



# **CSIR-NISTADS**

## **Biennial Report**

### **2009-2011**



**CSIR - National Institute of Science, Technology and Development Studies**



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## **Biennial Report** **2009-2011**



**CSIR - National Institute of Science, Technology and Development Studies**  
**Pusa Gate, K.S. Krishnan Marg, New Delhi, India**



**Editorial Team:** Dr. Neelam Kumar, P.R. Bose  
Anil Kumar Sharma and S.A. Nabi

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## Director's Message



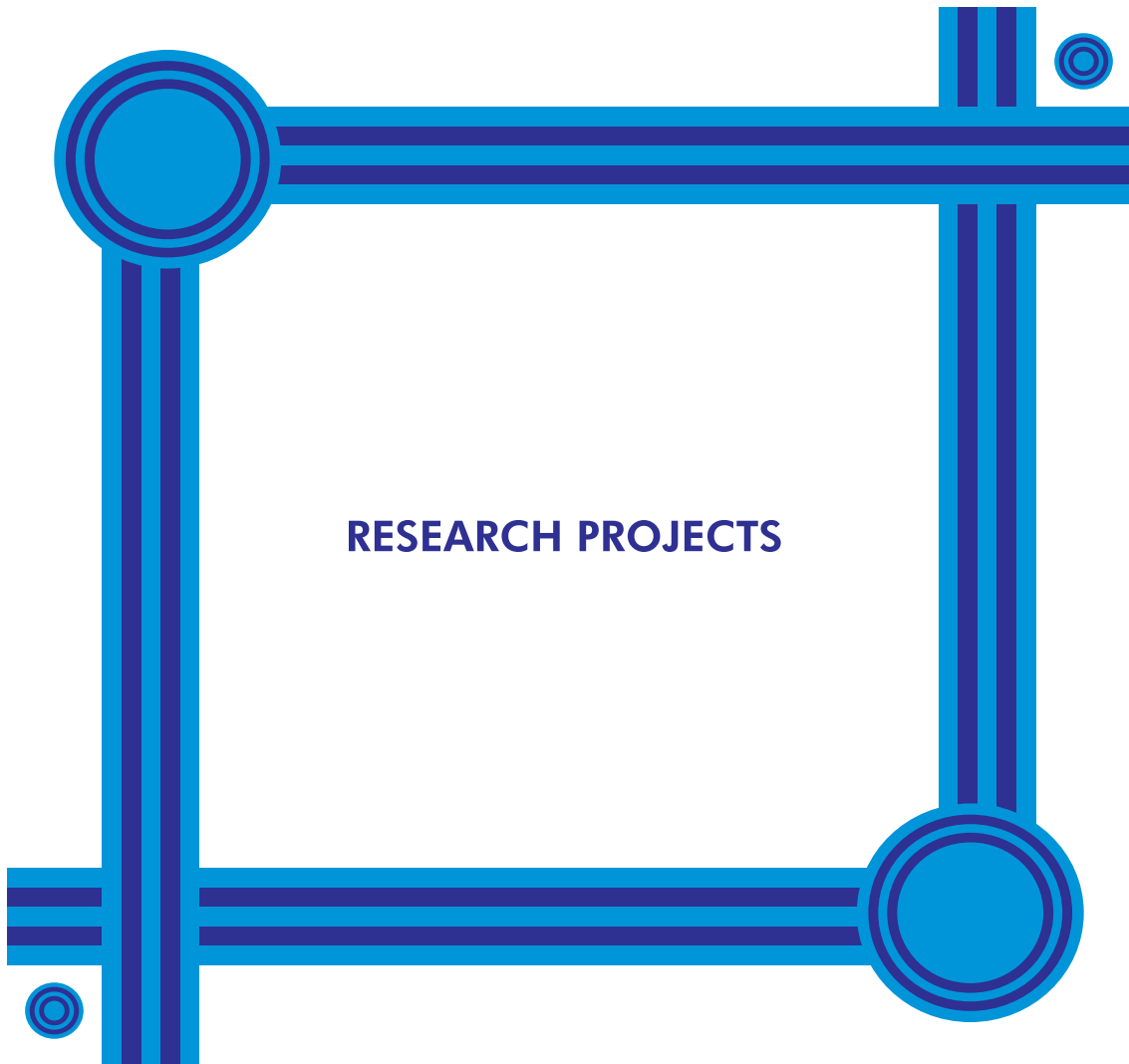
It is indeed a pleasure to put before you a comprehensive report of the activities and achievements of CSIR - National Institute of Science, Technology and Development Studies (CSIR-NISTADS), for the period 2009-2011. CSIR-NISTADS, with faculty members from a multidisciplinary platform, remains committed to policy research and communicating advising or publishing on various issues related to science technology innovation and society. Over the years, CSIR-NISTADS has emerged as a unique and important research institution of the country. It has also developed and strengthened its collaboration with similar institutions abroad. As the only national institute in this area of research, its vision is "To undertake research on policy, policy advisory and provide research support to advocacy and advice, and to serve CSIR and other national S&T agencies on science, technology, society and innovation challenges". This *Biennial Report* reflects and highlights the major research projects, academic and research profiles of its faculty members, lectures and conferences organized during this period.

The Institute reflecting its strengths in S&T policy research has initiated new efforts, such as 'India S&T' biennial-report series. It also keeps renewing its research focus in tune to the changing Indian as well as global S&T issues and systems. Innovation, which forms the base for current global economy, was thus the core concept for *India S&T Report 2010-11*. The report could identify: a) the nature and extent of innovative activities in the country; b) the lacunae in the innovation support mechanism; and c) S&T interventions required in the policy matrix to enable India to be in the forefront on innovation activities. CSIR-NISTADS, during this period, continued with and deepened inquiries into: scientists and science in organizations including in public research institutions; science capabilities of academic as well as non-academic scientific organizations; R&D in industries and industrial organization; issues on intellectual property rights; measurement of S&T outputs; evaluation studies on programs and organizations; S&T manpower and infrastructure; globalization and S&T including comparative policy research; technology and rural artisans; off-farm and agricultural innovation; S&T and geography including on regional development and on S&T and federalism; governance and innovation and S&T; public space and S&T; gender and science; green agenda and growth. The Institute, in short, is committed to generate and

disseminate knowledge related to scientific and technological innovation, creativity and their applications along with the policy implications. The Institute undertakes sponsored studies along with the academic and scholarly activities. During this period CSIR-NISTADS provided valuable additions to the pool of knowledge through: a) publications in the form of books, research papers, reports; b) organization and participation in national as well as international conferences, seminars, workshops; c) by delivering and organizing invited lectures; d) taking up in-house as well as sponsored projects and; d) conducting training programmes. In addition, the Institute tries to serve the CSIR, other national S&T, public and international agencies.

CSIR-NISTADS is very grateful to the Research Council Chairman, Prof. S.K. Joshi and Prof. Ashok Chandra and the distinguished members for guiding the academic affairs of the Institute. We look forward for their continued support to enable CSIR-NISTADS to move forward and excel in the field of science and technology studies.

**Dr. Parthasarathi Banerjee**



**RESEARCH PROJECTS**





## 1.1. SUPRA INSTITUTIONAL PROJECT

Supra Institutional Project constitutes one of the core research activities of CSIR-NISTADS. The Institute has published two India S&T Reports under this Project till the date.

The first report, India S&T, which was published in 2008, is available at: <http://www.nistads.res.in/indiasnt2008/>.

The report consists of the following chapters:

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## INDIA, SCIENCE AND TECHNOLOGY, 2010-11

The second report, India, Science and Technology, 2010-11 is available at: [http://www.nistads.res.in/indiasnt2010-11/index\\_India\\_S&T\\_2010-11.php](http://www.nistads.res.in/indiasnt2010-11/index_India_S&T_2010-11.php)

In today's global economy, the ability of a country to develop, adapt and harness its innovative potential is critical for its long term economic performance. India's S&T Report 2010-11 has, thus, been designed with innovation as a core concept. The central focus of this year report was to identify: a) the nature and extent of innovative activities in the country; b) the lacunae in the innovation support mechanism; and c) to suggest S&T interventions in the policy matrix so that India could be in the forefront on innovation activities.

India S&T Report 2010-11 is organised under following five themes: (i) S&T and Human Resources, (ii) S&T and Innovation Support System, (iii) S&T and Industry, (iv) S&T Outputs and Patents, and (v) S&T and Rural Development Strategies. While the content and approach of these five themes differ from each other, innovation occupies the central stage in each of these themes.

**S&T Human Resource** section presents different facets of S&T education in India. The coverage includes primary, secondary as well as tertiary level of education. Moreover, this theme has also examined the development in the sphere of professional, technical and medical education. Last but not the least, this theme also gives detailed status of vocational education taking into account the skill development mission.

**S&T and Innovation Support System** analyses the existing organisational arrangement for promotion of technological innovation in India. It encompasses not only organisations that are created specifically to promote innovation but also those that address issues which are considered as important components of innovations. The organisations are identified at different administrative levels extending from national, state, and district to field/village level. In the present edition of the Report, the focus is on the secondary sector of the economy.

**S&T and Industry** theme analyses the various facets of innovation activities in the realm of manufacturing and service sector of

modern India. Policy space, enabling environment for innovation, support mechanism, and performance of selected sectors in the realms of innovation – all occupies a place in this theme. The focus has also been on micro, small and medium enterprises (MSMEs) of India in this theme to identify the tardiness in growth in this sector. In any economy, MSMEs play a significant role in respect of employment generation. In view of jobless growth of recent years, invigorating India's MSME sector through innovation is need of the hour. Further, we have attempted to address emerging green issues in this theme in view of India's commitment to green economy agenda.

**S&T Output and Patents** section aims to assess to what extent the country is generating new knowledge and whether any 'tangible' component can be derived from it that can be appropriated by firms and/or other institutions in the country. Research papers (primarily in peer reviewed journals) and patents are the most commonly used 'proxy' to assess the intensity of knowledge creation and utilisation. So in this theme, the performance indicators – scientific publication and patents in particular – are analysed to understand India's performance in recent years.

**S&T and Rural Development: Strategies and Capacities** presents an overview of S&T strategies for rural development in India. The focus is on understanding the S&T capacities that exist, and how the knowledge and technologies are accessed and used for the rural development. Given the development agenda of Indian economy, this theme is centred around three sub-themes namely (a) Rural development: S&T strategy for poverty alleviation, (b) S&T strategies for agri/farm based livelihoods and (c) S&T strategies for non-farm/rural industrial development.

The report is targeted at a wide readership ranging from policy makers and advisors to academic readers as well as the common people.



## 1.2 SPONSORED PROJECTS

### KNOWLEDGE CREATION AND INNOVATION IN AN EMERGING TECHNOLOGY: CONTEMPORARY AND FUTURE SCENARIO IN NANOTECHNOLOGY

*Team: Sujit Bhattacharya and Madhulika Bhati*  
*Sponsored: NSTMIS, Department of Science and Technology (DST), New Delhi*  
*Status: January 2011 to August 2012 (ongoing)*

India has taken a major drive to create capacity and capability in Nanotechnology. It has launched the Nano Science and Technology Initiative (NSTI) (coordinated by Department of Science and Technology) in the year 2001. Total government funding today is about \$250 million. This funding has been utilized to sponsor 90 research projects and create 10 centers of excellence. 17 universities have nanotechnology in their curricula. It is important at this critical juncture to assess the status of research and innovation in nanotechnology in India. The present project will attempt to address this. The status of 'nanotechnology' research and innovation in India will be discerned on the basis of: (a) application of bibliometric methods to create knowledge maps of research activities (based on analysis of research papers), and inventive activities (analysis of patents); (b) analysis of products or embedded nanotechnology components; (c) deriving insights from DST projects and other surveys/reports etc on the status and extent of commercialization in India. The project will also examine nanotechnology research and innovation in a few advanced OECD economies and emerging economies particularly in Asia. This examination will show to what extent capacity and capability has been created in these countries. It would also show how the different actors in the selected countries are involved in research & innovation activities and the linkages among them. This will help us to benchmark India's activity, uncover any major gaps that need to be addressed and provide insights to different approaches that can be adopted for stimulating nanotechnology research and innovation in India. Some of the key research questions to address the central

thesis are: what are the enabling factors for nanotechnology R&D in India; what are the structural characteristic of the scientific and applied knowledge; what is the nature and quality of linkages existing among different actors; what can be the learning experiences for India in terms of policy formulation, strategy and governance that can stimulate research and innovation in nanotechnology.

### TECHNOLOGY FORECASTING IN AGRICULTURE USING SCIENTOMETRICS

*Team: K.C. Garg*  
*Sponsored: Indian Agricultural Statistics Research Institute (IASRI), New Delhi*  
*Status: October 2010 (completed)*

A Consultancy project entitled "Technology Forecasting in Agriculture using Scientometrics" was undertaken for Indian Agricultural Statistics Research Institute (IASRI), New Delhi. The study undertook two different case studies. The first dealt with "Forecasting emerging research areas in Plant Genetics and Breeding" which identified the emerging research areas in the field of plant genetics and breeding for USA, UK, China, India, and Brazil. The project also mapped plant genetics and breeding research in India. The second case study dealt with "Future implications of remote sensing towards agricultural development" which identified remote sensing technologies that have important role in agriculture applications.

### DESIGN AND DEVELOPMENT OF SCIENCE & TECHNOLOGY POLICY OF THE STATE OF UTTAR PRADESH

*Team: Tabassum Jamal and Kasturi Mandal*  
*Sponsored: Council of Science and Technology, Lucknow, U.P., India.*  
*Status: January 2011 to February 3013(ongoing)*

The project started in January 2011 and the duration of this project is for two years. The main objective of the project is to study the sectoral policies of the state and integration of these policies with the Science & Technology Policy of Uttar Pradesh (U.P.), India.



### **EMPOWERMENT OF PEOPLE THROUGH GEOSPATIAL DATA WITH EMPHASIS ON RURAL WATER MANAGEMENT IN MEWAT DISTRICT (HARYANA)**

*Team: Subhan Khan, Mohd. Rais and S.A. Nabi*  
*Sponsored: Department of Science and Technology (DST), New Delhi*  
*Status: Date of start: November 2010 (ongoing)*

The project proposal was submitted on 23-11-2009. It was peer reviewed by DST and the project proposal was presented to NRDMS Expert Committee at JNU, New Delhi on 27<sup>th</sup> July 2010. The action plan of the project was revised on the basis of recommendations of the expert committee, a final site was selected and user agency's commitment letter was obtained. All these documents were submitted to DST. A grant of for Rs 15 lakhs was sanctioned and an amount of Rs. 7 lakhs was released by them. The project was formally launched on 11th November, 2010 and is ongoing.

### **COMPENDIUM OF SALIENT FINDINGS OF PROJECTS CARRIED OUT UNDER NATIONAL NATURAL RESOURCES MANAGEMENT SYSTEM ON BIO-RESOURCES AND ENVIRONMENT (NNRMS SC-B) SCHEME, FUNDED BY MINISTRY OF ENVIRONMENT AND FORESTS (MOE&F), GOVT. OF INDIA,**

*Team: Subhan Khan*  
*Sponsored: Ministry of Environment and Forests (MOE&F), New Delhi.*  
*Status: September 2008 May 2009 (completed)*

This project was a result of appreciation of an earlier in-depth study "Evaluation of National Natural Resources Management System on Bio-resources and Environment (NNRMS SC-B) Scheme - a study of 96 Projects". During the discussion and its presentation to the Environment & Forests, Ministry, Govt of India, a further request was made to NISTADS to prepare a compendium of summaries of all NNRMS SC-B Scheme completed projects in order to assess the salient features of the research outputs. As an output a document titled, 'Compendium of

Salient Findings of Projects under National Natural Resources Management System on Bio-resources and Environment (NNRMS SC-B) Scheme' was prepared and published in joint authorship of PI and the nodal officer of the Ministry. This compendium contains summaries of 71 completed projects. Each project falls under one of the six thematic categories identified in the evaluation study. The printed compendium was submitted to the sponsorer.

### **PILOT VOCATIONAL TRAINING PROJECT ON GEOSPATIAL DATA COLLECTION AT VILLAGE LEVEL INVOLVING STUDENTS, YOUTHS, VILLAGE VOLUNTEERS AND SCHOOL DROPOUTS FOR LOCAL AREA DEVELOPMENT IN MEWAT DISTRICT (HARYANA)**

*Team: Subhan Khan*  
*Sponsored: NRDMS, Department of Science and Technology (DST), New Delhi*  
*Status: August 2007 to June 2010 (completed)*

The project was sanctioned by DST in March 2007 with a total grant of Rs.9,88,080. It was formally launched in mid August 2007 and came to an end in June 2010. Under the project, efforts were also made to initiate and provide training to local people in collection of geo-referenced data with the help of GPS. Ten day special training programme on usage of geo-spatial technologies including GIS, GPS and remote sensing was organized for the local people. The languages used in the training programme were mainly English and Hindi, with local dialects viz. Mewati and Haryanvi. The other activities undertaken during the workshop included: (i) evaluation mechanism undertaken for the workshop, (ii) closing ceremony attended by PI & Director NRDMS, (iii) participant feedback/remarks obtained, and (iv) overall experience shared etc. The efforts were also being made under the project to develop standalone map viewing, navigation, query and report generation software which includes various options like Input, Navigation, Tools, Query, Output and Print etc. The final project completion technical report was submitted to the sponsoring agency.



## **DATABASE MANAGEMENT AND SUPPORT FACILITY DEVELOPMENT FOR INSPIRE PROGRAMME**

*Team: Naresh Kumar, AvinashKshitij, Vipin Kumar and Yogesh Suman*

*Sponsored: Department of Science and Technology (DST), New Delhi.*

*Status: April 2009 to March 2011 (ongoing)*

The aim of this project is to provide the database management and support for the three main components of INSPIRE programme, i.e., (a) *Scheme for Early Attraction of Talents for Science (SEATS)*, which grants science innovation scholarship of Rs.5000 to a total of one million young learners of the age group 10-15 years once in their school career. The scheme also provides mentorship through global science leaders, including Nobel Laureates and Indians leaders in science, at a summer camp to the top 1% performers in the Class X examination every year for the period of five years; (b) Scholarships for Higher Education (SHE) is meant for the age group of 17-22 years and grants Rs. 1 lakh per year for continuing science education at B.Sc. and M.Sc. levels to 10,000 candidates; and (c) Assured Opportunity for Research Careers (AORC), which is meant for 1000 young researchers in the age group of 22-32 years to pursue doctoral research in science for 5 years, backed by an assured career opportunity scheme for a period of another five years on completion of their Ph.D.

## **MEASURES OF PERFORMANCE OF UNIVERSITIES IN INDIA: AN ANALYSIS OF THE PUBLICATION OUTPUT IN SCIENCE AND TECHNOLOGY**

*Team: Naresh Kumar, K.C. Garg and Avinash Kshitij*

*Sponsored by: Department of Science and Technology (DST), New Delhi*

*Status: October 2010 to September 2011 (ongoing)*

The study will try to identify the factors underlying the status and progress of Indian S&T, its growth, stagnation and decline. Attempt will also be made to examine India's position vis-à-vis select developed and developing nations, in terms of its research output, citation visibility, economic status, strength in education & training, and financial

& manpower resources devoted to S&T. The analysis pertaining to the above will be conducted using SCOPUS data base which has a large domain of journals from interdisciplinary fields. The objective of the proposed study is to analyse the performance of Indian institutions/universities in terms of performance of Indian universities across all subject areas of knowledge; institutional performance in S&T across broad disciplines; S&T Performance of geographical regions and states; S&T Performance of the country by sector such as academic, research institutions and industry; and pattern of collaboration.

## **SKILLS FOR GREEN BUILDINGS IN INDIA**

*Team: Vipin Kumar and Madhulika Bhati*

*Sponsored: International Labour Organization (ILO), Geneva, Switzerland*

*Duration: October 2010 for one year*

This report presents sectoral study on the skills in green building sector. Green building encompasses both construction of new green buildings and retrofitting of existing buildings to achieve green objectives. Reducing carbon emissions is a key objective, but other objectives such as using materials with a low environmental impact and water conservation are relevant too. The study has been divided into three parts i.e. (i) Studying the involvement of educational Institutes in the "Green Buildings" initiation; (ii) The importance of Associations such as LEEDS, Architectural bodies and (iii) The importance of employers, i.e. builders/Architects. The sectoral study will draw on information from a significant number of countries on green building, the skills and occupations it requires, and training and education responses to those requirements. Green building movements are spread worldwide and countries from Asia, Europe, North America and Australia also have adopted some form of formal green building rating system. Internationally, voluntary building rating systems have been instrumental in raising awareness and popularizing green design. However, most of the internationally devised rating systems have been tailored to suit the building industry of the country where they were developed. India



currently has two major rating systems: LEED India, run by the Indian Green Building Council; which is more on energy efficiency measures in AC buildings. Keeping in view of the Indian agro-climatic conditions and in particular the preponderance of non-AC buildings, a National Rating System - Green Rating for Integrated Habitat Assessment (GRIHA), has been developed by TERI and the Ministry of New and Renewable Energy.

### **PROSPECTS OF GREEN OCCUPATIONS IN INDIA WITH SPECIAL EMPHASIS ON SKILLED PROFESSIONS**

*Team: Vipin Kumar; Kasturi Mandal, and Naresh Kumar*

*Sponsored: International Labour Organization (ILO), Geneva, Switzerland*

*Status: September 2009 to December 2009 (completed)*

The project was initiated at NISTADS under the sponsorship of International Labour Organisation (ILO) to identify major challenges and priorities related to climate change and environmental degradation and the subsequent greening policies and strategies to generate green job environment in India. The study is a part of the major programme on “Green Jobs” by ILO under which about 21 countries are participating. NISTADS undertook this short study through (i) meeting with several stakeholders which included, Ministries, Trade Unions, Academia, Industry and Non-Governmental bodies; (ii) Conference on Green Economy; and (iii) Case Studies. In the report an attempt was made to provide an insight of major sectors with a green job potential in the country with special emphasis on traditional sectors; analyze whether and how skills response strategies are incorporated into larger ‘greening’ policies and programmes. The report has also provided conclusions and policy recommendations for skill development and strategies, skills provision at national, sectoral, local or enterprise level in green jobs area.

Output: Kumar, Vipin; Mandal, Kasturi; Kumar, Naresh; Banerjee, Taposik. (2010)

*Skills for green jobs in India*, International Labour Organisation (ILO), Geneva, Switzerland

### **THE ORGANISATION OF SCIENCE IN RUSSIA AND INDIA AT THE BEGINNING OF THE XXI CENTURY**

*Team: Kasturi Mandal, P. Banerjee, Sanjib Pohit, Taposik Banerjee and Naresh Kumar*

*Sponsored: Department of Science and Technology (DST), New Delhi*

*Status: January 2011 to December 2012 (ongoing)*

This project has two research components: the first research component is among NISTADS and the Centre for Sociology of Science and Science Studies research, the Institute for the History of Science and Technology, Russian Academy of Sciences (RAS), St. Petersburg; the Centre for Science Studies of the Institute for the History of Science and Technology, RAS, Moscow; Institute of Philosophy and Law SD, RAS, Novosibirsk; Sociological Institute, RAS, the Institute for the History of Science & Technology, St. Petersburg. The second component is between NISTADS and the Institute of Economy, Russian Academy of Science.

The two research components are, (1) The Organisation of Science in Russia and India at the beginning of the XXI century in which includes: (a) analysis of the organizing and functioning of Russian and Indian science during 2010-2012; (b) comparative analysis of the ways and methods of modernizing science in Russia and India; and (2) Transformation of Science and Technology institutions in Russia, India and China: A Comparative Analysis in which will focus on: (a) Institutional matrices theory (or “X- and Y-theory”) as the framework for the comparative analysis of institutional modernization of Russia and India; (b) New reproduction theory in modern knowledge economy; (c) Statistical modelling of economic evolution; and (d) Economic growth under the condition of diminishing and increasing (Hi-Tech branches case) returns.



## DOCUMENTATION OF TECHNOLOGY TRANSFER/LICENSING AT NATIONAL RESEARCH AND DEVELOPMENT CORPORATION (NRDC)

*Team: Kavita Mehra*

*Sponsored: National Research Development Corporation (NRDC), New Delhi*

*Status: March 2010 - February 2012 (ongoing)*

The project aims to study and document the technology licensing processes and practices in NRDC through its long history. As a deliverable of e-project, it will put up an open electronic archive for quasi-public access a database of technology transfer agreements; selected aspects of contracts; oral records of experiences of people involved in the process; web archive of audio-visual material related to technology transfer episodes (web gallery); case studies and case readings of few technology transfers.

## IMPACT OF FOREIGN DIRECT INVESTMENT IN R&D ON INDIAN PRODUCTION AND R&D SYSTEMS

*Team: N. Mrinalini, G.D. Sandhya, Pradosh Nath and Rammi Kapoor*

*Sponsored: TIFAC, Department of Science and Technology (DST), New Delhi*

*Status: Started in July 2008, Draft report submitted in 2010 and final report submitted in June 2011 (completed)*

The study had two components- the first part was to identify and prepare a detailed list of firms bringing in FDI for R&D activities in India during 2003-2009 and the second component was to evaluate the impact of the presence of the R&D centres by analyzing the nature and type of linkages these centres have with the Indian institutions. The key findings of the study are as follows: a) 706 firms have been identified as having brought in FDI for R&D activities in India during 2003-2009; b) in comparison to the total FDI inflow, the Inflow of FDI for R&D is miniscule (0.01%); c) small investments for R&D activities are large in number, while large investments are only a few; d) of the total 706 firms bringing in FDI for R&D, only 74 firms have patents and of these, 63 firms have less than 5% share of Indian patents vis-à-vis their global patents; e) FDI in R&D is basically for the IT sector followed by Auto and pharma sectors; f) about

88% of R&D investments were made in 5 clusters – Bangalore, Hyderabad, Chennai, Delhi-NCR, and Pune-Mumbai; g) of the total 706 firms only 117 firms have formal linkages with the Indian institutions, indicating that most of the firms operate in isolation; h) linkages with educational institutions is the most prominent one and it is basically for recruitment of manpower, training and skill development; h) the linkages with national research institutions are rare, with Indian firms it is basically for contract research. The project was completed and the report has been submitted.

## DEVELOPMENT OF INNOVATION INDICATORS: NATIONAL INNOVATION SURVEY

*Team: Pradosh Nath, N. Mrinalini, G. D. Sandhya, Sujit Bhattacharyya and Rammi Kapoor*

*Sponsored: Department of Science and Technology (DST), New Delhi*

*Status: October 2010 to September 2012 (ongoing)*

A questionnaire based survey of innovation activities in the Indian production system is being carried out. In the present phase of the project manufacturing sector is being surveyed. Total about 10000 units would be surveyed across the country covering all districts. The sample was drawn from the ASI latest (2008) database. The survey would be carried out by two agencies identified by DST. Collected information would be made available to NISTADS for further analysis. NISTADS has to bring out series of bulletins with highlights on sectoral, technological, industrial, regional aspects of innovation. The report based on the survey would try to develop a developing countries perspective on system of innovation.

## FRAMEWORK FOR IMPACT ASSESSMENT OF THE NCSTC- NETWORK

*Team: L. P. Rai, D. Gangopadhyay, N. Kumar, K. Lal and S. Kumar*

*Sponsored: NCST, Department of Science and Technology (DST), New Delhi.*

*Status: November 2009 – July 2010 (completed)*

The present study has been undertaken to design an impact assessment framework for the NCSTC Network from both theoretical and



empirical angles taking into account their major activities/programs. Social impacts of such programs cover a wide spectrum from behavioral/attitudinal changes of the individual to the alterations in the way people live, work, play, develop skills, relate to each other and organize their communities and institutions to meet their needs. However, intended social impact of NCSTC Network activities sometimes seems to be overlooked. This is because attention is rarely paid to elucidating and substantiating the assumed linkages between the above activities and the intended or observed impacts on society. The proposed framework aims to link and attribute impacts on behavioral and attitudinal change. The framework has three parts: (1) The analytical framework presents the array of pathways through which generation of scientific awareness by the way of investments in different activities can result in nurturing a sufficient pool of knowledge intensive human resource; (2) Applying the framework requires assessing what can be measured, how the data can be analyzed and assigning the responsibilities for measurement and analysis; and (3) Tools for estimating impacts. The study is largely based on the information provided by the NCSTC (please see [www.ncstc-network.org](http://www.ncstc-network.org)). Since, it is a short term project, the methodologies adopted would be just 'indicative' in nature.

#### **A COMPARATIVE STUDY ON S&T, INNOVATION AND DEVELOPMENT STRATEGIES OF CHINA AND KOREA VIS-À-VIS INDIA**

*Team: G.D. Sandhya, Sujit Bhattacharya, N. Mrinalini, Pradosh Nath and Kasturi Mandal*  
*Sponsored: Office of the Principal Scientific Advisor to the Government of India, New Delhi*  
*Status: February 2010 to January 2011 (ongoing)*

S&T has played a key role in advancing the knowledge frontiers of both China and South Korea which is evident from the rising knowledge intensities and steep growth rates particularly in select sectors and technologies. The study was undertaken to look into the process that has led to the increasing dynamism in both the economies. The study analyses the policy framework of China and Korea to discern the relationship between the spectacular achievements of China and Korea

in select fields and S&T and Innovation Policies. Some of the key issues dealt in this study are: (1) The Performance of S&T through select indicators in China, South Korea and India; (2) S&T, Innovation and Development policies of China & Korea Post reforms to trace the evolution of policies and the process of policy of policy making; (3) Structural and organizational changes in the arrangement for Innovation and its governance; and (4) Few case studies on electronics, nanotechnology and the automotive sector to delineate the role of country specific strategies and consequent policy instruments.

#### **SCIENCE & TECHNOLOGY SCOPING STUDY: IDENTIFYING AREAS OF COOPERATION BETWEEN IRELAND AND INDIA**

*Team: Praveen Sharma and Avinash Kshitiij*  
*Sponsored: Embassy of Ireland*  
*Status: December 2009 to June 2010 (completed)*

NISTADS was requested to carry out this study by the Embassy of Ireland in India. India is engaged in scientific cooperation with many countries around the world. The Irish Government believes that they are at a watershed in terms of S& T cooperation and that Ireland has an opportunity in certain niche areas to catch itself to a rising scientific and technological star. The purpose of the study was to facilitate the capacity of the scientific establishments in both countries to work together, to plan mechanisms required and identify specific areas of future scientific cooperation. The 'Ireland-India S&T Cooperation Agreement' was signed in January 2006 during the Irish Prime Minister's visit to Delhi. It was later ratified in 2008. Despite many visits and agreements at government and Institute level, the S&T relationship between the two countries has been limited to sporadic collaboration of the most elementary kind. This study includes record of S&T agreements done at government and agency level, extent of implementation, and interviews with Institutes involved in such bilateral activities. The report was compiled on the basis of questionnaires and personal interviews; data available with NISTADS; *Scientometric* data using the Scopus database; record of bilateral



S&T agreements done so far; and recent progress in the bilateral cooperation. Some of the recommendations made by the study include: (i) exchange of information and ideas between researchers; (ii) a mechanism for bilateral funding needs to be enhanced through increased budgetary support and discussion between national funding agencies. It was also noted that the participation in European Union supported programmes like Framework Programme (FP7) can be a promising avenue of funding for bilateral/trilateral cooperation.

**A COMPREHENSIVE REPORT ON  
MATERIAL AND METAL ENGINEERING  
EDUCATION IN INDIA FOR BETTER AND  
SUSTAINABLE GROWTH IN THE ACADEMY  
OF SCIENTIFIC AND INNOVATIVE  
RESEARCH.**

*Team: Yogesh Suman, Debnirmalya  
Gangopadhyay and Anju Chawla  
Sponsored: National Metallurgical Laboratory  
(NML), Jamshedpur  
Status: February 2011 (ongoing)*

The purpose of this study is to analyze the engineering education in the area of material and metals in India, to prepare a

comprehensive report, which can be of help to National Metallurgical Laboratory, Jamshedpur in designing a better course curriculum. The study will utilize information on: (a) number of students passed out and number of candidates appeared in Ph.Ds / B.Techs by major Institutions (viz., IITs, IISc, ISM and some major Central Universities/NITs) in metallurgical and materials engineering in India for the last 10 years and a future projection of another 10 years; (b) number of students qualified in GATE exam with 80% marks and above in B.Tech / B. E. (Metallurgy, Materials and Metallurgy, Materials engineering etc.) as well as number of students qualified NET exam (Materials Science, Physics and Chemistry etc.); (c) courses taught in IITS, IISc, ISM and other major Central Universities/NITs; and (d) total infrastructure required, residential, course material (library etc.). Another objective is to suggest new areas along with other prospective areas which may be looked into as areas of growth. The study will also try to develop a future Roadmap for material science education in India.



## 1.3 IN-HOUSE PROJECTS

### PSYCHOLOGY OF SCIENCE: RETROSPECTS AND PROSPECTS

*Neelam Kumar*

Until recently science has been the subject of study of history, philosophy and sociology. This project is based on the assumption that Psychology can be another important sub-discipline to study and explain science. This project argues that psychology can provide important perspectives to understand science and technology, both at the individual and group level. Scientists grasp and understand, abstract and generalize, frame hypotheses, and try to prove them. All this is behaviour, and psychology has the substantive as well as methodological potentiality to study human behaviour, both that of scientists as well as non-scientists. This project, thus, aims to examine the emergence, role and status of psychology as a subdiscipline studying science. It also proposes to examine the social psychological processes such as social comparison, social identity and differentiation, which can be linked to the scientific activities in Indian setting.

### WOMEN AND SCIENCE IN INDIA

*Neelam Kumar*

The issues on gender and science stand out for a developing country like India. The feudal authoritarian values and hierarchy have characterized Indian society. Are these reflected in Indian science as well? Using the available data and facts, along with the findings of an empirical study, the study aims to discuss Indian case in relation to global scenario. It examines the issues and importance of gender vis a vis other characteristics in determining scientists' research related values, research performance, academic rank and professional recognition in Indian context. This project has led to publication of several research papers and two edited books: a) *Women and Science in India*,

Oxford University Press, 2009; b) *Gender and Science: studies across Cultures* ( in press), Foundation Books, Cambridge University Press India

### VACCINE STS FOR RESEARCH AND POLICY

*Y. Madhavi*

This project has: a) established STS perspectives on Vaccine & has set the agenda for science-based policy in public health; b) resulted in publications which are important and major sources for information related to vaccine STS and policy issues; c) generated critical knowledgebase for informed decisions, especially regarding: Vaccine utility, demand and supply; Vaccine development, production or procurement; Universal vs. selective vaccination; Individual vs. combination vaccines; d) provided Illumination to the sectoral impact of the changing economic environment; Public sector decline, its impact on R&D, Production & affordable access to vaccines; private sector growth, its impact on the availability and cost of vaccines

### HIMALAYAN ECOLOGY AND ECONOMIC DEVELOPMENT (HEED) - AGRO- BIODIVERSITY POLICY ISSUES IN UTTARAKHAND

*Mohammad Rais*

This study investigates food production and agrobiodiversity in the Tarikhet and Ukhimath blocks in Uttarakhand, India, located in the middle ranges of the Himalayas. On the small patches of terraced land available to the average household in these areas, the cultivation of a wide range of traditional and high-yielding varieties of grains, legumes, vegetables, and fruits is a positive feature in terms of sustainability. Some villages also supplement plant-based food production and income by incorporating animal husbandry into the overall agro ecosystem. It was found, however, that the output of the average farm provides only about half of the household energy requirements, forcing most families to



resort to off-farm activities to support a large proportion of their food and other requirements. This study thus points towards a need to develop policies that will continue to support the rich agrobiodiversity of these areas, which can provide the nutritional and economic needs of the population.

#### **UTILIZATION & DEVELOPMENT OF NISTADS GEO-INFORMATION FACILITIES AND S&T FOR RURAL DEVELOPMENT**

*Subhan Khan*

Under the project the following steps were undertaken: a) identification of obsolete and unserviceable hardware/software and other items; b) processing for obtaining formal permission from sponsors to either gift the material procured out of their funds to institute or take back; c) handing over to stores totally unserviceable items for disposal, as per NISTADS/CSIR guidelines; d) procurement of new hardware and software, such as ERDAS Imagine and ARC INFO for remote sensing data interpretation & GIS exercise. The progress of the project was reported from time to time to PME and Director's office. Under the project, discussions were held with PD

COR Ltd., Jaipur on possibilities of participation of NISTADS in the year 2009. Using geo-spatial technology inputs, draft project proposal on Lake Conservation process in India was also initiated. Various workshops and conferences were organized. PI also participated as an expert member in: a) "Satellite remote sensing" workshop in ministry of water resources; b) IInd World Aqua Congress; c) National Workshop on Terafil Filtration Technology for Removal of Excess Iron in Ground Water Sources held at IMMT, Bhubaneswar (Orissa); d) a project proposal titled, 'Empowerment of People through Geospatial Data with emphasis on Rural Water Management in Mewat District (Haryana)' was submitted for sponsorship to DST, Govt of India. The project was sponsored and is going on.

#### **MENTAL HEALTH CARE AND AYURVEDA**

*Anuradha Singh*

The project proposes to look into the preventive and curative aspects of mental health according to Ayurveda. It also examines how the best practices can be mainstreamed in the national health programs.



## 1.4 OTHER RESEARCH ACTIVITIES

### ISSUES IN COGNITION, LANGUAGE, AND NEUROSCIENCE: A HETERODOX PERSPECTIVE

*T. Bagchi*

This is a multi-faceted project that was approved by the Research Council in November 2010. It aims at the exploration of different interfaces of human cognition with language and perceptual modes such as hearing and aspects of neuroscience. As part of the project, I delivered a keynote lecture entitled "Quantification, negation, and focus: Challenges at the Conceptual-Intentional semantic interface" at an international seminar, Aligarh Muslim University, February, 2011. In a co-edited volume published recently, entitled *Pragmatics and Autolexical Grammar* (eds. Etsuyo Yuasa, Tista Bagchi, and Katharine Beals; Amsterdam and Philadelphia: John Benjamins), my refereed book chapter "Towards an intonational-illocutionary interface" hypothesizes and argues for an interface between speech-act structure and spoken intonation across languages; and, also as part of this project, an intensive day-long Meeting was held with Professor Anita Mehta, S. N. Bose National Centre for Basic Science, Kolkata, at NISTADS on 30 March 2011, and work in progress on conducting experiments in the processing of quantification and negation in Hindi has been initiated, along with the application of computational work on Multi-Component Tree-adjoining Grammar to selected Indian languages.

### THEMES IN SCIENCE, SOCIETY, AND ETHICS WITH A SPECIAL FOCUS ON HUMAN-SUBJECT BIOETHICS (IN INDIA)

*T. Bagchi with inputs and support from Rajeswari S. Raina*

This project seeks to assess the application of the principles of ethics as a key branch of philosophy to the issues related to biomedical research and biotechnology. It will have special reference to bioethics in relation to human subjects and science and technology in

societal context. To begin this project, I made seminar presentation at Nistads on June 10, 2010. A roundtable presentation entitled "Consciousness, ethics, and informed consent: Some reflections" was also made at the Centre for Philosophy, School of Social Sciences, JNU, on November 29, 2010. As part of the sociological theme of this project, I made a presentation entitled "Women and the practice of S&T in India: Experience and access", a NISTADS-CWDS Panel Discussion, featuring Prof. Helen Longino of Stanford University. A one-day Seminar-cum-Workshop, entitled "How did the concept of 'nature' get transformed into the concept of 'natural resources'?", was organised and moderated by me featuring Prof. Akeel Bilgrami of the Department of Philosophy and the Committee on Global Thought, Columbia University, USA, along with several other presenters from JNU and the University of Delhi besides Dr. Rajeswari S. Raina of NISTADS, on January 13, 2011. Dr. Raina and I also made Webinar presentations in a panel at an International Conference on "The Responsible Conduct of Science" held at Forman Christian College, Lahore. I have submitted a paper entitled "Between life-creation and policy formulation: Assisted reproductive technologies in South Asia" for an edited volume, which is in progress by Dr. Rajeswari S. Raina.

### SCIENTOMETRIC PROFILE OF GLOBAL DENGUE RESEARCH

*Bharvi Dutt, Suresh Kumar and K.C. Garg*

The objective of the study was to estimate the global output on dengue research and to identify most prolific countries and institutions engaged in research as well as the impact of the research output of these prolific countries. The study also examined the citation and co-authorship patterns of the research output. The study indicates that 2566 papers were published during 1987-2008 as reflected by the coverage in Science Citation Index Expanded. These papers were mostly published in journals originating from the USA, the UK, Netherlands, France and Germany. Total output came from 74 countries, of which 17



countries contributed about 87% of the papers. Highest number of papers came from USA followed by India. More than half of the output was concentrated among the sub-disciplines of microbiology & virology, immunology & vaccines, epidemiology and entomology. The publications by US institutions had the highest impact in terms of citations. The proportion of co-authored papers increased significantly in the year 2008 as compared to 1987.

#### **RURAL DEVELOPMENT, RURAL-NON-FARM-ECONOMY (RNFE)/WEAKER SECTION OF THE SOCIETY**

*D. Gangopadhyay*

This project concerns mainly with the rural development, rural-non-farm-economy (RNFE) / Weaker Section of the Society. It identified some self sustainable and employment generation programmes based on societal needs on the basis of field visits and suitable action plan were proposed for sustainable rural development. It also involved the evaluation/assessment of a few Government R&D organizations to shed light on some aspects of judgment, method, decision making and selection of S&T policies.

#### **INDIAN SCIENTIFIC OUTPUT AS SEEN THROUGH INDIAN SCIENCE ABSTRACTS**

*K.C. Garg, Suresh Kumar and Bharvi Dutt*

The objective of the study was to find out: a) the distribution of the Indian scientific output according to performing sectors; b) its distribution according to disciplines; c) identification of most prolific institutions; and d) identification of highly productive journals. The findings indicate that during the year 2006 Indian Science abstracted 18,224 papers, which were scattered in 445 journals. The major publication output came from the academic institutions, followed by State Agricultural Universities. Punjab Agriculture University topped the list among the institutions; and agriculture, forestry animal husbandry, and fisheries were the discipline in which the highest number of papers was published.

#### **FOREIGN AUTHORED CONTRIBUTIONS TO INDIAN SCIENCE PERIODICALS**

*K.C. Garg and Suresh Kumar*

The objective of the study was to identify: a) the geographic regions and locations from where the foreign authors published in Indian science journals; b) identification of foreign contributing institutions; c) identification of disciplines which have attracted the largest number of foreign contributions; and d) identification of Indian journals used for publishing the research results. The study indicates that 2450 papers were published by foreign authors in 284 Indian science journals. These papers originated from 1311 institutions located in 102 countries. Asian countries were the largest contributors to Indian science journals. Turkey, USA, Iran, China, and Nigeria contributed about 48% of the total foreign authored contributions. The largest share of contributions was published in the discipline of medical sciences followed by chemistry and material sciences.

#### **SCIENTOMETRIC PROFILE OF GENETICS AND HEREDITY RESEARCH IN INDIA:**

*K.C. Garg, Suresh Kumar and Bharvi Dutt*

The objective of the study was to undertake an examination of the pattern of the growth of the Indian output in the field of genetics and heredity, during 1990-2008, using Web of Science and its distribution in different sub-fields of and different organisms. The study also identified most prolific institutions and assessed the impact of their research output using different bibliometric indicators. The results of the study indicate that 2899 papers were published during 1991-2008 and the publication output grew after 2000. The highest output was in the field of molecular genetics. A significant proportion of papers were published in journals which originated from the advanced countries of the West and in journals with impact factor >1. Academic institutions contributed the highest number of papers, but had less impact than other performing sectors like Council of Scientific



and Industrial Research and the Department of Biotechnology. Among the institutions Madras University had the highest impact.

#### **AN ANALYSIS OF CITATION PATTERN OF INDIAN SCIENCE JOURNALS:**

*K.C. Garg and Suresh Kumar*

The study investigates the pattern of citations of the articles published in 46 Indian science journals indexed by SCIE in the year 2006 and cited during January 2006- June 2009. The study indicates that of the 5317 articles and reviews published in these Indian science journals predominantly published domestic papers. About 40% of the papers published in these journals were cited in the international literature during January 2006- June 2009. The proportion of cited papers and the rate of citation varied for domestic, foreign and collaborative papers, as well as among disciplines and publishers. The analysis indicated that collaborative papers had the highest rate of citation per paper. The *Indian Journal of Medical Research*, published by Indian Council of Medical Research, New Delhi had the highest citation impact. Highest number of papers was cited in the discipline of medicine

#### **CONTRIBUTION AND IMPACT OF CSIR RESEARCH OUTPUT (INCLUDE IN INHOUSE PROJECT)**

*B.M. Gupta*

The present report concerns: (i) analysis of performance of CSIR at the overall level as well as laboratory level in terms of various indicators during 1998-07; (ii) identification of the strength and weakness of CSIR at the overall level as well as at the laboratory level; (iii) the role of national and international collaborative linkages of CSIR; (iv) comparison of the performance of CSIR with various national agencies/departments and IITs and select similar scientific agencies in other countries, such as CSIRO-Australia, CSIR-South Africa and Chinese Academy of Sciences. This is followed by assessment of

national and international collaborative linkages of CSIR and its 37 laboratories. In addition, different types of leading Indian organizations with which CSIR and its laboratories have major collaboration linkages are identified.

#### **SCIENTOMETRIC PROFILE OF GLOBAL FOREST FUNGAL RESEARCH:**

*Kirti Joshi, Avinash Kshitij and K.C. Garg*

The objective of the study was to explore the geographical distribution and pattern of the research output in the field of forest mycology, during 1987-2008, using Web of Science. The study identified most prolific institutions working in the in this area of research and examined the citation impact of different countries using some bibliometric indicators. The study indicates that 3313 papers were published during 1987-2008 and the number of publications has increased significantly during 2004-2008. These papers appeared in 619 journals published from 50 different countries and 839 institutions. USA topped the list in the publication output, while Sweden had the highest citation impact. China had the highest rate of annual growth of the research output.

#### **OWNERSHIP AND CONTENT: A STUDY OF THE NEWS CHANNEL IN INDIAN TELEVISION INDUSTRY**

*Pradosh Nath with the project team CCMG, Jamia Millia Islamia, New Delhi*

It is a pilot study, empirical in nature, for understanding the intricate methodological issues for relationship between ownership structure and the content telecast in the news channels. The study, on the basis of a rigorous statistical analysis, suggests that there is an emerging trend of content sameness in the news channels. The study also shows that entertainmentisation, Bollywoodisation and crime twist to presentation of news is the main tenets of the content sameness. This pilot study is being followed up for a major industry wise analysis. This will involve multiple funding agencies, namely, UGC, ICSSR, IDRC, Ford Foundation and HIVOS.



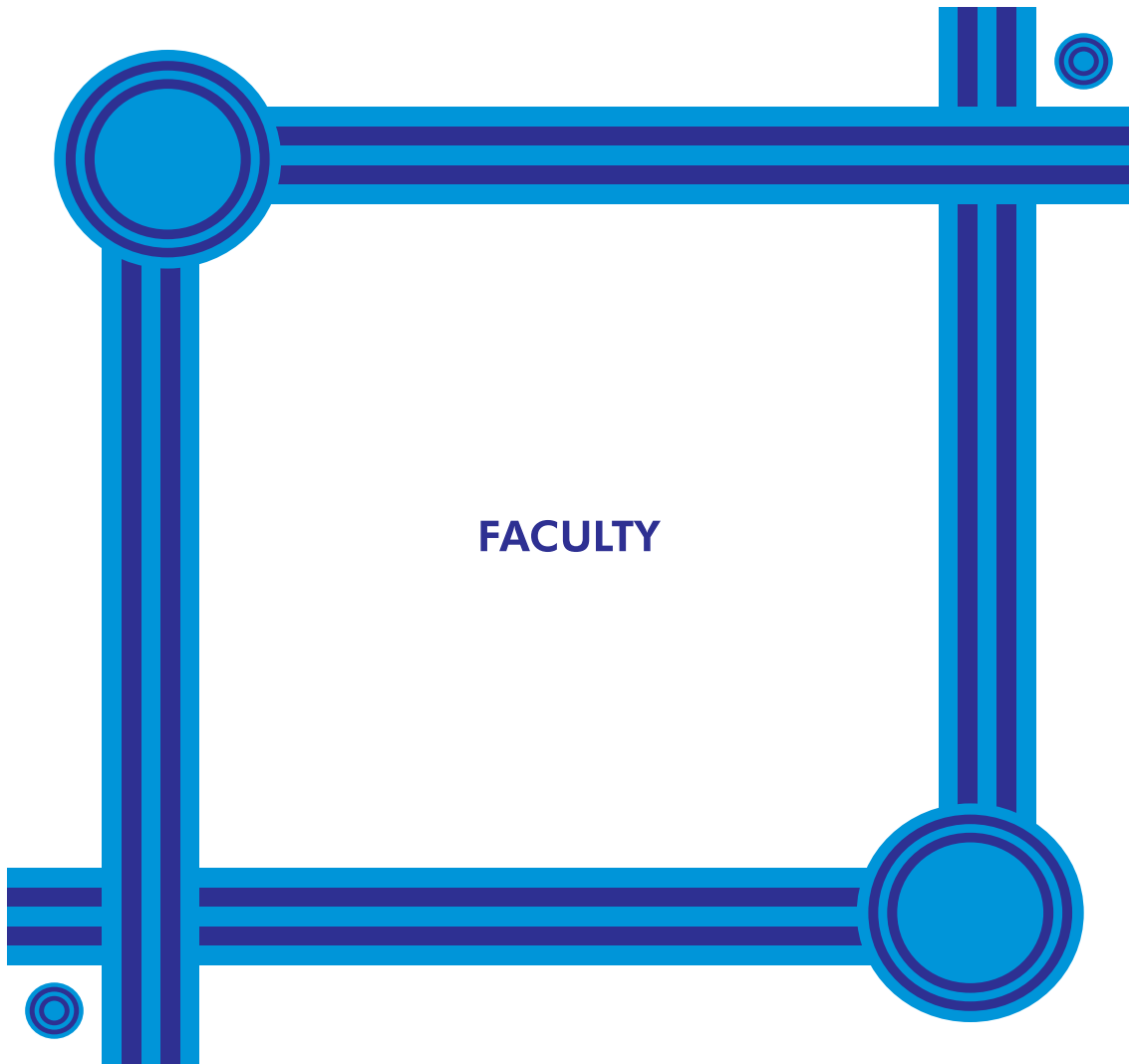
**IMPACT ASSESSMENT OF CSIR:  
FEEDBACK FROM TECHNOFEST 2010**

*S. Pohit, P.R. Bose, S.A. Nabi*

Activity: Conceptualising and writing the report. Finding: CSIR took active part in IITF-2010 to showcase her achievement in India's development process. During the event, NISTADS conducted a questionnaire-based survey among the visitors to understand the relevance of CSIR, awareness of CSIR brand among visitors, quality of the contents of its

exhibits and the marketability of exhibits. In total, about 692 responses were obtained. The survey findings indicate that awareness about CSIR is about 53% among the visitors. We find that business delegates are generally more aware about CSIR and many of them have visited CSIR pavilion due to prior awareness of CSIR. However, 90% of the business delegates visiting CSIR pavilion is of the opinion that CSIR has shown no pro-activeness towards brand development.





FACULTY





## 2.1 ACADEMIC BACKGROUND AND RESEARCH INTERESTS

### DR. PARTHASARATHI BANERJEE



**Qualification:** Ph.D.

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### DR. A.K. MUKHOPADHYAY

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### PRADOSH NATH



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### DINESH ABROL



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**Research Interests:** Science Technology & Society Studies; Innovation Studies; and Sustainability Studies

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### DR. V.K. GUPTA

**Qualification:** Ph.D.

**Research Interest:** Science Technology & Society Studies

### DR. SUBHAN KHAN



**Qualification:** Ph.D.

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## 2.2 PUBLICATIONS

### BOOKS

1. Banerjee, P. (ed.) (2009) *India, Science and Technology: 2008*, NISTADS, New Delhi.
2. Etsuyo, Yuasa, Tista Bagchi, and Katharine Beals (eds.) (2011). *Pragmatics and Autolexical Grammar: In Honor of Jerry Sadock*, John Benjamins, Amsterdam and Philadelphia.
3. Kumar, Vipan; Kasturi Mandal, Naresh Kumar and Taposik Banerjee (2010) *Skills for Green Jobs in India: Unedited background country study*. International Labour Office, Geneva.
4. Nath, Pradosh and Vishnu Mohan Calindi (2009) *Satellite Connectivity to Remote Areas and E-Services for Development: Initiatives through Post Office Telekiosks in Bhutan*, ITU - UPU, Geneva.
5. Nath, Pradosh and Vishnu Mohan Calindi (2010) *ICTs Community Access and Development: Case studies from six developing countries*, ITU, Geneva.
4. Khan, Subhan and R.K. Suri, (2009) '*Preparation of Compendium of the Salient findings of Projects funded under National Natural Resources Management System on Bio-resources and Environment (NNRMS-SC-B) Scheme*'-an extended assignment of MOE&F consultancy Project of MOE&F, Govt of India, final project completion report submitted on 6 May.
5. Khan, Subhan, (2010) '*Pilot Vocational Training Project on Geospatial Data Collection at Village Level involving Students, Youths, Village Volunteers and School Dropouts for Local Area Development in Mewat District (Haryana)*', sponsored by NRDMS Division, Department of Science and Technology (DST), Govt of India, final project completion report submitted on 29 June.
6. Kumar, Naresh; Vipan Kumar and P. Banerjee, (2009) '*Data Support System for SHE: Part II*', a project report submitted to DST, GAP-040730, May.

### REPORTS

1. Feldman, S.; D. Nathan, Rajeswari S. Raina, and Y. Hong, (2009) *Summary for Decision Makers, East-South-Asia and Pacific (ESAP) report of the International Assessment of Agricultural Knowledge, Science and Technology for Development (IAASTD)*, Island Press: Washington, D.C.
2. Gupta, B.M., (2009) '*Development of National Database on S&T Output and Development of National Indicators on S&T for 2001 and 2006*', submitted to Department of Science and Technology, April.
3. Gupta, B.M.; P.R. Bose and Avinash Kshitij, (2009) '*Determining Excellence of Indian Research Institutions in Different Fields of Science and Technology, as reflected in their International Collaborative Publications Output during 1996-2006*', report submitted to DFG in June.
7. Kumar, Vipan; Kasturi Mandal, Madulika Bhati, Sapna Narula and Parag Nathanay, (2011) '*Skills for Green buildings in India*', In Press, International Labour Office, Geneva.
8. Rai, L.P.; D. Gangopadhyay, Naresh Kumar, Kashmiri Lal and Suresh Kumar, (2010) '*Framework for Impact Assessment of the National Council for Science and Technology Communication (NCSTC) Network*', submitted to National Council for Science and Technology Communication, Department of Science and Technology, New Delhi.
9. Raina, Rajeswari S. member of IAASTD Synthesis Report Team, (2009) '*Synthesis Report of the International Assessment of Agricultural Knowledge, Science and Technology for Development (IAASTD)*', Island Press: Washington, D.C.
10. Saxena, D.; S. Verma, B. Sinha, A. Kshitij, D. Gangopadhyay, P. Banerjee, R. Bahl and A.K. Mukhopadhyay, (2009)



'New Orbit for NPL: A Strategy Document, Part I & II: Executive Summary and Benchmarking Exercise', submitted to DG CSIR, NISTADS, CSIR, New Delhi, India, pp. 1-147.

## JOURNAL PAPERS

1. Bala, Adarsh and B.M. Gupta (2009) Growth and Impact of Research Output of Government Medical College & Hospital: A Case Study'. *Annals of Library & Information Studies*, 56, 86-94
2. Bala, Adarsh and B.M. Gupta (2009) S&T Contribution of Chandigarh during 1998-2007, *COLLNET Journal of Scientometrics and Information Management*, 3(2), 29-41.
3. Bala, Adarsh and B.M. Gupta (2010) Mapping of Indian Neuroscience Research: A Scientometric Analysis of Research Output during 1999-2008, *Neurology India*, 58 (1), 35-41.
4. Bala, Adarsh and B.M. Gupta (2010) Mapping of Neuroscience Research: A Quantitative Analysis of Publications Output of China, 1999-2008, *Annals of Neurosciences*, 17(2), 63-75.
5. Bala, Adarsh and B.M. Gupta (2010) Ranking of Indian Neuroscience Research Institutions for their Research Performance during 1999-2008, *Journal of Library and Information Science*, 35(1), 37-50.
6. Bala, Adarsh and B.M. Gupta (2010) Research Activities in Biochemistry, Genetics & Molecular Biology in India during 1998-2007: A Scientometric Analysis', *DESIDOC Journal of Library & Information Technology*, 30(1), 3-14.
7. Bala, Adarsh and B.M. Gupta, (2010) Perception of health professionals regarding use and provision of LIS through mobile technologies'. *DESIDOC Journal of Library & Information Technology* 30(3), 7-12.
8. Basu, Aparna (2010) Does a Country's Scientific Productivity Depend Entirely on the Number of Country Journals Indexed?, *Scientometrics*, 82(3), 507-516.
9. Biswas, P.K. and Indranil Biswas (2009) Sources of Finance and Productivity: A Study of Unorganized Manufacturing Sector in India', *Productivity*, 50(2), 121-129.
10. Biswas, P.K. and Kasturi Mandal (Mitra) (2010) Drinking Water in Rural India: A Study of Deficiency, Quality and Some Social Implications, *Water Policy*, 12, 885-897.
11. Biswas, Pradip; Sanjib Pohit and Rajesh Kumar (2010) Biodiesel from Jatropha: Can India meet the 20 percent Blending Target? *Energy Policy*, 38, 1477-1484.
12. Chakrabarti, M.; D. Pal, I. Biswas and S. Datta S. (2009) Towards Institutionalizing Sustainable Agriculture in India as a Response to Climate Change: Preparation Needed for COP 15, *Agriculture Situation in India*, 4154/Agri/09, 241-252
13. Chaudhuri, Saswati; Anandajit Goswami and Sanjib Pohit (2010) Impact of Policy Changes on Copper Production: Case Study of India, *GALT Update*, 4(2), 3-5.
14. Chen, Y.; Z. Yang, F. Shu, Z. Hu, M. Meyer and S. Bhattacharya (2009) A Patent Based Evaluation of Technological Innovation Capability in Eight Economic Regions in PR China', *World Patent Information*, 31,2, 104-110.
15. Dabade G., JSA., CSSM, SAMA, Madhavi, Y. et al. (2010) Concerns Around Human Papilloma Virus (HPV) Vaccine, Debate, *Indian Journal of Medical Ethics*, 7(1), 38-41.
16. Dhawan, S.K. (2009) Making Science-Related Jobs (Less) Attractive, *Current Science*, 96,1, 7.
17. Dutt, Bharvi; Suresh Kumar and K.C. Garg (2010) Scientometric Profile of Global Dengue Research, *COLLNET Journal of Scientometrics and Information Management*, 81-91.
18. Dutta, Monica and Saptarshi Mukherjee, (2010) An Outlook into Energy Consumption in Large Scale Industries in India: The Cases of Steel, Aluminium and Cement, *Energy Policy*, 38(11), 7286-7298.



19. Feldman, S.; S. Biggs and R. Raina, (2010) A Messy Confrontation of a Crisis in Agricultural Science, *Economic and Political Weekly*, 45(3), 66-71.
20. Gangopadhyay, D. and A.K. Mukhopadhyay, (2010) Participatory Learning and Action for Sustainable Rural Development in India - A Case Study of Didhsari Village, Uttarkashi, Uttarakhand, *J. Rural Development*, 29(2), 199-227.
21. Gangopadhyay, D.; R. Singh and C.K. Kamble, (2009) Evolution of a Bivoltine Breed DNB1 of the Silkworm, *Bombyx Mori* L. Through Ameiotic Parthenogenesis, *Indian Journal of Sericulture*, 48,1, 41-48.
22. Garg, K.C. and S. Kumar, (2009) Foreign Authored Contributions to Indian Science Periodicals, *Annals of Library and Information Studies*, 56(2), 80-85.
23. Garg, K.C. and S. Kumar, (2010) An Analysis of Citation Pattern of Indian Science Journals Indexed by Science Citation Index Expanded, *Annals of Library and Information Studies*, 57(4), 365-372.
24. Garg, K.C. and S. Kumar, (2010) Citedness of Indian Science Journals Indexed by Science Citation Index Expanded, *Current Science*, 99(7), 860-862.
25. Garg, K.C., (2010) Ranking of Research Performance of Indian Universities, *Current Science*, 2010, 99(10), 1305.
26. Garg, K.C.; S. Kumar, B. Dutt and Oindrilla Chakraborty, (2010) Scientometric Profile of Genetics and Heredity Research in India, *Annals of Library and Information Studies*, 57(3), 196-206 (*Special issue: A tribute to Eugene Garfield, Information Scientist Extraordinaire, on his 85<sup>th</sup> birthday*).
27. Gupta, B.M. and Adarsh Bala, (2011) A Scientometric Analysis of Indian Research Output ;in Medicine during 1999-2008, *Journal of Natural Science, Biology and Medicine*, 2(1): 87-100.
28. Gupta, B.M. (2010) Mapping of Science and Technology Output of Brazil during 1997-2007, *Annals of Library & Information Studies*, 57, 150-165.
29. Gupta, B.M., (2010) A Comparative Study of India, China and South Korea S&T Publications Output During 1999-2008, *Annals of Library & Information Studies*, 57, 207-21
30. Gupta, B.M., (2010) Status of South Korea in Science and Technology as Reflected in Its Publications Output, 1997-2007, *COLLNET Journal of Scientometrics and Information Management*, 4(1), 53-79.
31. Gupta, B.M., (2011) Ranking of Indian Institutions in Agriculture & Allied Sciences for their Research Output during 1999-2008', *Annals of Library and Information Studies*, 58: 62-69.
32. Gupta, B.M., Avinash Kshitij and Yogendra Singh, (2010) Indian Computer Science Research Output During 1999-2008: Qualitative Analysis, *DESIDOC Journal of Library and Information Technology*, 30(6), 39-54.
33. Gupta, B.M.; A. Kshitiji and C. Verma, (2011) Mapping of Indian Computer Science Research Output, 1999-2008, *Scientometrics*, 86(2), 261-83.
34. Gupta, B.M.; Har Kaur and Adarsh Bala, (2011) Mapping of Indian Diabetes Research during 1999-2008: A Scientometric Analysis of Publications Output, *DESIDOC Journal of Library & Information Technology*, 31(2): 71-80
35. Joshi, Kirti and N.S.K. Harsh, (2009) Biological Control of Fusarium Wilt of Dalbergia Sissoo Seedlings in Nurseries Using Trichoderma Species, *J Mycol Pl Pathol*, 39(3), 439-444.
36. Joshi, Kirti and N.S.K. Harsh, (2009) Population Assessment of *Trichoderma Piliuliferum* Using a Modified Selective Medium, *Indian Forester*, 135(7), 960-964.
37. Joshi, Kirti, (2009) Agriwastes as Substrate for *Trichoderma* Formulation, *Current Science*, 97(1), 10.
38. Joshi, Kirti, (2010) Conserve, Cultivate & Capitalize: Vital Concerns for Indian Herbal Sector, *Journal of Medicinal and Aromatic Plant Sciences*, 32(4), 351-357.



39. Joshi, Kirti; Avinash Kshitij and K.C. Garg, (2010) Scientometric Profile of Global Forest Fungal Research, *Annals of Library and Information Studies*, 57(2), 130-139.
40. Kaur, Har and B.M. Gupta, (2009) Indian Contribution in Immunology & Microbiology, 1999-2008: A Scientometric Analysis, *DESIDOC Journal of Library & Information Technology*, 29(5), 42-49.
41. Kaur, Har and B.M. Gupta, (2009) Indian Contribution in Pharmacology, Toxicology & Pharmaceutics During 1998-2007: A Scientometric Analysis, *COLLNET Journal of Scientometrics & Information Management*, June.
42. Kaur, Har and B.M. Gupta, (2010) Mapping of Dental Research in India: A Scientometric Analysis of India's Research Output, 1999-2008, *Scientometrics*, 85, 361-76.
43. Kshitij, A.; B. Sinha, K. Joshi, K. Mandal and V. Kumar, (2010) Mapping of India's Capability in Emerging Areas of Solar Energy Research, *Innovation: A Journal of Interdisciplinary Perspectives*, (in press).
44. Kumar, Naresh and A. Alexander, (2010) The Cross-Border Mobility of Students: A Perspective from BRIC Countries, *Sociology of Science and Technology*, 1(1), 118-125.
45. Kumar, Naresh and Deeksha Sharma, (2010) Mobility of Highly Skilled Workers and Academic Collaboration in India and Russia, *Sociology of Science and Technology*, 1(3), 85-97.
46. Kumar, Neelam, (2010) Karl Popper, Psychology and Philosophy, *Psychological Studies*, 55(3), 270-74.
47. Kumar, Suresh; K.C. Garg and Bharvi Dutt, (2009) Indian Scientific Output as Seen Through Indian Science Abstracts, *Annals of Library and Information Studies*, 56(3), 163-168.
48. Madhavi, Y. and N. Raghuram, (2010) Pentavalent & Other New Combination Vaccines: Solutions in Search of Problems, *Indian J Med Res*, 132, 456-457.
49. Madhavi, Y., (2009) Home-Grown Vaccines are Crucial for Public Health, *SciDev.Net*, 1-3.
50. Madhavi, Y., (2009) Meeting Local Needs in Global Times: The Case of Universal Vaccines in India, *Journal of Health Studies*, 2, 81-105.
51. Madhavi, Y.; J.M. Puliyeel, J.L. Mathew, N. Raghuram, A. Phadke, M. Shiva, S. Srinivasan, Y. Paul, R.N. Srivastava, A. Parthasarathy, S. Gupta, U. Ranga, V. Vijayalakshmi, N. Joshi, I. Nath, C.M. Gulhati, P. Chatterjee, A. Jain, R. Priya, R. Dasgupta, S. Sridhar, D. Dabade, K.M. Gopakumar, D. Abrol, M.R. Santhosh, S. Srivastava, S. Visalakshi, A. Bhargava, N.B. Sarojini, D. Sehgal, S. Selvaraj, D. Banerji, (2010) Evidence-Based National Vaccine Policy, *Indian J Med Res*, 131, 617-628.
52. Mehra, Kavita and Kirti Joshi, (2010) The Enabling Role of the Public Sector in Innovation: A Case Study of Drug Development in India, *Innovation: Management, Policy and Practice*, 12(2), 227-237.
53. Naville, Nicolas; Fanny Henriet, Celine Herweijer, Sanjib Pohit and Jan Corfee-Morlot, (2011) An Assessment of the Potential Impact of Climate Change on Flood Risk in Mumbai, *Climate Change*, 104(1), 139-167.
54. Pohit, Sanjib; Pradip Kumar Biswas, Rajesh Kumar and Anandajit Goswami, (2010) Pricing model for Biodiesel Feedstock: A Case Study of Chhattisgarh in India, *Energy Policy*, 38(11), 7487-7496.
55. Pratap, Gangan and B.M. Gupta, (2009) Ranking of Indian Engineering and Technological Institutes for Their Research Performance During 1999-2008, *Current Science*, 97(3), 304-306.
56. Pratap, Gangan and B.M. Gupta, (2009) Ranking of Indian Universities for Their Research Output and Quality Using a New Performance Index, *Current Science*, 97(6), 751-752.
57. Raina, Rajeswari, S., (2009) Questioning Temperaments in Agricultural Sciences, *Seminar 597*, May, 50-54.



58. Raina, Rajeswari, S., (2010) Situating Ethics in Technology and Science, *Economic and Political Weekly*, 45(23), 25-27.
59. Raina, Rajeswari, S., (2010) Warum Halt der Weltagrarbericht das Potenzial der Kleinbauern, den Hunger zu Reduzieren, für so Gross?, *Boll Thema*, 2/10, 10-12.
60. Rais, Mohd.; Bohumir Pazderka and Gary W. vanLoon, (2009) Agriculture in Uttarakhand, India - Biodiversity, Nutrition, and Livelihoods, *Journal of Sustainable Agriculture*, 33(3), 319-335.
61. Rais, Mohd.; Subhan Khan and D.C. Sharma, (2009) In-situ on Farm Agro-Biodiversity Conservation in Mid-hills of Indian Central Himalaya, *Indian J. Plant Genet. Resour.*, 22(2), 145-151.
62. Raza, G., (2009) Introduction: Mapping public understanding of science, *Science, Technology and Society*, 14(2), 211-219.
63. Raza, G., S. Singh, R. Shukla, (2009) Relative Cultural Distance and Public Understanding of Science, *Science, Technology and Society*, 14(2), 269-287.
64. Ronald, N. and Sujit Bhattacharya, (2010) Identification of Military Related R&D, *Defence Science Journal*, 60(3):
65. Sanjib Pohit, (2010) Pricing and Energy Choice, *Geography and You: A Development and Environment Magazine*, 10(62), 6-8.
66. Sarojini, N.B.; S. Sandhya, Y. Madhavi, S. Srinivasan and S. Anjali, (2010) The HPV Vaccine: Science, Ethics and Regulation, *Economic & Political Weekly*, 27,48, 27-34.
67. Saxena, Anurag; S. David Beazer and B.M. Gupta., (2009) A Quantitative Analysis of Countries Research Strengths, *International Journal of Educational Policies & Leadership*, 4(3), 1-7.
68. Sengupta, Amit; Anjali Shenoy, N.B. Sarojini and Y. Madhavi., (2011) Human Papilloma Vaccine Trials in India, *The Lancet*, 377(9767), 719., ([http://www.thelancet.com/journals/lancet/article/PIIS0140-6736\(11\)60270-5/fulltext](http://www.thelancet.com/journals/lancet/article/PIIS0140-6736(11)60270-5/fulltext))
69. Sharma, P.; K.C. Garg, (2009) Editorial Gatekeeping in the US and UK Clinical Medicine Journals, *Current Science*, 97(3), 292-292.
70. Singh, G.; Madhulika Bhati and Thanaram Rathod, (2010) Use of Tree Seedlings for the Phytoremediation of a Municipal Effluent Used in Dry Areas of North-Western India: Plant Growth and Nutrient Uptake', *Ecological Engineering*, 36(10), 1299-1306.
71. Singh, R., C.K. Kamble, D. Gangopadhyay and P.R.M. Rao, (2009) Induction of Mosaics by Double Copulation in the Silkworm, *Bombyxmoril*', *Indian Journal of Sericulture*, 48,1, 85-87.
72. Singh, Ravindra, Sreekumar, D. Gangopadhyay, R. Nirupama and S.K. Ashwath, (2009) Assessment of Homozygosity Using RAPD Markers in Silkworm Breeds Developed Through Application of Androgenesis and Parthenogenesis, *Sericologia*, 49(3), 261-266.
73. Singh, Surjit; Gauhar Raza, S.N. Misra and Pushpa Dahiya, (2009) Mapping Gender Differences in Understanding about HIV/AIDS, *Journal of Science Communication*, 8(3):
74. Singh, Yogendra and B.M. Gupta, (2010) Mapping of Indian Engineering Research Using Quantitative Indicators, 1999-2008, *COLNET Journal of Scientometrics & Information Management*, 4(2), 1-12.
75. Sinha, B. and R. Sharma, (2009) Records of *Eryx johnii*, (Russell, 1801) (Ophidia: Boidae) and *Echis Carinatus*, (Schneider, 1801) (Ophidia: Viperidae) from the Thar Desert, Rajasthan, India, with Distributional Notes on Other Snakes, *J. Bombay Nat. Hist. Soc.*, 2008, 105(3), 342-343. (reflected in 2009).
76. Sinha, B., (2010) Approaches in Formalizing Informal Innovations in Agriculture Sector: A Case Study of Traditional Pest Management, *Innovation: A Journal of Interdisciplinary Perspectives* (in press).
77. Sinha, B., (2011) Trends in Global Solar Photovoltaic Research: Silicon versus



- Non-Silicon Materials, *Current Science*, 100(5), 654-660.
78. Sinha, B.; and I. Biswas, (2010) Biopesticides: Expanding Reach Abets Rural Prosperity, *Financial Agriculture*, 42(6), 24-28.
79. Sinha, Bikramjit, (2010) An Appraisal of the Traditional Post-Harvest Pest Management Methods in Northeast Indian Uplands, *IJTK*, 9(3), 536-543.
80. Upadhyay, V.K.; P. Sikka and D.K. Abrol, (2009) 'Technology Dissemination Programmes and Extramural R&D Support in India', *Journal of Technology Transfer*, 1, 11.
- Civilization: Vol.XV, Part 2 – Science and the Public*, (ed.) Ashok Jain, Centre for Studies in Civilizations-PHISPC: New Delhi, 225-252.
6. Banerjee, P., (2010) 'Ethics in Science and Technology: Exploring a Select Perspective'. In *Ethics, Business and Society*, (ed.) A. Dasgupta, Response Books, Sage Publications Inc.: New Delhi, 140-148.
7. Banerjee, P., (2010) 'Innovation as Inter-Institutional Contests for Revaluing Assets and for Redistribution'. In *Liberalizing Research in Science and Technology: Studies in Science Policy*, (eds.) N. Asheulova, B.K. Pattnaik, E. Kolchinsky and G. Sandstrom, St. Petersburg: Politechnika, 300-331.

### BOOK CHAPTERS

1. Abrol, Dinesh, (2010) 'Global Challenges and the External Dimension of the ERA: A Comment'. In *International Science and Technology Cooperation in a Globalized World: The External Dimension of the European Research Area*, Edward Elgar.
2. Abrol, Dinesh, (2010) 'Public Engagement on Intellectual Property Rights: Lessons from the Campaign of TRIPS in India'. In *History of Science, Philosophy and Culture in Indian Civilization: Vol.XV, Part 2 – Science and the Public*, (ed.) Ashok Jain, Centre for Studies in Civilizations-PHISPC: New Delhi, 183-224.
3. Abrol, Dinesh, (2010) 'Successes and Failures in the Organization of Research for Industrial Development in the CSIR System of Laboratories'. In *Science and Society in India*, (ed.) Arun Bandopadhyay, Manohar: New Delhi, 345-384.
4. Bagchi, T., (2011) 'Towards an Intonational-Illocutionary Interface'. In *Pragmatics and Autolexical Grammar: In Honor of Jerry Sadock*, (eds.) Yuasa et.al., Amsterdam and Philadelphia: John Benjamins, 107-122.
5. Banerjee, P., (2010) 'Consuming Body and Shaping Policy on the Science of Healing'. In *History of Science, Philosophy and Culture in Indian Civilization: Vol.XV, Part 2 – Science and the Public*, (ed.) Ashok Jain, Centre for Studies in Civilizations-PHISPC: New Delhi, 183-224.
8. Banerjee, P.; Biswatosh Saha, (2009) 'Growth of Future Market: Acts of Disintermediation or Reintermediation?'. In *Effects of FUTURE MARKETS on Agricultural Commodities*, (ed.) Madhoo Pavaskar, 145-157.
9. Bhattacharya, Sujit and Kashmir Lal, (2010) 'Innovation Activity in the Indian Software'. In *Liberalizing Research in Science and Technology: Studies in Science Policy*, (eds.) Nadia Asheulova, B.K. Pattnaik, E. Kolchinsky, G. Sandstrom, St. Petersburg, 339-365.
10. Bhattacharya, Sujit; Madhulika Bhati and A.P Jayanthi, (2011) 'Knowledge Creation and Transformation Process in a Frontier Technology: Case Study of Nanotechnology Research in India'. In *Advances in Application of Nanotechnology in Agriculture*, (eds.) H.P. Singh, et.al., Volume 7, Westville Publishing: New Delhi, 204-230 (in press).
11. Bose, P.R., (2010) 'Technological Change and Growth of Indian Cement Industry under Globalization'. In *Global and Local Polemics of Development*, (ed.) Prasenjit Maiti, Concept Publishing Company Pvt. Ltd: New Delhi, 75-101.
12. Etsuyo Yuasa, T. Bagchi and Katharine Beals, (2011) 'Introduction'. In *Pragmatics and Autolexical Grammar: In Honor of Jerry Sadock*, (eds.) Yuasa et.al.,



- Amsterdam and Philadelphia: John Benjamins, xiii-xxvi.
13. Gulati, Ashok and Monica Dutta, (2010) 'Rice Policies in India in the Context of the Global Rice Price Spike'. In *The Rice Crisis: Markets, Policies and Food Security*, (ed.) David Dawe, published by The Food and Agriculture Organization of the United Nations and Earthscan, 273-295.
  14. Gupta, B. M. and S.L. Sangam, (2011) 'Contribution and Impact of Karnatak University Publications During 1999-2008: A Study in Comparison with Three Other Universities in Karnataka'. In *Scientometric Studies*, (eds.) S.L. Sangam, Department of Library & Information Science, Karnatak University: Dharwad, 89-112.
  15. Joseph, K.J. and Dinesh Abrol, (2009) 'Science, Technology and Innovation Policies in India: Achievements and Limits'. In *Brics and Development Alternatives, Innovation Systems and Policies*, (eds.) José Eduardo Cassiolato and Virginia Vitorino, with a Foreword by Bengt-Åke Lundvall, The Anthem Press-European Union Series: Anthem Press.
  16. Khan, Subhan, (2009) 'Agricultural and Rural Development Policies in Context of Globalization: Experiences from an International-aided Project for Development of Mewat Region in Haryana (India)'. In *Agriculture: Tradition, Modern Technology and Globalization in India and China*, (eds.) V.P. Kharbanda and Pei Guo, published by NISTADS, New Delhi and Center for Rural Development Policy(CRDP), Beijing, China, 405-428.
  17. Kumar, Naresh and Shailaja Rego, (2009) 'An Analysis of Diffusion of Fixed Line and Mobile Phones in India'. In *IT Innovation for Organisational Excellence*, (eds.) A. Sharma, et.al., Excel Books: New Delhi, 319-327.
  18. Kumar, Naresh and Shailaja Rego, (2010) 'Application of ICT in Education: Opportunities and Challenges for India'. In *IT Initiatives for Building Creative Organizations*, (eds.) Suyash Jhavar, Yogeshwari Pathak, Raj Kishore Sharma and Alok Bansal. Excel Books: New Delhi, 385-394.
  19. Kumar, Neelam, (2010) 'Gender Concerns in Indian Science'. In *History of Science, Philosophy and Culture in Indian Civilization: Vol.XV, Part 2 – Science and the Public*, (ed.) Ashok Jain, Centre for Studies in Civilizations-PHISPC: New Delhi, 333-346.
  20. Kumar, Neelam, (2010) 'Science and Engineering in India: Gendered Equation?' In *Women in Engineering and Technology Research*, (ed.) Anne-Sophie Godfroy-Genin, Lit Verlag: Germany, 647-660.
  21. Madhavi Y., (2010) 'Liberalization: Its Impact on Indian Vaccine S&T and Implications for National Vaccine Policy'. In: *Liberalizing Research in Science and Technology: Studies in Science Policy*, (eds.) Nadia Asheulova, Binay Kumar Pattnaik, Eduard Kolchinsky, Gregory Sandstrom, Russian Academy of Sciences & IIT Kanpur, Saint-Petersburg: Politechnika.
  22. Mehra, Kavita, (2010) 'Women Empowerment to Women Capabilities: Bridging the Gap'. In *Empowerment of Women Through S&T Interventions*, (eds.) N. Prakash, B. McLellan, B. Wejnert, Centre for S&T of Non-Aligned and other Developing countries, Regency Publications: New Delhi, 189-201.
  23. Nath, Pradosh, (2010) 'R&D Management in Developing Countries: Issues from the Perspective of Catching-up'. In *Liberalizing Research in Science and Technology: Studies in Science Policy*, (eds.) N. Asheulova, B.K. Pattnaik, E. Kolchinsky and G. Sandstrom, Politechnika: St. Petersburg, 204-214.
  24. Pandit, Ajay and Yogesh Suman, (2011) 'Crucial Factors in Technology Transfer from Government Research Institutions to Private Sector Industry: Findings from the Case Studies'. In *Strategies and Innovation for Sustainable Organizations*, (ed.) Anu Singh Lather, Anil K Saini, Puja Khatri, MacMillan: Delhi, 136-153.



25. Raina, Rajeswari S., (2009) 'Innovation for Eco-Friendly Development – Towards Institutional Reform in Scientific Research and Policy-Making'. In *Science for Policy*, (eds.) Guimaraes-Perreira and Funtowicz, Oxford University Press: London and New Delhi.
26. Rais, Mohd; D.C. Sharma and Subhan Khan, (2009) 'Agro-Biodiversity and Indian Central Himalayan Agricultural-A Paradigm'. In *Agriculture: Tradition, Modern Technology and Globalization in India and China*, (eds.) V.P. Kharbanda and Pei Guo, published by NISTADS, New Delhi and Center for Rural Development Policy(CRDP), Beijing, China, 363-380
27. Ranger, Nicola; Nicolas Naville, Fanny Henriet, Celine Herweijer, Sanjib Pohit and Jan Corfee-Morlot, (2010) 'An Assessment of the Potential Impact of Climate Change on Flood Risk in Mumbai', *Climate Change*, DOI 10.1007/s10584-010-9979-2; © Springer Science+Business Media B.V. December.
28. Raza, Gauhar, (2010) 'Public Understanding of Science'. In *History of Science, Philosophy and Culture in Indian Civilization: Vol.XV, Part 2 – Science and the Public*, (ed.) Ashok Jain, Centre for Studies in Civilizations-PHISPC: New Delhi, 103-128.
29. Sangwan, Satpal, (2010) 'Contested Discourse, Conflicting Claims Constructing Colonial Forestry in Nineteenth Century India'. In *History of Science, Philosophy and Culture in Indian Civilization: Vol.XV, Part 2 – Science and the Public*, (ed.) Ashok Jain, Centre for Studies in Civilizations-PHISPC: New Delhi, 293-332.
30. Singh, Anuradha (2010) 'Benchmarking Dai's practices with Ayurvedic Texts'. In *Entering Dai's World*, (ed.) Janet Chawla CWDS: New Delhi, June.
31. Sinha, B., (2010) 'Green Farmers of Meghalaya'. In *Skills for Green Jobs in India: Unedited Background Country Study*, by Vipin Kumar, Kasturi Mandal, Naresh Kumar, Taposik Banerjee, International Labour Office: Geneva.

## PAPERS IN CONFERENCE PROCEEDINGS

1. Bhati, Madhulika, (2010) 'Comparison of Regulatory Framework of Drinking Water Quality Standards Across Translational Governance', in *proceeding of IV World Aqua Congress*, 8-10 December, New Delhi, pp.70-79.
2. Chatterjee, Amrita; Arpita Dhar and Sanjib Pohit, (2010) 'Trade and Distributional Impact of Genetically Modified Crops in India: A CGE Analysis', in *proceedings of the Thirteenth Annual Conference on Global Economic Analysis*, 9-11 June, Bangkok, Thailand.
3. Chaudhuri, Saswati; Anandajit Goswami and Sanjib Pohit, (2010) 'Environmental and Employment impact of resource use in India: A case study of copper', in *proceedings of the Thirteenth Annual Conference on Global Economic Analysis*, June 9-11, Bangkok, Thailand.
4. Khan, Subhan and Shivani, (2010) 'Government-Panchayat –NGO Partnership (GPNP) in Developing Village Level NRDMS Database on Water Bodies-A Case Study of NCR', in *Abstract Volume of Map India-13th Annual International Conference & Exhibition on Geospatial Information Technology and Applications*, (Theme: *Defining Geospatial Vision for India*), held during 19-21 January, at Epicentre, Appreal House, Gurgaon, India, pp.64.
5. Kumar, Neelam, (2010) 'Gender and Science: Indian Realities', in proceedings of Conference on *Beyond the Leaky Pipeline. Challenges for Research on Gender and Science*, held at Brussels, Belgium, 19-20 October, p.68.
6. Kumar, Vipin, (2010) 'Green Architects in India', a *Country Study presentation on the occasion of Technical Validation Workshop on Skill for Green Jobs*, 17-18 May, Geneva, Switzerland.
7. Pandit, Ajay and Yogesh Suman, (2010) 'International Technology Transfer in Post liberalized India: A Perspective Study', in *proceedings of International Conference on Information Management in Knowledge Economy*, (Ed. Anu Singh



- Lather, Anil Kumar Saini, Sanjay Dhingra) Macmillan: Delhi, organized by IP University, New Delhi, March, pp.490-499.
8. Rai, L.P. and Rajesh Katiyar; (2010) 'Emerging Trends in Higher Education in India', in *proceedings of the International Conference on Challenges and Applications of Mathematics In Science and Technology (CAMIST)*, organized by National Institute of Technology, Rourkela (Orissa) during 11-13 January. pp.936-943.
  9. Rai, L.P., (2009) 'S&T Policy: Structural Adjustments Required', in *proceedings of the CSIR - Conference on Systems & Management Innovation for R&D*, held at National Institute of Science Communication and Information Resources (NISCAIR), New Delhi on 9 October, pp.61-69.
  4. Joshi, Kirti, 'Conserve, Cultivate & Capitalize: Focal Issues of Indian System of Medicine', SEIN Environmental Impacts of Business Vol. 3 No. 9, 02/12/2009.
  5. Khan, Subhan; M.A. Qureshi and Pramod Kumar Prajapati, 'Social Dimension of Science & Technology Development & Status of Social Sciences Research in Hindi Speaking Areas', ISSA's Journal of Social Science Gazetteer, Indian Social Science Association (ISSA), Agra (UP), 2009, 4(2), 125-140.
  6. Khan, Subhan; M.A. Qureshi, Praveen Arya and Sangeeta Budhhiraja, 'Guest-Editor of the Third Special Issue of the Publication titled, 'Haryana Panchayati Raj Sookna Patrika', on Women, published in Hindi in the month of January 2009.
  7. Kumar, Neelam, 'Culture, Gender and Science (abstract) *Psychological Studies*, Volume 54, Number 4 / December, 2009, p.279.
  8. Kumar, Naresh and A. Fodea, 'Perspective on Economic Growth of BRIC Countries: A Case of Brazil and India', SSRN, 2010.
  9. Kumar, Naresh and S. Rego, 'Level of Educational Attainment and Its Impact on Technology Diffusion in Developing', SSRN, 2010.
  10. Madhavi, Y., 'Home-grown Vaccines are Crucial for Public Health', opinion article, Scidev.net, 23 September 2009 (<http://www.scidev.net/en/opinions/home-grown-vaccines-are-crucial-for-public-health.html>)
  11. Madhavi, Y. and N. Raghuram, 'Crisis of Speculation: Donors Should Fund only Proven Vaccine Needs and Local Capacity-Building, Rapid Responses', *British Medical Journal*, May 2010, ([www.bmj.com/cgi/eletters/340/may12\\_3/c2576](http://www.bmj.com/cgi/eletters/340/may12_3/c2576)).
  12. Raina, Rajeswari S., 'Questioning Temperaments in Agricultural Science', *Seminar*, 2009, No.597, 50-54.
  13. Singh, Rajinder and Subhan Khan, 'Oxytocin: As a Sweep Poison', *Indian Dairyman*, Monthly Magazine, Indian Dairy Association, New Delhi, December 2009, 61(12), 80-83.

#### BOOK REVIEWS

1. Madhavi Y., (2009) Review of *The Vital Drop: Communication for Polio Eradication in India*. By Gitanjali Chaturvedi. Sage Publications India Pvt Ltd., published in *Current Science*, 97(1), 10 July, 108.
2. Khan, Subhan, (2010) Review of *Mahauliyati Aaludgi Ka Masla*, (in Urdu), by Dr Ravindra Kumar, published in *Science Ki Duniya*, January-March, pp.37-39

#### MISCELLANEOUS PUBLICATIONS

1. Bagchi, T., 'Baakya-kathaa: Bhaashaay o Manane (In Bengali) ('the story of the sentence: In language and in cognition')', 2010, *Alochanaa-chakra* 20.
2. Biswas, P.K. and K. Mitra, 'Problems of Drinking Water Availability in India: Some Implications on Health and Hygiene', listed on SSRN's Top Ten download list.
3. Chaudhury, Saswata; Anandajit Goswami and Sanjib Pohit, 'Impact of Policy Changes on Copper Production: Case Study of India', *Galt Update*, March 2010, 4(2), 3-5.



14. Singh, Ravindra; R. Nirupama, D. Gangopadhyay, and S.M.H. Qadri, 'Androgenesis – A New Approach in Silkworm Breeding', *Indian Silk*, 2010, 1(2), 10-11.
  15. Sinha, B and I. Biswas, 'Biopesticides: Expanding Reach Abets Rural Prosperity', *Financing Agriculture*, 2010, 42(6): 24-28.
  16. Suman, Yogesh and P. Nishy, 'Taking IT to the Villages -- The Challenges of Delivery', *Science Reporter*. December 2009, 46, 8-13.
  17. Tripathi, Arun, 'Culture of Embodied Skills in Human Computer Interaction: How Embedded Users Deal with Embedded Computers', abstract published in proceedings of 2nd International Symposium on InterFace 2010: Humanities and Technologies, 15-16 July 2010, International Digital Laboratory, University of Warwick, UK, link: [http://www.interface2010.org.uk/about\\_of\\_InterFace\\_2010](http://www.interface2010.org.uk/about_of_InterFace_2010); ISBN: 978-80-89313-50-1, eds. Silvester Czanner and Jassim Happa, 45-47. (in CD).
  18. Tripathi, Arun, 'Culture of Embodied Skills in Human-Computer Interaction: How Embodied Users deal with Embedded Computers', abstract published in the book of abstracts of the Conference on Hermeneutics & Science: Worlds, Realities and Life; organised by International Society for Hermeneutics and Science (ISHS) with the support of the Sigmund Freud University, Vienna, Austria, 27-29 August 2010, p.37.
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## 2.3 INVITED LECTURES/CONFERENCE PRESENTATIONS

1. Bagchi, Tista, 'Consciousness, Ethics, and informed Consent: Some Reflections', a round-table presentation made at the Centre for Philosophy, School of Social Sciences, Jawaharlal Nehru University, New Delhi, 29 November 2010.
2. Bagchi, Tista, Discussant to the special invited lecture on 'Perfectionist Liberalism and Political Liberalism', by Martha Nussbaum, Ernst Freund Distinguished Service Professor of Law and Ethics, University of Chicago, at NISTADS on 14 December 2010.
3. Bagchi, Tista, 'Women and the Practice of Science and Technology in India: Experiences and Access', presentation made at the NISTADS-CWDS joint Panel Discussion on Feminist Science Studies, led by Professor Helen Longino of Stanford University, 24 December 2010.
4. Bagchi, Tista, 'Concerns about the Responsible Conduct of Science and Technology in South Asia, with special reference to Biotechnologies', webinar presentation made (from NISTADS, alongside Dr. Rajeswari Raina) at an International Conference on The Responsible Conduct of Science, jointly organized by the International Life-Sciences Institute and Forman Christian College, Lahore, on 1 February 2011.
5. Bagchi, Tista, 'Quantification, Negation, and Focus: Challenges at the Conceptual-Intentional Semantic Interface', keynote address delivered at an International Seminar on Interdisciplinary Approaches to Semantics, at Aligarh Muslim University, Aligarh, 25-27 February 2011.
6. Bagchi, Tista, 'Some Themes to consider for Linguistics in the New Millennium', presentation made at the National Conference on Linguistics in the New Millennium, organized by the UGC Centre for Advanced Study in Linguistics, Department of Linguistics, University of Delhi, 11 March 2011.
7. Basu, Aparna, 'Bradford Law and the Random Hierarchical Model Revisited', invited talk at International Conference on Webometrics, Informetrics and Scientometrics (WIS), organized in Mysore by Mysore University & COLLNET (Germany), 19-22 October 2010.
8. Dutt, Bharvi; Suresh Kumar and K.C. Garg, 'Scientometric Profile of Global Dengue Research', International Conference on Scientometrics, Informetrics and Webometrics and Tenth COLLNET meeting, held at Dalian University of Technology, Dalian, China, 13-16 September 2009.
9. Gangopadhyay, D. 'Eco-friendliness of Sericulture and Its Impact on Poverty Alleviation to the Tribal Population in India – A Perspective Review', at International Conference on Emerging Trends in Environmental Research, held at St. Albert's College Ernakulam, Kerala, 14-16 August 2009.
10. Jamal, Tabassum, 'S&T Innovations, Trade and Globalisation', International Conference on Regional Cooperation in Science and Technology: Opportunities and Challenges in the context of Globalisation, Indian National Science Academy (INSA), New Delhi, 26-29 November-2010.
11. Joshi, Kirti. 'Conserve, Cultivate and Capitalize: Focal Issues of Indian System of Medicine', at International Conference on Emerging Trends in Environmental Research, at Kerala, 14-16 August 2009.
12. Joshi, Kirti. 'Government Intervention in Indian Herbal Sector', at International Symposium on Current Status and Opportunities in Aromatic and Medicinal Plants (Aromed), at Lucknow, 21-24 February 2010.



13. Kshitij, Avinash; Kasturi Mandal and P. Banerjee, 'Indian S&T System: Differences in Goals, Performances, Coordination and Governance', at Inaugural Conference of the Indian Academy of Management, at XLRI School of Business and Human Resource, Jamshedpur, 28-30 December 2009.
14. Kumar, Naresh and L. P. Rai, 'An Assessment of Enrolment Pattern in Higher Education in India', in the Symposium on Science Education in India, New Delhi, 12-13 December 2009.
15. Kumar, Neelam 'Women in Science', at US Embassy-Hosted workshop 'Celebrating Women in Science', New Delhi, 19 August 2009.
16. Kumar, Neelam, 'Women in Higher Education in India', at International Conference on Gender Equity Education in the Asia Pacific Region (APGEE3), Kaohsiung, Taiwan, 16-18 October 2009.
17. Kumar, Neelam, 'Gender and Science', at a seminar on 'Science, Technology and Medicine Through the Ages', Department of History, BHU, Varanasi, 25 March 2010.
18. Kumar, Neelam, 'Gender, Science and Psychology', at International Conference of Psychology of Science, Berkely, CA, USA, 6-7 August 2010.
19. Kumar, Neelam, 'Gender and Science: Indian Realities', at Beyond the Leaky Pipeline, Challenges for Research on Gender and Science, Final Conference of the study 'Meta-Analysis of Gender and Science Research', Brussels, Belgium, 19-20 October 2010.
20. Kumar, Neelam 'Women in Science and Technology: The Indian Realities', in a seminar on 'Underdevelopment and Development: Challenge and Response', Visva Bharati, Santiniketan, 15-16 January 2011.
21. Kumar, Vipan, 'Green Architects in India', Country Study presentation on the occasion of Technical Validation Workshop on Skill for Green Jobs, Geneva, Switzerland, 17-18 May 2010.
22. Kumar, Viapan, Participated in the panel Discussion and conference on Mid-Term Meeting of the Global Young Faculty Open Science – The Responsibility of Science in the Face of Earth System Crises, on June 21, 2010, 04:00 – 08:00 pm in the Philharmonie Essen, Huyssenallee 53, 45128 Essen, Germany
23. Kumar, Viapn, Participated in the Dialogue and panel Discussion on 1st managing global governance conference, Bonn – Germany, InWent and DIE, commissioned by BMZ, 12 - 15 April 2010.
24. Madhavi, Y. and N. Raghuram, 'Emerging Issues in Vaccine Policy', Guha Research Conference, Aurangabad, 21 December 2010.
25. Madhavi, Y. and N Raghuram, 'Vaccines and Patient Safety in India', in National Patient Safety Conference, All Indian Institute of Medical Sciences, New Delhi. 12 October 2009.
26. Madhavi, Y., 'Access to Vaccines: Governance, Regulation and Policy', at Workshop on Universal Access and Rational Therapy, India International Centre Annexe, New Delhi, 8-9 April 2009.
27. Madhavi, Y., 'Demand-Supply Gaps in Vaccines, Status of Indigenous Production and Policy', in a two day long Brainstorming Workshop on Sustainable National Vaccine Policy, held at NISTADS, New Delhi, 4-5 June 2009.
28. Madhavi, Y., 'Indian Vaccine R&D and Innovation: Priorities & Realities', in Status of the Mandated Actions under the GSPOA and Public Health, Innovation and Intellectual Property in India Workshop, at National Health Systems Research Centre (NHSRC), National Institute of Health and Family Welfare (NIHFW) Campus, New Delhi, 24-25 April 2009.



29. Madhavi, Y., 'Issues for Evidence-Based Policy on Combination Vaccines in the Context of Pentavalent Vaccine for Indian UIP', presented in an Expert Committee Meeting on Pentavalent Vaccine, Indian Council of Medical Research, New Delhi, 24 April 2010.
30. Madhavi, Y., 'National/Global Interfaces: "Fast, Slow or No": Deciding to Introduce the Pentavalent Vaccine in India', Invited Discussant on two day Indo-Norwegian SUM Medic Annual Workshop 2011: Explaining Differential Immunization Coverage, held at India International Centre, New Delhi, 17-18 February 2011.
31. Madhavi, Y., 'New Vaccine Introduction in UIP: Emerging Issues in Vaccine Policy', Delhi University, New Delhi, 18 January 2011.
32. Madhavi, Y., 'Vaccine Economics and National Vaccine Policy', at Institute of Public Health, Public Health Foundation of India, Gurgaon, 23 July 2009.
33. Mandal, Kasturi and Avinash Kshitij, 'Indian S&T System: Structure & Its Functioning', in the Training Program on S&T Policy in Japan/Asian Countries, S&T Foresight and Its Tools (incl. work exercise), Innovation', at NISTEP, Japan, 7-11 November 2010.
34. Mandal, Kasturi and Nabamita Bag. 'Rising incidences of water-borne diseases: How effective are state policies and programmes related to drinking water in India?', at international conference on 'Water – Harvesting, storage and conservation 2009', at IIT, Kanpur, 23-25 November 2009.
35. Mandal, Kasturi and Taposik Banerjee, 'Indian S&T System in the Water Sector: Differences in Goals, Performances, Coordination and Governance', at World Aqua Congress, held at India Habitat Centre, New Delhi, 8-10 December 2010.
36. Mandal, Kasturi and Taposik Banerjee, 'Skills for Green Jobs in India: Prospects and Challenges', at MOLE/ILO National Conference on Green Jobs, New Delhi, 24-25 June 2010.
37. Mehra, Kavita and Nitu Singh, 'Emergence of India as Global Player in Biotechnology Sector', in Business in 'Asia: A Global Shift in the Knowledge Economy Perspectives', Institute for Management of Innovation and Technology, Gothenberg University, Sweden, 9-10 December 2009.
38. Mehra, Kavita, 'A Comparative Study of Entrepreneurial Innovations in Formal and Informal Sectors', in Ninth Biennial Conference on Entrepreneurship at Entrepreneurship Development Institute of India, Ahmadabad, 16-18 February 2011. (Full paper in CD).
39. Mehra, Kavita, 'Role of Intermediary Organisations in Innovation Systems: A Case from India', in 6th Asialics Conference on Linkages in Innovation Systems: Global and Local, Hong Kong, 6-7 July 2009. Full paper: [asialics6.ust.hk/essay\\_ao/Mehra\\_Kavita\\_062 June 15.pdf](http://asialics6.ust.hk/essay_ao/Mehra_Kavita_062June15.pdf)
40. Nath, Pradosh, 'ESCAP-APCTT invited to deliver two lectures on Linkages and Partnerships among Enterprises, R&D institutions and Academia/Universities to Foster Innovation and Transfer of Technology: The Indian experiences', Hanoi, VietNam, 6-7 December 2010.
41. Pohit, S. 'Achieving a Low Carbon Growth: India's Policy Choice and Action', at NISTADS-STEPI joint conference on Innovation System and S&T Policy in Korea and India with special focus on IT and BT, held at New Delhi, 11 January 2011.
42. Pohit, S. 'Overview of Trade Facilitation Environment in India-Nepal Trade', at ICRIER's workshop on Trade Facilitation in South Asia: Enhancing Intra-SAARC Trade, New Delhi, 13 January 2011.
43. Pohit, S. 'Trade Facilitation Index', at ICRIER's Workshop on Trade Facilitation in South Asia: Enhancing



- Intra-SAARC Trade, New Delhi, 13 January 2011.
44. Rai, L. P., 'Models for Policy and Planning', presented in the CSIR Workshop on Advances and Applications of Mathematical Modelling: AAMM-2009, organized by CSIR Centre for Mathematical Modelling and Computer Simulation (C-MMACS), Bangalore, 23-25 May 2009.
  45. Raina, S. Rajeswari, "Sustainable Agriculture and the Civic Space: Climate Change and Challenges", Keynote Address at the Food and Water Coalition, Consultation on Climate Change and Sustainable Agriculture, Sewa Mandir, Udaipur, 30-31 October 2009.
  46. Raina, S. Rajeswari, 'Conceptual Challenges for Socially Inclusive Innovation in India's Drylands', presented at the Innovation Asia-Pacific Symposium (IAPS), Kathmandu, 4-7 May 2009.
  47. Raina, S. Rajeswari, 'Food Security and Regional Trade: What can we expect from the India – ASEAN FTA?', at International Seminar on ASEAN India FTA and Way Forward, organized by CDS, Trivandrum, IIFT, New Delhi, Centre for WTO studies, and UNCTAD, Bangkok, held at CDS Trivandrum, 5-6 February 2010.
  48. Raina, S. Rajeswari, 'Inclusive Innovation in Indian Agriculture – Module 2A', SIID Project Workshop on Systems of Innovation for Inclusive Development, University of Hyderabad, 26-28 November 2009.
  49. Raina, S. Rajeswari, 'Landscapes of Exclusion: Rice-Wheat and Poverty in the Indo-Gangetic Plains', at the National Convention on Making Growth Inclusive – Opportunities, Scope and Challenges at the State level, GIDR, Ahmedabad, 26-27 October 2009.
  50. Raina, S. Rajeswari, 'The SIID Project – What it is and Why', at the National Workshop on Inclusive Innovation Systems and MSME Clusters in Rural India: Possibilities and Challenges, organized by the Gujarat Institute of Development Research (GIDR), Ahmedabad, 27-28 February 2010.
  51. Raina, S. Rajeswari, 'Development Policy and Rural Innovation in India: Roads not taken or Acknowledged', presented at the Workshop on Public Administration and Development, organized by NISTADS and Public Administration Delegation from the USA (under the auspices of the People to People Ambassador Programmes), 24 February 2010.
  52. Singh, Anuradha and Janet Chawla, 'Indigenous Systems of Medicine (ISM): Essential Inputs for Maternal Health Policies', in the Conference on Global Maternal Health, organised by The Maternal Health Task Force (MHTF) and the Public Health Foundation of India (PHFI) Delhi 30 August to 1 September 2010.
  53. Singh, Anuradha and Janet Chawla, 'Reflections from the "Matrika" Experience with Dais in Locations of four States', in Conference on Establishing the Strengths of Indigenous Birthing Traditions in Diverse Parts of India, at Indian Social Institute, New Delhi, 11-13 August 2009.
  54. Singh, Anuradha was part of the group presentation on 'Relevance of Dai Tradition' to the members of planning commission, under the chairpersonship of Dr. Syeda Hameed, Member, Planning Commission held on 30 December 2009.
  55. Singh, Anuradha, 'Integrating Nutrition with Health: Making a Case for Mainstreaming the Ayurvedic Nutrition', National Seminar on Traditional Indian Diets and Health Care, held at National Institute of Nutrition, Hyderabad, 4-5 February 2010.
  56. Singh, Anuradha, 'The Need for Supportive Reviews of Ayurvedic Texts for Validation of Best Practices of Dais', in Conference on Establishing the Strengths of Indigenous Birthing



- Traditions in Diverse Parts of India, at Indian Social Institute, New Delhi, 11-13 August 2009.
57. Sinha, B., 'Community Conservation Initiatives in Nagaland: Opportunities and Challenges', in International Conference on Emerging Trends in Environmental Research, at St. Albert's College, Ernakulam, Kerala, 14-16 August 2009.
58. Sinha, B., 'Growing Industrialization of R&D in China: Empirical Observations of Role of the State', in China-India Seminar on Innovation, Transformation, Displacement and Growth, at Institute of Development Studies, Kolkata, 21-23 December 2009.
59. Sinha, B., S. Dey and J. Kalita, 'Evaluation of Eupatorium Adenophorum Spreng as a Potential Botanical Pesticide', in 5th International Conference on Biopesticides: Stakeholders Perspective, at TERI, New Delhi, 26-30 April 2009.
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## 2.4 FOREIGN VISITS

	<b>Name of Scientist</b>	<b>Place of visit</b>	<b>Date of visit</b>	<b>Purpose of visit</b>
1.	Vipan Kumar	Bonn, Germany	12-15 Apr. 2009	To participate in the 1 <sup>st</sup> Alumni Conference in the framework of the training and dialogue programme “Managing Global Governance”
2.	Avinash Kshitij	Germany	11-20 May 2009	To undertake joint Feasibility study of CSIR-FHG Co-operation
3.	Dr. Bikramjit Sinha	Germany	11-20 May 2009	To undertake joint Feasibility study of CSIR-FHG Co-operation
4.	Dr. K. Mehra	Hong Kong	6-7 July 2009	To participate the 6 <sup>th</sup> Asialics International Conference “Linkages in Innovation Systems: Global and Local Perspectives”.
5.	Gauhar Raza	Hiroshima, Japan	7-8 Sept. 2009	To participate in the “International Meeting of the Public Understanding of Science and Technology for Environmental Issues”
6.	Bharvi Dutt	Dalian, China	13-16 Sept. 2009	To participate in the “Fifth International Conference on Webometrics, Informetrics and Scientometrics (WIS) & Tenth COLLNET Meeting”
7.	Dr. Naresh Kumar	Dakar, Senegal	6-8 Oct. 2009	To participate in the 7 <sup>th</sup> International Globelics Conference 09 on “Inclusive Growth, Innovation and Technological Change: Education, Social Capital and Sustainable Development”
8.	Dr. L. Pulamte	Dakar, Senegal	6-8 Oct. 2009	To participate in the 7 <sup>th</sup> International Globelics Conference 09 on “Inclusive Growth, Innovation and Technological Change: Education, Social Capital and Sustainable Development”
9.	Dr. Sujit Bhattacharya	Dakar, Senegal	6-8 Oct. 2009	To participate in the 7 <sup>th</sup> International Globelics Conference 09 on “Inclusive Growth, Innovation and Technological Change: Education, Social Capital and Sustainable Development”
10.	Dr. Rajeswari S Raina	Bangkok, Thailand	8-9 Dec. 2009	To participate in the 2 <sup>nd</sup> Launching Event and Inception Workshop : Enabling Bio-Innovation for Poverty Alleviation in Asia”
11.	Dr. Kavita Mehra	Gothenburg, Sweden	9-10 Dec. 2009	To participate the International Conference on “Business in Asia: A Global Shift in the knowledge Economy”
12.	Dr. Rajeswari S Raina	Berlin, Germany	12 Jan. 2010	To participate in the Conference on “Eco Fair – The new role of agricultural trade within the conflict area of the clima food-and financial crises”



13.	Gauhar Raza	China	16-19 May 2010	International Forum on Public communication of Science and Technology Studies: at China
14.	Vipan Kumar	Geneva, Switzerland	17-18 May 2010	To participate in the workshop “ Skill for green jobs: Technical validation workshop
15.	Vipan Kumar	Essen Germany	21-25 June 2010	To participate in the “Joint Mid-term meeting of the Global Young Faculty”
16.	DK Abrol	London, UK	14-16 June 2010	To participate in the Launch of “Innovation, Sustainability, Development : A New Manifesto”
17.	Dr. Neelam Kumar	USA	6-7 Aug. 2010	To participate in the “International conference of Psychology of Science and Technology
18.	Dr. P. Banerjee	Tartu Estonia	27-28 May 2010	To participation in the International Scientific Conference “4 <sup>th</sup> conference on Micro Evidence on Innovation in Developing Countries”
19.	Dr. Neelam Kumar	Belgium	19-20 Oct. 2010	To participate in conference on ‘Meta-analysis of gender and science research’
20.	Dr. (Mrs) Rajeswari S. Raina	Malaysia	1-3 Nov. 2010 1-4 Nov. 2010	To participate in conference on “The 8th Globelics International Conference on Making Innovation Work for Society: Linking, Leveraging and Learning. Project workshop-system of Innovation for Inclusive Development (SIID).
21.	Sh. D.K. Abrol	Malaysia	1-3 Nov. 2010	To present a paper in The 8th Globelics International Conference on “Making Innovation Work for Society: Linking, Leveraging and Learning”
22.	Vipan Kumar	Essen, Germany	2-6 Nov. 2010	To participate in the conference “ Our common future conference ‘
23.	Dr. (Mrs) Kasturi Mandal	Japan	8-11 Nov. 2010	To take up the training programme on “ S&T Policy in Japan/Asian Countries, S&T foresight and its tools (incl. Work exercise), innovation”, held at National Graduate Institute for Policy Studies
24.	Sh. Avinash Kumar Kshitij	Japan	8-11 Nov. 2010	To take up the training programme on “ S&T Policy in Japan/Asian Countries, S&T foresight and its tools (incl. Work exercise), innovation”, held at National Graduate Institute for Policy Studies



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25.	Dr. (Mrs) Rajeswari S. Raina	Germany	23-24 Nov. 2010	To attend conference on “Sustainable Agriculture: A Challenge for the 21 <sup>st</sup> Century.
26.	Sh. Pradosh Nath	Viet Nam	22-23 Dec. 2010	To present paper in the “National Workshop in Linkages and Partnerships among Enterprises, R& D Institutions and Academia/Universities to Foster Innovation and Transfer of Technology”



- SEMINARS / CONFERENCES  
/ WORKSHOPS /  
TRAINING PROGRAMMES
- TUESDAY SEMINARS





### 3. SEMINARS/CONFERENCES/WORKSHOPS

Brainstorming workshop on  
**SUSTAINABLE NATIONAL VACCINE  
POLICY**

*Held at New Delhi, 4-5 June 2009.*

Two day brainstorming workshop on 'Sustainable national Vaccine Policy' held on 4-5<sup>th</sup> June 2009. The workshop was interdisciplinary in nature with participants from academia and the civil society including technologists, bench workers, medical doctors, public health researchers, government officials, lawyers and economists. As an outcome of this ICMR-NISTADS workshop, a unanimous draft policy document on 'Evidence-based national vaccine policy' was adopted and published in one of the best known medical journals in India - 'Indian Journal of Medical Research', which may lead to scholarly discourses on the subject.

One-day International Seminar on  
**GIS/GPS/RS APPLICATIONS IN RURAL  
DEVELOPMENT & PLANNING ACTIVITIES  
OF NISTADS DURING LAST 20 YEARS**

*Held at NISTADS, New Delhi, 20 June 2009*

A one-day International Seminar organised for 36 Foreign Delegates/Visitors of 'Regional Programme on Innovative and Best Practices and GIS Applications in Rural Development in India', conducted by National Institute of Rural Development (NIRD), Hyderabad (AP) during 16-24 June 2009. At NISTADS on 20th June 2009 during the seminar, special technical presentation was made on, 'GIS/GPS/RS Applications in Rural Development & Planning Activities of NISTADS during last 20 Years'. Maximum number of the international visitors of Regional Study Visit-cum-Training Programme delegates took keen interest and interacted keeping in view as how NISTADS experiences can be best utilized in their respective countries.

Workshop on  
**GREEN ECONOMY: CHALLENGES AND  
RESPONSES TO CHANGING CONDITIONS**

*Held at India International Centre, New Delhi during 14-15 December 2009.*

As a part of a project on "Prospects of Green Occupations in India with special emphasis on skilled professions" NISTADS organised a two day workshop on "Green Economy: Challenges and responses to changing conditions" on 14th-15th December, 2009 at India International Centre, New Delhi. The workshop aimed to focus on economic sectors with greening potential, such as water, energy etc and the skills response strategies towards current and future labour market demand for green collar workers at different levels, i.e. national, sectoral, regional, company and training provider. A discussion on the priorities of the country for mitigating and adapting to climate change in response to environmental degradation among researchers, academicians, bureaucrats and stakeholders was a part of the workshop. The workshop was broadly divided into two parts: Day I: Access to clean water: Water supply, Wastewater treatment, Governance; and Energy efficiency: Green buildings, Emerging clean technologies, energy supply. Day II: Environmental standards: Regulations, Management, Audit; and Other issues on new or existing green occupations

one day workshop on  
**PUBLIC ADMINISTRATION AND  
DEVELOPMENT**

*Held at NISTADS, New Delhi, 24 February 2010*

CSIR-NISTADS & Public Administration Delegation from USA (under the auspices of People to People Ambassador Programme) jointly organized the workshop.



NISTADS-UNESCO workshop on  
**POLICIES, INSTITUTIONS AND VALUES:  
THE ARCHITECTURE OF S&T FOR  
DEVELOPMENT IN SOUTH ASIA**

*Held at the India International Centre, New Delhi, 31 March 2010. Sponsored by IDRC, New Delhi and UNESCO, Bangkok*

There is an acute awareness in South Asia, of the potential development impacts that science and technology (S&T) can enable. The structure and content of S&T for development is a function of how S&T itself is shaped by policies, and the policy instruments that are shaped by S&T. Scientific advances in South Asia are being applauded along with resigned sighs about the context -of (almost inevitable) poverty, hunger and morbidity and now, the dreaded contribution from the region to worsening environments, climate variability and change. How can science gain a legitimate democratic voice in shaping policies and plans that will direct its own contents, people's access to its results, as well as society's capacities to utilize its knowledge outputs to sustainable economic and social ends? There is a need for research to address these issues. This planning workshop is meant to fine tune a research proposal, the outcome of which will help bridge some of the gaps and misconceptions (that simultaneously stretch and underpin) in the relationship between development policy and S&T.

Half day Workshop on  
**NEW & RENEWABLE ENERGY  
RESEARCH: CHALLENGES AND  
OPPORTUNITIES FOR NEW  
TECHNOLOGIES**

*Held at CSIR-NISTADS, New Delhi, 26 October 2010.*

NISTADS in collaboration with People to People Ambassador Programs, USA held a half day workshop on "New & Renewable Energy Research: Challenges and Opportunities for New Technologies" on 26 October 2010 at NISTADS, Pusa Gate, New Delhi. The delegates from "People to People Ambassador Program" were senior professionals from many parts of the world – from Canada, USA, Japan, Russia, Peru, Kuwait and Nigeria. From Indian side representatives from Research/ Academia

(NISTADS, NPL), Ministries (MNRE, MoF), and Corporate Sector (CEL) participated.

The workshop deliberated on following issues:

- Dialogue between various stakeholders on the issue
- Indian utilities' opinion and philosophy about the renewable energy and interface challenges with the grid
- Five-year plan and projects for renewable energy in which the Indian utilities are involved
- Activities of public sector R&D, Indian companies in research and development of renewable energy, particularly wind and solar power
- Wind and solar power projects in progress, including justification, payback period, and government subsidy
- Energy efficiency related issues

Special Lecture on  
**PERFECTIONIST LIBERALISM AND  
POLITICAL LIBERALISM**

*Held at NISTADS, New Delhi. 14 December 2010*

Dr. Tista Bagchi organised the Special Lecture by Martha Nussbaum, Ernst Freund Distinguished Service Professor of Law and Ethics, University of Chicago, with Professor Mushirul Hasan, Director-General, National Archives of India and former Vice-Chancellor, Jamia Millia Islamia, as Chairperson; NISTADS, 14 December 2010.)

Supra project Workshop on  
**INDIA S&T REPORT 2010'**

*Held at NISTADS, New Delhi, 2010*

NISTADS-STEPI joint conference on  
**INNOVATION SYSTEM AND S&T POLICY IN  
KOREA AND INDIA WITH SPECIAL FOCUS  
ON IT AND BT**

*Held at NISTADS, New Delhi, 11 January 2011.*

A joint conference in collaboration with Science and Technology Policy Institute (STEPI), South Korea on "Innovation system and S&T policy in Korea and India with special focus on IT and BT", was held on January 11, 2011. The objective of the conference was to bring together the experts



and policy makers from both the countries to discuss the emerging issues relating to information technology (IT) and Biotechnology (BT) for mutual benefit and understanding. The conference was intended to work out modalities and to promote academic cooperation and collaboration in Science & Technology (S&T) Policy studies between both countries. The highlights of the conference are:

- The IT industry and mobile ecosystem of Korea
- Innovation system and S&T Policy in Korea
- The overview of bio industry in Korea
- Achieving Low Carbon Growth: India's Policy Choice & Action
- Biotechnology, Pharmaceuticals and IPRs: the Challenge of TRIPs
- Rationalizing India's Information Policy

One-day Workshop on

**THE WIDER SIGNIFICANCE OF NATURE**

*Held at NISTADS, New Delhi, 13 January 2011.*

Dr. Tista Bagchi organised the workshop led by Akeel Bilgrami, Johnsonian Professor of Philosophy and Director, Heyman Center for the Humanities, Columbia University, New York, on 13 January 2011; the invited Panelists for the Workshop were Dr. Manidipa Sen, Centre for Philosophy, School of Social Sciences, Jawaharlal Nehru University, New Delhi; Dr. Rajeswari S. Raina, NISTADS; Dr. K. P. Shankaran, Department of Philosophy (and Convenor, Philosophical Society), St. Stephen's College, University of Delhi.

**TRAINING PROGRAMME CONDUCTED**

One day training programme on  
**STATISTICAL ANALYSIS SYSTEM (SAS)**  
*Held at NISTADS, New Delhi, 23 April 2009.*

Professional training programme in  
**SAS PROGRAMMING**  
*Organised jointly with SAS India, at NISTADS, New Delhi, 24-29 August 2009.*



## 4. TUESDAY SEMINARS

Date	Title	Speaker
28 April 2009	ICT for Development	Pradosh Nath Scientist, NISTADS
5 May 2009	An exercise in quantitative sociology: A case-study of underserving socially vulnerable groups	Dr. Gangan Prathap Director National Institute of Science Communication and Information Resources (NISCAIR), New Delhi
12 May 2009	Regional Rural Economic Regeneration Strategies in Afghanistan	Dr. Mohammad Rais Scientist, NISTADS
19 May 2009	Public Funding of Research and Technology Development	Shri Dinesh Abrol Scientist, NISTADS
26 May 2009	Globalization: An anti text	Prof. P.K. Basu Visva Bharti University, Shantiniketan, West Bengal
9 June 2009	Selling Medicine: Reflections on Health in Print Culture, 1900-1950	Dr Madhuri Sharma Scientist 'Fellow' NISTADS
16 June 2009	COLLNET- A Pathway to International Collaboration	Dr. Ramesh Kundra Scientist NISTADS
30 June 2009	Chemical Free arsenic removal from groundwater	Dr. Bhaskar Sen Gupta, Queen's Academic Ambassador and Senior Lecturer in Environmental Engineering, School of Planning, Architecture and Civil Engineering, Queen's University Belfast, UK
7 July 2009	The Evolving Ecology of Transnational Broadcasting in India	Dr Vibodh Parthasarathi Associate Professor (ex officio Coordinator-Research & Innovation) Centre for Culture, Media & Governance, Jamia Millia Islamia, New Delhi
7 July 2009	Introducing Science and Culture	Prof. S.C. Roy & Dr. S. Kar Editor Science & Culture, Kolkatta
14 July 2009	ERP Implementation as an Organisational Change Exercise: A Case Study of an R&D Organisation	Shri Deepak Saxena QHS Fellow Scientist NISTADS
21 July 2009	IPRs and Counterfeiting: Recent Developments	Dr Biswajit Dhar Director General Research and Information System for Developing Countries, New Delhi
28 July 2009	Energy Transition as a Global Challenge - The Case of Renewable Energy	Dr Anna Pegels Research Fellow German Development Institute



4 August 2009	ICT for Development	Shri Pradosh Nath Scientist, NISTADS
11 August 2009	IPRs and Agriculture	Dr S. Mauria Asstt. Director General (IPR and Policy) Indian Council of Agriculture Research, New Delhi
18 August 2009	Indigenous Agriculture and Sustainable Development - The case of the Apatanis	Dr L. Pulamte Scientist, NISTADS
1 September 2009	Participatory Appraisal of Agricultural Pest Management - The North East Experience	Dr. Bikramjit Sinha QHS Fellow Scientist NISTADS
8 September 2009	Science fails to INSPIRE youths?	Dr. Naresh Kumar Scientist NISTADS
22 September 2009	PMBP: The making of an Indian International Journal	Dr N. Raghuram Indraprastha University, Delhi
13 October 2009	Citation analysis of Indian science journals indexed by SCI-E	Dr. K.C. Garg Scientist, NISTADS
20 October 2009	Computer Science Publications from India: An Overview	Yogesh Suman Scientist, NISTADS
27 October 2009	The South African Telecommunications Sector – Poised for Change	Mr Sagie Chetty Senior Manager in Eskom (Electricity utility) South Africa
24 November 2009	Women's Participation for Rural Development in India	Dr. Pushpa Singh NISTADS
1 December 2009	The Exponential Curve of Science (Derek J. de Solla Price): Applications in Science and Technology Studies	Dr. Sujit Bhattacharya Scientist, NISTADS
8 December 2009	New vaccines in National Immunization Programme: Dilemmas & debates	Dr. Y. Madhavi Scientist, NISTADS
15 December 2009	Origin and Evolution of Clinical Trials & Contract Research	Mr Nirupam Bhattacharya Bioinformatics Institute of India, NOIDA
12 January 2010	Emerging Paradigm of Formal Ontology: Some Computational Applications	Mr Navjyoti Singh Scientist, NISTADS
19 January 2010	Of Biotrash and Techno-bling: Umbilical Cord Blood Banking in “New” Chennai	Dr Sarah Hodges History Department, University of Warwick, UK
2 February 2010	Walks and cycles	Dr Ranjan Srivastava QHS Fellow Scientist NISTADS



9 February 2010	Prospects of Institutional Modernization for National Innovation System in Russia	Dr Svetlana Kirdina Institute of Economics Russian Academy of Sciences, Moscow
2 March 2010	Access to Genetic Resources: Policies and Regulations	Dr Pratibha Brahma Principal Scientist National Bureau of Plant Genetic Resources (NBPGR) Pusa Campus, New Delhi-110012
4 May 2010	Where do we come from? The Portuguese recent economic evolution	Prof. Francisco José Lopes de Sousa Diniz Prof. Associado c/ Agregação- Associate Professor with Habilitation ECHS/DESG/CETRAD/UTAD, Av. Almeida Lucena 1, Portugal
18 May 2010	The role of small and medium-sized towns in rural development	Prof. Francisco José Lopes de Sousa Diniz Prof. Associado c/ Agregação- Associate Professor with Habilitation ECHS/DESG/CETRAD/UTAD, Av. Almeida Lucena 1, Portugal
25 May 2010	FDI in R&D in India: An overview	Dr. N. Mrinalini Scientist, NISTADS
15 June 2010	Role of Government, Industry and academia Interaction in Entrepreneurship in India	Mr Punit Saurabh PhD Scholar, VGSOM, IIT Kharagpur
15 June 2010	A healthcare Exchange Model System: Networked Model for Affordable, Accessible and Available Healthcare	Ms Parwati Das PhD Scholar, VGSOM, IIT Kharagpur
15 June 2010	Technology and Management Interventions in Healthcare	Ms Amrita PhD Scholar, VGSOM, IIT Kharagpur
29 June 2010	An outlook into energy consumption in large scale industries in India - A case study of steel, aluminium and cement	Ms. Monica Dutta QHS Fellow Scientist NISTADS
13 July 2010	Federated Governance and S&T in China	Dr. P. Banerjee Director, NISTADS
20 July 2010	Democratization of philosophy of technologies: Critical Theory of Technology	Dr. Arun Tripathi NISTADS
3 August 2010	Implementation in Undominated Strategies by Bounded Mechanisms	1. Saptarshi Mukherjee QHS Fellow Scientist NISTADS 2. Prof. Eve Ramaekers Centre for Operations Research and Econometrics (CORE) 3. Prof. Arunava Sen Indian Statistical Institute (ISI Delhi)



10 August 2010	Visual hermeneutics and cultural technologies	Mr. Michael Funk Department of Philosophy of Technology Dresden University of Technology Germany
24 August 2010	Understanding Innovation in Indigenous Science: The Case of Jhum in Nagaland	Abhinandan Saikia Ph.D Scholar Centre for Studies in Science Policy (SSS), Jawaharlal Nehru University, New Delhi
31 August 2010	The Agrarian Crisis	Mr Hardip Grewal NISTADS
7 September 2010	Artificial Neural Networks: Application to Astronomical Spectra	Prof. Ranjan Gupta IUCAA, Pune
14 September 2010	Sustainable Energy Utility Design: An Alternative Energy Model	Dr Ashok Kumar Scientist, NPL, New Delhi
21 September 2010	Growth of Indian Scientific Societies	Dr B K Sen Scientist (Retd.), NISCAIR, New Delhi
28 September 2010	The Birth of Psychology in India	Dr. Amit Ranjan Basu Independent Researcher & Consultant, Social Psychiatry Consulting Trainer; AIDIAS, Kolkata
5 October 2010	Crucial Factors in Technology Transfer from Government R & D institutions to SMEs: Findings from case studies	Mr. Yogesh Suman Scientist, NISTADS
12 October 2010	Water Policy and S&T	Prof. Ramaswamy R. Iyer Honorary Research Professor Centre for Policy Research, New Delhi
16 November 2010	Agricultural Innovation Systems and Exclusion - India's Drylands	Dr. Rajeswari Sarala Raina Scientist, NISTADS
7 December 2010	Problem of the Mental Content	Ms. Ananya Barua Ph.D. Research Scholar Jawaharlal Nehru University, New Delhi
14 December 2010	Perfectionist Liberalism and Political Liberalism	Prof. Martha Nussbaum, Ernst Freund Distinguished Service Professor of Law and Ethics, The Law School and the Department of Philosophy, University of Chicago, USA
4 January 2011	Regionalism and the multilateral trading system: A changing relationship?	Dr. Theresa Carpentar Executive Director Centre for Trade and Economic Integration at the Graduate School Institute of International and Development Studies, Geneva
18 January 2011	Critical Perspectives on China's Economic Transition	Prof. Anthony P. D'Costa Professor of Indian Studies and Research Director, Asia Research Centre, Copenhagen Business School, Dalgas Have 15, DK-2000 Frederiksberg, Denmark



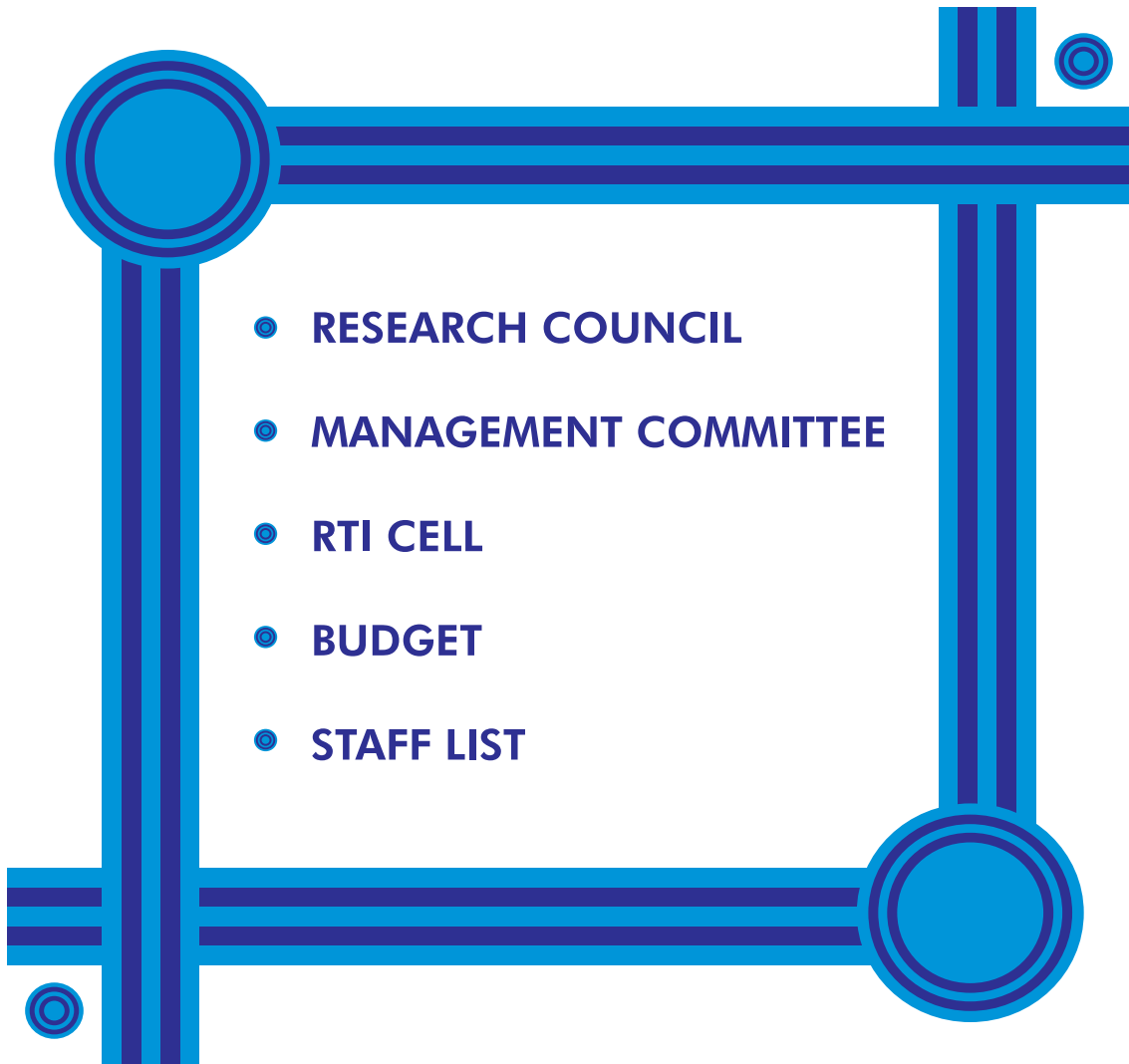
25 January 2011	A New Triumvirate? Japan, India, and China as Innovation Partners	Prof. Anthony P. D'Costa Professor of Indian Studies and Research Director, Asia Research Centre, Copenhagen Business School, Dalgas Have 15, DK-2000 Frederiksberg, Denmark
1 February 2011	Role of Spirituality and medical science in prevention and treatment of diseases	Dr T. Gupta MBBS, DHA,DNB(Radio-diagnosis), Senior Chief Medical Officer In-charge (SAG), Central Government Health Scheme (Govt. of India), Delhi
1 March 2011	Investigating the Role of Policies, Strategies, and Governance in China's Emergence as a Global Nanotech Player	Dr Sujit Bhattacharya, Dr Madhulika Bhati and Shri Avinash Prasad Kshitij Scientists, NISTADS
<b>OTHER LECTURES</b>		
2 September 2009	Economic Experiments to Evaluate Markets for Pollution Trading	Dr. G. Ghosh University of Ruhr, Germany
16 September 2009	Social Impact of Arsenic Mitigation Programme in India With the help of Low Cost Technology Developed by NMRL, DRDO Govt. of India	Dr. Pralay O.Basu, Founder Secretary and Director, Save The Environment (NGO), Kolkata
8 October 2009	Inter-state differences in consumption: Analytical insights from NSSO data	Prof. Bimal Roy, Indian Statistical Institute, Kolkata
8 October 2009	Waste Management	Prof. Syed E. Hasan, Professor of Gesocience & Director, Center for Applied Environment Research University of Missouri, USA
4 November 2009	Markov looks at Harappa	Dr. Ronojoy Adhikari Institute of Mathematical Sciences, Chennai
4 November 2009	The Archaeology of the Indus Script	Dr. Bryan Wells Institute of Mathematical Sciences, Chennai
6 November 2009	Soft Computing and Machine Intelligence	Prof. C. A. Murthy Indian Statistical Institute, Kolkata
9 November 2009	Technological empowerment of the PRI: Problems & prospects	Dr. Rangan Dutta, IAS (Retd.), Scientific Consultant Office of PSA to the Government of India, New Delhi
19 November 2009	Knowledge Systems: Their Genesis, Conflicts & Relevance Today	Prof. D P Agrawal, FNASC Lok Vigyan Kendra, East Pokharkhali Almora (Uttarakhand)



29 January 2010	Science and Technology in Global South	Prof B K Pattnaik IIT Kanpur
7 April 2010	Culture of Embodied Skills in Human-Computer Interaction How Embodied Users deal with Embedded Computers	Mr Arun Kumar Tripathi Research Assistant, Department of the Philosophy of Technology Institute for Philosophy , Dresden University of Technology (Germany)
10 June 2010	Biolinguistics, human cognition and bioethical concern	Prof. Tista Bagchi Department of Linguistics, University of Delhi
6 August 2010	Regulation and Technological Change in Telecommunication	Prof. A Chaudhary I.I.M. Calcutta
19 August 2010	The (Im)possibility of Bridging the 'Three Cultures'	Dr Anup Dhar Fellow, Centre for the Study of Culture and Society (CSCS), Bangalore
26 August 2010	From Jugaad to Systematic Innovation: The Challenge for India	Prof. Rishikesh T. Krishnan Professor of Corporate Strategy; Indian Institute of Management Bangalore; Bannerghatta Road, Bangalore
19 November 2010	The new world of nanotechnologies: between promises, fears and debates	Dr Jacques Arnould Centre National d'Etudes Spatiales (CNES) – Ethics Advisor to the President of CNES, France
7 January 2011	Application of Mathematical Modelling & SNA	Prof. J. Ghosh Management Science and Information System George Mason University, Virginia, USA
13 January 2011	The Wider Significance of 'Nature'	Akeel Bilgrami Johnsonian Professor of Philosophy and Director, Heyman Center for the Humanities Columbia University, New York, USA  Panelists/Commentators: Dr. Manidipa Sen, Centre for Philosophy, Jawaharlal Nehru University, New Delhi Dr. Rajeswari S. Raina, NISTADS Dr. K. P. Shankaran, Department of Philosophy, St. Stephen's College, University of Delhi
17 February 2011	Contending European Agendas for Agricultural Innovation	Les Levidow Open University Milton Keynes MK7 6AA, UK,
18 February 2011	The History of the Different Models of Technical Education in India- The early years	Prof. Samir Kr. Saha Professor, Mechanical Engineering Department Jadavpur University, Kolkata



9 March 2011	Absorptive Capacity, Firm Capabilities & Destination in Learning by Exporting: Fresh Evidence from Indian Pharmaceutical Producers, 1994-2007	Dr Chirantan Chatterjee Carnegie University Mellon, USA
24 March 2011	Innovation in Finance to Finance Innovation: supporting pro-poor entrepreneur-based innovation in India	Dr Lina Sonne Assistant Professor Azim Premji University, Bangalore
30 March 2011	Multinational Enterprises and R&D in Developing Countries: Opportunities and Limitations	Prof. Rajnees Narula Professor of International Business Regulation Director, John H. Dunning Centre for International Business Henley Business School University of Reading, UK



- **RESEARCH COUNCIL**
- **MANAGEMENT COMMITTEE**
- **RTI CELL**
- **BUDGET**
- **STAFF LIST**





## 5. RESEARCH COUNCIL

### Research Council for 2007-2010

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Former Director General, CSIR &  
Secretary, DSIR  
Vikram Sarabhai Professor & Honorary  
Emeritus Scientist  
National Physical Laboratory  
K.S. Krishnan Marg  
New Delhi-110012

#### **Members**

##### **Dr. Anil K. Gupta**

Kasturbhai Lalbhai Chair of Entrepreneurship  
Indian Institute of Management  
Vastarpur, Ahmedabad-380015

##### **Prof. Ashok Chandra**

Principal Advisor, International Management  
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##### **Shri R. Rajamani**

Former Secretary, Ministry of Environment &  
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8-2-585/A/1 Road No. 9,  
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##### **Prof. Sushil Khanna**

Professor, Strategic Management  
Indian Institute of Management Calcutta, Joka  
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Kolkata-700027

##### **Dr. Prasanna Hota**

Former Secretary, Ministry of Health &  
Family Welfare  
11, Golf Links, New Delhi-110003

#### **Member (Agency Representative)**

##### **Shri Anuj Sinha**

Scientist G, Department of Science and  
Technology  
Technology Bhawan, New Mehraul Road  
New Delhi-110 016

#### **DG's Nominee**

##### **Dr. H.R. Bhojwani**

Adviser to Minister (S&T & ES), Council of  
Scientific & Industrial Research  
Anusandhan Bhawan, Rafi Marg  
New Delhi-110 001

#### **Sister Lab**

##### **Dr. Gangan Prathap**

Director, National Institute of Science &  
Communication & Information Resources  
K.S. Krishnan Marg, New Delhi-110 012.

#### **Director**

##### **Dr. P. Banerjee**

Director,  
National Institute of Science Technology &  
Development Studies  
K.S. Krishnan Marg,  
New Delhi-110 012.

#### **Permanent Invitee**

Head or his representative  
R&D Planning Division, CSIR  
Council of Scientific & Industrial Research,  
Anusandhan Bhawan, Rafi Marg  
New Delhi-110001

##### **Dr. Naresh Kumar**

Head R&D Planning Division, (RDPD)  
Council of Scientific & Industrial Research,  
Anusandhan Bhawan, Rafi Marg  
New Delhi-110001

##### **Dr. Chandra Gupta**

Scientist  
R&D Planning Division, (RDPD)  
Council of Scientific & Industrial Research,  
Anusandhan Bhawan, Rafi Marg  
New Delhi-110001

**Research Council for 1 April 2010 to 31 March 2013****Chairman****Prof. Ashok Chandra**

Principal Advisor  
International Management Institute, India  
B-10, Qutab Institutional Area, Tara Crescent  
New Delhi-110 016

**Agency Representative****Shri S.S. Kohli**

Scientist F  
Department of Science & Technology  
Technology Bhawan, New Mehrauli Road  
New Delhi 110016

**Members****Prof. Kanchan Chopra**

Former Director  
IEG, Y-155, Regency Park-II  
DLF Phase IV, Gurgaon-122002

**DG Nominee****Dr. H.S. Maiti**

Former Director, CGCRI  
Sr. Advisor to DG  
Council of Scientific & Industrial Research  
Anusandhan Bhawan, 2 Rafi Marg  
New Delhi 110001

**Prof. Satish Jain**

Prof. Of Economics  
Centre for Economic Studies & Planning  
School of Social Sciences  
Jawahar Nehru University, New Delhi 110087

**Sister Laboratory****Dr. S. Gangopadhyay**

Director  
Central Road Research Institute  
P.O. CRRI, New Delhi 110020

**Dr. Ajit Ranade**

Chief Economist  
Aditya Birla Management Corporation Ltd.  
Aditya Birla Group. CII, S.K. Ahlre Marg,  
Worli  
Mumbai 400030

**Cluster Director****Dr. Gangan Prathap**

Director  
National Institute of Science Communication  
and Information Resources  
Dr. K.S. Krishnan Marg  
New Delhi 110012

**Prof. J. Chatterjee**

Professor, IME Deptt.  
Indian Institute of Technology  
Kanpur 208016

**Director****Dr. P. Banerjee**

Director  
National Institute of Science, Technology and  
Development Studies  
Dr. K.S. Krishnan Marg  
New Delhi 110012

**Prof. Sugata Marjit**

Director  
Centre for Studies in Social Sciences  
10 Lake Terrace, Kolkata 700029

**Dr. Rangan Dutta**

Scientific Consultant  
Office of PSA, 318 Vigyan Bhawan Annexe  
Maulana Azad, New Delhi 110001

**Permanent Invitee****Head or his Nominee**

Planning & Performance Division  
Council of Scientific & Industrial Research  
Anusandhan Bhawan, 2 Rafi Marg  
New Delhi 110001

**Dr. Sandip K. Basu**

Professor of Eminence  
National Institute of Immunology  
Aruna Asaf Ali Marg  
New Delhi 110067



## 6. MANAGEMENT COMMITTEE

### Management Committee for 2009-2010

#### **Chairman**

Dr. P. Banerjee  
Director, NISTADS

Dr. (Ms.) Tabassum Jamal  
Scientist, NISTADS

#### **Members**

Sh. S.K. Rastogi  
Acting Director, NISCAIR

Ms. Sandhya Wakdikar  
Scientist, NISTADS

Dr. K.C. Garg  
Scientist, NISTADS

Sh. Anil Sharma,  
T.O., NISTADS

Dr. Satpal Sangwan  
Scientist, NISTADS

Sh. Sukh Ram  
COFA, NISTADS

Sh. P.R. Bose  
Head PME, NISTADS

Sh. Rameshwar Dass  
COA, NISTADS

### Management Committee for 1 January 2010 to 31 December 2011

#### **Chairman**

Dr. P. Banerjee  
Director, NISTADS

Dr. Vipin Kumar  
Scientist, NISTADS

#### **Member**

Dr. Gangan Prathap  
Director, NISCAIR

Sh. P.R. Bose  
Head, PME, NISTADS

Dr. Subhan Khan  
Scientist, NISTADS

Sh. Rammi Kapoor  
Tech. Officer, NISTADS

Dr. N. Mrinalini  
Scientist, NISTADS

Sh. Hari Kumar  
F & A.O., NISTADS

Dr. Naresh Kumar  
Scientist, NISTADS

Sh. Ramemshwar Dass  
COA, NISTADS



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## 7. RIGHT TO INFORMATION ACT (RTI) CELL

### **For 2009-10**

1. Dr. K.C. Garg, Appellate Authority
2. Shri Rammi Kapoor, PIO
3. Shri S.A. Nabi, APIO

### **For 2010-11**

1. Dr. K.C. Garg, Appellate Authority (1.4.2010 to 30.9.2010)
2. Dr. Mohd. Rais, Appellate Authority (1.10.2010 onward)
3. Shri Rammi Kapoor, PIO
4. Shri S.A. Nabi, APIO



## 8. Budget

<b>Year</b>	<b>Budget (Rs. in lakhs)</b>	<b>E.C.F. (Rs. in lakhs)</b>
2006-2007	<b>619.4</b>	<b>14.67</b>
2007-2008	<b>975.68</b>	<b>80.76</b>
2008-2009	<b>1065.1</b>	<b>125</b>
2009-2010	<b>1109.38</b>	<b>102.66</b>
2010-2011	<b>1254.40</b>	<b>105.93</b>



## 9. STAFF LIST

### DIRECTOR

Dr. P. Banerjee

Shri Yogesh Suman

Mrs. Sandhya Wakdikar

### SCIENTIFIC STAFF

#### Group IV (6) Scientist G

Dr. A.K. Mukhopadhyay (*voluntary retirement on 16.12.2009*)

Shri P. Nath

Shri Dinesh Abrol

Dr. M.U. Khan (*retired on 31.7.2009*)

Dr. V.K. Gupta (*retired on 30.6.2009*)

Dr. Subhan Khan

Dr.(Ms.) S. Visalakshi (*retired on 31.7.2009*)

Dr. (Ms.) N. Mrinalni

Dr. K.C. Garg

#### Group IV(2) Scientist C

Dr. (Ms.) Madhulika Bhati

Dr. Vikramjit Sinha (*joined on 1.12.2010*)

#### Group IV(1) Scientist B

Shri Indranil Biswas (*transferred on 31.7.2010*)

Shri Avinash Prasad Kshitij

Dr. Kasturi Mandal

#### Group IV(5) Scientist F

Ms. M.P.K. Nagpal (*retired on 31.1.11*)

Shri Gauhar Raza (*transferred on 9.8.2010*)

Shri Navjyoti Singh (*voluntary retirement on 07.02.11*)

Shri A.K. Mathur (*retired on 31.3.11*)

Dr.P.V.S. Kumar (*transferred on 19.8.2010*)

Shri S.K.Dhawan

Dr. Ramesh Kundra (*retired on 30.6.2009*)

Dr. Irfan Habib (*resigned on 8.3.2010*)

Shri P.R. Bose

Dr. (Ms.) Kavita Mehra

Dr. Satpal Sangwan

Dr. (Ms.) G.D. Sandhya

Mrs. Anuradha Singh

Dr. L.P.Rai

Dr. (Ms.) Tabassum Jamal

Dr. Sanjib Pohit

#### Fellow (QHS)

Ms. Madhuri Sharma (4.5.2009 to 1.7.2009)

Shri Deepak Kumar Saxena (16.1.2009 to 30.10.2009)

Sudhanshu Verma (8.5.2009 to 6.11.2009)

Shri Rakesh Bahl (22.4.2009 to 20.10.2009)

Shri Shashank Singh (7.8.2009 to 20.7.2010)

Ms. Pritibha Singh (30.11.2009 to 2.8.2010)

Dr. Ranjan Srivastava (22.7.2009 to 27.8.2010)

Dr. Bikramjit Sinha (8.4.2008 to 30.11.2010)

Dr. Kirti Joshi (28.2.2008 to 28.2.2011)

Ms. Sreevani (18.8.2009 to 30.3.2011)

Shri Saptarishi Mukherjee (22.3.2010 to 14.3.2010)

Mr. Swarup Chatopadhyay (10.8.2009 to 30.4.2011)

Dr. D. Gangopadhyay (*joined on 5.1.2009*)

Dr. Taposik Banerjee (*joined on 17.7.2009*)

Ms. Monica Dutta (*joined on 5.2.2010*)

Dr. Anindya Chaudhuri (*joined on 20.10.10*)

Ms. Papiya Ghosh (*joined on 14.3.2011*)

Ms. Niharika Sahoo (*joined on 21.3.2011*)

Mr. Ritwik Chatterjee (*joined on 21.3.2011*)

Ms. Aditi Jamalpuria (*joined on 1.4.2011*)

#### Group IV(4) Scientist E-II

Shri V.K. C. Sanghi

Dr. Sujit Bhattacharya

Dr. Mohammed Rais

Dr.(Ms)Y. Madhavi

Dr. (Ms) Neelam Kumar

Dr. L. Pulamte

Dr.(Ms.) S. Rajeswari

Dr. Naresh Kumar

Dr. Ram Samar Singh

#### Visiting Scientists

Dr. Milindo Chakarborty (14.5.2008 to 18.1.2009)

Prof. Tista Bagchi (*joined on 5.8.2010*)

#### Group IV(3) Scientist E-I

Mrs. Nirmal Haritash (*retired on 31.8.2009*)

Shri Vipran Kumar

### TECHNICAL STAFF

#### Group III(6)

Shri S.C. Sharma

Shri Surjit Singh (*transferred on 7.10.2010*)

Shri Rammi Kapoor

Shri Anil Sharma

Shri Bharvi Dutt

**Group III(5)**

Dr. Anju Chawla  
Shri S.A. Nabi  
Shri S.K. Prasad  
Shri A.K. Bhardwaj  
Shri Kashmiri Lal  
Ms. Praveen Sharma  
Shri Suresh Kumar  
Ms. Renu Jethi

**Group III(4)**

Shri Vajendra Joshi  
Ms. Mala Bahl

**Group III(3)**

Shri Avinash Verma

**Group II (4)**

Ms. Shaheen Syed  
Shri Karanvir Singh  
Shri Suresh Chander  
Shri Ajay Sheopuri (*transferred on 11.10.2010*)  
Dr. (Ms.) Anita Bali  
Ms. Tara Verma  
Shri N.K. Prashar  
Shri J.S. Narula  
Shri R.K. Nagarwal

**Group II(3)**

Shri Bharat Lal

**Group I(4)**

Shri S.P. Singh (*retired on 31.7.2009*)

**Group I(3)**

Shri Madan Kumar  
Shri Dhiraj Pal  
Shri Ram Suphal  
Shri K.C. Joshi  
Shri Shiv Singh Negi  
Shri S.C. Tyagi  
Shri Sunder Lal

**Group I(2)**

Shri Murli Dhar

**ADMINISTRATIVE STAFF****Controller of Administration**

Shri Rameshwar Dass (*retired on 31.07.10*)

**Administrative Officer**

Shri K.P. Sharma (*joined on 13.8.2010*)

**Stores & Purchase Officer**

Shri Ramesh Chander (*transferred on 5.11.2009*)  
Shri Brijesh Kumar (*transferred on 10.11.2010*)

**Controller of Finance & Accounts**

Shri Sukhram (*retired on 28.2.2010*)

**Finance and Accounts Officer**

Shri Hari Kumar (*joined on 5.4.2010*)

**Section Officer**

Ms. Anita  
Ms. Bhawna Guglani (*transferred on 26.2.10*)  
Shri Vijay Kr. Pandey (*resigned on 10.11.2010*)

**Section Officer (F&A)**

Shri Anil Kumar Sharma

**Section Officer (S&P)**

Shri S.P. Prabhakar

**Private Secretary**

Ms. Mercy Joseph  
Ms. Neeta Sahney

**Assistant (Gen) Grade-I**

Shri Dharam Singh  
Shri Anil Kumar  
Ms. Rajinder Kaur  
Shri Manish K. Mehta  
Shri Prabhakar Ojha (*relieved on 31.08.10 to join JPC as SDM*)  
Shri N.A. Khan  
Shri Pretesh Kumar  
Mohd. Idrees (*w.e.f. 21.5.2010*)

**Assistant (F&A) Grade-I**

Ms. Kavita Bellani  
Shri Anisur Rehman

**Assistant (S&P) Grade - I**

Ms. Indira Jain  
Shri R.K. Mago

**Senior Stenographer**

Mrs. Neerja Rawal (*transferred on 30.4.2009*)  
Ms. Krishna Verma  
Shri Yogender Kumar (Hindi)  
Shri Ved Prakash (Hindi)  
Shri Pukh Raj (Hindi)  
Shri Ashok Kumar  
Mrs. Sunita Arora (*w.e.f. 20.9.10*)



**Junior Stenographer**

Ms. Inderjeet Kaur  
Shri Mohan Lal  
Ms. Dolly Chaudhary

**Junior Hindi Translator**

Shri Veer Pal Singh

**Assistant (Gen) Grade-II**

Shri Surinder Pal

**Assistant (F&A) Grade-II**

Shri M.S. Rawat

**Assistant (Gen) Grade-III**

Shri Samir Mukherjee (*transferred on  
31.8.2009*)

**Assistant Grade- III(S&P)**

Shri Kanchan Singh Negi

**Assistant Grade- III (F&A)**

Shri Narender Singh

**Staff Car Driver**

Shri Tara Chand

**Record Keeper**

Shri Harbans Singh

**Daftry**

Shri Rajnath

Shri R.N. Kumbhkar (*transferred on 30.04.10*)

**Peon**

Shri Mohd. Kamrul (*joined on 30.11.2009*)