

INTERNATIONAL DECADE FOR NATURAL DISASTER REDUCTION

MEETING OF GROUP OF EXPERTS

JULY 5-8, 1988

GENEVA, SWITZERLAND

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SUMMARY

1. The meeting of the Group of Experts for the International Decade for Natural Disaster Reduction commenced with an open session addressed by the Secretary-General, the Director-General of UNESCO, the Secretary-General of the WMO, the Permanent Representatives of Japan and Morocco to the UN, and the Chairman of the Group. The presentations noted the high expectations each had for the Decade and the commitment of each to its success.

2. The first working session was devoted to refining the agenda for the four-day meeting and to the designation of assignees for key responsibilities. The Group agreed on a ten-question discussion agenda and assigned discussion leaders for each question. To be addressed were: the roles of national committees, of international science and technology organizations, of UN System organizations, of regional organizations, of multilateral and bilateral projects, and of private sector institutions; the nature and content of the Group's report(s); organizational structure for the Decade; the salient issues for each category of hazard; the merits of the proposed IINDR program committee directly supporting research projects; and the special problems of developing countries in participating in the IINDR. The Group chose to devote one day to a plenary session, to be followed by a day of three subgroup meetings devoted to Atmosphere-Biosphere, Geotechnology, and Decade Organization. A review session was then scheduled to evaluate progress at this first meeting, to schedule subsequent meetings, and to make assignments to assure progress between meetings. The list of Experts and other meeting attendees; the list of questions and discussion leaders; and members of the subgroups; assignments for post-meeting activities; and tentative schedule of subsequent meetings may be found in the appendices of this report.

Needs of Developing Countries

3. In the discussion of the special needs of developing countries, consensus was reached that these nations needed to enhance their capabilities to address natural disaster and to assign higher priority to disaster mitigation. These countries generally suffered from a weak or nonexistent hazard mitigation infrastructure; a low priority for such mitigation activities given their lack of resources; limited data availability and poor data gathering capability; poor information dissemination systems; deficiencies in existing personnel and inadequate education and training programs; and inadequate linkages with stronger programs both at the regional level and with those of industrialized nations. It was recognized that UN System organizations have proved valuable, and will be important, in assisting these nations. There was agreement that early attention ought to be given to bilateral, multilateral and regional activities that could result in the following: assistance in implementing warning and forecasting systems; enhancement of training and education at all levels; linkage of hazard mitigation with

economic development activities; improvement of risk assessment and remote sensing programs; and, in general, work toward creating an effective and low-cost disaster mitigation capability that would transcend the Decade.

4. It was pointed out that the existence of disaster mitigation technology alone should not be regarded as a measure of success. Rather, it is its implementation that confirms success, which itself demands more than disciplinary concerns.

Role of the U.N. System Organizations

5. The special importance of the activities of UN System organizations with regard to developing nations was noted. There was consensus that these organizations could play an important role in many aspects of the Decade, including, for example, by encouraging pilot projects at the national or regional level and in disseminating their results, particularly to other developing nations with common concerns. The UN System was recognized as having a strong orientation toward meeting humanitarian needs, and was viewed as having a key role in translating advanced scientific and technological concepts into low-cost appropriate-scale techniques. The specialized agencies of the U.N. are seen to be a key participant in the Decade's activities, and its inputs into the planning process were encouraged.

Regional Activities

6. A subsequent discussion of the role of regional organizations noted the merit of finding ways to work at the regional level to enhance the relatively low priority that national governments might accord to disaster mitigation efforts in the absence of regional consensus, and to increase the efficiency of education and training programs, demonstration projects, and early warning systems.

7. The Group agreed to seek out means for the Decade to promote meaningful regional activities. In many parts of the world it was recognized that there are commonalities in disaster among neighboring nations and that these countries could benefit from shared experiences and programs. In some instances, a critical mass of financial resources and/or technical skills did not exist within a single country so that a regional approach would be necessary. The success of regionally-oriented disaster mitigation programs, including hydrological or weather disaster mitigation efforts, demonstrates the benefits of regional cooperation to reduce the impact of other natural disasters.

National Committees

8. The discussion of how to encourage the formation of national committees demonstrated the important role of professional societies in encouraging national efforts. It concluded, however, that a successful national Decade would require the full participation of those with present or prospective implementation responsibilities, in addition to the science and technology community. In practical terms, this calls for the early involvement of government officials as well as those from voluntary and humanitarian organizations so that the program that emerges has broad-based support and a high level of visibility both among professionals and with the general public. The case example of Japan was presented to illustrate the roles to be played by a diversity of

participants. The Group agreed that encouraging the formation of national committees was a desirable objective and that incorporation of disaster reduction into the national development plans is essential. In this connection, the Group asked that the Chairman convey to the Secretary-General its suggestion that Member States be urged to consider the formation of national committees. It was also agreed that the Group would return to this subject at its second meeting so that more detailed guidance for the formation of national committees might be provided to the Secretary-General.

Role of Professional Organizations

9. There was consensus that international scientific and technological organizations should play an important role in encouraging the formation of national committees by outreach to their membership. Their various international meetings and fora could prove useful in creating greater awareness of and interest in the goals of the Decade, to gather inputs for the planning process for the Decade and, subsequently, for disseminating the results of Decade activities. It is also reasonable to expect that such international scientific and technological organizations can engage in pilot projects which can be initiated promptly at modest cost and will bring widely visible benefits. In this respect, it is important to recall that on most occasions, for example in the 1970 Peru disaster, post-disaster memory is short. The group considers that education in all aspects of disaster mitigation and at all levels is essential. To achieve this, permanent national entities should be developed to carry out public awareness programs.

Voluntary Agencies

10. The role of voluntary agencies, both at the national and international levels, was viewed as important to the implementation of Decade programs. They should, therefore, be asked to contribute their views to the planning process. It was agreed that ideas about the potential role of voluntary agencies would be sought from such organizations as the International Council of Scientific Unions and the International Council of Voluntary Agencies. The U.N. Disaster Coordinator and his Deputy accepted this responsibility, and members of the Group were asked to give the issue of voluntary agency participation further thought in advance of the Group's second meeting.

Presentation of a Case Study

11. A case study of the problems, as well as research and implementation opportunities, of wind energy disaster and their relationship to structural engineering was presented by Professor Alan Davenport, President of the International Wind Engineering Association. A written version of his presentation is appended. The IDNDR was seen as a means for building on ongoing efforts through the setting of broad, multidisciplinary goals and through the involvement of all relevant disciplines both in setting Decade priorities and in translating them into reality.

12. The approach of this case study seemed appropriate for discussion of problems and opportunities associated with other natural disaster. Regarding earthquakes, it was noted that risks stem from the large inventory of substandard structures, increasing population growth and urbanization, deficiencies in some current construction practices, and

relatively poor dissemination of knowledge about existing earthquake disaster mitigation strategies.

13. In discussing insect plagues, it was noted that present intervention practices are viewed as not very satisfactory and additional research will be needed to develop a truly workable approach. In particular, long-lived pesticides can mitigate an infestation but also create lasting damage to fragile ecologies. In the near term, in addition to research that can eliminate grasshopper swarming, it is necessary to develop an enhanced international coordinating mechanism and to raise the level of expertise in areas at risk through more emphasis on education and training.

Subgroup Reports

14. For Geotechnology issues, it was recommended that the Decade focus on improved information transfer, both to the general public and among experts around the world. The subgroup indicated its members' intent to reach out to their various professional organizations to invite suggestions for specific projects that could be implemented in the near-term. A brief review was made of problems and opportunities in the various geotechnical hazard areas, noting activities that might lead to improved structural integrity as well as to more reliable early warning.

15. After it was indicated that this subgroup and its sister subgroup on Atmosphere-Biosphere issues would develop both a subgroup report and a series of smaller hazard-specific reports, the U.N. Director-General for Development and International Economic Cooperation noted that it would be particularly helpful to the U.N. Secretariat if each contributor would address why the IDNDR, as a formally declared activity, would be helpful in promoting disaster mitigation in their area of expertise.

16. The discussion of Atmosphere-Biosphere issues noted that weather and flood early-warning systems were in various stages of development throughout the world, and that reliable and timely systems were increasingly feasible. The Decade might motivate a diverse group of individuals and organizations to widely implement such systems and, equally important, to foster public education and disaster mitigation efforts, especially in developing countries. The inclusion of droughts as one of the natural disaster that the Decade should address arose in this discussion, and arguments were made for and against this issue. The significance of drought was obvious, it being the most important natural hazard in sub-Saharan Africa. But it was not a rapid-onset event and, for this reason and others, its mitigation strategies differed markedly from the other disaster being considered. The issue will be raised again at the second meeting.

17. The U.N. Director-General for Development and International Economic Cooperation observed that it would be important to convince the international community of the usefulness of the concept of International Decades. In its discussion of the unique contribution the Decade could make, the Group concurred that the focus of many disciplines in many countries over an extended period can achieve real progress in not only reducing the economic losses from natural disasters but also in reducing the loss of human life, livestock and plant life, and in limiting the sociological and psychological impact of these disasters.

18. With regard to Organization, there was consensus that the IDNDR have a 7-10 member Board of Trustees appointed by the Secretary-General but which would have substantial autonomy. Trustees would be high-level individuals commanding international respect who would bring visibility to the Decade and who could perform a general oversight function. A Secretariat was also needed, to be located in Geneva and composed of several professionals headed by an Executive Director. Its members would serve in their individual, independent capacity and could be experts seconded from national governments, from the U.N. System or from other organizations. Some form of Program Committee and/or Executive Committee would also be required to enable the various interested groups at the national and international levels to develop jointly a workable program and to supervise and direct the activities of the Decade's Secretariat. Details of size, membership, means for appointment, and management structure and functions of the Program and Executive Committees will be the subject of discussion at the second meeting, at which time the Chairman will present his views. Members of the Group were asked to communicate their thoughts on these questions to the Chairman, prior to this second meeting.

Future Meetings of the Group of Experts

19. It was agreed that a total of four meetings would be desirable, with the next meeting to be at the United Nations in New York on October 3-6, 1988 and with subsequent meetings in January and April, 1989. Sites for the latter two meetings were not selected although Morocco and Japan were mentioned. The members of the Group were flexible on this subject.

Final Report

20. It is expected that the Group of Experts will present its final report to the Secretary-General at the fourth meeting. This would necessitate that a near-final draft be the goal for the end of the third meeting. To achieve this objective, each of the technical experts on the Atmosphere-Biosphere and Geotechnology subgroups was asked to develop a review of disaster mitigation strategies pertaining to his own area of expertise in advance of the second meeting so that these reports, with other material, could be assembled into a preliminary draft by the end of the second meeting. In addition to the issues previously discussed, these reports would address the question raised by the U.N. Director-General for Development and International Economic Cooperation regarding the unique value of the IDNDR toward the implementation of the suggested agenda.

Pilot Projects

21. Members of the group were asked to commit to paper their suggestions for pilot projects--activities that could be initiated quickly, would have high visibility, and would achieve significant accomplishments in a short period of time. To this end, Professor Kenzo Toki, consultant to the UN Steering Committee, presented five short-term project concepts, and it was agreed that these and others would be the subject of more focussed discussion at the second meeting. In addition, the Vice Chairman was asked to organize a discussion on pilot projects, the results of which would also be presented at the second meeting. Also to be considered would be the elements of relevant past international projects that have proved most successful, as well as whether more

concentrated effort on ongoing projects might have special merit. The U.N. Secretariat will provide information on recent and ongoing projects of relevance to the Decade, and the Chairman will indicate one or more projects that he believes are worthy of consideration for early implementation.

Preparations for the Group of Experts' Second Meeting

22. As a follow-up to the Group's consensus that a regional perspective was very important, members of the Group were assigned responsibility for providing status reports on activities and areas of priority for their regions: Asia and the Pacific, Africa, Europe, North America and Latin America and the Caribbean. These reports would address issues related to both Atmosphere-Biosphere and Geotechnology, and thus two or more discussants for each region were selected. In parallel, the Secretariat was asked to provide a brief regional perspective for these five economic regions to serve as inputs to the reports that will be provided by members of the Group. Finally, in preparation for the second meeting, assignments to members of the Group were made for papers discussing the role of: UN System organizations in the implementation of the Decade; regional organizations; international science and technology organizations; and the private sector.

CONCLUSIONS

23. o A successful Decade will lead to:
 - a new high visibility for hazard mitigation projects;
 - outreach to communities previously uninvolved in but critical to the success of hazard mitigation efforts;
 - prompt establishment of new priorities for research and implementation.
24. o The Decade should focus on closing gaps in knowledge that can be accomplished in a relatively few years, as well as on demonstration projects that can be replicated during the course of the Decade. Wherever possible, these should be a series of independent projects undertaken with decentralized management.
25. o Early financing will be critical to the success of the Decade, and the organizational structure should reflect this high priority.
26. o Application of hazard mitigation technology is the primary goal of the Decade, and to do so will require a concerted effort to enhance public awareness and governmental involvement.
27. o It is imperative to involve social scientists, planners and government representatives in the implementation of disaster mitigation programs.
28. o Scientific and technological organizations should be encouraged to focus on the Decade by devoting sessions to the subject at scheduled meetings and by participating in pilot projects. Such pilot projects will be necessary to provide high visibility and early success to the Decade.
29. o Developing countries have special needs in the area of disaster mitigation, including:
 - early warning systems; enhanced preparedness;
 - training and education programs;
 - means to overcome short public memory of disasters and the low priority the subject takes in national planning efforts.
30. o Disaster mitigation strategies should be built into all national development plans, but particularly those of developing countries.
31. o The U.N. System, through its many specialized agencies, has a special role to play in the Decade, particularly in supporting the needs of developing countries. The program for the Decade should seek to incorporate the capabilities of these agencies.

CONCLUSIONS (continued)

32. o Regional networks, such as the Pan-American Institute of Geography and History (PAIGH), Centre Seismologique Euro-Mediterranean (CSEM), Asian Disaster Preparedness Center (ADPC), and the International Tsunami Information Center, may be a key implementation mechanism, particularly as regards developing countries.

NARRATIVE

33. The Group of Experts for the International Decade for Natural Disaster Reduction (IDNDR) commenced its activities on July 5, 1988, at 3 PM in Geneva, Switzerland. The list of members of the Group is attached as Appendix A, with an asterisk next to the names of those members not in attendance. In addition, the Group was joined by observers from the U.N. System and from other organizations. Appendix B provides a list of non-Group members.

34. At the opening ceremony, the Group was addressed by the Secretary-General; the Group's Chairman, Frank Press; UNESCO Director-General Federico Mayor; WMO Secretary-General G. O. P. Obassi; Ambassador El Gali Benhima of Morocco; and Ambassador Makoto Taniguchi of Japan. Each discussed his expectations for the Decade and hopes for progress by the Group. Ambassador Slaoui also indicated the willingness of his nation to host a meeting of the Group of Experts early in 1989.

35. In his statement, the Secretary-General called attention to General Assembly Resolution 42/196 (attached as Appendix C), in which the international community, under the auspices of the United Nations, is called upon to "pay special attention to fostering international cooperation in the field of natural disaster reduction", and to the objective and goals set forth therein. He requested the Group to consider the imperative of involving "the active support of governments and people" as it works to devise a framework for the Decade, as well as the need "to demonstrate to governments facing budgetary constraints that the allocation of additional resources to disaster prevention is cost beneficial." The Secretary-General reaffirmed his confidence in the capability and willingness of the United Nations to serve as a forum for the coordination of international action and called upon the collective wisdom of the Group in identifying the challenges and opportunities presented by the Decade. The text of the Secretary-General's statement is attached as Appendix D.

36. This public session was followed by a closed working session of the Group, which commenced at 4:30 PM. It was devoted to discussion of the Chairman's concepts for organization of this first meeting, which were intended to assure rapid progress and early attention to substantive issues. Emilio Rosenblueth and Thomas Odhiambo accepted the positions of Vice-Chairman and Rapporteur respectively. The Group agreed to devote its second day, July 6, to a ten-question agenda identified by the Chairman. Assignments were made designating members of the Group as discussion leaders for each question. The list of questions and their designated discussion leaders is presented as Appendix E. It was also announced that on the afternoon of July 6, Alan G. Davenport, President of the International Association of Wind Engineering, would address the Group on opportunities provided by IDNDR for reducing the destructive effects of wind. This presentation would serve as a case study for subsequent detailed discussions of other hazardous phenomena. The Group also agreed that, for the purpose of working-level discussions, July 7 would be organized around three subgroups--Atmosphere-Biosphere, Geotechnology, and IDNDR Organization. Mr. Kintanar agreed to serve as chairman of the

Atmosphere-Biosphere subgroup, Mr. Arya as chairman of the Geotechnology subgroup, and Mr. Press as chairman of the Organization subgroup. Appendix F presents a list of the subgroup memberships.

37. The Wednesday, July 6, session began with a discussion of Question 10, which addresses the special needs of developing nations. Mr. Oyebande led the discussion, noting the special problems that these nations will have both in participating in the Decade and in utilizing the results. Developing nations typically suffer from a poor network for data collection for forecasting purposes. In addition, the magnitude or severity of hazard risks in developing nations is not accurately known in many cases. Progress can only be measured against past performance and, unfortunately, baseline data are not available in most developing nations. This raises the question about whether resources must be expended to establish baseline information or whether the urgent need for progress suggests that pilot projects be the focus of attention. Another fundamental problem is the inadequacy of early warning systems. Developing nations have generally poor infrastructure, and this is especially so in the case of telecommunications. Further, they tend not to have adequate land-use planning and to lack trained personnel able to plan for the mitigation of natural disaster. In some instances, although skilled personnel do exist, the organizational structure of the nation is insufficient to enable them to work together in a coherent way. Another deficiency is the general lack of data gathering mechanisms. Data sensing in remote and inaccessible areas is very expensive and, hence, often does not take place.

38. In discussing what might be done, Mr. Oyebande indicated that developing nations needed assistance in implementing warning and forecasting systems; in establishing systems for risk assessment; in establishing remote sensing systems; in improving preparedness for disaster management and prevention via land-use planning, logistical management, and promotion of public awareness; in undertaking the research needed to develop data bases; in establishing disaster prediction systems; in training of personnel, particularly through the creation of regionally-based institutions; and in implementing integrated regional development and planning programs to bring some order to the rapid rural to urban area migration.

39. Further addressing the subject of regional perspectives, Dr. Bensari summarized the proceedings of the First Workshop on Geophysical Risks in Africa, held in Casablanca, Morocco May 25 through June 3, 1988. Recommendations emerging from the Workshop included the creation of an "African Institute of Paraseismic Studies"; the implementation of disaster prevention education campaigns for the general public; and creation by the United Nations of a clearinghouse for information on natural hazard reduction. The Workshop stressed the need to address natural disasters in Africa from a national, sub-regional and regional perspective and called for specific projects in the Maghreb zone of Northwest Africa and in the East-African Rift system. In addition, it was recommended that a linkage be established with the Group of Experts and that the two bodies organize a workshop on the prevention of natural disasters under the auspices of the African Academy of Sciences.

40. Mr. Giesecke added that in developing nations the general awareness of disaster is very low. Even the memory of past disasters is short-lived as the population concentrates on day-to-day survival. He noted that there is no money for insurance and, hence, working with this industry would have little or no effect in reducing exposure to disaster in developing nations. Indeed, the central government itself often has very little local influence. The drug problem in South America, for example, has totally isolated some areas from their nation's government. He also noted the potential role of national ministries of education in promoting knowledge in the elementary grades, in addition to efforts to train specialists via higher education. He indicated that it was critical in developing nations to identify several capable people to lead a nation's effort. Whether these people were in the civil defense establishment, in a non-governmental science organization, or in a governmental science or engineering body was less important than that they were clearly charged with the responsibility for coordinating their nation's efforts and for understanding the unique technical and institutional issues facing their nation. As a final remark, Mr. Giesecke noted the special difficulties of operating in a developing nation by pointing to the problem of maintaining technical equipment in an environment in which spare parts or the capability to maintain equipment did not exist, or where resources were so tight that there might be funding for personnel and equipment but not the funds to procure gasoline for a field trip.

41. Mr. Benblidia commented that developing nations not only often lack personnel with a knowledge of disaster but are also deficient in knowledge of the methodology for forecasting and for management of assistance. He suggested that, with respect to developing nations, the IDNDR give specific attention to land-use planning to reduce risks at low cost, particularly in urban areas; to improvement of the process of technology transfer via the implementation of regional projects in which both developing and industrialized countries participate and in which there are balanced benefits; and, in general, to increasing the level of funding, perhaps to three or four times the present one. In addition, he advocated U.N. System involvement in aid transfer activities.

42. Mr. Keilis-Borok added that a strategy for developing countries might be based on a rapid analysis of existing data, followed by the establishment of small high-level research and development groups to identify projects with early and tangible payoffs, including the training of hazard mitigation specialists and the development of technology transfer mechanisms.

43. Mr. Petrovski also indicated that the first step might be the identification of gaps in knowledge, suggesting that the subsequent research activities might be conducted on a regional basis with participation of researchers from both developing and industrialized nations.

44. The discussion then shifted to Question 1, on the nature of national committees and how their establishment might be encouraged. Mr. Okabe served as the discussion leader, utilizing the formation of the Japanese national committee as a case example. He noted that efforts to form a national committee in Japan began shortly after Frank Press'