“A REPORT ON”

“MANAGEMENT DEVELOPMENT PROGRAM ON RURAL ENTERPRISES”

COORDINATORS

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DR. NOMESH BOLIA

DEPARTMENT OF MECHANICAL ENGINEERING, IIT DELHI

ORGANIZED BY

RURAL TECHNOLOGY ACTION GROUP (RuTAG), IIT DELHI AND MINISTRY OF RURAL DEVELOPMENT, GOVERNMENT OF INDIA

NOVEMBER-2011
RuTAG

RuTAG: Rural Technology Action Group (RuTAG) is a mission conceptualized, initiated and sponsored by the principal scientific advisor (PSA) to the Government of India. In line with few operating RuTAGs in Tamilnadu, Uttarakhand etc, RuTAG IIT Delhi commenced in 2011.

About RuTAG

In India, we have a variety of life styles. The sates around Delhi like Uttar Pradesh, Madhya Pradesh, Rajasthan, Himanchal and Uttarakhand have their own life style and traditional values. These states have different local resources and there are a lot of local resource based enterprises. These enterprises include Amla products, milk production units, herbal units and low cost housing to name a few. The people in these regions need local resource based development to improve the quality of life. Economy of these regions will be boosted if value additions to the existing rural technologies can be brought out.

There is a lot of potential in incorporating value additions in technology involving areas like fuel and energy, textiles, food processing etc. There is also need to provide R&D interventions in the areas like potable water, agriculture, rural trades etc. for both quality of the life and economy of the region. There are many Governmental and Non- Governmental Organizations working for the same objectives. RuTAG IIT Delhi would bring all such groups together to proactively work for the development of the region such that people can get the benefits of Research and Developmental activities in scientific organizations.

Regional examination of resources and appropriate technology innovations and interventions could bring out not only many dormant talents of artisans to higher levels of productivity but perhaps create many new directions for economic activities. For example, herbal medicines could also lead to prominent market in both national and international levels boosting export activities.

An analysis of the ups and downs in the rural industries indicates that sustained S&T input could help to improve the efficiencies of the rural systems and keep them competitive at national and international levels. S&T intervention will also result in generating jobs in the unorganized sector relating to rural industries.
Thus a meaningful approach to national development will be to identify avenues for employment generation and better productivity improvement, based on local resources and strengths in each region and develop appropriate technologies that could be competitive in the emerging global economy.

Collaborating NGOs/Enterprises with RuTAG - IIT Delhi

- Parvatiya Kisan Mahasangh, Uttarakhand
- Kasturba Gandhi National Memorial Trust, MP
- Manthan, Rajasthan
- Amar Saheed Chetna Sansthan, UP
- SARA, Rajasthan
- Sahjivan Samithy, MP
- HESCO, Uttarakhand
- Himalayan Research Group, Shimla
- Seva Mandir, Rajasthan
- Centre for Rural Biotechnology, MP
- Bahujan Hitkari Shiksha Samiti, MP
- Manav Seva Kendra, UP
- Gramodaya Rachnatmak Vikas Sansthan, UP
- Gramodaya Sansthan, UP
- Gramin Vikas Vigyan Samiti, Rajasthan
- Utpadak Upbhokta Sangh, UP
- Sarvodaya Shikshan Sansthan, UP
- Institute of Rural Development & Technical Research, Rajasthan
- Jagram Jan Vikas Samiti, Rajasthan
- Paryavaran Sanrakshan Avam Adivasi Vikas Kendra, Rajasthan
- Srijan India
- Swami Adgadanand Training Centre, UP

RuTAG Objectives

- RuTAG is a continuously developing science and technology group incorporating Government agencies, NGOs, researchers and academicians with a goal to provide innovative interventions in rural sector of enterprises of the country for such systems that have been developed already to a certain stage and identified for further improvements.
- The aim of RuTAG is to upgrade rural systems to most efficient levels for boosting the rural economy.
- RuTAG will identify new areas for improvement in the rural sector and provide the science and technological inputs wherever required.
RuTAG Approach

- At RuTAG (IIT Delhi) we are networking with various NGOs working as rural enterprises or are providing benefit for the rural economy in some way or another. Some of them are small scale rural enterprises, educational institutes, training centers, textiles and handlooms.
- Moreover, we are networking with R & D institutions, financial institutions and NGOs to identify, formulate suitable project proposals so that these can be funded under RuTAG grant and further these funded projects are monitored for more initiatives.

Workshop/ Training (Management Development Program)

Many ventures are started by the rural people at different parts of the country. Apart from the efforts in incubation to upliftment of an enterprise its very important to train these incumbent units technologically so that these could create value in their ventures.

Seeking the need of the rural enterprises a management development program was organized by the RuTAG, IIT Delhi on November 10-18, 2011 with the help of Government of India.

Many NGOs/ Enterprises participated in this program to get the cutting edge advantage so that they can manage the functioning units properly in an efficient and effective manner.

Regular sessions on different aspects of running a successful enterprise with the field visits made this training program scintillating.

Speakers from different specialization areas shared their experiences in tackling the emerging problems in front of the rural enterprises and inspired the participants to take up challenges in establishing and successfully running the rural enterprises.
Objectives achieved from the management development program (MDP)

- The participants got a good idea of what is a rural enterprise; how they can initiate, get facilitation and support from various sources; the challenges they can expect and approaches of possible solutions. They learnt about this from academicians, as also successful leaders in the respective fields.

- The participants got at least an introductory exposure to the theory of various practices of sound techno management such as Operations, financial, Marketing, Information Technology, Human Resource, Appropriate technology in rural sector, etc.

- Since effectively managing operations is probably one of the biggest challenges of rural enterprise, the emphasis was on the operations aspect, i.e., supply chains, cost cutting, operations, day to day management, quality, maintenance etc.
• The participants got an understanding of the types of decisions involved at strategic, tactical and operational levels in rural enterprises and also the complexities/uncertainties associated with such decisions.

• Seeing the experiencing is believing: so, the participants
  • Accessed to experiences of and from successful entrepreneurs and leaders in this field
  • Direct experience through guided field visits and laboratories.

A 9 days program was organized that took the participants through a logical sequence, one that would be natural for someone interested in being a competent rural entrepreneur.

**Different Modules of MDP**

Two modules were scheduled which are briefed as below:

**Module1:**

• Basics of NGO: Who are the NGOSs, their working style etc.
• Basics of starting a rural enterprise: opportunity, challenges, support structure, regulatory framework.
• Human Resource Management, Sustainable resources
• Focus on Technology choice, Technology Management, and Innovative technologies for indigenous development
• Basic accounting and Financial Management

**Module 2:**

• Operations and Project Management, Marketing Management
• Application of Engineering/Technology in rural enterprises
• Learning through live examples (case studies, field trips, simulation/software exercise etc.).
Speakers

Mr. P.M. Tripathi
President, Association of Voluntary Agencies for Rural Development

Prof. S.N. Naik
Centre for Rural Development and Technology, IIT Delhi.

Prof. S. N. Naik is currently Head of the Centre for Rural Development and Technology, IIT Delhi. Apart from this, his area of technical interest includes research on Oils, Fats and Waxes Technologies, Natural Products Extraction, Minor Forest produce.
Prof. V.K. Vijay
Centre for Rural Development and Technology, IIT Delhi.

Dr. V.K. Vijay is currently a professor in Centre for Rural Development and Technology, IIT Delhi. His area of research includes Renewable Energy Sources, Biogas Enrichment and Bottling, Bio Energy Applications for Rural Areas, Animal Power, Rural Energy Planning and Management, Rural Industrialization, Sustainable Development and Environment, Food Processing and Post Harvest Technologies, Waste Management Systems, Cow-dung and Urine Based Products (Panchgavya).

Dr. V.M. Chariar
Centre for Rural Development and Technology, IIT Delhi.

Dr. V.M. Chariar is now an Associate professor in Centre for Rural Development and Technology, IIT Delhi. His area of interest includes traditional Sciences and Technologies of India, Rural Industrialization, Non-chemical agriculture, Indian Systems of Medicine, Science and Technology Policy, Sustainable Development, Bamboo-based Technologies.

Prof. R. Prasad
Centre for Rural Development and Technology, IIT Delhi.

Dr. R. Prasad currently a Professor in Centre for Rural Development and Technology, IIT Delhi. His area of interest includes Gas Dispersion in Liquids, Rural Energy Systems, Wood Burning Cookstoves, and Technology for Artisans and Weaker Sections like Leather, Pottery, Carpet Making, Bee-keeping, Food Processing, Milk Processing, Water Management, and Entrepreneurship Development.

Prof. R.R. Gaur

Prof. R. R. Gaur is currently the Chairman, Core Group of RuTAG (Rural Technology Action Group) at IIT Delhi and the former Professor of Mechanical Engineering Department. He has been actively involved in technology development for the rural areas for their upliftment.


**Prof. D. K. Banwet**  
Department of Management Studies, IIT Delhi.

Prof. Devinder Kumar Banwet (FIE) is Professor & Group Chair, Operations & Supply Chain Management. He is a graduate mechanical engineer, a Masters in Industrial Engineering & a Ph.D. (Production & Operations Management) from I.I.T. Delhi.

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**Prof. P. K. Jain**  
Department of Management Studies, IIT Delhi.

Dr. P. K. Jain is Professor of Finance & Group Chair, Financial Management. He earlier served as the Head of Department of Management Studies. He is Modi Foundation Chair Professor also. Earlier, he had been Dalmia Chair Professor and Co-ordinator of Dalmia Research Programme on Management in Asia.

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**Dr. Mahim Sagar**  
Department of Management Studies, IIT Delhi.

Dr Mahim Sagar is Assistant Professor in the area of Marketing Management & Strategy. He has done his doctoral work on Brand Positioning in Cross Cultural & Ethical Context from Indian Institute of Information Technology & Management (IIITM) and has done seminal work on Ethical Brand Positioning.
Prof. P.M.V. Subbarao
Department of Mechanical Engineering, IIT Delhi.

Dr. P.M.V. Subbarao is currently a Professor in Department mechanical engineering, IIT Delhi. His personal interest in knowing more resulted in development of ten different courses being taught by him covering all the dimensions of thermal engineering. As a practitioner he has been consulting and researching by bringing systematic design solutions from theory to solve industrial as well as agricultural problems. He is keen to move towards teaching and researching in the area of Micro-Energy Systems, which will enable a local society or people to develop their infrastructure without depending on large corporate or centralized institutions.

Dr. Abhijit Majumdar
Department of Textile Technology, IIT Delhi.

Dr. Abhijit Majumdar completed his PhD from Jadavpur University, Kolkata. Currently he is an Assistant Professor in Department of Textile Technology, IIT Delhi. His specialization includes Yarn and fabric production, Soft computing applications, and Production & operations management. He is virtuoso Spinning and weaving systems, Yarn and fabric structures and properties, Quality aspects; Artificial Neural Network, Fuzzy logic, Hybrid neuro-fuzzy system; Multi-criteria decision making, AHP, TOPSIS, Fuzzy MCDM, Optimisation.

Dr. M.S. Kulkarni
Department of Mechanical Engineering, IIT Delhi.

Dr. M. S. Kulkarni is currently Associate Professor with the Department of Mechanical Engineering at the Indian Institute of Technology Delhi. He is associated with the Industrial Engineering group of the Department. He graduated in Production Engineering and later did his masters in Materials Technology from the Department of Metallurgical Engineering and Materials Science at the Indian Institute of Technology Bombay. Subsequently, he completed his Ph.D. in the area of Manufacturing Engineering from the Department of Mechanical Engineering at the Indian Institute of Technology Bombay. His post Ph.D. industry experience includes application of quality and reliability engineering techniques in manufacturing and service industry.
Prof. A.D. Gupta
Department of Mechanical Engineering, IIT Delhi.

A.D. Gupta is a faculty member in the Department of Mechanical Engineering at IIT Delhi. His research interests are in Industrial Engineering, Operation Research, Value Engineering, Industrial Quality Control.

Dr. Shilpa Surana Jain
TERI University, New Delhi

Dr. Nomesh Bolia
Department of Mechanical Engineering, IIT Delhi.

Dr. Nomesh Bolia has completed his B-Tech (Mechanical Engineering) from IIT Bombay, two years of work experience at Infotech Financials Pvt Ltd (Mumbai) and Tata Institute of Fundamental Research (TIFR, Mumbai), PhD in Operations Research (OR) from UNC Chapel Hill and now a faculty member in the Department of Mechanical Engineering at IIT Delhi. While at TIFR, his research was in Options Pricing using Simulation (using techniques such as Importance Sampling and Control Variates so that American options can be priced effectively). He is interested to divulge into more applications of OR, viz logistics, supply chain management, workforce management, manufacturing planning and economics.
**Dr. Vipul Jain**  
Department of Mechanical Engineering, IIT Delhi.

Dr. Vipul Jain is Assistant Professor in the Department of Mechanical Engineering at IIT Delhi. Prior to joining IIT Delhi, he was working at INRIA Nancy Grand Est (French Institute for Research in Computer Science and Control) at Nancy France. He was involved in European project I*PROMS (Network of Excellence for Innovative Production Machines and Systems). His teaching interests include Supply Chain Management, Industrial Engineering Applications in e-Business, Game Theory, Optimization, Operations Management, Reverse Logistics etc. His research interests include Supply Chain Management, Mechanism Design in Supply Chain Settings, Operations Management, Design, Planning, Analysis and Control of Manufacturing Systems, Reverse Logistics, Quantitative Methods for Managerial Decisions etc.
### List of participants

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<th>Sl no.</th>
<th>Name</th>
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<td>Shri Prem Kandwal</td>
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<td>Shri Dakesh Kumar</td>
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<td>Mrs. Savita Viswakarma</td>
<td>Amar Shahid Chetna Sansthan</td>
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<td>Km. Sunita Sharma</td>
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<td>Tarun Sanskar</td>
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<td>Km. Saumya Sharma</td>
<td>Kasturba Gandhi National Memorial Trust</td>
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<td>Shri Vinod Jain</td>
<td>Bahujan Hitkari Shiksha Samiti</td>
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<td>Shri Ajay Namdev</td>
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<td>Shri Ramesh Chand Mali</td>
<td>Gramin Vikas Vigyan Samiti</td>
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<td>Shri Ranvijay Pratap Singh</td>
<td>Swami Adgadanand Training Centre</td>
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<td>Mr. Amit Kumar</td>
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<td>Mrs. Sonu Kanwar</td>
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<td>Srijan India</td>
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Feedback Form

Name (optional):__________________________________________________________

Q1. Objectives and plan of training program were useful for you.
   • Agree
   • Indifferent
   • Disagree

Q2. Do you agree that contents of the lectures were relevant with rural development?
   • Strongly agree
   • Somewhat agree
   • Neutral agree
   • Disagree

Q3. The content and language in which the speakers communicated to you were...
   • Understandable.
   • Incomprehensible.
   • Could have been better.

Q4. Was the training programme organised in an effective manner?
   • Yes, it was.
   • No
   • Could have been better

Q5. Would you wish to attend another program from our organisation in future?
   • Yes
   • May be
   • No

Q6. Encouragement to innovate the product/process development was given by the instructors in your respective organizations.
   • Yes, it was.
   • No
   • Could have been better

Q7. Proper solutions were provided for your questions and doubts during the lecture.
   • Yes, it was.
   • No
   • Could have been better

Q8. Your stay in the institute was pleasant.
   • Yes, it was.
   • No
   • Could have been better

Q9. Please write your suggestions regarding this training program (if any)
Conclusion

This 9 days expedition was a perfect marriage between technology and management in Indian rural development initiatives. The distinguished participants from all over the country tapped through colors of techno-managerial mind-storming. The symbiosis between participants and RuTAG has enriched during the journey. This assimilation of extra oxygen in the heart of young rural-entrepreneurs is going to metabolise the rural development of India.

The sessions were pre-customized to align with the expectation of the participants through an interactive session with the participants. The technical sessions was begun with sustainable development issues in rural estate and discussion on pros and cons of renewable energies. Throughout the program the participants were catered with different flavor of management sciences like operations management, supply chain management, human resource issues; as well as they were interfaced with promising technology development sailed by Department of Mechanical Engineering and Center for rural development and technology, IIT Delhi. Though the objective of this program was set to initiate rural entrepreneurship, but the need of a context-based technical session were frequently felt during the interaction and hence it was addressed. The mélange has dawned a new journey with young Indian Entrepreneurs and IIT Delhi, the cradle of world class engineers and managers.