

## **MINISTRY OF SCIENCE & TECHNOLOGY HIGHLIGHTS OF LAST ONE YEAR**

- Draft National Biotechnology Development strategy prepared and launched.**
- **Roadmap for research in agricultural biotechnology for next ten years have also been prepared.**
  - **Roadmap for development of bio-informatics in the country prepared.**
  - **A new therapeutic anti-tuberculosis molecule “Sudoterb” developed. This will clear the infection in two months in comparison to the current level of 6 to 8 months. After animal trial, first phase of human trial has begun.**
  - **A common man’s computer with an entry level price of Rs. 10,000 unveiled. The computer holds the promise of providing IT solution to many problems faced by people especially in rural areas.**
  - **A leading Indian IT company in collaboration with 18 of the best of academic and R&D institutions launched globally a portable, versatile and cost effective bio-information package-bio suite for genomic and rational drug design.**
  - **An ELISA system for Japanese Encephalitis developed through collaborative work between two public funded R&D institutions and a medical college.**
  - **Three facilities of clinical proteomics are being established in Delhi focusing on screening and identification of individual/ groups for most of the chronic diseases.**
  - **Establishment of two interdisciplinary centers for stem cell research and tissue engineering-one each at Delhi and Pune has been taken up.**
  - **National Mission for Bamboo Applications launched for innovative applications and marketing of this hardy grass.**
  - **Nano-Science and Technology Mission is ready for launching.**
  - **Two bio-pesticide formulations named “Nirmal Bio Prahar” and “Nirmal Bio-Wooly Kill” have been commercially launched.**
  - **Saras- the first Indian civilian aircraft for the future test flown.**
  - **Department of Ocean Development is poised to install Tsunami warning**

**system for Indian coasts.**

- **To provide potable water in emergency situations, CSIR is now installing hand operated micro-filtration units capable of providing bacteria and germ-free water.**
- **National Institute of Ocean Technology is establishing a one lakh litre per day capacity desalination plant in Kavaratti, Lakshadweep.**
- **An eight member delegation, led by the Minister for Science and Technology and Ocean Development, Shri Kapil Sibal visited Antarctica. This was the first ever visit by an Indian Minister to the icy-continent.**
- **The Indian National Centre for Ocean Information Services, Hyderabad started generating and disseminating potential Fishing Zone advisories using satellite data for chlorophyll and sea surface temperature.**
- **National Institute of Ocean Technology, Chennai successfully developed and disseminated the viable technology for fattening lobsters and mud crabs.**
- **Indigenously developed data buoys to improve capabilities of short and long term weather forecasting, launched.**
- **A National Spatial Data Infrastructure is being set up to ensure the availability of standardized geospatial data on authentic maps. Steps taken to provide GPS compatible spatial data/map for motor vehicles in six major metros viz Delhi, Mumbai, Chennai, Kolkata, Hyderabad and Bangalore to enable vehicle navigation and tracking.**
- **A major innovation of the year 2004, Mapping the Neighbourhood Programme is at present being implemented in 20 schools in Almora and Nainital districts and will be expanded to cover 30,000 schools.**
- **Rural Bioresearch Complexes are being initiated at 5 locations in partnership with State Governments, Agricultural Universities, Banking Institutions and NGOs.**
- **The first ever highly sophisticated and the state-of-the-art low temperature ice core laboratory was inaugurated by Shri Kapil Sibal, Minister of State (Independent Charge) for Science & Technology and Ocean Development, at the National Centre for Antarctic & Ocean Research, Goa, an autonomous body under Department of Ocean Development.**
- **Under Common Minimum Programme, National Institute of Technology,**

Chennai, an autonomous body under Department of Ocean Development, executed two projects for alleviating the poor coastal communities of Uppada near Kakinada and Potti Subbiah Palem near Chirala.

- Under Drugs from Sea Programme, anti-diabetic and anti-cholesterol compounds have been identified for drug development after screening 2000 samples.
- In order to generate ocean awareness, Department of Ocean Development brought out a booklet 'A Story of Oceans' and this has been translated in various regional languages to increase its circulation.
- A special programme launched for rehabilitation of Tsunami victims in Tamil Nadu, Pondicherry and Andaman & Nicobar Island.
- In the area of health care new vaccines and diagnostics have been developed indigenously and are under different stages of trial.
  - The vaccine for rotaviral diarrhoea has completed Phase-I human trial successfully and the first pilot lot of vaccine for clinical studies has been prepared successfully by Bharat Biotech.
  - Recombinant oral vaccine for cholera has completed Phase I&II clinical trial.
  - The combination rabies vaccine is under animal trials.
  - The combination Anthrax Vaccine developed indigenously has been transferred to the industry and Phase I & II human clinical trials are underway.
- The infrastructure development was given greater thrust through schemes like Support to Analytical Instruments Facilities (SAIF) Under social programmes core support has been extended to eleven voluntary organizations for need based S&T interventions. Centre for Indian Knowledge Systems (CIKS), a science based field group is making efforts to explore and develop the contemporary relevance and applications of traditional Indian knowledge systems.
- Under the societal programme of the Department of Biotechnology more than 12,000 women have been benefited through training and income generating activities.
- The need for high quality S&T manpower for development of expertise in

basic and applied research is well recognized. Department of Science and Technology has been supporting a number of programmes for S&T Manpower Training at various levels. Specific S&T Programme for Empowerment of Women have been initiated with a view to promote development and adaption of appropriate technology, transfer of proven technologies and demonstration of live technology models to benefit women.

- A Women Scientists Scheme has been instituted to provide opportunities to women scientists to work as bench-level scientists including those who had to suffer breaks in their career.
- Programmes related to Science and Technology Application for the weaker sections have been supported on floricultures and nursery training for income generation and demonstration of pearl culture technology to create scientific and technical expert manpower in weaker sections of the society. 34 new projects have been sanctioned under Tribal Sub-Plan (TSP) scheme.

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