

plinary teaching, training and research activities. The Institute of Medical Sciences at BHU will also benefit, not only in terms of collaborative research but also from the intensive training to medical graduates and other senior level personnel in molecular and human genetics. Such a collaboration is already in place and will become increasingly intense in the future. Similar collaborations are expected to develop with the Institute of Agriculture and the Institute of Technology at BHU in the near future.

In view of its comprehensive nature of training, this course has quickly become

popular across the country. The course is open to graduates in any branch of science, agriculture and medicine. Students qualifying through this course are expected to be well trained to undertake high quality research in any area of modern biology. They are also well qualified to undertake R&D work in biotechnology, pharmaceutical industry. Because of the strong background in molecular biology, molecular genetics and bioinformatics, the Information Technology industry, which is looking for applications in bioinformatics, will also find these students useful. The medical

laboratories involved in genetic diagnostics and/or assisted reproduction too can benefit from the knowledge and experience of these students.

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MEETING REPORT

National Water Convention*

At the Eleventh National Water Convention held recently, water resource engineers, scientists, academicians, NGOs and others deliberated and discussed about various pressing water-related issues. The convention was inaugurated by A. P. J. Abdul Kalam, President of India. The Secretary, Water Resources (WR), after welcoming the dignitaries, presented an overview of India's water scenario and the constraints in water management. Improvement in water use efficiency, area development and management of surface and groundwater were discussed in detail. In this context interbasin transfer of water is important, he said.

The keynote address on the focal theme, 'Water for life, with special reference to interlinking of rivers' was delivered by C. C. Patel, Former Secretary (WR, GOI), and Ex-Vice-chairman, TF-ILR. He highlighted the indispensability of water for life and explained current water resources scenario of India. The impact of pollution and future potential of water for irrigation were discussed. The problem of water scarcity and disputes arising out of plenty vs scarcity, among different states were highlighted. The diminishing quantity of water at different river basins, and possible use of better watershed development in the upper reaches were dis-

cussed. Exploitation of water potential to the fullest extent at each basin is needed. He went on to clarify the misgivings of interlinking of rivers (ILR) so as to remove the roadblocks through a mediatory role of the Central Government, consensus amongst the concerned water-surplus and water-deficit states in the best interest and the best option available for sharing the water.

Jayaprakash Narayan Jadav, Minister of State for Water Resources, emphasized the need for interlinking of select rivers to manage the water resources equitably. National Water Development Agency (NWDA), having identified 30 points of interlinking of rivers, has to pursue the matter. He stressed on the issue of intra basin transfer of water to solve the problem. Priyaranjan Das Munshi, Minister for Water Resources emphasized the need for increased irrigation potential to 160 million hectares for all crops by 2050. Emphasizing the need to enhance production to meet the food demand of the increasing population, Munshi said that the conventional water resources developmental activities will be inadequate to meet the emerging situation. Other options, including interbasin transfer of water, have to be thought of to provide water and to overcome regional imbalances in water availability.

Abdul Kalam addressed the current water resources scenario and expressed the need of this resource for sanitation, irri-

gation, industries, etc. and the need to know water balance and minimum requirements. Snow-fed rivers in the north and rain-fed rivers in the south being the sources of water, regulation of flood water and harvesting are the major ways to solve the problem of scarcity. Planners have to take note of this and canalize and evolve long-term solutions. He emphasized the importance of rehabilitation of communities that needed compensation to be given on first priority. Environmental upgradation for enhanced precipitation and water availability followed by river-flow management need to be closely monitored using available technology, he said. Remote sensing technology is one such tool to study the pattern of flow and environmental profile. Water harvesting and recycling should be taken up as a mission – as done at Siluthuli (near Coimbatore), where large-scale water harvesting is implemented. Kalam also suggested alternative practices to be followed for water budgeting to develop action-oriented plan.

In the first technical session with the theme 'Interbasin water transfer, an important strategy in the development of water resources', R. K. Sharma speaking on the current status of the ILR programme, explained the national perspective plan for water resources development and steps initiated to overcome apprehensions of the states in order to arrive at a consensus. The work carried out by the task force on

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ILR was presented. Sharma also dealt with the international dimensions that may be involved in some of the projects. It is necessary to have a comprehensive review of ILR projects. The present status is to focus on the peninsular component. A special cell on ILR has been constituted with environmentalists, social scientists and other experts to advice on the programme. The feasibility report of priority links – Ken–Betwa and Parbati–Kalisindh–Chambal components has been completed.

There were three invited speakers in the first session. Z. Hasan (Former Secretary, WR, GOI) speaking on dams and water transfer, deliberated on the optimum use of water resources potential of Sutlej, Beas and Ravi rivers through a system of large reservoirs, diversion structures and interlinking canals, which resulted in progress and prosperity of the region. Similar development in other river systems also needs to be examined. He suggested to replicate the model of Sutlej, Beas and Ravi river basins with due attention to the impediments, which should be addressed with utmost care and sensitivity, including the problem of rehabilitation and resettlement of people.

Ramaswamy Iyer gave a critical review of the interlinking of rivers, with due considerations to the issues connected to this event. He pleaded for alternative methods and interventions to save water and small projects instead of large-scale dams and hydro-engineering works leading to consequential irreparable damages.

C. D. Thatte gave a detailed account of international experience of ILR and the lessons India can learn from intrabasin

and interbasin water transfers so that the needed interventions and precautions could be taken.

S. K. Sinha (CWC) presented abstracts of about 28 papers included in this session, dividing them into seven subject categories.

In the second technical session on 'Issues involved in planning and implementation of interlinking of rivers programme', there were three invited speakers.

S. K. Pande (TERI, New Delhi) gave an account of the environmental concerns when dealing with ILR. He underlined the need to take precautionary approach right from the project cycle onwards, so as to internalize environmental considerations. River linking being a major ambitious and grandiose developmental programme envisaged by our country, the possible environmental activities to be affected during its implementation through the construction stage onwards were highlighted. Pande concluded that the right to information, free and unrestricted access to authentic and reliable temporal data, including the human dimensions should be made available for greater acceptability of the project concept.

R. Mala Kapoor Shankardas emphasized the social relationship between the social system and water sector. In the coming decades the necessity of water for rapid and immense growth are to meet these challenges, interdisciplinary approach of human, social and environmental aspects have to be adapted to address the innumerable economic, hydrological, environmental and social issues arising due to linking of rivers. These have to be understood in terms of

impact on habitat and communities and weighed for adverse and favourable aspects with their gender dimensions.

M. S. Menon (INCID) explained the necessity of consensus-building measures in ILR projects. Water being basically a state subject, the Union Government interferes only in case of inter-state river waters. Transfer from donor to donee state could be done only through consensus with the states concerned. Menon traced the history of national perspective plan for water resources development brought out by Govt of India in 1980 and genesis of NWDA. The available options and the road blocks expected were also detailed. The possible win-win situation for both donor and donee states were also discussed. Equitable use and 'obligation not to cause significant harm' are to be followed while dealing with neighbouring countries for use of international rivers.

In the concluding session, the participants wanted to know more about ILR and many doubts were raised. Several views were expressed on alternate methods to ILR for meeting the water requirements of our nation.

One of the main drawbacks of the convention was that the authors could not present their papers, though the proceedings of the convention was brought out. This is a serious lacuna which needs to be addressed.

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