



**World Meteorological Organization**



## **THE ASSOCIATED PROGRAMME ON FLOOD MANAGEMENT**



### **Report on the National Workshop on Community Approach to Flood Management in India**

**Edited by**

**TECHNICAL SUPPORT UNIT**

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## **Institute for Resource Management and Economic Development**

### **Report on National Workshop on Community Approach to Flood Management in India**

A National Workshop on Community Approach to Flood Management in India was organized by the Institute for Resource Management and Economic Development, Delhi on 28th & 29th November, 2005 at India International Centre, New Delhi. It was attended by 78 participants representing all the concerned sections of society namely senior officers from Government of India and State Governments, academicians, experts and representatives from the village community from the three selected flood prone States. The list of 78 participants is enclosed as Annexure I. The workshop started with an inaugural session on Monday, the 28th November, 2005 at 10.00 A.M. and ended with valedictory session on Tuesday the 29th November, 2005 at 5.30 P.M. In between, there were 6 technical sessions of which one session had 2 syndicate group discussions. The Workshop was characterized by lively discussion resulting in useful recommendations. Summaries of deliberation and major recommendations are given below.

#### **1. Deliberation**

##### **Day One**

##### **Inaugural Session**

The inaugural session started with a welcome speech by Prof. Kamta Prasad, Chairman, Institute for Resource Management and Economic Development, Delhi. He welcomed the Chief Guest, Hon'ble Shri S. Regupathy, Minister of State for Home Affairs, Government of India who came to the workshop despite Parliament being in session as well as his constituency in Tamil Nadu coming under the unusual flood fury. Prof. Kamta Prasad also welcomed Shri J. Hari Narayan, Secretary, Ministry of Water Resources, Government of India, who came to preside over the inaugural session in spite of his busy schedule. He further welcomed Dr. Wolfgang Grabs, Chief Engineer, Water Resources, World Meteorological Organization (WMO), Geneva, who had come all the way from Switzerland to participate in the workshop and Shri P.G. Dhar Chakrabarti, Executive Director, National Institute of Disaster Management (NIDM), New Delhi. Prof. Prasad mentioned that NIDM had agreed to collaborate with IRMED in organizing the workshop and that NIDM had also contributed a key paper to the workshop.

Thereafter, Prof. Prasad gave a brief background of and introduction to the workshop. He explained that the workshop represented the culmination of the process of an action research project on Community Approach to Flood Management in India which had started from November, 2003 when a Kick Off meeting was organized by WMO in Dhaka, Bangladesh. Since then, studies were launched in one district each of Assam, Bihar & West Bengal, the three most flood prone states of India. Finalization of a Manual on Community Approach to Flood Management in India was the most important outcome of this study. With the support provided by the World Meteorological Organization, Geneva, the Manual was published. The National Workshop had been organized to examine the content of the Manual as a step towards its implementation. Prof. Prasad pointed out that the emphasis in the workshop was on discussion by the participants who had been selected very carefully for the purpose.

Thereafter, Shri D. Routray, Director, Institute for Resource Management and Economic Development presented bouquet to the Hon'ble Minister; Shri P.K. Sharma, Head of the Computer Centre of the Institute presented bouquet to Shri J. Hari Narayan ; Shri Mangal Giri, Senior Research Assistant of the Institute presented bouquet to Dr. Wolfgang Grabs and Shri Bastroo Ram, Consultant of the Institute presented bouquet to Shri P.G. Dhar Chakravati.

The workshop was then inaugurated by Shri Regupathy, Hon'ble Minister of State for Home Affairs, Government of India. The Hon'ble Minister drew attention to the seriousness of flood disaster. He also



highlighted the international and inter-state nature of the flood problem in India. Floods, according to him, were one of the causes of backwardness of flood prone areas since farmers in these areas have little incentive to make long term investment in farming because fertilizers and other inputs used on the farm get washed away whenever a flood occurs. Referring to several structural and non-structural measures taken in the past by the Government to deal with the flood problem in India, he expressed a need for involving local community in flood management to the maximum extent. The adoption of community approach would require creation of new institutions and changes in the role of existing ones including that of the Government. Areas of interface between Government and community based institutions should be identified. The Hon'ble Minister thanked IRMED, Delhi for taking initiative for an in depth study of the issues involved in community participation in flood management and for publishing a very useful manual on the subject which should be considered for implementation by the Government. He observed that "the Institute deserves all the help and support from the Government and National Disaster Management Authority so that it can keep on developing new initiatives in this respect. It may be strengthened to function as the national resource center on community approach to management of flood and other natural disasters in India."

The speech of the Hon'ble Minister was followed by the keynote address by Dr. Wolfgang Grabs, Chief Engineer, Water Resources, World Meteorological Organization (WMO), Geneva. He started his presentation by making a reference to the tremendous efforts of the Institute for Resource Management and Economic Development and in particular Prof. Kamta Prasad and his team of professionals. He showed how a large part of the gains in development were threatened by recurring floods and their disastrous impacts that destroy livelihoods, infrastructure and rural production capacity. In the context of flood prevention and mitigation on a global level, WMO through its Associated Programme on Flood Management (APFM) had been developing strategies aimed at effective community preparedness in several countries with the active participation of local communities concerned. He mentioned that the Overseas Development Institute had recently estimated that for every 1 rupee spent on community-based approaches to flood management, there were 3.8 rupees of quantifiable benefits. Community participation in flood management was complimentary to Government interventions. Success of the experiments in India had encouraged him to propagate the concept and its methods to a much larger number of rural communities threatened by recurring floods. This required outreach strategy. For this purpose the number of experiments in community participation in flood management should increase substantially. At the same time, the monitoring of the progress should also take place. He felt that the workshop was also a part of the outreach process. He pleaded for empowerment of the community along with the need for seed funding to promote a proven concept on community approaches to flood management.

Thereafter Prof. Kamta Prasad, Chairman, IRMED, Delhi made a presentation of the theme paper on Building Resilience in Flood Prone Communities through Participation. As his theme paper had already been circulated, Prof. Prasad indicated only the main highlights of the paper whose purpose was to provide a framework for building resilience in flood prone communities. He presented a glimpse of the flood scenario through several photographs showing how normal life got disrupted due to floods. He threw considerable light on the potential of community participation in flood management. A major advantage with the local people was that they were readily available in the villages. They had an in depth knowledge of the requirements as well as potential of their areas. He, therefore, pleaded for adoption of the community approach to flood management which should be a complement to Government's effort. He gave a brief account of the present level of participation by the people but felt that the responses were mainly individualistic. During floods, the entire community functioned as a cohesive group helping each other forgetting mutual conflicts and differences. He gave a detailed analysis of how the community approach would provide better results with regard to disaster preparedness, response planning, flood rescue and relief and agricultural practices. He, therefore, concluded that the performance of most of the non-structural measures would improve and resilience building would be speeded up if community played a major role in their management.

Thereafter, he outlined a 7 point resilience building package comprising of institutional empowerment, financial empowerment, capacity building, flood shelters, operational aspects in dealing with flood during flood, pre-flood and post-flood periods, Government community interface and the Manual. Elaborating



the points he referred to the need for constituting a community based flood management committee along with necessary powers and finance. While bulk of the funding would come from the Government by diverting funds from local administration to the community, some contribution from the community was also considered essential to ensure active participation of the villagers. Capacity building should comprise awareness generation programmes and specialized training. Multi-purpose flood shelters on the uplands were needed in areas affected from long duration floods. With respect to operational aspects, the main focus should be on review and advance planning, forecasting and warning, identification of flood vulnerable areas and flood escape routes, arrangement for boats and essential items, crop management, veterinary care, health care and sanitation, redeployment and reconstruction of houses, damage assessment and relief administration.

Shri J. Hari Narayan, Secretary, Ministry of Water Resources, Government of India, in his presidential address, appreciated the efforts made by IRMED in organizing the workshop and for highlighting the new approach to flood management. He, however, felt that there could be community approach for other disasters also. He, therefore, indicated the need for community oriented disaster management committee rather than a committee for managing floods only. Accordingly, he suggested that the manual developed so meticulously by the Institute for Resource Management and Economic Development be generalized to take care of all disasters. He was of the view that community participation would pay dividends in other walks of life also. Hence it should be extended to every field of human endeavour. Based on his personal experience of disasters in Andhra Pradesh where he served earlier, he described the difficulties experienced by disaster affected people during post-disaster recovery period. He drew special attention to the effect of disasters on rural indebtedness, which as per information available with him, increased very much in the process of recovery. While concluding he conveyed his good wishes for the success of the National Workshop and promised to go through its recommendations with much interest.

Shri P.G. Dhar Chakrabarti, Executive Director, National Institute of Disaster Management, New Delhi, which was a collaborative institution along with IRMED proposed a vote of thanks to the distinguished panel on the dais as well as to the participants. He also described the important role the National Institute of Disaster Management was playing in the country in providing training to in-service officers and others and in research and documentation. He indicated his readiness to be associated with IRMED in any other activity related to disaster management. Thereafter, the inaugural session came to a close.

### **Technical Session – I**

The first technical session which followed after the tea break was concerned with Government Approach to Flood Management With Respect to Involvement and Response at the Community Level. It was presided over by Smt. Mala Srivastava, I.A.S., Director General, RCVP, Noronha Academy of Administration and Management, Government of Madhya Pradesh, Bhopal. Prof. Santosh Kumar of National Institute of Disaster Management, New Delhi made a presentation on the theme. Shri M.A. Alam, Special Secretary, Relief Department, Government of West Bengal acted as a Resource Person / Facilitator.

Smt. Mala Srivastava, at the outset, made a few observations based on her experience in M.P. Government when she dealt with this subject for three years as Revenue Secretary to the State Government. She observed that there was no conflict between Government and local people on the issue of management of flood which occurred in 5 to 6 districts of M.P. She highlighted the aspect of rescue operations and mentioned that this created problems both for people and animals. It was difficult to persuade people to leave their houses. She claimed that the response of Government machinery to any disaster was quick in her state (M.P). She felt that there should be a coordinated approach between Government and the community. But in order to be effective, the community must be trained.

Presenting the theme paper prepared jointly with Shri P.G. Dhar Chakrabarti. Prof. Santosh Kumar spoke of losses due to flood, problems in reducing risk and vulnerability, interface between natural hazards and vulnerable condition. According to him, development can not be sustainable until disasters are tackled. The poor were affected the most. He pointed out that rescue operations during night time were very difficult because of the surrounding darkness. Hygiene was another problem resulting in several diseases.



He highlighted linkages with various agencies including the Government. He laid much emphasis on disaster preparedness, effective precautionary measures and prompt delivery of relief. Rescue operations should start as quickly as possible after occurrence of flood. Discussing the role of Government, he felt that the Central Government should supplement the efforts of the state government. Legal aspects also needed to be dealt with at the grass root level. He felt that dissemination of warning was not successful because of illiteracy of the people.

The presentation of the paper was followed by a lively discussion in which G. Kathpalia, M.R. Beg, B.R. Sharma, Subhash Chandra, P.G.V.S. Bhanu, A.B. Verma, Lipi Mukhopadhyaya, R.K. Singh, C.P. Yadav and R.N. Handa took part. According to one of the participants, increasing emphasis on non-structural measures of dealing with flood should not lead to the neglect of structural measures which were also needed so that a hazard did not become a disaster. Structural measures with the latest technology could aid the community. Another participant pointed out that there was a tendency in India to overlook the problems faced by the weaker sections. Community involvement was expected to take care of this. One participant pointed out the use of siren instead of electronic media for transmission of flood warnings would be a better method at the village level. He also suggested that children above 5 years of age should learn swimming and preferably it should be taught as a subject matter in school curriculum. The need for appropriate level of community participation was pointed out by several speakers. It was commented by one NGO representative from U.P. that the measures advocated by UNDP in this respect were not adequate. According to another participant, the community could do the job only if it got some back up support of the type indicated in the Manual. But if we did not have the right attitude, then nothing would succeed. There was strong need for bringing out a change in the mindset of the politicians. There should also be a right balance between the Government and the community as had been rightly pointed out in the Manual. One participant wanted to know what would the Flood Management Committee do in areas where floods rarely came. It was clarified that these committees were meant for frequently flooded areas as in Bihar, Assam, West Bengal, U.P. and Orissa etc.

Making his observations on the important points raised during the discussions, Prof. Santosh Kumar agreed with the need to change the mindset of the politicians. He felt that successful experiments of the type made by IRMED would assist in this process. Attitude question should not apply to local institutions alone but to others also like government officials, scientists, engineers etc. He clarified that the involvement of community did not imply that there was no role for structural measures. An appropriate combination of both structural and non-structural measures was needed, as was also indicated in the Manual.

### **Technical Session – II**

The next technical session was concerned with Delivery Services for Advance Warning for Disaster Prevention at Community Level. It was chaired by Mr. M. Gopalakrishan, Secretary General, International Commission on Irrigation and Drainage. Prof. Binayak Rath of I.I.T., Kanpur and Shri R.K. Siingh, Director, Ganga Flood Control Commission, Patna acted as Resource Persons / Facilitators. The Chairman, at the outset, emphasized the role of Information Technology (IT) in flood disaster management and dissemination of warning. Thereafter, Mr. A.K. Sinha, Director, Central Water Commission, Government of India, gave a presentation on the theme. He highlighted some of the points from his paper which had already been circulated. He emphasized the need for advance warning to reduce damages due to flood. The number of forecasting stations operated by CWC had gone upto 173 in all the river basins of India. 28 out of these were inflow-forecasting stations for reservoirs/ barrages. He also highlighted the different methods of forecasting followed by CWC. Forecasts were being issued 12 hours to 72 hours in advance depending upon the watershed characteristics. He also explained several newer techniques being taken up by CWC for modernization of flood forecasting network in India so as to improve the forecasts still further.

Discussion on the paper was initiated by Dr. Binayak Rath of IIT Kanpur who was followed by R.K. Singh, W. Grabs, C.P. Yadav, Subhash Chandra, Zahir Abbas, G. Kathpalia, B.R. Sharma, R.R. Singh, R.N. Yadav, M.A. Alam, Renuka Kumar, L.R.K. Prasad and S.C. Agarwal. The discussion veered round three issues. First, some participants drew attention to deficiencies of flood forecasts. Figures given by





I.M.D. and C.W.C. do not tally sometimes with respect to gauge stations, siltation etc. A longer lead time was needed to make the forecasts more useful to the concerned people. In the case of coastal areas, there was a need to look into the level of the sea also. Second, most of the participants pointed out that the delivery of the forecasts to the people was unsatisfactory. While meteorological forecasts were passed on daily to the public through newspapers, T.V. etc. hydrological forecasts were transmitted only to decision makers. People at the grass-root level did not get the information as to whether and when their area would be flooded. Third, several participants, therefore, underlined the need to remove the deficiency at the earliest by instituting a more suitable transmission mechanism to translate forecasts to local level and deliver the same to the community. Several suggestions in this respect were made. One suggestion was to involve educational institutions like schools etc. for this purpose. It was pointed out that computers were now available with administration at the local level even in rural areas and these should be utilised for the purpose. In the North Eastern part of the country, Community Information Centres (CIC) were now available in every block. These centres should be established in other parts of the country also and the services of these centres should be utilised for delivering flood forecasts. Services of established institutions and religious leaders might also be availed of in this respect as was already the case in Cachar district of Assam. Another suggestion was that there should be a ready reckoner in local languages in every district indicating the specific villages and areas to be flooded with respect to different water levels in local rivers. Action to be taken on receipt of warning was equally important. It was pointed out by more than one participant that quite often people and more particularly women were reluctant to move out. How to sensitise them to move out in the face of an impending flood was an issue to be tackled. It was pointed out that community involvement would be very useful in this respect. Such an involvement might also help authorities in related issue of flood plain zoning.

After summing up the discussion, the Chairman, Mr. M. Gopalakrishan, observed that interest of user groups should determine research at higher levels.

### **Technical Session – III**

Technical Session – III was devoted to Voice of the Community. In this session representatives from grass root levels in Assam (Cachar district), Bihar (Samastipur and Darbhanga districts) and West Bengal (Murshidabad district) where the field works of the study had been conducted, put forward their points of view on the usefulness of the community approach to flood management. This session was chaired by Shri C.P.Bhatt, eminent Environment and Social Activist of Uttaranchal State who was associated with the famous Chipko movement. Professor Rajiv Nandan Yadav, Ex-Principal, T.P.S. College, Madhepura, Bihar and Dr. Sujata Singh of Indian Institute of Public Administration, New Delhi were the Resource Persons / Facilitators in this session. The Chairman, in his opening remarks, highlighted the problem of siltation and relief measures. He also emphasized the role of afforestation in flood management. The community had a stake in local ecological development. The community was also conversant with the role that forests and water play in their welfare. He made a strong plea for strengthening the knowledge base of the local people. In this connection, students of local schools / colleges should be taught about flood disaster and vulnerability reduction.

Shri Amarendra Prasad Singh, the Mukhia (Head) of Sinuara Panchayat, Hanumanagar Block in Darbhanga district of Bihar was the first to present his views. He drew a bleak picture of the flood management scenario in his area. The government neither provided any boat for rescue operations nor any other type of assistance. There was no relief on time. He had approached the BDO who expressed his helplessness since he had no powers to give relief. He could give relief only if the Collector sanctioned it. Mr. Singh's speech was followed by that of Shri Sanjay Kumar, the BDO of Hanumanagar Block. The BDO more or less corroborated the statement of Shri Singh to the effect that he could take actions only after getting prior permission from the District Collector. Community involvement, however, was considered useful by the BDO. Thereafter, Shri Rajiv Laskar, who was representing Nutan Ramanagar Panchayat in Sonai block of Cachar district in Assam, made his observations. He drew attention to total collapse of communications during flood which was made more difficult due to lack of boat. Because of the usual delays associated with government machinery, order for the requisition of boats was passed a few days after the floods came. It took another two to three days before the boats would arrive. According to him, if district authorities could empower the BDO, who in turn could empower the Secretary of Gram



Panchayat to acquire 4 to 5 boats, then people would not suffer. In his opinion, flood management efforts by district authorities were neither sufficient nor timely. Hence, panchayats along with local bodies should be preferred for flood management. He also drew attention to the absence of flood shelter in his panchayat and pleaded that such a shelter should be made at the earliest. Thereafter, Shri S.J. Banerjee, Block Relief Officer of Bhagwangola II block in Murshidabad district of West Bengal described the conditions in his block. He stated that common people suffered due to flood. He informed that a Gram Panchayat level disaster management committee had been formed in his block and three types of map indicating areas of different levels of vulnerability had been prepared by the people.

These presentations were followed by a discussion in which Renuka Kumar, A.M. Alam, G.R. Das, Zahir Abbas, B. Rath, R.N. Yadav, W. Grabs and Sujata Singh participated. While the first three who were senior officers of U.P., West Bengal and Orissa state governments respectively gave an idea of preparedness on the part of the respective state governments, others drew attention to the inadequacy of these measures. Renuka Kumar observed that the occurrence of flood got highlighted in newspapers, T.V. etc. As a result, quick remedial measures were taken by the state government. Mr. Alam observed that contingency plans in West Bengal were prepared before the onset of flood and relief materials were also stored before flood. Boats to be requisitioned were also earmarked before the flood. Mr. G.R. Das, pointed out that the Orissa Government had a Rapid Action Force consisting of trained manpower posted in the coastal areas of the state to deal with flood as and when it strikes. There were 97 storage godowns in such areas created with the purpose of emergency storing of food and other essential items for meeting the exigencies during floods. Mr. Das also reported that in his state 8000 schools were used as relief camps for providing food and shelter to the marooned villagers during flooding. He highlighted the need for common kitchens in various relief camps as was being followed in his state. Other speakers felt that government machinery at the local level was almost non-functional or totally indifferent. Panchayats were also totally dependent on government machinery. Further, there was often a secret collusion between Mukhia (Head) of a Panchayat and local bureaucracy. As a result people used to suffer. Because of disruption of communication links in Assam, connectivity between district and state headquarter broke down. Lack of boats with district administration was another problem. It was, therefore, suggested by another participant that villages be provided funds to own and maintain boats for use in emergency. Decentralization of relief material should also take place at a level where administration could not reach easily. Besides, there was a need for awareness and education in rural areas. Flood shelters should also be provided in such areas.

## **Day Two**

### **Technical Session - IV**

The second day of the National Workshop started with Technical Session IV on Experiments in Community Participation in Flood Management : Experience and Lessons. Professor R.R. Singh, Ex-Director, Tata Institute of Social Sciences, Mumbai presided over this session while Mrs. K. Yechuri, Member in charge, Water and Sanitation, All India Women's Conference, New Delhi acted as Resource Person/Facilitator. Presentations were made by Professor Kamta Prasad, Dr. C.P. Yadav from Bihar, Shri B.K. Majumdar from West Bengal and Mr. Zahir Abbas from Assam.

Professor Kamta Prasad started his presentation with the observation that there was very little participation of the community in flood management in India. Management of both structural and non-structural measures was concentrated in the hands of the government. Public response was mainly individualistic. It was the WMO who took initiative for public participation in flood management in India, Nepal and Bangladesh. It organized a kick-off meeting in Dhaka on 6 and 7 November, 2002 in which professionals from the three countries participated. Thereafter, a pilot project was launched in each country to find out the current status and explore the potential. Three states of Assam, Bihar and West Bengal were selected for the pilot study in India by the Institute for Resource Management and Economic Development, Delhi which was entrusted with the responsibility for conducting the study in India. The findings of the exploratory study were presented at the 3rd World Water Forum in Kyoto (Japan) during March, 2003. These indicated that there was a good potential for community participation in flood management. Thereafter, WMO launched the second phase of the study with the objectives to raise



awareness in the selected areas and prepare a manual for community approach to flood management. For this purpose, rapid rural appraisal, focused group interviews, workshops and training programmes were conducted in the selected areas. A comprehensive Manual on community approach to flood management in India was prepared and published. Thereafter, the Manual was tested during actual flood conditions in one and two frequently flooded areas of Bihar during the flood months of 2004 and 2005 respectively. The experiments proved that the Manual was implementable and that the rural community can take care of several aspects of flood management. Professor Prasad also made a brief reference to the UNDP programme of community participation in disaster management which was in operation in several districts in India as well as to an IFFCO Foundation's programme in one block in Bihar. Drawing lessons from the experience, Dr. Prasad impressed upon the need to seek the prior cooperation of the Collector at the district level and the panchayat head at the village level. Secondly generation of awareness in the concerned area was necessary. Thirdly, long time and considerable interactions were needed for persuasion.

Thereafter, Dr. C.P. Yadav, who functioned as Extension Officer in the selected areas in Bihar during the testing of the Manual in 2004 and 2005 flood periods, narrated his experiences and findings. He showed how Flood Management Committees as per guidelines indicated in the Manual were constituted and functioned in the two selected Panchayats and how the people benefited in the process. Empowerment of the people took place through capacity building trainings in flood rescue and rehabilitation, health care and sanitation, cattle care, agricultural practices etc. He concluded that the Manual was tested successfully and people were happy to be associated with flood management.

The next presentation in this session was made by Shri B.K. Majumdar of E.I.T. Kolkata who was in charge of the field work in the selected areas in West Bengal during the 2nd phase of the project. He narrated his experiences including the initial difficulties faced in motivating the local administration, gram panchayat hierarchy and the villagers. But, later on, the turn out in the village meetings was very good and participants of the training programmes took much interest. A similar presentation was made by Mr. Zahir Abbas representing a selected Panchayat in Sonai block of Cachar district of Assam. His experience was more or less similar. There was full cooperation from the administration since Deputy Commissioner (Collector) had shown interest in this and people were enthusiastic.

The discussion on the above presentations was initiated by Dr. R.R. Singh who was chairing the session. He opined that only two experiments for testing the Manual were not adequate and more experiments in different types of areas should be conducted. He indicated that attention should be given not only to prevention of disasters and relief but also to development of the affected area and people. An aspect that required to be looked into was loss of teaching during flood against which there was no provision for undertaking compensatory teaching programme. He pleaded for the facilitating role of educational institutions and NGOs. He also drew attention to the fact that damage assessment was not scientific because of which many a times the desired benefits did not reach the deserving person. Hence, maintaining transparency while preparing a list of beneficiaries was called for. Mrs. K. Yechuri expressed her concern about the risk and vulnerability in flood affected areas and the role that the organized communities can play in dealing with them. Mr. Alam laid emphasis on interface between the Government and the community as rightly highlighted in the Manual. Mrs. Mala Srivastava also highlighted the need for cooperation between government agencies, NGOs and CBOs. Replying to a point raised by Dr. R.R. Singh, Prof. Kamta Prasad expressed his agreement with him that two experiments in testing the Manual were not adequate. He pointed out that it was because of the recognition of that fact that a session on multiplying the experiment had been provided for in the programme of the National Workshop.

#### **Technical Session – V**

After this, the participants opted themselves into two groups for a more intensive discussion. The first group was on interface between governmental/Non-governmental and community organizations. It was chaired by Mrs. Mala Srivastava and facilitated by Prof. N.M.P. Verma. The second group was on Empowerment of Communities through capacity building training. Prof. R.R. Singh was selected as Chairman of this group while Shri D. Routray acted as resource person/facilitator. The reports of both the





groups were discussed in the plenary session which was chaired by Shri Brij Bhushan Prasad Singh. Both the groups had found that the guidelines given in the Manual were realistic and more or less sufficient. The groups, however, added a few more points. These are given below.

Areas of interface between governmental and community organizations including NGOs should include planning and supervision of infrastructure, assessment of damages from flood, management of flood across different panchayats, blocks and districts i.e., transboundary flood and dissemination of warning. The group also recommended that NGOs should be graded, PRIs should be strengthened and complaints against CBOs might be looked into by the government. Capacity building training for empowerment of communities should also include training on management of community kitchen, first aid, mobile child care units (crech), disposal of waste specially dead animals, sluice gate operation, training on swimming, flood proofing, damage assessment, monitoring services and trauma counseling. The group also pleaded for inclusion of flood management aspects in school curriculum and conducting of mock drills in flood prone areas.

### **Technical Session – VI**

The next session, held immediately after the lunch break was on the theme of Multiplying the Success of the Pilot Project : Strategy and Prospects. It was presided over by Dr. Wolfgang E. Grabs of WMO, Geneva. Shri P.G. Dhar Chakrabarti, Executive Director, NIDM, Delhi and Shri G.R. Das, Chief General Manger, Orissa Disaster Management Authority, acted as the Resource Persons/Facilitators.

Dr. Grabs, in his opening remarks, complimented the efforts of the Institute for Resource Management and Economic Development in producing an excellent Manual which was tested successfully in two flood seasons with very limited funding support. This was an example of how much can be accomplished despite constraint of fund if the implementing agency had the required commitment as IRMED had. Thereafter, he emphasised the need for multiplying the experiment and felt that the government and other funding agencies should come forward as WMO had exhausted its fund for this purpose. He invited suggestions from the members.

Prof. R.N. Thakur, Mrs. Mala Srivastava, Prof. R.R. Singh, Shri G.R. Das, Dr. B. Rath, Dr. B. Mishra and Mr. Chakrabarti participated in the discussion. Some of the important suggestions made were the following. The Manual be translated in local languages and its implementation be monitored by IRMED. Copies of the Manual be sent to State governments by National Institute of Disaster Management (NIDM). UNDP should try to implement it in the selected districts in which it was operating. Community experiments of the type made by IRMED during 2004 and 2005 should be repeated for six years in a large number of areas in different states. Floods should be included as part of the school curriculum in flood affected areas.

### **Valedictory Session**

The above session was followed by the Valedictory session. Shri Mohan Kanda (IAS ret'd.), Member National Disaster Management Authority, Government of India, in-charge of flood and former Relief Commissioner, Government of India as well as former Chief Secretary, Andhra Pradesh Government was the Chief Guest. The session started with Prof. Kamta Prasad, Chairman, IRMED giving a brief resume of the deliberations of the workshop during the two days. He highlighted the remarks made by the Hon'ble Minister of State for Home Affairs on the need for community participation in flood management and the need for adequate support from Government to IRMED to enable it to function as the nodal institution in this respect for the country. Thereafter, Professor Prasad gave a summary of major observations and suggestions. He informed the Chief Guest, that the Manual circulated during the workshop by IRMED was reviewed by the participants and found most appropriate for the purpose. Participants wanted that the said Manual be circulated to state governments and UNDP by the Home Ministry or NIDM.

A few members also made brief observations during this session. These included Prof. R.R. Singh, Dr. W. Grabs, Dr. B. Rath, Prof. R.N. Yadav, Prof. N.M.P. Verma, Dr. C.P. Yadav and Mr. P.G. Dhar Chakrabarti. Many of them supported the suggestion of the Hon'ble Minister of State for Home Affairs that IRMED should be made a nodal agency for community approach to flood and other disasters and it



should be provided adequate funds by the Govt. of India for this purpose. Such a nodal centre would further refine the Manual by undertaking research and field studies. Being the first of its type, the Manual should be regarded as a Manual for National Initiative. The Manual should be adapted to local conditions prevailing in different parts of the country and also to meet the requirements of other water related disasters like drought and cyclone. Dr. Grabs observed that because of its high quality he would recommend the Manual to several other countries of the world. Shri P.G. Dhar Chakrabarti stated that NIDM would circulate the Manual to state governments and the UNDP and would help IRMED in conducting additional experiments as well as in any follow up action that may be taken.

The Chief Guest, Shri Mohan Kanda, expressed his satisfaction that the National Workshop had been a grand success. He put great emphasis on participatory mode giving special attention to the needs of women and children during a disaster. He also underlined the need for adopting an eco-friendly approach. He hoped that IRMED would look into monitoring aspect for which it should receive support from the government. Thereafter the National Workshop came to an end with a vote of thanks moved by Prof. Kamta Prasad.

## **2. Recommendations**

1. The Institute for Resource Management and Economic Development, Delhi should be strengthened to enable it to function as the national resource centre on community approach to management of flood and national disasters in India. For this purpose, it should be provided funds and other support from the Govt. of India, the National Disaster Management Authority and National Institute of Disaster Management, New Delhi.
2. The number of experiments in community participation in flood management should increase substantially.
3. The Manual on Community Approach to Flood Management so meticulously developed by the Institute for Resource Management and Economic Development should be generalized to take care of all disasters.
4. Structural measures for dealing with flood were also needed so that a hazard did not become a disaster.
5. The Manual on Community Approach to Flood Management in India as formulated and circulated by IRMED was most comprehensive and implementable. It should, therefore, be taken up for implementation by the Government. The following points may, however, be added to the Manual.
  - (i) Use of sirens for transmission of flood warnings.
  - (ii) Need for bringing out a change in the mindset of politicians.
  - (iii) Areas of interface between governmental and community organizations should include planning and supervision of infrastructure, assessment of damages from flood, management of transboundary flood and dissemination of warning.
  - (iv) Capacity building training should also include training on management of community kitchen, first aid, mobile child care units, disposal of waste specially dead animals, sluice gate operation, training on swimming, flood proofing, damage assessment, monitoring services and trauma counselling.
6. Flood management aspects should be included in school curriculum in flood affected areas.
7. NGOs should be graded.
8. Complaints against CBOs might be looked into by the Government.
9. A longer lead time was needed to make the flood forecasts more useful.



10. Delivery of forecasts should involve schools and other educational institutions, Community Information Centres (CIC), other established institutions and religious leaders.
11. There should be a ready reckoner in local languages in every district indicating the specific villages and areas to be flooded with respect to different water levels in the flood causing rivers.
12. Interest of user groups should determine research at higher levels.
13. Decentralization of relief material should take place at a level below which administration can not reach easily.
14. Attention should be given not only to prevention of disasters and relief but also to development of affected areas and the people.
15. The Manual be translated in local languages and its implementation be monitored by IRMED for which funds should be provided by the Government.
16. Copies of the Manual be sent to State Governments and UNDP by NIDM for implementation.
17. IRMED should further refine the Manual by undertaking additional research and studies funds for which should be provided by the Government or NDMA or NIDM.
18. Being the first of its type, the Manual should be regarded as a Manual for National Initiative. The Manual should be adapted to local conditions prevailing in different parts of the country and also to meet the requirements of other water related disasters like drought and cyclone.