

CHAPTER 17

SCIENCE AND TECHNOLOGY

SCIENCE AND TECHNOLOGY

17.01 Science and Technology play a vital role in the process of development and transformation of a traditional agrarian economy into a modern industrial economy. Development of science and technology in the State has the following objectives.

- (i) To keep abreast of the latest developments in the field of science and technology and to take necessary steps for dissemination of these developments to industry, research laboratories, Universities and amongst scientists and technologists.
- (ii) To co-ordinate R&D Programs of different departments, Industrial and research institutions and to ensure scientific and technical co-operation among these institutions and agencies.
- (iii) To formulate and finance research and application programs in the field of science and technology.
- (iv) To encourage, develop and extend the use of renewable sources of energy including energy plantations.
- (v) To popularize Remote Sensing Technology and make effective use of it.
- (vi) To popularize science and technology among the people in general and students in particular, so as to inculcate in them a scientific temper and attitude.
- (vii) To promote scientific and technological education in selected institutions of higher specialisation.
- (viii) To promote activities in key areas like Biotechnology, Remote Sensing, and Non-conventional sources of energy.

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- (ix) To develop library and documentation center for development of science and technology.
- (x) To enhance scientific and technological communication through awareness promotion, support to institutions for seminars/workshops, development of science centers and administration of Pathani Samant Planetarium (PSP).
- (xi) To conduct Science & Technology Entrepreneurship Development Programs (STEDP).
- (xii) To promote and popularize appropriate rural technologies.
- (xiii) To implement Integrated Rural Energy Programs (IREP) in the State.
- (xiv) To undertake fundamental research in Mathematics and its applications.
- (xv) To carry out well defined research and development programs on frontier areas of Material Science and technology and to conduct inter-disciplinary research on special materials, their development, optimisation, production and utilisation.
- (xvi) To train and upgrade skills of field level development functionaries of different departments of State Government.

STATE COUNCIL ON SCIENCE AND TECHNOLOGY

17.02 The State Council on Science and Technology is the apex organization which has been constituted to advise Government on appropriate policies for development of Science and Technology in the State. It identifies key areas, reviews implementation of programs and provides financial support for application oriented research projects and for transfer of appropriate technology. Up to 2003-04, 54 Research projects have been supported financially. Financial assistance amounting Rs.0.95 lakh to 8 Scientists was provided during 2003-04 for presentation of Research/ Technical papers in the International/National Seminars, Workshops, Symposiums etc.

17.03 The basic objective of the popularisation of Science Programme is to help inculcate scientific attitude and development of a scientific temper among the people in general and the student community in particular. The programme is being organised by the Orissa Bigyan Academy. Financial support is being provided under this programme for organisation of symposia, workshops, science exhibitions, Competitions, for presenting awards to senior and junior scientists to promote high quality research, for felicitating eminent scientists, for giving awards to prominent writers of popular scientific literature in Oriya, and for imparting training to teachers and writers.

The significant achievements of the academy for the year 2003-04 are as follows:

1. Orissa Bigyan Academy has organised Science Exhibition, Seminars, Lectures, Essay/Drawing/Debates Competitions etc. in different places of the State in collaboration with NGOs/Institutions.
2. A bi-monthly popular science magazine in Oriya named, "Bigyan Diganta" is being published by the Academy. Six issues of the magazine were published during the year 2003-04. Four issues of the abridged version of "Bigyan Diganta" were also published for the visually handicapped students of the state and distributed free of cost to the visually handicapped students and their institutions during 2003-04.
3. Orissa Bigyan Academy organised investiture ceremony of Samanta Chandra Sekhar Awards for the years 2000 & 2001 at Jayadev Bhawan (Soochana Bhavan), Bhubaneswar on 11th June 2003.
4. Orissa Bigyan Academy organised a popular science lecture on Biotechnology in the conference hall of DAV Public School, Unit-VIII, Bhubaneswar on dt.11.7.03 at 3.00PM. Near about 200 school students and teachers participated in the lecture programme.
5. Orissa Bigyan Academy organised investiture ceremony for Felicitation of Senior Scientists of Orissa for the years 2000 & 2001 at Jaydev Bhavan (Soochana Bhavan), Bhubaneswar on 8th August 2003.
6. Orissa Bigyan Academy organised investiture ceremony of Popular Science Writer's Award and Orissa Young Scientists Award for the years 2000 & 2001 at Jaydev Bhavan (Soochana Bhavan), Bhubaneswar on 30th November 2003.

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7. Orissa Bigyan Academy organized a popular science talk on the occasion of Death Centenary of Pathani Samanta at Bhadrak High School, Bhadrak on dt.23.7.2003. Around 700 school students and teachers participated in the programme. Orissa Bigyan Academy also organized another popular science talk on the occasion of Death Centenary of Pathani Samanta at Nayagarha High School, Nayagarh on dt.22.9.2003.
8. Orissa Bigyan Academy organised a popular science lecture at Post Graduate Department of Zoology of the Utkal University, Vani Vihar, Bhubaneswar. Eminent scientists delivered a popular talk of the topic "Development of Human Life Systems for Colonisation in Space" on 20.11.2003. The Post Graduate students, researchers, members of staff of Zoology, Botany and Biotechnology Departments attended the lecture.
9. On the eve of observance of Death Centenary Year of Pathani Samanta, Orissa Bigyan Academy organised the Poster Exhibition on life and work of Pathani Samanta and demonstration of model instruments devised by Pathani Samanta in 30 High Schools of the District Headquarters of the state.

Besides this Orissa Bigyan Academy also organized different activities like Quiz, Debate & Essay competitions related to Astronomy, Astrophysics and Cosmology in 59 High Schools of the State.

10. The National Science Day-2004 was celebrated by Orissa Bigyan Academy at M.K.C. High School, Baripada on 27.2.2004 and 28.2.2004. In this occasion science based project exhibition, essay, sit & draw competition, science quiz competition were conducted. Around 500 school students and teachers of different schools of the district participated in this function. About 64 numbers of different science projects were displayed in the science exhibition held in the premises of the school.

Funds to the tune of Rs.18.07 lakh was provided during the year 2003-04 to Orissa Bigyan Academy.

PATHANI SAMANT PLANETARIUM

17.04 The Planetarium, named after the great Oriya luminary in astronomy, was established at Bhubaneswar in 1990 with a view to inculcate interest in our celestial

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environment and with the aim of creating awareness in astronomy, astrophysics and space science among the people in general and among the students in particular. During 2003-04, the Planetarium conducted 1,312 shows, which were witnessed by 98,443 viewers. A new Planetarium Programme bearing the title "Worlds and Weathers" was introduced during 2003-04. Besides Night sky watch programs were conducted at PSP for 37 days and outside the Planetarium for 15 days. These programs were witnessed by 6,300 and 6,500 viewers respectively. Besides, 28 slide shows, 14 radio talks and 9 popular lectures/general talks were conducted by Planetarium during 2003-04.

Other activities of the Planetarium during 2003-04 are :

- (i) The annual meeting of the SCAAA was held in the premises of planetarium every month on Sunday following the second Saturday
- (ii) Safe viewing of Transit of Mercury was organised in the premises of planetarium on 7.5.2003. Around 1,500 visitors witnessed the programme.
- (iii) A meeting was organised in the auditorium of planetarium to commemorate the 1st death centenary of Pathani Samanta.
- (iv) On the occasion of 14th annual day of Pathani Samanta Planetarium Essay, debate and quiz competitions were organised among school children and the winners were awarded.
- (v) Besides this, slide shows on planetarium programs were conducted by the planetarium in different schools of the state.

Funds to the tune of Rs.30.44 lakh was provided during the year 2003-04 to Pathani Samant Planetarium.

ORISSA REMOTE SENSING APPLICATION CENTRE (ORSAC)

17.05 Orissa Remote Sensing Application Center (ORSAC) has since its inception, collected valuable information on natural resource and environment through satellite imagery.

Significant achievements of the Center during 2003-04 are as follows:

- (i) ORSAC prepared wasteland maps of 19 districts of the state under the Nationwide Wasteland Updation Mission Project 2003 using satellite images of 2003-04.
- (ii) Ground water potential maps of drought prone areas (52 sheets) of the state was prepared under Rajib Gandhi Drinking Water Mission Project.
- (iii) District wise acreage and yield estimation for Kharif rice for the entire state was conducted and forecasts were released.
- (iv) Shifting cultivation maps for 18 blocks of KBK districts was prepared for ST & SC Development Dept.
- (v) The digital Disaster Database for 3 districts of the state was prepared out of the proposed 10 coastal districts.
- (vi) Under the Bio-diversity Study the center is classifying the forest type of the state in collaboration of NRSA, Hyderabad.
- (vii) The center has undertaken a study on cropping system analysis of all the districts of the state in collaboration of SAC, Ahmedabad.
- (viii) Wetland maps of five wetland sites namely Hukitola, Devi estuary, Bahuda estuary, Ansupa Lake and Indravati flood plan was prepared.
- (ix) The center has completed district level digital database creation of all the districts under NRIS programme of Govt. of India.
- (x) The center conducted a SAR (Radar) flight in sever flood prone areas of coastal Orissa as part of pre-flood spatial dataset generation to compare the same during flood period.
- (xi) Under a collaborative project of SAC-ISRO, Ahmedabad and CRRI, Cuttack the center has conducted collection of methane gas samples from rice fields in six districts of the state under spatio temporal mapping of Methane Emission for Rice Field project.
- (xii) The center has developed digital database of Similipal Biosphere Reserve and Chandaka Wildlife Sanctuary.

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- (xiii) The center prepared watershed management plans of 30 micro-watersheds of the state.
- (xiv) The center took a pivotal role for disseminating the forest of potential fishing zones in the coastal water of the state.
- (xv) Under Gramsat Development programme, the following activities were undertaken by the center during 2003-04 :
 - F Completion of DRS network connectivity of 1087 Gramapanchayats of KBK districts, 30 district head quarters, and 314 block headquarters of the state.
 - F VSAT connectivity to 349 locations.
 - F Commencement of evening broadcasting under Gramsat Pilot Project.
 - F Completion of 92 numbers of interactive programs.
 - F 15 developmental programs were produced for Gramsat evening transmission.

During 2003-04 an amount of Rs.255.95 lakh was provided to this Center out of state budget.

ORISSA RENEWABLE ENERGY DEVELOPMENT AGENCY (OREDA)

17.06 Orissa Renewable Energy Development Agency (OREDA) functions as the State nodal agency for promotion of various renewable energy systems and energy saving devices. The State Government provides financial support in the form of grants-in-aid to various programs of the agency.

- (i) The National Programs on Biogas Development (NPBD) is a Central Sector Scheme. The programme is being implemented through District Rural Development Agencies (DRDAs) and some selected voluntary organizations. During 2003-04, 15,231 bio-gas plants were constructed in the State.
- (ii) National Programme on Improved Chullahs (NPIC) is being executed in the State since 1983-84 under the 20 point programs and Minimum Needs Programs with the financial assistance of both the Central and

State Governments. The main objective of the scheme is to provide smokeless improved Chullahs. 2,000 improved Chullahs were installed/sold in the State during the year 2003-04.

- (iii) Under Solar Photovoltaic programs (SPV) lighting of rural roads and households with solar lights, and use of solar lanterns are taken up in areas that do not have easy access to electricity. Government of India as well as State Government provides subsidy for these programs. During 2003-04, 113 street lighting systems, 557 home lighting systems and 380 solar lanterns were installed/sold.

An amount of Rs.54.01 lakh was provided to this agency out of State Budget for implementation of the above programs during 2003-04.

INSTITUTE OF MATERIAL SCIENCE

17.07 The Institute of Material Science came into force in 1996-97. The basic objective of the institute is to provide facilities for research in the frontier areas of material science and to conduct inter-disciplinary research on special materials.

Significant achievements of this institute during 2003-04 were as follows-

- (i) Multielemental colossal magnetoresistance targets are made using rare earth manganites for preparation of ultra thin film by pulse laser deposition technique in collaboration with Virginia University.
- (ii) Dielectric properties of plasma sintered high temperature oxides (Al-Zr) are studied and important results pertaining to the observation of low dielectric constant reported to international journals.
- (iii) Specific CMR materials are prepared by using institutes indigenous experimental setup the sample were tested by BARC and enhanced properties of are obtained.
- (iv) Theoretical models were designed and tested using computer simulation technique for testing of the properties of newly developed materials.
- (v) One research scholar joined the institute for implementing the research project "Low cost La-based reproducible colossal magnetoresistance film by spray pyrolysis". One CSIR NET qualified research scholar also joined the institute to work in the area of Nano composites.

- (vi) One research scholar of the institute received his Ph.D. degree from Utkal University and deputed to Nano-storage research group of National Taiwan University to work on spintronics.

During 2003-04, a sum of Rs.2.50 lakh was provided to the Institute out of the state budget.

INSTITUTE OF MATHEMATICS AND APPLICATIONS

17.08 This institute has started functioning during 1999-2000 with the following objectives :

- (i) To undertake fundamental research in Mathematics and its Applications.
- (ii) To undertake and support interdisciplinary research for interaction between mathematicians and physical/ biological/engineering/social scientists.
- (iii) To organise reorientation and refresher programs for teachers/research scholars with a view to upgrade their teaching /research skills.
- (iv) To organise publication of research monographs / journals/ proceedings/ papers on Mathematics and its Applications.
- (v) To nurture talent in mathematics.
- (vi) To establish interaction with other institutions/ Universities/ Academic Societies of high learning, both at the national and international level.
- (vii) To provide guidance in research for doctoral students and to render technical advice and service to Government and other Institutions.

The following activities were undertaken by the Institute of Mathematics and Applications in 2003-04 :

- (i) Research Activities : There are six research scholars in the institute, working for their Ph. D. One women scientist and two internationally famous visiting professors have joined the institute. A National level conference on "Wavelet Analysis and its Application" and Annual Conference of Orissa Mathematical Society was organised by the

institute during 2003-04.

- (ii) Search and Nurture of Mathematical Talents : The institute organized a two week summer Mathematics training camp for school children from class VI to XII. More than 110 school children participated in the program. A winter Mathematics Training Program was also organized by the institute from 22nd December 2003 to 28th December 2003.
- (iii) Rural Mathematics Talent Search Program : This project is financed by National Board for Higher mathematics. Under this program 100 children of class VI from Govt. and Govt. aided schools of rural Orissa were selected through a test and invited along with their teachers for a training on techniques of solving non routine type mathematical problems. Training camps were also organised by the institute for "Rural Mathematics Olympiad" participants. Scholarships to 30 students were also provided through the institute, basing on their performance in Rural Mathematics Olympiad. The scholarship was arranged privately.
- (iv) Problem solving classes are organized by institute on every Sunday for benefit of local school children.
- (v) A self financing M. Tech. in Finance Engineering course has been initiated by the institute.

During 2003-04 an amount of Rs.38.69 lakh was provided to this Institute.

DEVELOPMENT OF BIOTECHNOLOGY

17.09 Biotechnology is a fast emerging sector and has been perceived as a major vehicle for socio-economic development in the state.

The following activities were undertaken during 2003-04 under this programme:

- (i) A document titled "Biotechnology Vision for the State of Orissa for the Tenth Five Year Plan has been prepared and released. The document has identified the following thrust areas for bringing about economic problem and societal development along with creation of employment opportunities in the State :
 - (a) Inventorisation, conservation and characterisation of Bio-resources,
 - (b) Plant & Forest Biotechnology.
 - (c) Environmental Biotechnology and Biodiversity conservation.
 - (d) Food and nutrition security.

- (e) Fisheries and Aquaculture
 - (f) Medical Research and Application.
 - (g) Disaster Management and Biotechnological Intervention.
 - (h) Human Resources Development.
 - (i) Biotechnological Industries and
 - (j) Institutional Framework and Networking.
- (ii) An advisory Committee on Biotechnology has been constituted with the following aims and objectives :
- (a) To ensure proper scientific coordination, exchange and interaction among the different institutions and Universities in the state.
 - (b) To advise Government in the matters relating to Biotechnology.
- (iii) A vision Group, headed by Secretary, Department of Biotechnology, Government of India has been constituted for preparation of a long term Vision document (Vision Document 2020) for development of Biotechnology in the state.
- (iv) A land measuring 25 acres has been identified for setting up of a Biotechnology Park.

Fund to the tune of Rs.28.00 lakh has been provided during 2003-04 for this scheme.

INFORMATION TECHNOLOGY (IT)

INFORMATION TECHNOLOGY

17.10 Information Technology is a fast growing segment of the Indian Socio Economic Scenario. The State Government has recognised Information Technology as a thrust area and priority sector, mainly because of its great potential for generation of employment and earning of foreign exchange. The Industrial Policy Resolution-2001 has identified Electronics, Telecommunication, Information Technology and IT Enabled Service as the "priority sector". These establishment and industries concerning to the aforesaid priority sector, have been declared as "Public Utility Services".

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17.11 With the aim of achieving the goals, State Government have created a separate Department namely, Department of Information Technology with effect from 15.03.2000. It is entrusted with all matters relating to Computer Communication and Electronics both Software and Hardware. Orissa Computer Application Centre (OCAC) and Orissa State Electronics Development Corporation Ltd. (OSEDCC) are functioning as nodal agencies for promotion and development of Information Technology in the State. The Department of IT also acts as the nodal department for National Informatics Centre (NIC) and Software Technology Park of India (STPI) established in Bhubaneswar. The Department of IT also plays an enabling role in promotion, development and implementation of IT related e-Governance projects for different sectors of Government. In order to encourage IT enabled service activities, a new scheme entitled "IT Enabled Service" is being implemented during 2004-05.

17.12 The Department of Information and Technology have formulated the Information and Communication Technology (ICT) Policy, 2004, which will help IT reach the common citizen, so as to narrow down the Digital Divide. The ICT policy will provide the following aspects.

- F Inexpensive access to Information,
- F Transparency in governance practice,
- F Door-step delivery of host services,
- F Increased employment, and
- F High export turnover and economic growth

An outlay of Rs.360.00 lakh has been proposed in the Annual Plan, 2004-05 for IT related activities.

SELF-EMPLOYMENT SCHEME FOR EDUCATED UNEMPLOYED YOUTHS

17.13 In order to give a dent to the problem of unemployment among educated youth, State Government have introduced two innovative self-employment schemes viz (i) Information Kiosks and (ii) Business Process Outsourcing (BPO) Complex. An outlay of Rs.278.00 lakh has been proposed in the Annual Plan, 2004-05 for these two schemes.

i. Information Kiosks

17.14 It has been proposed to establish 3000 information Kiosks all over the State at Urban and semi-urban areas during 2004-07 out of which 1,000 kiosks will be established during 2004-05. The unit cost of each Kiosks is about Rs.2.50 lakh, of which subsidy amount is 25% of the unit cost subject to a maximum of Rs.25,000/- per Kiosk to be provided by the State Government. The OCAC, Bhubaneswar will be the nodal implementing agency for this scheme, and will impart free need-based computer training to the entrepreneurs for a period of two weeks. A sum of Rs.218.00 lakh has been proposed under the scheme for the year 2004-05.

ii. Business Process Outsourcing (BPO) Complex

17.15 It has been proposed to create an enabling environment for encouraging and assisting educated entrepreneurs to outsource business relating to IT enabled services from different locations. Keeping this in view, there is a proposal for setting up of a BPO Complex. The entrepreneurs so covered will likely to create self-employment opportunities for at least 1,000 educated and unemployed persons during the year 2004-05. The OCAC will be the nodal implementing agency and will provide need-based specialized computer training for two weeks to the entrepreneurs. A sum of Rs.60.00 lakh is proposed under the scheme for the year 2004-05.

IT ENABLED SERVICES (ITES)

17.16 This scheme aims at providing a broad range of IT enabled services to the people of Orissa having vibrant and preferred IT destination by taking benefits from the emerging global opportunities in the field of IT enabled services. The Cheap Capital investment, availability of IT professionals, better law and order environment, excellent infrastructure like data connectivity and business space like Info-City and Fortune tower are some attractive features that are expected to encourage potential investors to invest in a big way for setting Call Centres, Information Kiosks, Internet Dhabas and other establishments. The scheme allows services to be provided from e-Enabled locations across State and National Borders. This promises to revolutionarise the service operations by radically

reducing cost and improving service standards. Keeping the above in view, networking connectivity from the Secretaries up to the level of Deputy Secretaries in the Secretariat has been set up during the last two years. It has further been proposed to extend the facility up to the Heads of Department and to the level of Section Officers of the Secretariat during the year 2004-05.

17.17 Under the ITES Scheme, a State Portal Group has been formed in the IT Centre of the Secretariat under the Department of IT. The Home page of the official website of the State Government <http://orissagov.nic.in> has been revamped and information are being built up for the Portal of the State Government. At present, Portal has been hosted by the National Informatics Centre from their New Delhi Server under URL <http://orissa.gov.in> and <http://www.orissa.gov.nic>. Departments in the Government shall have rich information content in their web pages preferably in the form of Departmental web site. The State Portal is a continuing one in the ITES scheme. An outlay of Rs.70.00 lakh has been proposed for the scheme in the Annual Plan, 2004-05.

ORISSA COMPUTER APPLICATION CENTRE (OCAC)

17.18 The OCAC, an agency under IT Department is entrusted with the responsibility for systems development and computerisation in Government offices and undertakings and training of manpower on system operation and has now established itself as one of the leading IT consultancy organisation in the State. The significant activities being undertaken by OCAC are as follows :

- i. **Facility Centres** : The employment opportunities for IT personnel in the IT sector at international level are fast growing. To tap such opportunities for the IT personnel, three training centres called as Facility Centre of OCAC, one each at Burla, Berhampur and Rourkela have been set up. Job oriented advanced courses and the technical Japanese course are also being organised at OCAC.

- ii. **TDIL Project** : A resource centre for Technology Development in Indian Language (TDIL) of MIT, Government of India for development and promotion of Oriya Language based computer tools and applications has been set up at OCAC.
- iii. **CISCO Regional Academy** : An MOU with CISCO, USA for establishment of Regional Academy at OCAC to promote ten local academies in various parts of Orissa for conducting the highly acclaimed job oriented CISCO Certified Network Associates (CCNA) course on non-commercial basis has been established.
- iv. **ERNET Facility** : The ERNET India, under MIT, Government of India has established one of the 12 Transit Nodes at OCAC, Bhubaneswar. These nodes are located in reputed R&D and Educational Institutions in the country including Indian Institute of Technology (IITs) and Indian Institute of Sciences (IIS) for internet connectivity with advanced educational content. Recently ERNET India has signed an MOU with All-India Council for Technical Education (AICTE) to provide ERNET facility to all the AICTE approved colleges with one time grant of Rs.3 lakh for subscribing to ERNET.
- v. **State Level Agency for Electoral Roll Database & EPIC Project** : OCAC has been appointed as the State level Agency for the Electoral Roll Database and Electoral Photo Identity Card and project by the Election Commission, Government of India. The necessary software and manpower has been provided by OCAC to implement the project through private entrepreneurs covering the entire State of Orissa.
- vi. **UNDP Sponsored Project** : The UNDP Sponsored Project has been inaugurated at Bhawanipatna on 30.06.2003 with a objective to provide improved access to the citizen of the District Kalahandi.
- vii. **Cadastral Map of Digitization** : Under the Cadastral Map digitization project OCAC has successfully completed digitization of 410 village maps of Bolgarh Tehsil and 426 maps of Kendrapara Tehsil.
- viii. **Computerisation of other offices** : The OCAC is also implementing computerisation work relating to various Departments of Government and Corporate Bodies such as Computerisation of OHPC with System

Requirement Specification. Computerisation of State Transport Authority (STA/RTA).

17.19 In addition to these on going schemes, OCAC proposes to take up the activities such as (i) Local Area Network and (ii) Computer Training for School Children during 2004-05. An amount of Rs.8.00 lakh has been proposed in the Annual Plan 2004-05 for the purpose.

ORISSA STATE ELECTRONICS DEVELOPMENT CORPORATION (OSED)

17.20 OSED, established in 1981, has been engaged themselves for promotion of Electronic industries both in the field of hardware and software in the State. It has promoted 5 hardware and software projects with /without participation of equity investment. The significant achievements include the following :

- i. **Website of Government of Orissa:** The Website of Government of Orissa (WWW.orissagov.nic.in) has been launched with the help of NIC. The Website is bringing about qualitative improvement in information dissemination to the citizens. All forms, tenders, documents, available in the Government website are used for transactions with Government.
- ii. **INFOCITY :** An IT park named "INFOCITY" has been established at Bhubaneswar through IDCO for growth of IT in Orissa. It covers an area of 205 acres of land. The park has infrastructure and communication facilities to attract Software companies to set up their units. Major software houses including INFOSYS and Industrial Development Corporation of Orissa have already set up their units in it.

SOFTWARE TECHNOLOGY PARK OF INDIA (STPI)

17.21 Software Technology Park of India (STPI), is an autonomous society under Ministry of Communication and Information Technology, Government of India to promote Export of IT Software and Services from the Country. With this aim the STPI centre at Bhubaneswar and Rourkela are working in the State of Orissa. The Bhubaneswar centre of STPI which is one of the Premiere centre in the country has come a long way and

achieved major milestones in the IT sector of the State spearheading the country's mission to fulfill the national dream of global leadership in Software Exports. Its dream of making Bhubaneswar a silicon city is gradually becoming a reality. STPI offers various incentives like 100% foreign equity permission, 100% exemption on custom duty on import of capital goods, total exemption on excise duty on indigenous procurement of capital goods, permission for importing second hand capital goods, full reimbursement of Central Sales Tax, exemption from corporate Income Tax on export earning etc. to the software exporters under its regulatory services.

Incubation Facility: The STPI Bhubaneswar and Rourkela have set up incubating infrastructure and provide the facility based on the member unit requirement under lying the philosophy is to give one stop and non stop services to the software industries and consequently leaving other mundane but important aspects of operationalisation to STPI. In addition to the Satellite earth station at Bhubaneswar and Rourkela to provide high speed data links with foreign countries, STPI has also installed its second International Gateway at Bhubaneswar and Rourkela for providing 100% reliable data communication. It is also exploring the IT potential at Berhampur, Puri etc. STPI is also offering customized solutions in the field like network design and architecture, international connectivity, local loops, facility management, feasibility study, project management and implementation etc.

17.22 The STPI Bhubaneswar has designed a comprehensive course module in various field to keep abreast the student of the changing trend and technology. The STPI, Bhubaneswar is also promoting IT enabled services namely Medical Transcription, Manpower Intensive GIS and Digitizing jobs as well as call centre operations. STPI Bhubaneswar has made every effort for promoting and enhancing the export share from the State. The value of export has increased from Rs.255 crore in 2002-03 to Rs.319 crore during 2004-05.

NATIONAL INFORMATICS CENTRE (NIC)

17.23 NIC is a premier Central Government Organisation in the field of IT in India. It provides State-of-art solutions to the information management and decision support requirements of the Government and Corporate Sectors. The NIC Orissa unit was setup in the year 1986. Since then it provides total informatics services to Orissa Administration

Central Government and other organizations. Apart from developing software, other services like training to Government officials, Internet and Email services, Video conferencing etc. are also provided to the administration. The core philosophy of the various key initiative undertaken during the period at NIC Orissa State Unit is to bring in the era of ICT driven e-Governance in all its spheres through out the State. The common strategy behind these initiatives are based on rethink of the core value of the Key Government Services, Service delivery, reduce costs and redefine administrative processes. Some of the major initiatives taken up are as follows :

Computerization of Land Records (Bhulekh)

17.24 Government has initiated the computerization of “Land Records” for all the 171 tahasils of the State to keep pace with the emerging scenario to provide fair, efficient and transparent services to the citizen with the assistance of Government of India under various Centrally Sponsored Plan and Centrally Sponsored Schemes. Out of 171 tahasils, data entry have been completed in 151 tahasils and computerized services have been provided in 130 tahasils. Besides, cadastral mapping have been taken up for computerization of land records in 6 tahasils. An amount of Rs.23.26 crore have been spent for computerization of land records and digitization.

Rural soft

17.25 It is a highly robust and scalable e-governance solution that aims at capturing and processing the data related to poverty alleviation schemes PRIASOFT (Panchayati Raj Institution Accounts Monitoring Soft Ware). PRIASOFT is a e-governance solution which aims at all the three levels of PRIs. It captures the financial data of each PRI on scheme wise monthly basis. The data entry is done at all the three levels of PRIs as these are the root level of implementing organizations. PRIASOFT keep track of opening balance, in flow, out flow and closing balance of each scheme operating at the different level under different heads such as P.L. Account, Bank, cash and advance etc. The financial status of PRIs are monitored at the State level.

NIC State Secretariat Center (CCF)

17.26 Departmental LAN has been set up which are hooked to Secretariat

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LAN back bone. Presently, about 220 nodes are connected over Secretariat LAN including CM's Secretariat, Council of Ministers and Secretaries of 38 departments. Secretariat INTERNET application has been developed which is the most important interface between different departments. It provides information on Forms, Circulars, Proceedings, Notifications, Orissa Government Rules of Business and many other informations. NIC Secretariat Center is equipped with R-F connectivity having 11 Mbps Upload / Download link to NIC State Unit and in turn linked with NIC NET. The DVBVSAT is also installed to provide backup support.

Other Projects

- F The customization needs of 'Sarathi' and 'Vahan' for Orissa have been finalized. Sarathi (Driving license Software) has been implemented at RTO, Bhubaneswar on pilot basis.
- F The Govt. of Orissa portal and District portals of all 30 districts has been hosted at NIC Server and being updated regularly. The site is <http://orissagov.nic.in>.
- F Computerization of Registration Offices (ORIS) has been made operational in the District Registrar Office, Khurda, Bhubaneswar which has been taken up as the pilot site and also implemented in 13 district Sub-Registrar Offices.
- F Computerization of Orissa legislative Assembly, office of the Controller of Accounts, Orissa watershed Development Mission, Agricultural Marketing Information system Network, Computerization of Passport Office, GRAMSAT etc. have been made.

ECOLOGY AND ENVIRONMENT

17.27 Industrial development adversely impact environment if proper checks are not in place. Therefore, Government have to play an important role for striking a healthy balance between economic development and protection of environment. Keeping this in view, the thrust areas of the Forest and Environment Department during 2004-05 will be as follows.

- i) Strengthening institutional capabilities for environmental management with the aim of planning for sustainable use of resources, protection and conservation

of ecosystems, prevention and control of pollution through regulatory and promotional measures and

- ii) Encouraging people's initiatives and community participation in environment protection and prevention of pollution

PROTECTION TO ENDANGERED ECOSYSTEM OF CHILKA LAKE

17.28 Conservation management and development of Chilka lake is being taken up by Chilka Development Authority (CDA) through weed control, stabilization of lake mouth, soil Conservation in the catchment area, implementation and monitoring of desiltation process through dredging, maintenance of salinity level in Chilka, and preparation of data base etc. An outlay of Rs.10.00 lakh is proposed for the scheme in the Annual Plan, 2004-05.

ENVIRONMENTAL STUDIES, AWARDS AND FELLOWSHIP

17.29 The centre for Environmental Studies undertakes studies on environmental issues, particularly in industrial pockets of the State and suggests remedial measures. It also develops and publishes IEC materials on environmental education. Further to recognize and provide encouragement for notable contribution in this field of conservation of environment and protection of forests, Environmental Awards like Prakruti Bandhu and Prakruti Mitra have been instituted by State Government as an annual feature. An outlay of Rs.2.50 lakh has been kept for such activities in the Annual Plan, 2004-05.

ARMY ECO TASK FORCE

17.30 It has decided by the State Government to execute a Scheme for implementation of afforestation programme, to prevent environmental degradation and to maintain ecological balance in the State through Ex-Military personnel.

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