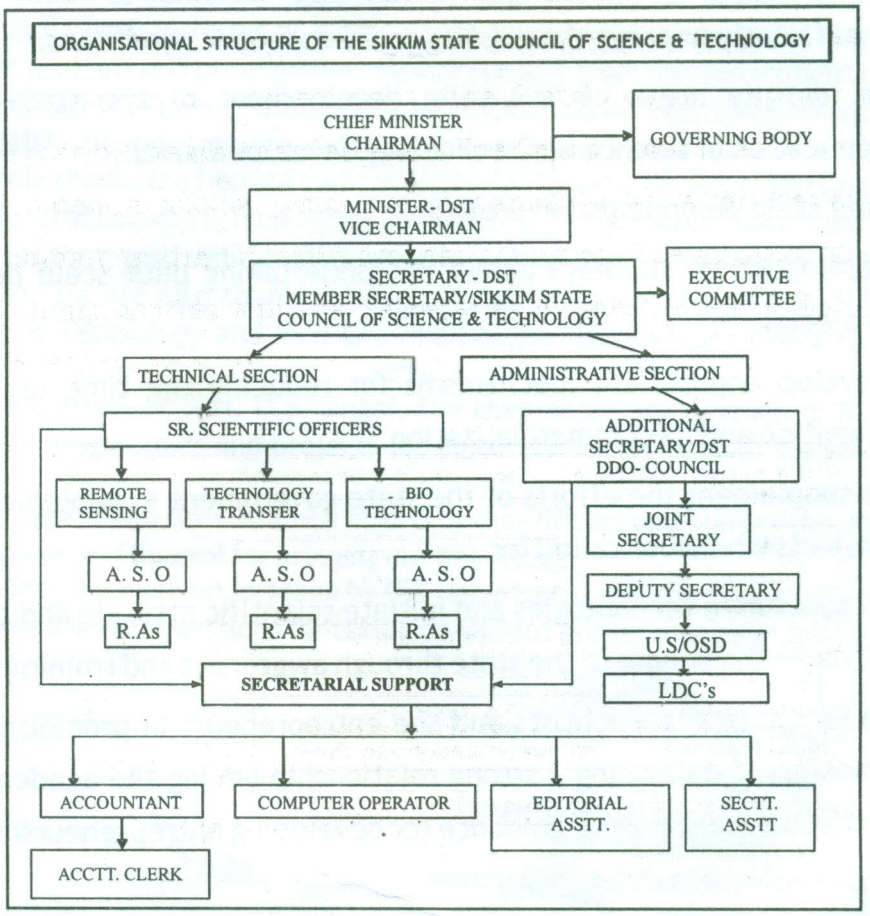
g. To supplement the efforts of the state government in implementing various projects whenever called for.

h. To popularize technologies and initiate scientific attitude and temperament amongst the people of the state through awareness and training programs.

i. To facilitate the scientists and the entrepreneurs in promoting technology transfers, establishing a strong relationship among the academia, research institutes and industry, guidance for developing entrepreneurship.

ORGANISATIONAL STRUCTURE

The Sikkim State Council of Science & Technology with the Hon'ble Chief Minister as Chairman and Hon'ble Minister for Department of Science & Technology, Government of Sikkim as Vice-Chairman has a representation of members drawn from different fields from all over India. The Secretary, DST, Government of Sikkim is the Member Secretary to the State Council and other members are mostly senior level government functionaries, scientists or academicians. The State Council also has an Executive Committee headed by the Member Secretary. The Council continues to work closely with the DST, Government of Sikkim, which provides administrative services as well as being an essential support to the Council's broader activities. The existing structure of the State Council functionaries and the Secretariat of the Council & DST are given at Annexure A & B respectively.



GOVERNING BODY

GOVERNING BODY OF THE COUNCIL

1.	Hon'ble Chief Minister	Chairman
2.	Hon'ble Minister S&T	Vice Chairman
3.	Chief Secretary	Member
4.	Development Commissioner	Member
5.	Principal Secretary, Finance Department	Member
6.	Secretary, Forest Department	Member
7.	Secretary, Agriculture Department	Member
8.	Secretary, Horticulture Department	Member
9.	Secretary, AH&VS Department	Member
10.	Secretary, Industries & Commerce Department	Member
11.	Secretary, Information Technology Department	Member
12.	Secretary, Rural Development Department	Member
13.	Secretary, Education Department	Member
14.	Secretary, Mines & Geology Department	Member
15.	Vice Chancellor, Sikkim Manipal University	Member
16.	Secretary/representative of the Department of Science & Technology, Government of India	Member
17.	Secretary/representative of the Department of Biotechnology, Government of India	Member
18.	Secretary/representative of the Ministry of Environment & Forest, Government of India	Member
19.	Secretary/representative of the Department of Space, Government of India	Member
20.	Director General, Indian Council of Medical Research (ICMR)	Member
21.	Director, Central Institute of Medicinal & Aromatic Plants (CIMAP)	Member
22.	Scientist-in-Charge, GB Pant Institute of Himalayan Environment & Development, Sikkim Centre, Pangthang	Member
23.	Representative Planning Commission, New Delhi	Member
24.	Secretary, Department of Science & Technology, Government of Sikkim	Member Secretary,

EXECUTIVE BODY

The composition of the Executive Council of the Sikkim State Council of Science and Technology as under:

1.	Shri M.L. Arrawatia, IFS, Member Secretary, Sikkim State Council of Science and Technology	Chairman
2.	Shri Thomas Chandy, IFS, CCF-Forest Env & Wildlife Deptt	Member
3.	Shri Tshering Tashi, Additional Director, Deptt of Mines & Geology.	Member
4.	Shri S.K. Pradhan, Principal, Sikkim Govt. College	Member
5.	Shri K. K. Singh, Director, Horticulture & Cash Crop Dev Deptt.	Member
6.	Dr. K. K. Singh, Scientist C, G. B Pant Institute, Pangthang	Member
7.	Dr R. K. Tamang, Joint Director, AH&VS Deptt.	Member
8.	Shri G. K. Gurung, Ex. Secretary, FS &Agriculture Dev. Deptt	Member
9.	Mr. C. Zangpo Bhutia, Addl. C.E. Urban Dev & Housing Deptt.	Member
10.	Dr J. P. Tamang, Reader, Sikkim Govt College	Member
11.	Dr M. P. Thapa, Reader, Sikkim Govt College	Member
12.	Shri D. G. Shrestha, Sr. Scientific Officer, SSCS&T	Convener

The Chairman of the executive Committee may co-opt other members from the Sikkim State Council of Science & Technology and from Government of India to its meetings as and when deemed necessary.

STATE REMOTE SENSING APPLICATION CENTRE (SRSAC)

STATE REMOTE SENSING APPLICATION CENTRE (SRSAC)

Remote Sensing and its applications has certainly gained considerable importance for acquiring the information about the earth's surface and has been found to be of great help in mapping of natural resources especially in the remote and inaccessible area of the state. The capability of high resolution, synoptic perspective being an added advantage for monitoring the seasonal changes on vegetation and timely monitoring of natural resources. The SRSAC was established under the Sikkim State Council of Science & Technology for setting up the data base on natural resources and socio- economic parameters on Image Processing and GIS for storage, analysis, retrieval, regular monitoring and updating of the information. Further, it is also to develop suitable methodology for integrating spatial and non-spatial database using Geographic Information System (GIS) and also to integrate plans with the coordinated efforts of various development departments for sustainable development of land, water, forests and environmental resources. Besides, the SRSAC also do impart training on Remote Sensing technology and GIS to the users.

During the 2006-07, the SRSAC has successfully undertaken the following projects beside its usual routine activities.

Integrated Mission for Horticulture Development Phase II

The Ministry of Agriculture, Government of India, sanctioned the project on the **"Technology Mission for Horticulture Development in the North East India"** to the Space Applications Centre, Department of Space, GOI, Ahmedabad. Since the project involved the use of Remote Sensing and GIS technology, the State Remote Sensing Application Centre under the Sikkim State Council of Science and Technology collaborated for the project pertaining to the State of Sikkim. This project aims in identifying the potential sites for development and expansion of horticultural crops in Sikkim. It is jointly taken up with SAC, Ahmedabad in close coordination with the State Horticulture and Cash Crop Development Department, Sikkim. In the second phase of this project the site suitability for growth of Mandarin orange has been extended to the whole of Sikkim.

The mapping of various themes like slope, aspect, drainage and land-use were done and the Digital Elevation Model (DEM) generated pertaining to the East District of Sikkim. The potential horticultural growth sites especially for the Mandarin Orange have been found out and the report on the suitable sites in the East District has been brought out.

Land Use Land Cover Mapping - (on 1:50,000 Scale)

A project titled Land Use Land Cover 50K in North East Region has been launched by National Remote Sensing Agency (NRSA), Department of Space, and Government of India. The total expenditure to undertake the work and the provision of three satellite data is been taken over by NRSA. The project shall be providing the basic information about the latest status of the Land Use Land Cover in our state on 1:50000 scale. With the guidance from the North East Space Application Centre the project is being carried out and the monthly progress report is being sent to NESAC, Shillong. Beside the project has the following objective:

1. Generate land use /land cover data base for the period 2006 2007 using three seasons (Kharif, Rabi & Zaid)
2. Digital data base creation based on standard codification and integration with based details and to generate seamless digital data at state level.

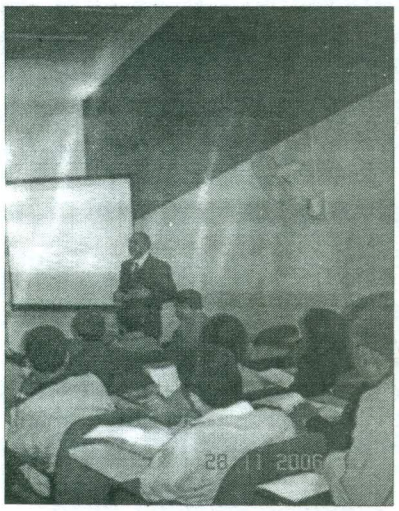


Photo:Dr. Arun Kumar, Scientist SAC, Deptt of Space, GOI, Bangalore, delivering his lecture.

Photo: B.D.O'S and Officials during the workshop.

3. Generate district wise tables of the land cover parameters and changes over the previous census cycle.
4. Preparation of LULC information system for easy query and retrieval of geodatabase.
5. Report the areas of major land use change with appropriate scale maps and assessment report on causative factors and remedial measures.

Workshop on National (Natural) Resources Information System at SIRD Complex, Karfectar, Jorethang, South Sikkim

A day workshop was organized by State Remote Sensing Applications Centre (SRSAC) under the Sikkim State Council of Science & Technology, Development Area, Gangtok on 28th November 2006 at State Institute for Rural Development Complex, Karfectar, Jorethang, South Sikkim. The workshop was supported by the Space Application Centre, Department of Space, Government of India. The workshop was organized mainly for the newly appointed Block Development Officers by the Government of Sikkim and the Non Governmental Organisations within the State. The Hon'ble Minister, Shri. S. B. Subedi, Department of Science & Technology, Government of Sikkim graced the programme as the chief guest. The guests during the program consisted of team members from different centres and institutions like Space Application Centre, ISRO, RRSSC and SIRD.

In the inaugural address the Hon'ble Minister, Shri. S. B. Subedi for Department of Science & Technology, appreciated the contribution made by the Department of Space, Government of India in development of State Remote Sensing Applications Centre as well as strengthening the centre with the latest updated remote sensing & GIS related hardwares and softwares. Beside he also apprised the Block Development officers to make use of the facilities available in the SRSAC specially the NRIS database which will be of great use in the planning development of the State.

The programme was followed by the welcome speech by the Member Secretary, Sikkim State Concil of Science & Technology, Shri. O. P. Singhi., Shri. S. K. Pradhan,

Director SIRD, Dr. K. L. Majumdar, Director, Space Application Centre, Ahmedabad Director SAC, Additional District Magistrate (South), Dr. Krishnamurthy, ISRO HQ, Bangalore, Dr. A. Jeyaram, Head, RRSSC, Kharagpur and other scientists from Department of Space includind the B.D.O's and N.G.O's. Beside he also expressed his gratitude to SAC Ahmedabad , ISRO HQ Bangalore, NE-SAC Shillong and RRSSC Kharagpur for their support to the State Remote Sensing Applications Centre (SRSAC) under the Sikkim State Council of Science & Technology and Director, SIRD, Karfectar for his immense support in holding this workshop.

The workshop on the first half was based on the presentation made by Shri. D. G. Shrestha, Sr. Scientific Officer, Sikkim State Council of Science & Technology in which he gave a brief outlook on the NRIS database of the state which also included the prepared thematic maps on natural resources of the State made by State Remote Sensing Applications Centre, Sikkim with the assistant from the Regional Remote Sensing Service Centre, IIT, Kharagpur. He also highlighted on the applications of NRIS database in the block level. Dr. A. Jeyram, Head, Dr. M. D. Behara and Dr. Chakraborty from RRSSC, IIT, Kharagpur elaborated in their presentation on the NNRIS database of the sate in detail.

The second half of the session of the workshop was briefed on the Village Resource Centre, a programme by ISRO. In this Dr. Ganesh Raj, Program Manager, Village Resource Centre, ISRO HQ, Department of Space, Govt of India, Bangalore made his power point presentation citing examples from various states in their applications of VRC.

The program ended with address by Director, SIRD, Karfectar and vote of thanks by Shri. Suman Thapa, Assistant Scientific Officer, Sikkim State Council of Science & Technology.

Other data/facilities provided to user department by State Remote Sensing & Application Centre.

The different users in the State (both govt. and non governmental agencies) come with their requirement, especially related to the identification of catchments area, classification of Satellite data etc. the services are provided on payments.

- Pakim Palatine College: Provided Satellite imagery of Sikkim, Image showing Changu lake, wet land map of four districts of Sikkim.

- Block Development Office, Yangang: preparation of maps with block boundary and other details like roads, rivers, forest cover, scrubland, agriculture cover and other infrastructures like schools, hospitals etc within the block.
- Scanning facility availed by user departments.
- Data is supplied to the other user Department such as, Power Department, Department of Agricultural & Horticulture, Forest, Env. & Wildlife Management Department, Irrigation and Flood Control Department, Government of Sikkim.

Coordinated Projects under SRSAC:

Microzonation of Sikkim Region (Seismicity project)

The "Microzonation of Sikkim region (Siesmicity)" is the project presently executed by Geology and Geophysics Department, IIT Kharagpur with the assistant of SRSAC and is sponsored by the Earth Science System Division of DST, GOI. The main aim of the project is to monitor the seismic behaviors of the region and also to create microzonation of the thrust areas of seismic zone of Sikkim. In compliance to the objective of the project the SRSAC has provided several technical facilities to instal total of eleven earthquake monitoring stations at different parts of the state where the digital seismographs has already been installed inside 6'x 6'x 6' concrete structure. The digital seismographs do constant recording of the seismic behavior, even of the lesser magnitude (which cannot be felt by the human being).

Based on the above recorded information "Seismic Hazard and Microzonation Atlas of Sikkim Himalaya" has been prepared by Prof. S.K.Nath and the same was released by the Secretary Department of Science and Technology, GOI on 24th April 06. After realizing the importance of the project, the duration of the project has been further extended for two years.

Workshop on "Microzonation of Sikkim Region" at Janta Bhawan, Gangtok, East Sikkim.

One day workshop on "Microzonation of Sikkim Region" a project coordinated by the Sikkim Remote Sensing Application Centre was held on 17th October 2006 at Janta

Bhawan, Gangtok, East Sikkim. During the workshop officials from various departments both from Government of Sikkim like Mines, Mineral & Geology, Public Works , Buildings, Human Resource Development, Rural Management and Development, Irrigation & Flood Control, Power & Energy, Forest Env & Wildlife, Public Health Engineering and from Government of India like the Meteorological Department, GREF, Geological Survey of India etc were present . The Hon'ble Minister for Department of Science & Technology, Government of Sikkim Shri. S. B. Subedi, graced the occasion as the Chief Guest. Prof. S. K. Nath, Principal Investigator of the Project, Department of Geology & Geophysics, Indian Institute of Technology, Kharagpur highlighted his works and achievements on project.

Micro Hydel Project, Thangu North Sikkim.

The micro hydel project A 2x100KW Micro Hydel Project, Thangu North Sikkim is being established with the support of Department of Science and Technology, Government of India. It is a demonstration project using cross flow turbine at an altitude of around 14000 ft.

The cost for certain component like construction of approach road, distribution line etc. has been provided by the State Planning and Development Department under the Border Area Development Programme.

A comprehensive Agreement has been signed with the Constructional and Power Generation Cooperative Society, Thangu, Lachen. The society would execute the project and run the plant. After its successful testing and commissioning the Society would maintain the plant with the revenue which would be collected in due course of time.

Entire execution work has been awarded to the Society on turn key basis. The actual ground work has started from the last week of March 06. The council has also hired a consultant for its proper supervision.

SIKKIM STATE TISSUE CULTURE CENTRE

SIKKIM STATE TISSUE CULTURE CENTRE

State Tissue Culture Centre (STCC) was established in the year 1996 under the Sikkim State Council of Science & technology. With the inception of the centre several R & D activities on rare and endemic plant species including Orchids, Medicinal and Aromatic herbs has been successfully undertaken. Following are the activities successfully undertaken under the centre in the year 2006-2007.

Micro-propagation of Orchid (*Phalaepnopsis*):

The centre has undertaken micro-propagation of orchids specially Cymbidiums and *Phalaenopsis*. The cymbidiums which are under cloning are commercially important hybrids both as cut-flower and pot plants. The protocol of each variety has been worked out and they are under mass multiplication. The laboratory has also collected *Phalaenopsis* orchids in different color and shades for cloning. The centre has successfully isolated and cultured *Phalaenopsis* from the flower shoot which offers true to type seedlings. The centre has also pollinated *Phalaenopsis* hybrid and produced seed pod which was subsequently cultured in the laboratory.

Tissue culture of medicinal plants (*Dactylorhiza hatagierea*):

Medicinal plant *Dactylorhiza hatagierea* locally called *Paanch aunley* is a high altitude plant found in alpine region. The plant belongs to orchid family and has various medicinal properties. The centre has collected seed pod from the field without disturbing its natural habitat and cultured in the laboratory. The results are yet to come. The centre has also worked on two oil yielding plant namely, Geranium and Patchouli and successfully isolated and multiplied in the laboratory.

Multiplication of *Geranium* and *Patchouli* through cuttings:

The centre has multiplied about 1500 numbers geranium and patchouli through cutting in the shed. In addition to the above two aromatics plants the centre is also working on the agro-techniques of important seasonal plants such as Chrysanthemum, calceolaria, cyclamen and orchids etc. The technical know-how so developed or perfected shall be useful to impart trainings to the growers.

Training on mushroom cultivation:

Training on mushroom cultivation was conducted at Changey Lakha, Rongli, E. Sikkim under the Boarder Area Development Programme. In the said training programme more than 30 rural women were trained in mushroom cultivation.

Bioinformatics Centre

(Distributed Information Sub-Centre)

Sikkim Bioinformatics Centre under State Council of Science and Technology, Department of Science and Technology was established in the year 2001. The centre has been set up in the capacity of Distributed information Sub-Centre(DISC).

The Centre actively involves in collection of information on various biological resources, retrieval of biological information and creation and management of database. It also serves as an Information Centre for providing information on biological resources to the researchers and scholars. The centre aims in keeping the scientific fraternity abreast with the latest biotechnological advancement and also aims in inculcating the scientific temperament among the scholars.

Activities undertaken during year 2006-2007:

The new executive committee consisting of eight members was formed and the second executive committee meeting was held to review the activities of the centre. Shri U.N.Behera (The then Joint Secretary of Department of Biotechnology, GOI) , Dr.J.P.Tamang (Reader, Sikkim Government College), Dr. Arnab Sen(Sr. Lecturer, North Bengal University) attended the meeting.

Animation of biological processes (cell division, protein synthesis, DNA replication) is being developed to help the scholars to understand the processes better.

From 10th September 2006 to 16th September 2006 Data Entry Operator along with the Assistant Scientific Officer toured West Sikkim (Kyongsla Alpine Sanctury, Changu lake and vicinity, Gnathang, North Bengal University & Kalimgpong) for photographic documentation of medicinal and aromatic plants.

Infrastructure facilities in the bioinformatics centre:

A. Computer and communication facility

The Centre is equipped with P4 PCs, Laptop, CD writer, Scanner, 5100C, DeskJet 810 C, Laser printer, dual processor server and a Xerox machine.

The centre has 24 hours internet connectivity provided by the State National

Informatics Centre through RF Antenna along with 512 Kbps leased line internet connectivity provided by Bharat Sanchar Nigam Ltd.

Database & other information resources:

The centre has developed database on bio resources of Sikkim .

Database on 450 species of orchids, 36 species of Rhododendron, and 200 species of medicinal plants has been prepared.

Workshop cum Training:

Two days training program on "Creation and Management of Biological Database" was held on 7/11/2006 and 8/11/2006. Scientists, lecturers, researchers and technical personals attended the training.30 trainees were trained during the training. Dr J.P Tamang, Dr. K. K. De and Dr L .K. Rai were invited as resource persons.

Informative News letter "Bio Gyan":

The centre releases Newsletter on regular basis.

Types of services provided:

- The centre acts as an information centre for providing information on various bio resources of Sikkim.
- The Centre Library with a good collection of references is used by scholars and researchers.
- Free internet facility is provided to the researchers for searching the biological informations.
- Prepares animations on various biological processes like protein synthesis for better understanding the process.

XVIIIth Annual BTISnet Coordinators Meet:

XVIIIth All India BTISnet Annual Coordinators Meet 2007 was held on 3rd and 4th February at Chintan Bhawan,Gangtok. The Meeting was chaired by Dr. M.Vijayan , Vice Chancellor, Indian Institute of Science ,Bangalore. Dr.T.Madan Mohan (Adviser DBT,GOI) and Shri U.N Behera (the then Join Secretary, DBT,GOI) were also present in the Meeting.

The Meeting was attended by members of Task Force Committee, Coordinators, Information officers and the officials from DBT, GOI and Department of Science and

Technology, Government of Sikkim. Each centre gave the review of progress of their centers through PowerPoint presentation. Bioinformatics Centre, Sikkim also made the presentation and highlighted the works carried out by the centre.

Shri T.Madan Mohan Director, DBT during the inauguration ceremony of the BTISnet Coordinators meets 2006-2007 Gangtok , Sikkim.

Shri S.B. Subedi, Hon'ble Minister DST, lighting up the lamp during the inauguration of Meets.

PATENT INFORMATION CENTRE (PIC)

Patent Information Centre for Sikkim is the eighth PIC in India that has been established under the Sikkim State Council with the collaboration with the PFC, TIFAC, DST, and Government of India with the following objectives:

- Creating awareness about Intellectual Poverty Rights, especially the patents and enabling R & D institutions, University, Industry and enabling R & D Institutions, University, Industry and Government Departments through workshops, seminars, conferences etc.
- To analyze the patent information on regular basis.
- To provide technical assistance to the inventor in patenting their inventions keeping in touch with TIFAC and supply related documents.

As per the terms & condition with regards to the MOU signed between the (PFC) Patent Facilating Centre, Technology Information Forecasting & Assessment Council (TIFAC), Department of Science & Technology (DST) GOI, and DST, the PIC centre was granted till 31st March'07. Fresh request has been made to TIFAC, DSI, GOI for extension of the PIC for the 11th Five Year Plan period, as well.

APPROPRIATE TECHNOLOGY
&
TRANSFER OF TECHNOLOGY

COMMUNICATION
&
POPULARISATION OF SCIENCE

BIO-INTEGRATION OF FARMING ACTIVITIES AND RESOURCES MANAGEMENT (BIOFARM).

The Project Bio-Integration of Farming Activities & Resources Management (BIOFARM) is funded by the Science and Society Division,Department of Science & Technology, Govt. of India. This project is being implemented by Losing-Pacheykhani after identification of two clusters with 22 households as stake holders with the following objectives:

Objectives of the project:

1. To produce food of high, nutritional quality in sufficient quantity for the family
2. To enhance biological cycles within the farming system involving microorganisms, soil flora and fauna, plants and animals.
3. To use, as far as possible, renewable farm resources in locally organized agricultural systems.
4. To preserve, document and enhance traditional and indigenous knowledge of cultivation, land management, pest control, seeds, cropping patterns, varieties and animal breeds.
5. To explore possibilities of forward linkage and value addition at individual and collective levels.
6. To study the income feasibility generated from a compact area of half an acre or less.
7. To design suitable tree-crop integrated systems for sloping cultivated lands of the region in a participatory and collaborative framework.
8. To involve local Panchayati Raj Institution members in various stages of farming system.

Activities undertaken in the year 2006-2007.

- Appointment of manpower
- Preliminary survey completed in 2 clusters identified for implementation of the project.
- Identification of beneficiaries in consultation with Panchayats members.
- Sensitization of the project in the village.
- Identification of areas of intervention as per the need of the beneficiaries.
- Soil sampling in identified sites, energy analysis for baseline study completed.
- Initiated with first Kharif season plantation such as vegetables, distribution of fruits saplings, and construction of Vermicomposting pit with distribution of vermiworms.

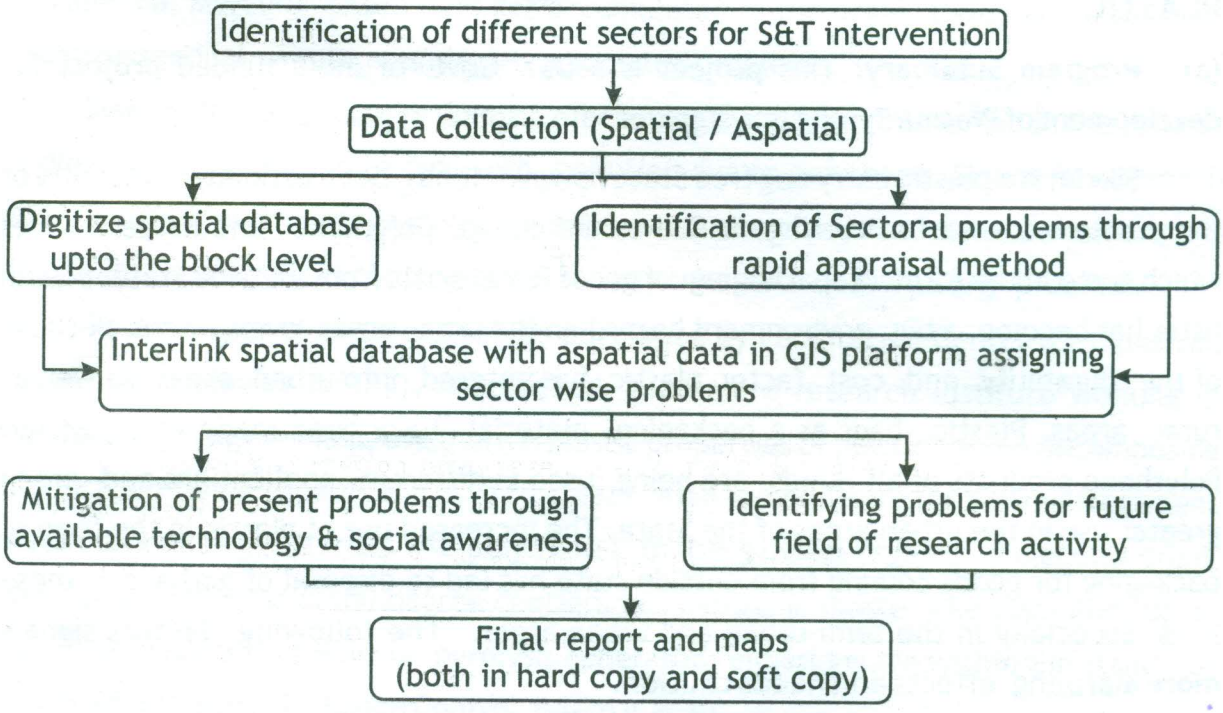
IDENTIFICATION OF STRATEGY FOR MAPPING OF S&T NEED OF THE STATE

This project is funded by the Department of Science & Technology, Govt. of India. The project S & T Mapping is associated with inventorisation and mapping of relevant sectoral area of entire state requiring S &T intervention based on primary and secondary resources. Documentation of Problem including areas. drafting of specific and well defined problem statements, mapped together with S&T resources available to plan and implement problem specific S & T interventions. The documentation is made through the collection of information from line Departments and Research Agency within the state paper and journals etc.for identification of the problems, while colleting information the various NGOs, including Field Officer, District Development Officer, Scientist, Administrator and farmers etc have been consulted. The preparation of map indicating the problem in the specific sector such as Agriculture, Horticulture, Fisheries, Sericulture, Animal Husbandry, Forest and Environment, Health and Hygiene, Cottage Industries, Natural Resources, Tourism, Human Resource Department, Natural Disaster, Transportation as per the frame work of mapping of S & T needs is under preparations and is to be completed by September 2007.

IDENTIFIED SECTORS FOR MAPPING OF S & T NEEDS

1. Agriculture Sector
2. Horticulture Sector
3. Forest And Environment Sector
4. Sericulture Sector
5. Animal Husbandry Sector
6. Aquaculture Sector
7. Cottage Industries Sector
8. Natural Resources Sector
9. Health And Hygiene Sector
10. Human Resource Development Department Sector
11. Natural Disaster Sector
12. Tourism Sector
13. Transport Sector
14. Irrigation and Drinking Water Sector

Methodology



PROGRESS OF THE PROJECT, 2006-07

- Collection of primary and secondary data on identified sectors upto district / block / village level. Identification of problems on the above sectors. Statistical analysis and data collected from secondary resources and first level survey in identified sector.

- Documentation of efforts of the State Government in addressing the sectoral problems and collection of information about available resources in the form of institution and expertise. Generation of spatial database (map) in digital format of administrative unit of Sikkim upto block level and interlinking of the spatial database with aspatial data in GIS platform.

- Primary and Secondary data generated from the information collected from various identified line departments.

- Secondary information about the profile of the identified sector. Regional settings, Agriculture & Horticulture sector, Forest and Environment sector, Sericulture, Fisheries and medicinal plants, Health and Hygiene sector, Human Resource Department sector, Natural Resource sector, Tourism sector, Cottage Industries sector, Transportation sector.

DEVELOPMENT OF PLASMA PYROLYSIS SYSTEM FOR DISPOSAL OF PLASTIC

(a) Program Summary: This project is a DST, Govt. of India funded project for development of Plasma Pyrolysis System for safe disposal of plastic waste.

Sikkim is a plastic carry bag free State however it has been estimated that 90% of the problem of waste littering is due to the cheap polythene and its derivatives which come in the form of packaging of goods & materials from outside State. Plastic litter has become a big environment hazard in the urban areas everywhere. Because of the durability and cost factor, plastic has entered into urban areas as well as rural areas. Plastic bags as a packaging material have been made very popular. Polythene products of all kinds are being used in different applications and are in greater use in the urban areas of the State. The increased use of plastic in the form of packaging for goods coming from outside state has led to disposal of garbage in these bags, especially in the semi-urban and urban areas. **The following factors signals more alarming effects and needs caution.**

- These plastic bags are health hazards not only because they choke the soil, block our drains and pollute the air, but also because lead and cadmium pigments used to colour there bags, which are invariably recycled. Every time a bag is recycled, its quality deteriorates. The recycling process to minimize polythene waste is also dirty and produces many toxic gases. There is gradual deterioration due to chemical changes and breakdown .
- Many chemicals are added during recycling to impart strength and colour and these chemicals are likely to leach into the products which are contaminated in Containers made from recycled plastic and may produce toxic effects on prolonged exposure.
- Recycled bags could also be used for eatables. When these bags come in contact with food, the dyes rub off. The chemicals used in the manufacture of plastic base to add colour and strength are carcinogenic and are know to cause cancer.
- Cadmium used to colour the yellow bags is bio accumulative and toxic. By accumulation in the bones, kidneys and arteries, it causes deformity of bones, blood pressure and arteriosclerosis.

- Lead based dyes cause gastrointestinal, renal and neurological symptoms as well as anemia. Mercury based dyes get accumulated in the brain tissue and also cause gastrointestinal symptoms and other associated problems.

Sikkim State Council for Science, Technology has been interested in the task of finding ways & solution to deal with pollution due to polythene. Scientific approach and creation of awareness amongst the different strata of population, to demonstrate & propagate the suitable technologies are the key criteria to deal with any problem.

Technologies of plasma pyrolysis developed by Facilitation Center for Industrial Plasma Technologies (FCIPT), Ahmedabad, a premere research Institute working in plasma technology in India, use thermo plastic properties of plastic for the decomposing chemicals. Plasma torches are used to create high temperature for plasma treatment of non conducting materials like polythenes. In this process organic molecules break down at a high temp (1100 degree centigrade). Inorganic matter like glass ends up as ash. FCIPT claims that Plasma pyrolysis generated emissions are within the standards laid down by Central Pollution Control Board (CPCB).

(B) Objectives & Methodology Summary:

i. The main objective of the proposal is to demonstrate the applicability of plasma pyrolysis technologies for safe disposal of plastic garbage and often non biodegradable solid waste.

ii. Creating public awareness on the need of the devising appropriate mechanism to deal with the disposal of polythene as an undesirable waste.

iii. Capacity building of local bodies , NGOs Medical staff, ragpickers in the use of modern technologies plasma pyrolysis in tackling the nuisance of plastic carry bags.

Methodology:

Establishment of Plasma Pyrolysis system for the safe disposal of plastic material are being taken up in the following steps:

Establishment of contact with Facilitation Centre for Industrial Plasma Technologies, Institute for Plasma Research (FCIPT).

- Identification of site for installation — completed
- Visit to the FCIPT, Institute of Plasma Research, Ahmadabad — completed
- Training of Technicians at FCIPT, — completed
- Commissioning of plant — completed
- Handing over to Urban Development and Housing Department for future use on turn Key basis after trials — Pending

Sikkim State Council of Science & Technology and Facilitation Centre for Industrial Plasma Technologies, Institute for Plasma Research (FCIPT) Ahmedabad, have agreed to work jointly on a project to setup and operate a plasma Pyrolysis System for the destruction of Plastic bags in Martam, East Sikkim.

(c) Project Highlights:

(i) Equipments Installed at Martam garbage processing site.
(ii) Network with UD & HD
(iii) Manpower trained at FCIPT, institute of Plasma Research, Ahamadabad.

ENVIS CENTRE SIKKIM ON ECOTOURISM

Environmental Information System (ENVIS) established in September 2001, is a Plan programme of the Ministry of Environment and Forests, Government of India. ENVIS is a decentralized system using the distributed network of data bases to ensure integration of national efforts in environmental information collection, storage, retrieval and dissemination to all concerned including policy planners, decision makers, research workers and the public. The objective of ENVIS Centre are to build up a repository and dissemination centre in Environmental Science and Engineering; to gear up modern techniques of acquisition processing, storage and retrieval and dissemination of information of environment nature; and to support and promote research, development and innovation in environmental information technology. ENVIS Centre in Sikkim is grouped in floral and faunal biodiversity.

The Website provides information on Eco-tourism status of floral and faunal biodiversity, online query answer form, web links for National and International Eco-tourism website etc. data bank on flow domestic and international tourist for the last 15 years. Newsletters are published bianually for dissemination of infermations. A book on Eco tourism destination of India-Sikkim Chapter is under compilation. The URL of ENVIS Centre is www.scstcenvis.nic.in

Activities:

- Documentation and digitization of available information and data on the identified thematic area 'Integrated Tourism and Environment.
- Design and development of the SDNP-ENVIS webpage. Web links has also been given to access other relevant information on Environment and Tourism, Ecotourism and Biodiversity conservation.
- The information on the identified thematic area in the ENVIS-SDNP homepage has been addressed through various. parameters like:
    a) Database on Ecotourism
    b) Environment and Tourism News Clippings
    c) Publications
    d) Case Studies.
    e) Organizational Links with NGO's and Government Departments.
    f) Conventions and Treaties
    g) Emerging issues
    h) Policy matters.
    i) Agenda 21

AWARENESS, COMMUNICATION AND POPULARIZATION OF SCIENCE.

Under this scheme various programmes were organized during 2006 - 07 for the promotion of scientific work and to create awareness, interest and scientific temper in science especially among students.

National Children Science Congress

The Council has started this programme since 2001 though it was started since early nineties. It is an annual feature and organized every year in collaboration with State Human Resource Development Department through District Education Officers. District Officers are nominated as district coordinator of the programme. This is a unique programme that provided the children of age group 10-17 years with a platform to express their scientific temperament through project preparation, presentation at various levels (District level, State level, finally at the National level) in the given theme. The children work on same theme for two years and the theme changes in every two years.

Children Science Congress is the activity of National Council of Science &

Technology Communication- Network (NCSTC-Network) a National NGO, catalyzed and supported by NCSTC, Department of Science & Technology Govt. of India. Children Science Congress is the only major Science programme for the School Children and Science teachers of the state. The exposure of the students at state and National level has led to interest towards Science among students. So far the children had participated Congress in the following theme;

1. Indigenous Technology for Future Use 2000 & 2001
2. Food System : Towards Nutrition for All 2002 & 2003
3. Harness Water Resources: For a Better Future 2004 & 2005
4. Biodiversity : Nurture Nature for Our Future 2006 & 2007

14TH NATIONAL CHILDREN SCIENCE CONGRESS, MAJITAR , SIKKIM 2006

The 14th National Children's Science Congress (NCSC) 2006 was hosted by the Sikkim State Council of Science & Technology and co-hosted by Sikkim Manipal Institute of Technology, in the SMIT premises at Majhitar, Rangpo, East Sikkim from 27th to 31st December 2006.. The focal theme was BIODIVERSITY, *Nurture Nature for Future.*

The primary objective of NCSC is to give opportunity to school and non school children a platform to show their responsibility and innovativeness by identifying problems around them, ponder over and ultimately come to a solution through scientific processes. This will help children not only to develop their scientific skills but also to become a responsible citizen in future.

This year a total of 543 child scientists participated in the national level of 14th NCSC, 2006 .They were accompanied by their respective State Coordinators, coordinators and escort teachers. Also there were 40 evaluators, 20 Resource Persons, 12 Eminent Scientists for face to face

From left: His Excellency the Governor of Sikkim, Shri V.Rama Rao, His Excellency the president of India Dr. A.P.J.Abdul Kalam, Hon'ble Chief Minister of Sikkim Dr Pawan Chamling during inaugural function of 14th National Children's Science Congress 2006 at SMIT, Majitar

interaction with the child scientists, Representatives from the NCSTC- Network member organizations and the National & State Organizing members. Infact 1700 people including child scientists, eminent scientists, academics, teachers, resource persons were part of the 14th NCSC programme. Apart form the official participation, children from different schools of Sikkim also participated in the programme from day one itself.

THE ACTIVITIES OF THE 14TH NCSC, 2006 WERE AS FOLLOWS:

Flag hoisting & Inaugural Ceremony:

On December 27, 2006, the 14th NCSC programme commenced with a flag hoisting ceremony. Hon'ble Minister, Shri S.B.Subedi, HRDD, GoS, Dr T.Ramasami, Secretary, DST, GoI and Prof S.S.Roy, Chairman, NCSTC Network hoisted the flags. It was followed by a colourful cultural procession by the representatives of all the participating states. The Exhibition-cum-Activity corners were inaugurated by Hon'ble Minister, Shri G.M.Gurung, HRDD, GoS, Shri S.K.Panigrahi, Planning Commission and Er. Anuj Sinha.

The congress was formally inaugurated by His Excellency the President of India, A.P.J Abdul Kalam.

He had interaction with the children during the programme. He answered many questions and asked few to the children as well. His speech highlighted the works of many great Indian scientists and encouraged children to be one of them.

Technical & Poster Session, Teachers meet, Activity Corner, Video conferencing:

The 14th NCSC caught up speed immediately after the inaugural function. 10 parallel technical sessions progressed day by day for four days. This year a total of 543 child scientists participated, each with unique scientific temperament and knowledge. Every child presented their projects with illustrative charts, photographs and models. The Technical Session was accompanied by 10 activity corners which included low-cost teaching aids, Science behind Miracles, LASER based activities, Nature Study Activities, Science Writing, biodiversity based activities etc. There were also poster sessions for child scientists and panel-discussions for teachers of all the participating states. Virtual meetings with other scientists on the focal theme were also possible by the video conferencing technology. Delhi, Bangalore, Ahmedabad and Sikkim were the places chosen for video conferencing.

Meet the scientists programme:

India's most distinguished scientists were present for "meet the scientist programme". The children had face to face interaction with the eminent scientists of the country and the state as well. The presence of Prof. Yash Pal for meet the scientist programme was very much appreciated by the children. Dr. J.M. Julka , Dr. Kishan Lal, Dr K.K. Singh, Dr T Ramasami, Dr J.P. Tamang, Dr. H.K. Badola, Dr. M..P Thapa, Dr. R.K Awasthi, Mr. Gopal Pradhan , Shri Tshering Tashi, Dr. A.K.Sahoo, Dr. Yashodha Pradhan were all present for face to face interaction with the child scientists.

Cultural programme:

Every tiring day of presentations and seminars ended with a lively cultural programme. Every day children of around 7 states were given chance to show their talents on the stage by dancing, singing or acting. The children as well as the adults enjoyed their performances to the fullest.

Valedictory Programme:

The 14th NCSC 2006 concluded with a valedictory programme. His Excellency the Governor of Sikkim, V. Rama Rao was the Chief Guest. He was also accompanied by Hon'ble Minister, Shri S.B. Subedi. All the participants of the congress were honored by Souvenirs, certificates & gifts. There was also a cultural programme on the last day.

ESTABLISHMENT OF SUB-REGIONAL SCIENCE CENTRE CUM PLANETORIUM

The Government of Sikkim has approved the Councils proposal to set up a Sub Regional Science Centre in collaboration with National Council of Science Museums, Kolkata. The land for the Centre has been identified and demarcated at Marchak. This Centre will have theme based science museum, science parks and various interactive science programmes for the local people and Students as well as tourists coming from different parts of the country. The State Govt.has has provided land for the Centre and bear 10% share on the total cost. Project is being executed by the Birla Institute of Technological Museum, Kolkata and provide all technical expertise. Total project cost is Rs.200.00 Lakhs.

The Building and Housing Department, Government of Sikkim is executing the work. It is likely to be completed by September 2007.The department has approved for redeployment of the manpower and also do providing them for trainings essential to them.

ORGANISAION OF SEMINARS, TRAINING AND CREATION OF SCIENTIFIC AWARENESS:

In order to create awareness among policy makers, administrators and scientists for adopting new scientific and technological methods in raising the living standards of the society, it is essential to update the knowledge and keep abreast with the research and discoveries in the scientific filed. The Council provides funding to Scientific Institutions & NGO's in following areas:

1 Specialized Workshops, Seminars, Training programmes for the administrators, scientists, technologists, voluntary organizations

2 To provide support to State Scientific Institutions for organizing Seminars/ Symposium on new Science and Technology areas to facilitate communication and exchange of information among the scientists, Administrators and policy makers in the state.

NATIONAL SCIENCE DAY CELEBRATIONS

The National Science Day (February 28th) celebrated in the state with the support from NCSTC. The Council organized the programme in all the Sub divisions and districts, & College. The NSD Celebrations covers students and teachers of whole State.

The most important event of the National Science Day is the Annual Science Exhibition **"Vigyan Pradershini"** being organized every year in Gangtok during the culmination of the programme. In this programme all scientific institutions and R&D organizations of the State participate to showcase their activities and progress. This programme also helps in exposing these institutions to the students and general public.

The Council organizes various Science Popularisation programmes through a Network of District Education Officers in the State for School Children. The Programmes in Colleges & Universities are organized in collaboration with active teachers/ scientists. The Council has involved a number of NGO'S in Children Science Congress Activity.

The Council has catalysed number Science promotion activities in the state & introduced number of Science programmes through Human Resource Department in the state for students and teachers.

1. The State Council for Science, Technology and Environment, H.P. has taken major

initiative to promote ORIGAMI in the State by training a large no. of teachers & students and organizing the Origami Competition at Sub Division

2. Level, District Level & State Level. Origami has become extremely popular among Children and there is growing demand for further trainings.
3. Ham Radio activity was introduced by Council for the first time in the state leading to large demand for training by individuals, students, and teachers.
4. The Children Science Congress programme of Council is the major Science Popularisation Programme which is organized throughout the state in rural, tribal, urban areas and has resulted in awareness about Science in the Hilly State.

National Science Day is an annual event celebrated every year On 28 February in the state to commemorate the discovery of Raman effect by the Nobel laureate Sir C.V. Raman. Inter school quiz, debate, painting etc. were organized at district and state level. A mobile science exhibition on Science & Mankind and book fair were also organized where many state and central organizations participated. Generally the Hon'ble Minister for Science & Technology, Government of Sikkim is the chief guest. National Science Day was also celebrated in the month of February' 07 with the theme "More Crop per Drop". Covering entire state through participation of all Senior Secondary and Secondary Schools in all four districts.

State Science Library

The State Science Library at the White Hall Complex, Gangtok is a unique specialist resource of science and technology, which has been developed to promote and support scientific learning and to cater knowledge where more than 3200 books are available on various disciplines of science.

ANNEXURE-A: SIKKIM STATE COUNCIL OF SCIENCE & TECHNOLOGY

Core Manpower:

1.	Shri M. L. Arrawatia	Member Secretary
2.	Shri D G Shrestha	Senior Scientific Officer (RS)
3.	Shri D T Bhutia	Senior Scientific Officer (TT)
4.	Shri B C Basistha	Senior Scientific Officer (Biotech.)
5.	Shri Suman Thapa	Assistant Scientific Officer (RS)
6.	Shri K B Subba	Senior ResearchAssistant
7.	Shri J Y Ladingpa	Research Assistant (Tissue Culture)
8.	Shri Narpati Sharma	Research Assistant (Remote Sensing)
9.	Shri Palden Gensapa	Accountant
10.	Km. Doma Eden Bhutia	LDC
11.	Km. Sonam Bhutia	LDC
12.	Smt. N M Rai	Librarian
13.	Km. S Lachungpa	Computer Operator
14.	Km. Dawa Gyalmu	Lab Assistant (Tissue Culture)
15.	Km. Tshering Bhutia	Lab Assistant (Tissue Culture)
16.	Smt. Saroj Lepcha	Lab Assistant (Tissue Culture)
17.	Shri Sunbir Subba	Lab Peon (Tissue Culture)
18.	Shri Sonam Bhutia	Driver
19.	Shri Gyampo Bhutia	Driver
20.	Shri Bikash Pradhan	Driver
21.	Shri Kewal Sharma	Driver
22.	Shri T R Sharma	Peon
23.	Shri Tashi Bhutia	Peon
24.	Shri Raju Rai	Peon
25.	Shri Tenzing Bhutia	Peon
26.	Shri Karma Bhutia	Peon
27.	Km. Neeru Sunwar	Safai Karmachari

Project Manpower:

1.	Sri. Bikram Rai	Technical Assistant (BITS)
2.	Sri. Prakash Sharma	Data Entry Operator (BITS)
3.	Km. Tshering Yangchen Bhutia	Computer Scientist (ENVIS)
4.	Sri Prashant Rai	Research Assistant (ENVIS)
5.	Sri. Pasang Sherpa	RA (Biofarm)
6.	Sri Nabin Sharma	FA (Biofarm)
7.	Sri Tika Gurung	Data Entry Operator (ENVIS)
8.	Sri Benoy Pradhan	Job Assistant (Seismicity Project)
9.	Km. Pema Choden	J R F (S&T Mapping)
10.	Km. Pasang Lhamu Bhutia	Data Entry Operator (S&T Mapping)
11.	Shri. Dadul Bhutia	Technician (Plasma Pyrolysis)
12.	Shri. Laden Lepcha	Technician (Plasma Pyrolysis)

ANNEXURE-B: SECRETARIAT OF THE DST, GOVERNMENT OF SIKKIM.

DST (Govt. of Sikkim)

1.	Sri M. L. Arrawatia	Secretary
2.	Sri S. T Gyatso	Additional Secretary
3.	Sri D P Neopaney	Deputy Secretary cum D. D. O
4.	Km. T. Donka	Assistant Scientific Officer
5.	Sri. S. R. Lepcha	Assistant Scientific Officer
6.	Smt. Sangita Bomjan	Officer on Special Duty
7.	Mrs. Yeshel Doma Lepcha	Office Superintendent
8.	Sri D K Pradhan	PA to Secretary
9.	Km. G. Cintury	UDC
10.	Sri Rapden Rai	LDC
11.	Smt. S Pradhan	LDC
12.	Sri R B Gurung	Driver
13.	Sri Sarad Pradhan	Driver
14.	Sri. H. R. Chettri	Peon
15.	Sri. Deepak Basnett	Peon
16.	Sri Suresh Rai	Peon

SIKKIM STATE COUNCIL OF SCIENCE & TECHNOLOGY GANGTOK, EAST-SIKKIM

STATEMENT OF ACCOUNTS

2006-07

N. MARDA & ASSOCIATES

CHARTERED ACCOUNTS

mardabehru@yahoo.com

NEAR GURUJI'S MANDIR

OPP. WATER SYPPLY CONTROL OFFICE

164/1, TIBET ROAD, GANGTOK, EAST SIKKIM

PHONE: 203311 (O), 203312 (R)

MOBILE : 94340-23311

AUDIT REPORT

We have audited the annexed Balance Sheet of STATE COUNCIL OF SCIENCE AND TECHNOLOGY FOR SIKKIM, DEVELOPMENT AREA, GANGTOK, EAST SIKKIM as at 31st March, 2007 and the Receipts & Payment Account for the year ended on that date as annexed thereto and report that:

1. All income / expenditure are accounted for on cash basis.

2. No Depreciation is provided for on Planetarium Land.

3. Excess of Receipts during the year over expenditure is treated as unspent balance of Grant and same is carried forward to the Balance Sheet.

Subject to the foregoing notes, We report that :

a. We have obtained all the informations and explanations which to the best of our knowledge and belief were necessary for the purpose of our audit.

b. In our opinion proper books of account have been kept by the Institution so far as appears from our examination of those books.

c. The Balance Sheet and the Receipts and Payments Account dealt with by this report are in agreement with the books of account as produced before to us.

d. In our opinion and to the best of our information and according to the explanations given to us, the annexed accounts subject to Notes thereon, give a true and fair view:

   i) In case of the Balance Sheet of the State of Affairs of the Institution as on the date of Balance Sheet.

   And

   ii) In the case of the Receipts and Payments Account of the Receipts and Disbursement of fund for the year ended on that date.

N. MARDA & ASSOCIATES ★ GANGTOK ★ Chartered Accountants

For N. Marda & Associates
Chartered Accountants

(Nehru Marda)
Prop.

PLACE : GANGTOK
DATED : 31.08.07

STATE COUNCIL OF SCIENCE AND TECHNOLOGY FOR SIKKIM

DEVELOPMENT AREA, GANGTOK, EAST SIKKIM

RECEIPTS & PAYMENTS ACCOUNT

R E C E I P T S	SCH. NO.	YEAR ENDED 31.03.2007
OPENING BANK BALANCE	1	10,371,632.47
GRANT-IN-AID	2	35,383,191.00
MISCELLANEOUS INCOME	3	386,959.11
PAYABLE & PROVISIONS	4	85,862.00
		46,227,644.58
P A Y M E N T S		
CENTRAL SPONSORED SCHEMES	5	21,922,590.00
OTHER PROJECT & PROGRAMMES	6	959,942.00
COUNCIL SECRETARIATE EXP.	7	7,361,307.08
ADVANCES & OTHER PAYMENTS	8	363,190.00
		30,607,029.08
CLOSING BANK BALANCES	1	15,620,615.50
		46,227,644.58

IN TERMS OF OUR REPORT OF EVEN DATE
FOR N. MARDA & ASSOCIATES
CHARTERED ACCOUNTANTS

31/08/07

(NEHRU MARDA)
PROP.

N. MARDA & ASSOCIATES * GANGTOK * Chartered Accountants

(C. L. Sharma)
Sr. Accounts Officer-cum-
Drawing & Disbursing Officer
Science & Technology Deptt.
Government of Sikkim, Gangtok

31/8/2007

MEMBER SECRETARY
STATE COUNCIL OF SCIENCE AND TECHNOLOGY

STATE COUNCIL OF SCIENCE AND TECHNOLOGY FOR SIKKIM

DEVELOPMENT AREA, GANGTOK, EAST SIKKIM

INCOME & EXPENDITURE ACCOUNT

INCOME	SCH. NO.	YEAR ENDED 31.03.2007
GRANT-IN-AID	2	35,383,191.00
MISCELLANEOUS INCOME	3	386,959.11
		35,770,150.11
EXPENDITURE		
CENTRAL SPONSORED SCHEMES	5 - A	20,562,307.00
PROJECT & PROGRAMMES	6	959,942.00
COUNCIL SECRETARIATE EXP.	7	7,361,307.08
		28,883,556.08
UNSPENT BALANCE OF GRANT SURPLUS/(DEFICIT)		6,886,594.03

IN TERMS OF OUR REPORT OF EVEN DATE
FOR N. MARDA & ASSOCIATES
CHARTERED ACCOUNTANTS

N. MARDA & ASSOCIATES ★ GANGTOK ★ Chartered Accountants

(NEHRU MARDA)
PROP.

(C. L. Sharma)
Sr. Accounts Officer-cum-
Drawing & Disbursing Officer
Science & Technology Deptt.
Government of Sikkim, Gangtok

31/08/2007

MEMBER SECRETARY
STATE COUNCIL OF SCIENCE AND TECHNOLOGY

STATE COUNCIL OF SCIENCE AND TECHNOLOGY FOR SIKKIM

DEVELOPMENT AREA, GANGTOK, EAST SIKKIM

BALANCE SHEET

LIABILITIES	SCH. NO	AS ON 31.03.2007
FIXED ASSETS GRANT FUND (As Per Contra)		9,894,871.74
UNSPENT BALANCE OF GRANT	B	19,516,292.50
OUTSTANDING LIABILITIES	C	53,040.00
		29,464,204.24
ASSETS		
FIXED ASSETS / CAPITAL EXPENDITURE	D	9,894,871.74
CURRENT ASSETS		
ADVANCES & DEPOSITS	A	3,948,717.00
FIXED DEPOSIT WITH C.B.I.	1	4,940,119.00
BANK BALANCE	1	10,680,496.50
		29,464,204.24

IN TERMS OF OUR REPORT OF EVEN DATE
FOR N. MARDA & ASSOCIATES
CHARTERED ACCOUNTANTS

(NEHRU MARDA)
PROP.

(C. L. Sharma)
Sr. Accounts Officer, cum
Drawing & Disbursing Officer
Science & Technology Deptt.
Government of Sikkim, Gangtok

31/08/2007
MEMBER SECRETARY
STATE COUNCIL OF SCIENCE AND TECHNOLOGY

N. MARDA & ASSOCIATES
GANGTOK
Chartered Accountants

STATE COUNCIL OF SCIENCE AND TECHNOLOGY FOR SIKKIM

DEVELOPMENT AREA, GANGTOK, EAST SIKKIM

SCHEDULE TO THE RECEIPT & PAYMENT ACCOUNT

SCHEDULE : 1		YEAR ENDED 31.03.2007
OPENING BALANCE		
WITH CENTRAL BANK OF INDIA (ACCOUNT NO - 8874)		2,951,499.39
WITH CENTRAL BANK OF INDIA (ACCOUNT NO - 9559)		15,427.50
WITH STATE BANK OF INDIA (ZERO POINT) (ACCOUNT NO - 01100050577)		(53,395.04)
WITH STATE BANK OF INDIA (MAIN BRANCH) (ACCOUNT NO -01100061356)		28,496.62
WITH UNION BANK OF INDIA (ACCOUNT NO - 2826)		(175,073.00)
FIXED DEPOSIT WITH C.B.I.		7,604,677.00
		10,371,632.47
CLOSING BALANCE		
WITH CENTRAL BANK OF INDIA (ACCOUNT NO - 8874)		(29,189.61)
WITH CENTRAL BANK OF INDIA (ACCOUNT NO - 9559)		15,427.50
WITH STATE BANK OF INDIA (ZERO POINT) (ACCOUNT NO - 01100050577)		1,493,949.07
WITH STATE BANK OF INDIA (MAIN BRANCH) (ACCOUNT NO -01100061356)		28,496.62
WITH UNION BANK OF INDIA (ACCOUNT NO - 2826)		9,171,812.92
FIXED DEPOSIT WITH C.B.I.	7,604,677.00	
LESS : F.V. OF MATURED F.D.R.	2,664,558.00	4,940,119.00
		15,620,615.50

STATE COUNCIL OF SCIENCE AND TECHNOLOGY FOR SIKKIM
DEVELOPMENT AREA, GANGTOK, EAST SIKKIM

SCHEDULE TO THE RECEIPT & PAYMENT ACCOUNT

SCHEDULE : 2

	YEAR ENDED 31.03.2007
GRANT - IN - AID	
COUNCIL SECRETARIATE GRANT	
FROM CENTRAL GOVT.	2,850,000.00
FROM STATE GOVT.	5,386,000.00
	8,236,000.00
PROGRAMME & SCHEMES GRANT	
BIO - FARM	860,000.00
BTIS	1,254,390.00
NSD 2006	300,000.00
PATENT AWARENESS WORKSHOP	152,861.00
SEISMOCITY WORKSHOP	325,000.00
DISC CENTRE	1,908,000.00
EARTHQUAKE	308,854.00
ENVIS ECO TOURISM	221,086.00
MEDICINAL PLANT	500,000.00
MICRO HYDEL	5,100,000.00
NCSE	14,057,000.00
PIC	165,000.00
14th NATIONAL SCIENCE CONGRESS	1,815,000.00
TRAINING WORKSHOP	180,000.00
	35,383,191.00

SCHEDULE : 3

MISCELLANEOUS INCOME	
BANK INTEREST RECEIVED	263,724.11
INTEREST ON MATURED F.D.R.	123,235.00
	386,959.11

SCHEDULE : 4

PAYABLE & PROVISIONS	
VAT DEDUCTION	6,711.00
INCOME TAX DEDUCTIONS	79,151.00
	85,862.00

N. MARDA & ASSOCIATES ★ GANGTOK ★ Chartered Accountants

STATE COUNCIL OF SCIENCE AND TECHNOLOGY FOR SIKKIM
DEVELOPMENT AREA, GANGTOK, EAST SIKKIM

SCHEDULE TO THE RECEIPT & PAYMENT ACCOUNT

SCHEDULE : 5 CENTRAL SPONSORED SCHEMES	YEAR ENDED 31.03.2007
A. PROJECT EXPENSES	
BIO FARM	131,851.00
BTIS	1,543,187.00
DISC CENTRE	710,582.00
ENVIS CENTRE	617,548.00
ENVIS EVALUATION/WORKSHOP- ACCOMODATION	49,109.00
THANGU MICRO HYDEL PROJECT	6,891,948.00
NCSC EXPENSES	8,464,873.00
NRIS	76,840.00
PIC	84,412.00
PLASMA PYROLYSIS	78,093.00
S&T MAPPING	318,821.00
OTHER SCHEMES	1,595,043.00
	20,562,307.00
PROJECT ADVANCE	1,360,283.00
	21,922,590.00

N. MARDA & ASSOCIATES
GANGTOK
Chartered Accountants

STATE COUNCIL OF SCIENCE AND TECHNOLOGY FOR SIKKIM
DEVELOPMENT AREA, GANGTOK, EAST SIKKIM

SCHEDULE TO THE RECEIPT & PAYMENT ACCOUNT

SCHEDULE : 6 PROGRAMME EXPENSES	AMOUNT	YEAR ENDED 31.03.2007
RESEARCH & DEVELOPMENT		
a. RESEARCH ACTIVITIES	100,000.00	
b. TISSUE CULTURE	689,645.00	
c. REMOTE SENSING	13,939.00	803,584.00
RURAL TECHNOLOGY	35,050.00	
MICROZONATION OF SIKKIM	109,752.00	
TRAINING ON MUSHROOM CULTIVATION	2,986.00	
LIBRARY	8,570.00	
		156,358.00
		959,942.00
SCHEDULE : 7		
COUNCIL SECRETARIATE EXP.		
OUT OF CENTRAL GOVT. GRANT		
SALARIES & ALLOWANCES	2,655,824.00	
TRAVELLING EXPENSES	146,152.00	
EQUIPMENTS	177,320.00	
OFFICE EXPENSES	24,707.00	3,004,003.00
OUT OF STATE GRANT		
SALARIES & ALLOWANCES	502,287.00	
OFFICE EXPENSES	590,343.08	
SCIENCE CENTRE	2,963,016.00	
VEHICLE MAINTENANCE	301,658.00	4,357,304.08
		7,361,307.08
SCHEDULE : 8		
ADVANCE & OTHER PAYMENTS		
CENTRAL GRANT ADVANCE		280,090.00
STATE GRANT ADVANCE		83,100.00
		363,190.00

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SCHEDULE TO THE BALANCE SHEET

SCHEDULE : A ADVANCES & DEPOSITS		AS ON 31.03.2007
BALANCE B/F		3,252,489.00
ADDITION DURING THE YEAR		1,723,473.00
		4,975,962.00
LESS : ADVANCE ADJUSTMENT		
ADVANCE TO OFFICERS	136,812.00	
ADVANCE TO SUPPLIERS	564,451.00	
OTHER ADVANCES	325,982.00	1,027,245.00
		3,948,717.00

SCHEDULE : B

UNSPENT BALANCE OF GRANT FUND

(FOR ONGOING SCHEMES/PROGRAMMES)	
BALANCE B/F	12,629,698.47
SURPLUS DURING THE YEAR	
(AS PER INCOME & EXPD. A/C)	6,886,594.03
	19,516,292.50

SCHEDULE : C

OUTSTANDING LIABILITIES

SALES TAX , INCOME TAX, VAT, LIC DEDUCTION AND OTHER SUNDRY PAYABLE	53,040.00
	53,040.00

SCHEDULE : D

FIXED ASSETS	W.D.V
MACHINRERY & EQUIPMENTS	1,248,478.46
OFFICE EQUIPMENTS & FURNITURE/ FIXTUR	1,037,393.36
MOTOR VEHICLE	833,707.88
OTHER ASSETS	199,087.04
PLANETARIUM LAND	6,576,205.00
	9,894,871.74

N. MARDA & ASSOCIATES
GANGTOK
Chartered Accountants

14th National Children Science Congress, 2006-Sikkim

Valedictory function, 14th National Children's Science Congress 2006

For further information please contact:

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Member Secretary

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