RIGHT TO INFORMATION

VISION 2020

1961-2011

50

CSIR IN THE NORTH-EAST
50TH YEAR OF DEDICATED SERVICE

CSIR- North East Institute of Science & Technology, Jorhat

Connecting Science & Technology For A Brighter Tomorrow

PREAMBLE

On the basis of S & T strength, the world can be classified into four groups: S&T-advanced countries, S&T-proficient countries, S&T-developing countries and S&T-lagging countries. India, with its scientific and technological strength in several research areas and a growing S&T capacity in all aspects, including personnel, infrastructure, investment, institutions, and regulatory framework is presumably an S&T proficient country. However, based on these parameters, a considerable part of India may be still classified into S & T developing and some parts into S & T lagging group. Evidently North Eastern region belongs to these groups. Although at independence, the North Eastern Region was amongst the most prosperous regions of India, today the region is lagging far behind in most important parameters of growth.

The Special Committee of the Governing Body of Council of Scientific & Industrial Research (CSIR), New Delhi way back on September 15, 1954 recorded that "There were special problems of industry and raw materials in Assam which required investigation. The inadequacy of communication between Assam and other parts of India made it necessary to put up a separate laboratory in Assam". Consequently, on March 18, 1961, Prof. Humayun Kabir, the then Minister of Scientific Research & Cultural Affairs, Govt. of India laid the Foundation stone of Regional Research Laboratory (RRL) presently North East Institute of Science & Technology (NEIST) at Jorhat, Assam, an ISO 9001:2008 organization and one of the premier multidisciplinary laboratories under the Chemical Sciences Group of the CSIR, New Delhi.

The objective of the laboratory was to develop indigenous technologies by utilizing the natural wealth of NE Region to develop the economy, industry and society and also to function as a link between the state organizations and other national laboratories.

The charter of the institute is - (i) effective use the immense material resources of the north eastern region and to provide R&D inputs and to develop the economy of the north eastern region in particular and the country in general, (ii) to help this region in solving such problems of research as are confronting it, (iii) to take up long range problems the solution of which would help the economic development and industrialization of the north eastern region in particular and the country in general and (iv) to act as a link between the state organizations and other national laboratories on problems requiring specialized attention.

As per the declared 'Quality Policy', CSIR-NEIST Jorhat is committed to achieve excellence with quality outputs in R&D in frontier areas, professional consultancy and contract services in Chemical, Bio and allied sciences to be offered to customers in public and private domains at national and international levels.

ACHIEVEMENTS OF CSIR-NEIST, JORHAT

The institute has developed more than 100 technologies of which about 60% are commercial success and have culminated in setting up of various industries throughout the country different areas listed below.

- Agro-technology
- Building Materials
- Specialty and Coated Papers
- Biological Sciences
- Oil Field Chemicals

Areas of expertise

- Natural Products Chemistry
- Drug and Drug Intermediates
- VSK Cement Plant Technology
- Agro-technologies
- Petroleum Microbiology
- Microbial Technologies
- Crude Oil Transportation
- Paper and Paper Products
- Ores and Minerals
- Coal Chemistry and Utilization
- Nano Materials
- Catalysts
- Ecology and Environmental Studies
- Geotechnical Investigations
- Foundation Design Engineering
- Soil and Building Materials
- Earthquake seismology studies etc.
- Beneficiation Chemicals

Patent commercialization

- Total no. of CSIR-NEIST patents: 292
- Total no. of patented technology transferred: 52
- Percentage of patented technology transferred: 17.81%
- Total no. of patents successfully commercialized (in production): 34
- Percentage of patents successfully commercialized (in production): 11.64%

Social contribution and impact

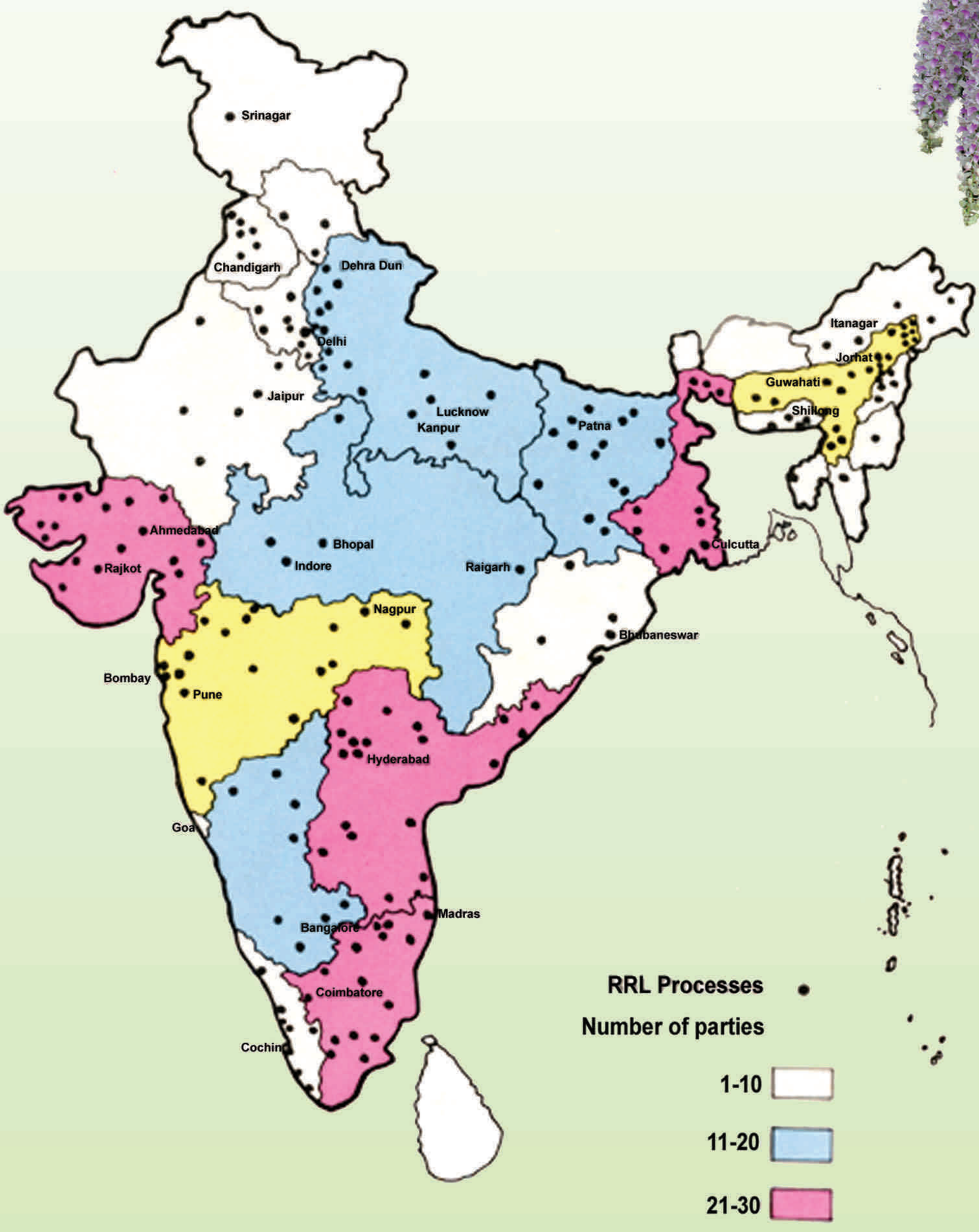
- Cultivation and Extraction of oil from Medicinal, Aromatic and Economic Plants
- Agro-technologies for mushroom cultivation generated employment for about 30,000 persons in the rural sector in North-East India

Research Projects undertaken

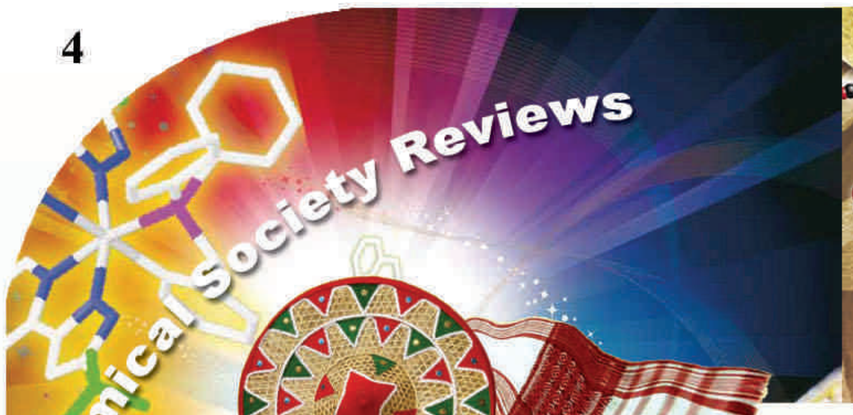
- 106 Projects : contract value : ₹ 7.342 crore : 9th Five Year Plan Period (1997- 2002).
- 114 Projects : contract value : ₹ 17.535 crore : 10th Five Year Plan Period (2002-2007).
- 91 Projects : contract value : ₹ 51.669 crore : 11th Five Year Plan Period (2007-2012).

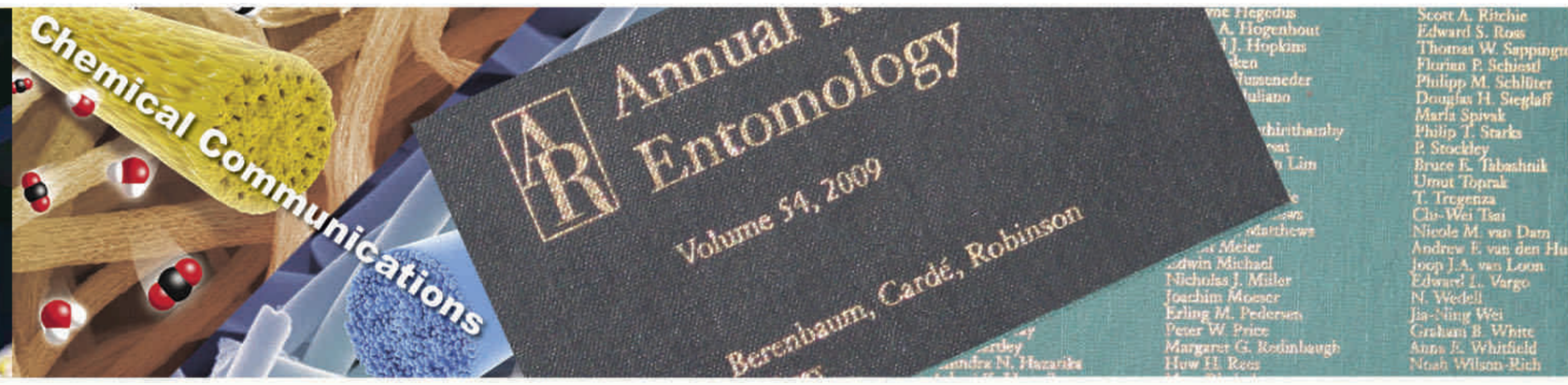
The annual turnover of the products produced with CSIR-NEIST (formerly RRL) technologies within the country is estimated to be about ₹150 crores.

CSIR-NEIST IN NATION BUILDING



- Generated more than 100 technologies with 60% commercial success culminating in setting up of Industries by more than 400 units throughout the country.
- The estimated annual turnover of the products produced with CSIR-NEIST technologies within the country is estimated to be more than ₹150 crore.





TOP TEN TECHNOLOGIES OF RRL / CSIR-NEIST JORHAT

Sl.No.	Technology	No. of entrepreneurs/ beneficiaries
1	Agropractices for Medicinal and Aromatic Plants like Citronella, Lemon Grass, Patchouli, Palmarossa etc.	25000 families
2	Mushroom Cultivation	30000 families
3	Paper Slate	83 parties
4	Vertical Shaft Kiln-Mini Cement Plant	39 parties
5	Water Filter Candle	36 parties
6	Low Dust Chalk Pencil	36 parties
7	Plastic Slate	22 parties
8	Silica Gel	12 parties
9	Thermographic Paper/Heat Sensitive Paper/ECG Paper	11 parties
10	Reclamation of crude oil contaminated sites	6 sites of ONGCL

TOP TEN ARTICLES OF RRL / CSIR-NEIST JORHAT

D. Chaturvedi, A. Goswami, P. P. Saikia, N. C. Barua and P. G. Rao, Artemisinin and its derivatives: a novel class of anti-malarial and anti-cancer agents, Chemical Society Reviews, 2010, 39(2), 435-454 — Impact Factor 26.583

L. K. Hazarika, M. Bhuyan and B. N. Hazarika, Insect pests of tea and their management, Annual Review of Entomology, 2009, 54, 267-284 — Impact Factor 12.180

D. K. Dutta and B. Deb, Potential rhodium and ruthenium carbonyl complexes of phosphine-chalcogen (P-O/S/Se) donor ligands and catalytic applications, Coordination Chemistry Review, 2011, 255 (15-16), 1686-1712 — Impact Factor 10.018

R. Sarma and D. Prajapati, Indium catalyzed tandem hydroamination /hydroalkylation of terminal alkynes, Chemical Communication, 2011, 47, 9525-9527 — Impact Factor 5.787

I. Kaminska, M. R. Das, Y. Coffinier, J. Niedziolka-Jonsson, P. Woisel, M. Opallo, S. Szunerits and R. Boukherroub, Preparation of graphene/ tetrathiofulvalene nanocomposites switchable surfaces, Chemical Communication, Article in Press 2011, DOI: 10.1039/c1cc15215g — Impact Factor 5.787

R. Sarma and D. Prajapati, Microwave-promoted efficient synthesis of dihydroquinazolines, Green Chemistry, 2011, 13(3), 718-22 — Impact Factor 5.472

B. J. Borah, D. Dutta, P. P. Saikia, N. C. Baruah and D. K. Dutta, Stabilization of Cu(0)-nanoparticles into the nanopores of modified montmorillonite: An implication on catalytic approach for "Click" reaction between azides and terminal alkynes, Green Chemistry, Article in Press 2011, DOI:10.1039/C1GC16021D — Impact Factor 5.472

S. Dasgupta, S. Bhattacharya, S. Maitra, D. Pal, S. S. Majumdar, A. Datta and S. Bhattacharya, Mechanism of lipid induced insulin resistance: Activated PKC is a key regulator, Biochimica et Biophysica Acta - Molecular Basis of Disease, 2011, 1812 (4), 495-506 — Impact Factor 5.211

R. Khan and M. Dhayal, Chitosan /polyaniline hybrid conducting biopolymer base impedimetric immunosensor to detect Ochratoxin-A, Biosensors and Bioelectronics, 2009, 24(6), 1700-1705 — Impact Factor 5.361

R. Kundu, S. Desgupta, A. Biswas, S. Bhattacharya, B. C. Pal, S. Bhattacharya, P. G. Rao, N. C. Barua, M. J. Bordoloi and S. Bhattacharya, Carlinoside reduces hepatic bilirubin accumulation by stimulating bilirubin-UGT activity through Nrf2 gene expression, Biochemical Pharmacology, 2011, 82(9), 1186-1197 — Impact Factor 4.889

AWARD

- The Federation of Indian Chambers of Commerce & Industry (FICCI) Award in 1982
- The P C Goswami Award thrice in 1984, 2000 and 2002
- Invention Promotion Award of National Research Development Corporation of India in 1985.
- FICCI Award in 1985 for Rural Development activities
- Fellow of the National Academy of Science, India - 1987, 2005, 2010
- K K Baruah Award of Assam Science Society in 1989
- BM Das Memorial Award in 1990, 1992, 1993, 1995, 1997, 1998, 1999, 2001 and 2002
- CSIR Young Scientist Award in 1995
- Fellow of the Indian Science Academy, 1997
- IIChE-Herdilia Award in 2001
- B P Poddar Memorial Award in 2003-04
- Prof H.C. Goswami Award in 2003-06
- AMI Louis Pasteur Award in 2004
- CRSI Bronze Medal in 2005 and 2007
- IIChE-NOCIL award in 2005
- Rohini Kumar Barua and Durlabh Deka Memorial Award in 2006
- Dr JN Baruah Memorial Science Award in 2006
- Life Time Education Achievement Award in 2006
- HC Dube Young Scientist 2007
- Three Most Cited Paper 2005-2008 Awards of Tetrahedron in 2008
- Best International Paper Presentation Award 'Peravadhunulu Award of IIME in 2008
- Young Scientist Award (2008-2009) in the area of "Chemical and Pharmaceutical sciences" by the Govt. of Uttar Pradesh.
- CSIR Technology Award for Innovation 2010
- Young Engineer 2010 Award by Senior Engineers Forum of Greater Guwahati.
- CSIR Technology Award for Life Sciences 2011

OUTCOME OF VISION 2010

Indigenous Resources and Traditional Knowledge

- Prepared 970 recipes out of 500 plant species for treatment of various disease symptoms and provided for inclusion in the Traditional Knowledge Digital Library.
- Developed technologies like Green tea polyphenol, Process for conversion of Nicotinic acid to 6-hydroxynicotinic acid, Low dust chalk pencil, Muga heal, Herbal incense sticks with mosquito repellent properties, Bacterial formulation for Crop Enhancement and Yield Improvement. An improved strain of Lemongrass named as BLI-ARUN and Agro-practice on Patchouli (Pogostemon cablin) developed.
- Novel herbal medicines like 'Anti-fungal' and 'Anti-arthritis' were developed.
- Mushroom cultivation techniques were propagated with several non-conventional substrates. More than 40 training programmes and awareness camps were conducted in various places of NE region benefiting over 1000 farmers/growers. More than 200 Mushroom spawn packets were distributed free of cost to the beneficiaries. Further 2 (two) Spawn production units have been installed in Mizoram and 1 (one) in Arunachal Pradesh.

Efforts were made to increase the cultivation of aromatic plants like Citronella, Lemongrass and Patchouli through marginal farmers and social entrepreneurs. More than 30 training programmes were conducted in various places of NE attended by nearly 1000 farmers/growers. Planting materials (more than 6 lakh Citronella and Lemongrass slips) were distributed to the growers for free. To augment the processing of oil, 10 distillation units (600 kg/batch capacity) were installed in Arunachal Pradesh.

Vermicompost cultivation was also promoted among the growers by imparting training, setting up of vermicompost units, distribution of vermin cultures, etc. So far more than 10 vermicompost units have been set up in Arunachal Pradesh and training imparted to more than 200 growers of the state.

- Efforts were made to provide research effects to understand and characterize the active molecules from traditional medicinal plants like Naga ginseng, taxas baccata in association with local NGOs.
- Extensive training programmes on Muga sericulture for production of better cocoon crop were also organized in different parts of Assam state for Muga farmers.

Technologies for Mitigation and Management of Natural Hazards

- Installed 21 state-of-art Seismic observatory stations covering NE India with VSAT facility and instant processing computing facility for identifying event details.
- Active participation in Microzonation of cities for hazard assessment started with Microzonation of Guwahati city. Work on Agartala is initiated and proposal for other cities is initiated.
- A number of Awareness camps/lectures were carried out for alerting the public.
- Investigation, preparation of survey reports of underground water quality were made to bring awareness on water quality.
- Organized 15 nos. of Workshop (State-level and zone-level) on 'Hazards – Minimizing risk, maximizing awareness', benefiting top level officers of NCS, NSS, students, teachers, NGOs, SHGs, health workers and general public.
- Organized workshop on various issues like Regional strategy on natural disaster management, climate change, etc. for sensitizing the public on the growing need and importance in today's context.

Generation and Management of Intellectual Property

- 87/22 (India/Abroad) nos. of Patent was filed and 114/9 (India/Abroad) was granted.
- Hands-on training imparted to staff members on patent search and analysis and management of Intellectual Property through patents.
- Talks/lectures organized on several occasions for the benefit of faculties & students of local colleges and universities.

Public Awareness of Science & Technology

- A series of scientific awareness camps were organized at various places of North Eastern states under the banner 'The Year of Scientific Awareness – 2004'. A total of 28 lectures, 11 open house interactive meets, 6 mobile S&T exhibitions, 1 science motivation programme and 2 extempore speech competitions on science topic were organized and 6 titles of booklets on scientific awareness were published.
- Motivated top ranking high school students for science stream through 12 motivational programmes, 10 CSIR programme on Youth for Leadership in Science (CPYLS) and several other science awareness programmes.

- Under the human resource development programmes, hands-on training extended to under-graduate and post-graduate science students in fulfillment to their academic requirements.
- Organized more than 60 S&T exhibitions in various parts of the country for creating science awareness.
- A series of talk/popular lectures were organized from time to time for the benefit of the masses
- Organized student visits to the laboratory on several occasions. Through this, more than 5,000 students have been benefited

Science & Technology Cooperation

- Collaboration with various central and state universities like Viswa Bharati University, Tezpur University, Dibrugarh University, Assam University, Guwahati University, etc. and also with several other research institutions, organizations, colleges, etc was made for cooperation in R & D and application of S&T.
- Developed collaboration programmes with foreign Institutes like, St. Andrews Univerity, UK; Institute of the Physics of the Earth, Moscow, Russia; East China Normal University, Shanghai, P R China etc. for mutual benefit.

Thrust on Small & Medium Scale enterprises

- A number of technologies suitable for Small & Medium scale were released to various firms, individuals, women entrepreneurs, NGOs, welfare societies etc. like Liquid Deodorant Cleaner, Low Dust Chalk Pencil, agro-technology on Mushroom cultivation, fibres from Banana pseudo stem, etc.
- Training extended to the unemployed youth in association with North Eastern Small Scale Industries Association (NESSIA), on household chemicals and aromatic & essential oil products.

Aspirations of people of the North Eastern Region

The people of the North Eastern region aspire to see this region as -
Peaceful, strong, confident and in tune with the global economy
This can be achieved only through Socio-economic and cultural development with S&T intervention.

Aspirations of the Institute

CSIR-NEIST Jorhat aspires to

- Pursue high quality research
- Innovate and adapt appropriate technologies in the areas relevant to the region in particular and the country in general
- Economic and societal development of the region
- To create a knowledge base and be leader in the country and world in selected areas of research.

Salient features of North Eastern Region: Vision 2020 relevant to CSIR- NEIST

- The North Eastern Region is highly dependent on agriculture and allied activities, which accounts for 80% of the region's Gross Domestic Products (GDP).

"An inventor fails 999 times, and if he succeeds once, he's in. He treats his failure simply as practice shots"
: Charles F. Kettering

- Promote improved methods of cultivation to raise productivity levels. Widespread promotion of horticulture and floriculture, as well as of medicinal and aromatic plants and herbs, including organic farming, to capture highly remunerative niche markets abroad, and hence uplift the condition of the people of the region. Plantations, especially for bamboo, rubber, spices and fruits and the rejuvenation of the tea gardens, especially through small farmers and farmers' group can also play a great role in this regard.
- The premier position of North East in biodiversity and generic wealth has to be maintained.
- The potential for quarrying and mining of coal, limestone, uranium etc. is very high but the activities should be environmentally acceptable and promote sustainable development.
- Human resources are the most promising asset of the North East, with standards of literacy well above the national average. Their potential is stifled by inadequate access to quality education, vocational education, training in languages, training in computers and IT, technical training, and business and management skills. A concerted effort to create centers of excellence through both public and private initiatives is essential.

Sailent features of CSIR vision 2022 relevant to CSIR- NEIST

Nation's Aspirations – 2022

- Self-sustained energy mission to sustain 8% growth
- Per capita income of US $ 10 per day
- Affordable healthcare to all
- An entrepreneur centric country
- Highest S&T output per dollar of investment
- A food surplus nation
- Nutrition Level higher than global average
- Potable water to all
- Natural disaster mitigation
- Uncompromising security
- Highest Happiness Index

CSIR's Approach – 2022

- New and renewable energy programmes
- Facilitate new employment opportunities
- Scientific leads from India traditional medicine
- Open Source Drug Discovery
- Creation of SME's through CSIR technologies
- S&T innovation & patent at lower cost
- Sustainable materials and development
- Strategic technologies for civilian use
- Treatment technologies
- Nutraceuticals and functional food
- Water resource mapping & recycling
- Technology support to disaster management
- Strategic partnership with defence, space and nuclear programmes
- Best employer in R&D sector

CSIR R&D Focus and Priority

The broad areas of focus :

- Affordable Healthcare
- Sustainable energy
- Chemistry and Environment
- Smart & Functional Materials
- Engineering Structures /Design and Electronics
- The CSIR-800 Mission

"Discovery consists in seeing what everyone else has seen and thinking what no one else has thought."

Albert Szent-Gyorgi,
1937 Nobel Prize in
Physiology and Medicine

Salient features of National S & T policy (DST 2003) relevant to CSIR-NEIST

The national S&T policy aims -

- To ensure that the message of science reaches every citizen of India so that we advance scientific temper, emerge as a progressive and enlightened society
- To ensure food, agricultural, nutritional, environmental, water, health and energy security on a sustainable basis.
- To mount a direct and sustained effort on the alleviation of poverty, enhancing livelihood security, removal of hunger and malnutrition, reduction of drudgery and regional imbalances, both rural and urban, and generation of employment.
- To promote the empowerment of women in all science and technology activities.
- To encourage research and innovation in areas of relevance for the economy and society.
- To encourage research and application for forecasting, prevention and mitigation of natural hazards, particularly floods, cyclones, earthquakes, drought and landslides.
- To integrate scientific knowledge with insights from other disciplines, and ensure fullest involvement of scientists and technologists in national governance.

The Purpose

The purpose of the Vision Statement is to set an ambitious and realistic goal for NEIST Jorhat and to delineate a broad path indicating areas of activities, so that by 2020 the institute can claim to have played a substantial role in economic and social development of the region and in generating a knowledge base for future use.

"Men love to wonder, and that is the seed of science." : Ralph Waldo Emerson

"The most beautiful thing we can experience is the mysterious.
It is the source of all true art and science." : Albert Einstein

VISION 2020

- To be a nationally and globally recognized and respected R&D organization in the area of basic and applied research
- To be a mentor and a catalyst in conversion of natural resources of North Eastern region into wealth in an environmentally safe, economically rewarding and sustainable manner
- To become an organization that will generate opportunities for wealth creation for the NE region in particular and the nation in general and, thereby, enhance the quality of life for its people
- To become an organization that will try to improve the life of the people of NE region by contributing in the sectors like health, water, energy, value addition to products, rural development, disaster mitigation, environment, income generation, human resource development etc.
- To forge intimate and fruitful interaction among private, public institutions and academia for research and diffusion of Science and Technology among the people of the region for social and economic upliftment

CHALLENGES

Areas to strengthen

- Extraction, isolation, purification and structure elucidation: exploitation of NE resources and traditional knowledge for value added products.
- Design and synthesis of biologically active New Chemical Entities (NCE).
- Bioassay facility for synthetic, semi-synthetic and naturally occurring organic molecules.
- Research in Biology-Chemistry interface based on biodiversity investigation and preservation.
- Medicinal, aromatic and economic plants: identification, preservation, agrotechnology, value addition
- Coal, Petroleum & Natural Gas, Ores & Minerals, Materials: Characterization, Beneficiation and Utilization.
- Environmental studies and pollution remedial measures.
- Earthquake seismology studies and disaster mitigation.
- Process development & design.

Constraints to overcome and action plan

- Over the years the institute experienced a depletion of expert manpower due to retirement etc. A pool of experienced as well as young manpower as its core strength has to be built up immediately. The recruitment should be a continuous process; otherwise by 2015 the manpower will be depleted by more than 50 % of its core strength.

- Increasing the activity of CSIR-NEIST Jorhat in other states of NE region by strengthening its branches, centers, sub-centers etc.
- Creation of 'State of art' analytical, instrumental and other facilities including laboratory buildings and premises will be given added effort as the facilities created earlier has become overused and requires updating.
- CSIR-NEIST Jorhat since its inception is engaged in extraction, isolation, structure elucidation of naturally occurring organic molecules from sources like plants, microbes etc. A large number of semi-synthetic and synthetic molecules have also been designed and synthesized. However, due to lack of bioassay facility, these molecules could not be evaluated completely. Under the 11th Five Year Plan period (2007 – 2012), a 'State of Art' Bioassay facility is being created for complete evaluation of biologically active molecules, particularly as anticancer and anti-malarial agents. This facility will also be used to evaluate the nutraceutical values of the unique and traditional food items of the North Eastern Region. In the coming years, the bioassay facility requires to be upgraded so that the activity of the molecules against other diseases and nutraceutical values of many more food materials can be investigated.
- Programme for training of manpower, particularly in the areas of recent advances in science and technology, and the areas where the country, the region, and the institute needs most will be implemented.
- The culture of collective leadership will be encouraged. However, the responsibilities of individuals will be defined which have to be borne meticulously. The capable individuals will be picked up for greater responsibilities with an aim to strengthen the teams and the institute as a whole.

CSIR-NEIST R&D FOCUS

CSIR-NEIST would like to pursue research and innovation in areas of relevance for the economy and society. There is rich potential for R&D work on natural resources and CSIR-NEIST plans to continue to tap the untapped resources for the benefit of the people of the region. CSIR-NEIST will focus its attention to the following R & D areas matching with the CSIR Niche Areas.

Affordable Healthcare

- Exploration of natural products from North East India for developing advanced and new generation molecules for value addition
- Green synthesis of novel molecules for therapeutic uses
- Genomic, molecular and proteomics diversity of microbes and plants and their application potential.

Chemistry and Environment

- Advanced materials like nanoparticles, membranes, inorganic chemicals etc. for specialty applications
- Resource quality assessment and application potential of coals from North East India with emphasis to environment
- Geoenvironment and associated hazards in North East India
- Seismotectonics and seismic hazard related studies of North East India
- Clean technology for paper pulping and mineral processing
- New generation advanced polymeric materials for environment friendly applications

The CSIR-800 Mission

- Natural resource utilization and agrotechnology intervention for sustainable and rural development

Strategy

Intensive efforts

- The institute, on its own, would take up projects with well defined time targeted objectives. The efforts would be thorough, vigorous and directed to single target.

Extensive efforts

- The institute, on its own, would simultaneously take up projects which has wide scope and far reaching effects. The efforts should encompass large area in space and time.

Human Resource Development

- Improve the quality of the Human Resources in the region particularly in research and teaching in frontier areas of Science and Technology.
- A close interaction will be built up with the students, researchers, faculties and entrepreneurs from and within the region by providing opportunity to interact with the scientists and to undergo training in the institute.
- Programmes like ‘Science Motivation’, ‘CSIR Programme for Youth Leadership in Science’, ‘Faculty Improvement Programme’ etc. are being conducted and will be continued at CSIR-NEIST Jorhat.
- Modernization of the infrastructure for science and engineering in academic institutions as the nodal implementing agency and with resources from other agencies.
- CSIR-NEIST Jorhat will continue ‘Skill and Entrepreneurship Development Programmes’ for the benefit of local entrepreneurs in North Eastern states.

Networking with other agencies

- Collaboration between various public, private organizations, and academic and research institutes in NE region as well as in the country. The collaboration can be synergetic and beneficial for the common cause of advancement of science and technology and in economic development.
- The immense natural resources of NE region can be justifiably and advantageously used through networking with (i) other R & D laboratories in the region for subject specific research and implementation of results, (ii) other R & D laboratories of the country for implementation of results of research, (iii) universities, colleges and other educational institutes in the region for research and human resource development, and (iv) State and Central Government agencies as well as NGOs.
- The institute already has and aspires for further close working alignments and collaboration with a number of universities including those of the NE region and other institutes besides the national laboratories throughout the country.

International Scientific Collaboration

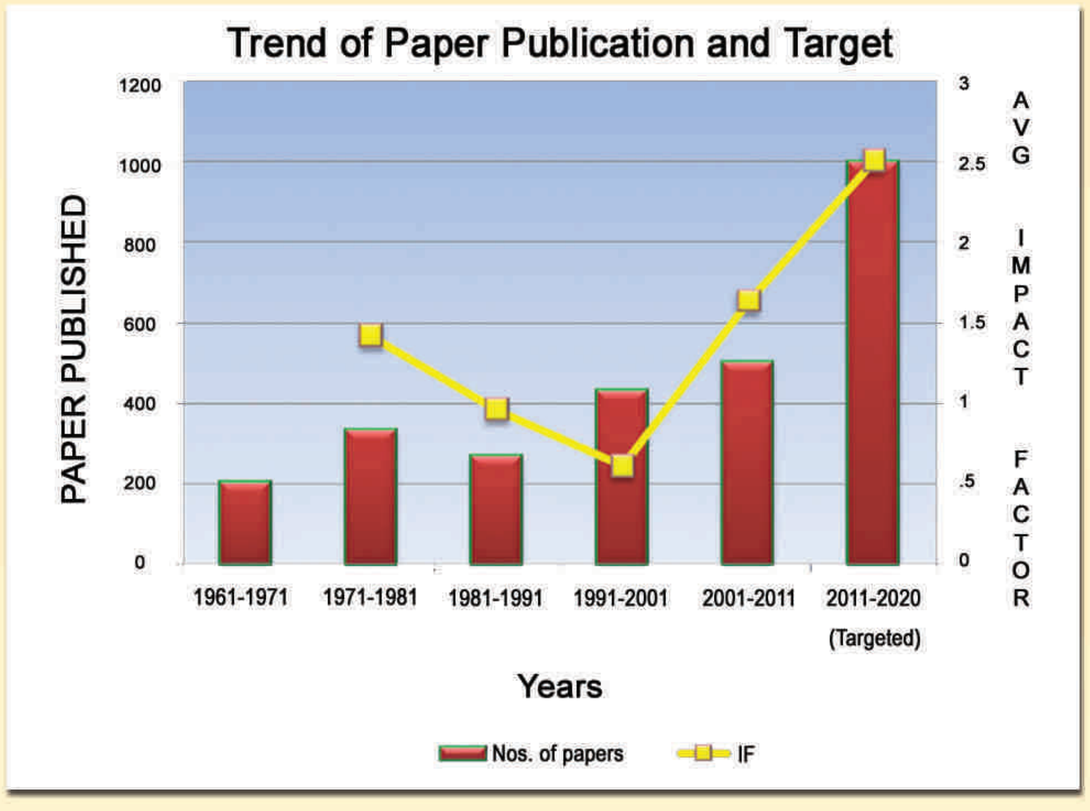
The institute would undertake International Scientific Collaborative projects in the frontier areas of research for advanced research, updating of knowledge, exchange of ideas and application of technology in problem solving.

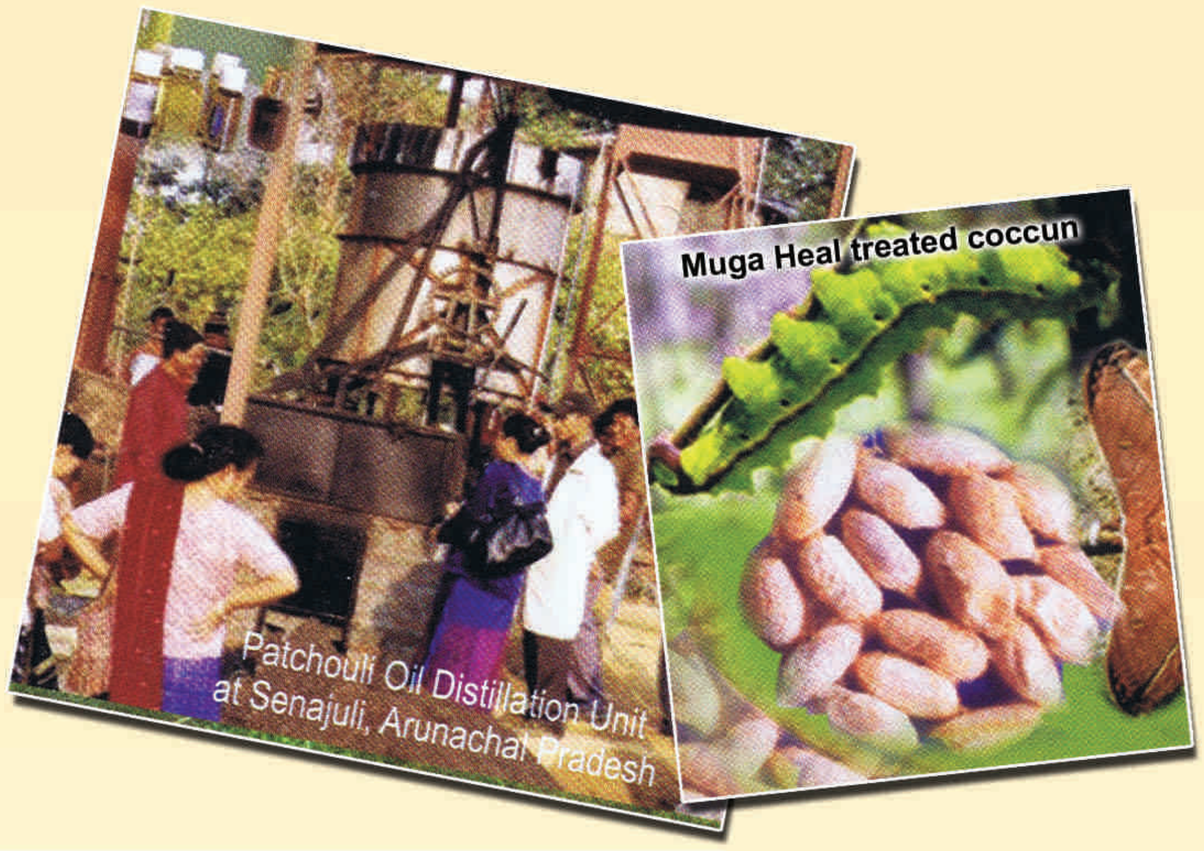
Impact Targeted

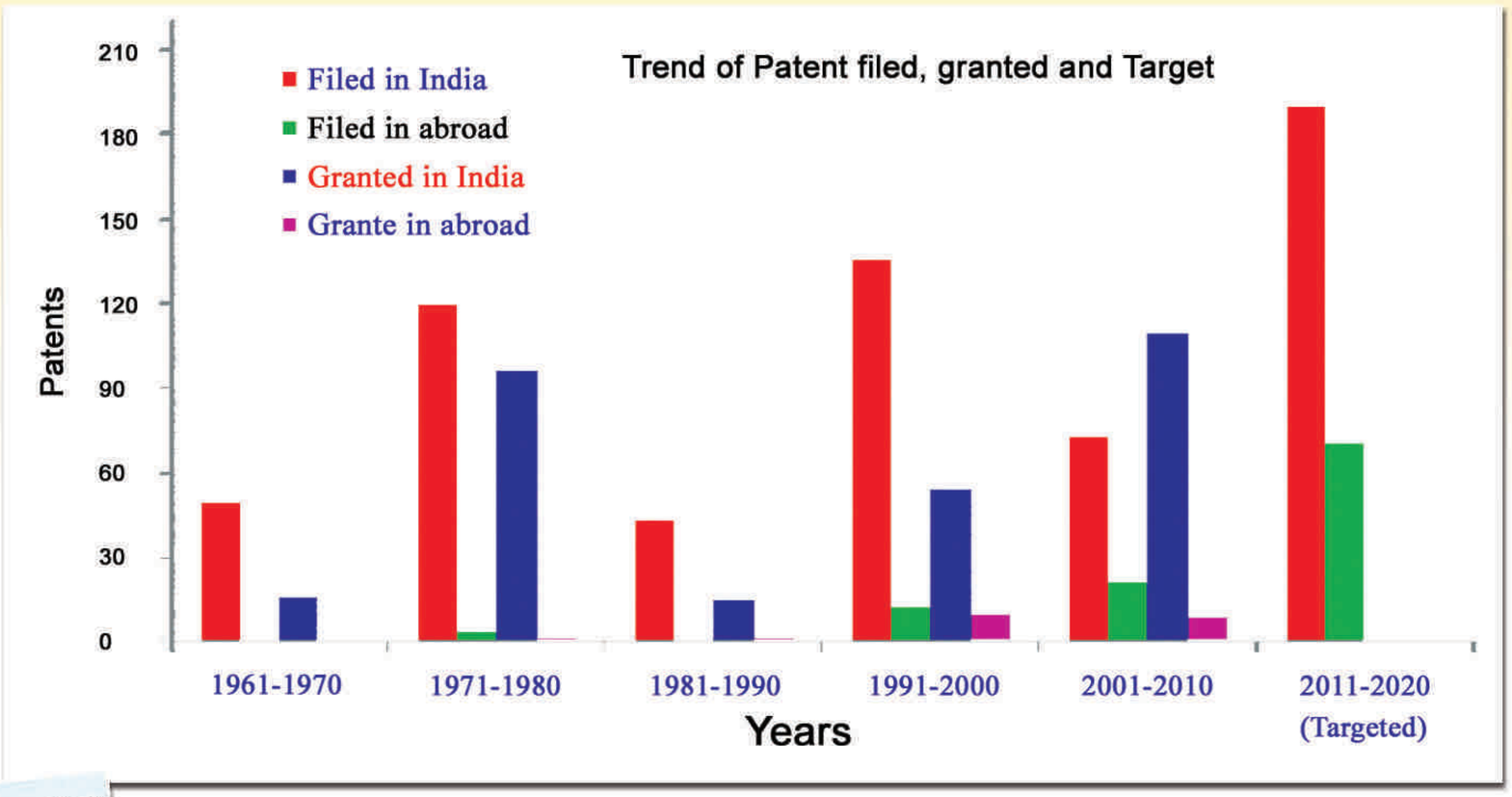
CSIR-NEIST Jorhat would endeavor to continue high quality research which will be exemplified by quality publications and patents in the relevant areas and also contribute in the social and economic development of the NE Region in particular and the country as a whole, through applications of Science & Technology for Employment generation, Income enhancement, Rural development, Human resource development, improvement in quality of life of poor people.The institute will also support to Health and Education systems, Energy and Environment sectors, Disaster mitigation, Technology identification and assimilation.

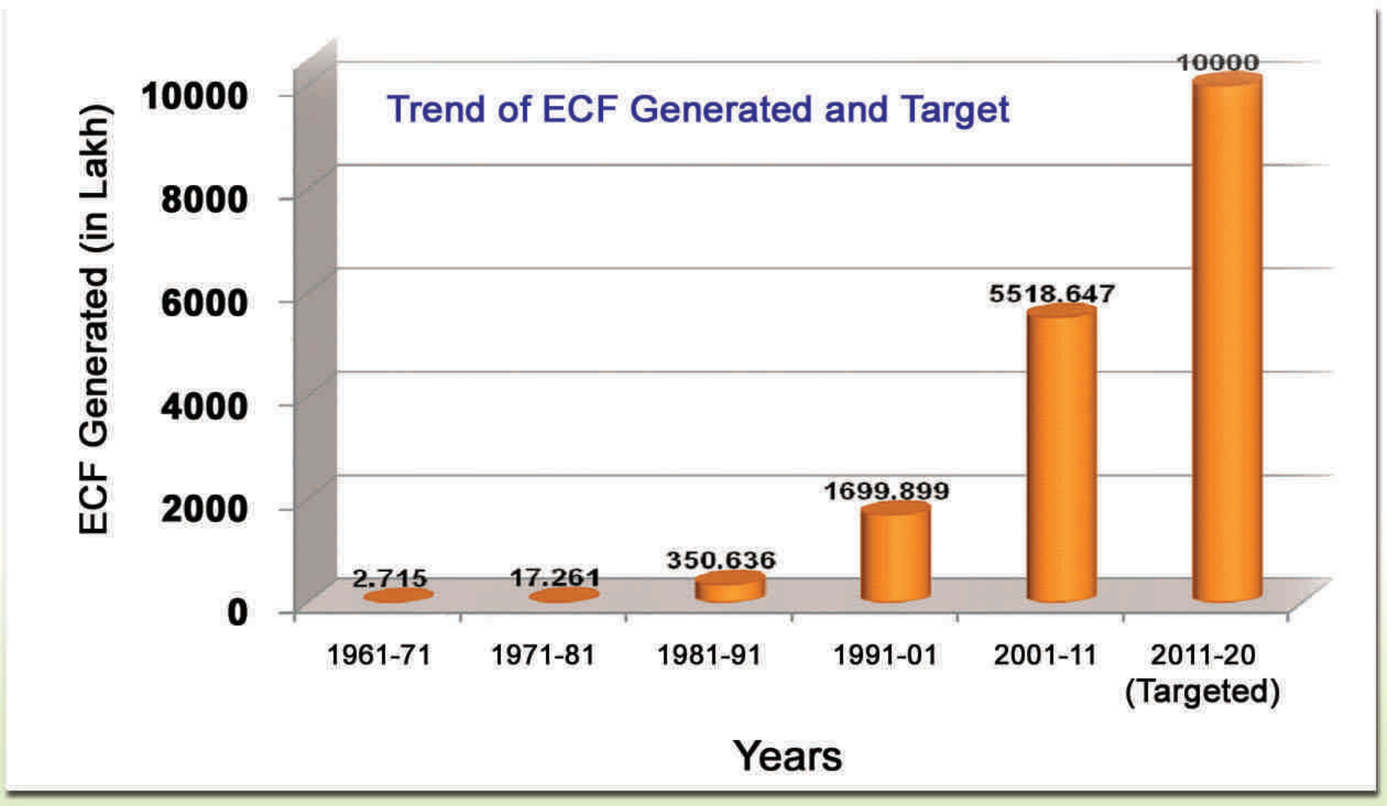
"Time is not measured by passing of years
but by what one does, what one feels and
what one achieves."
Pandit Nehru


PLANNING & PROJECT MONITORING, EVALUATION
AGRO TECHNOLOGY
CHEM. SCIENCES
BIO SCIENCES
CORE AREAS
ENG. SCIENCES
ENV. SCIENCES
GEO SCIENCES
HUMAN RESOURCE DEVELOPMENT
SUPPORTING AREAS
INFORMATION & BUSINESS DEVELOPMENT
EXTENSION OF R&D SERVICES
(BRANCH LAB AND SUB-STATIONS)









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