initial speech on the subject before the 8th World Conference on Earthquake Engineering in July 1984 and that the first steps were taken by their National Academy of Sciences, rather than by any governmental body. After considerable effort by the scientific and engineering community, in June 1986 the National Land Agency, a government agency, formed an organizational group for the Decade. Subsequent to the U.N. resolution calling for the IDNDR, of which Japan was one of the original cosponsors, the Japanese National Committee was formed. The committee operates as a council of the National Land Agency and has representation from 27 groups, including government agencies, ministries, and non-governmental organizations. The National Committee is planning the framework for Japan's Decade, after which it will be submitted to the Cabinet of Japan for approval and a Secretariat will be established to implement the Decade's activities. The framework will have three main thrusts: 1. response to the U.N. resolution; 2. response to existing and potential international and bilateral cooperative agreements; and 3. domestic activities. Efforts will be made to ensure that the various activities are compatible with the IDNDR, and there will be a reexamination of Japan's assistance projects. Other areas of focus will be means for implementing improved prediction capability as well as general means for applying R&D. Consistent with the objectives of the U.N. resolution, the Japanese domestic program will focus on typhoons, floods, landslides, and earthquakes, but land-use related activities will be tied to the dense population and other development constraints unique to Japan. In general, the long-term national plan of action that will emerge will call for a higher level of R&D than has been undertaken historically, as well as a greater effort to enhance public awareness. Mr. Okabe further referred to a paper developed by Mr. Kenzo Toki, consultant to the U.N.'s IDNDR program. This paper is attached as Appendix G.

45. In commenting on how national committees ought to be structured, Mr. Pelanda noted that there was no uniquely appropriate national committee structure both because of differences among nations and because alternative structures have different merits and debits. In every instance, however, he saw the need for the involvement of the national government both for visibility and to provide the necessary financial resources. Two plausible alternatives are: 1. full governmental involvement; and 2. relative involvement in which there is partial governmental control or a mechanism for linkage but with the core of the organizational structure outside government itself.

46. Mr. Kintanar indicated the importance of the participation on national committees of people with implementation responsibilities, such as representatives of local governments, labor representatives, and people in the communications industry. It is important that the results of scientific work get to people involved in implementation, and this can only be done if these implementers are part of the national committee structure.

47. Mr. Petersen noted that Iceland has a National Committee for Disaster Management which is linked with the nation's scientific community. He made the point that a national committee should be separate from any existing committee structure so that the new Decade committee can review present plans in perspective.

48. Mr. Keilis-Borok stated that ten agencies in the Soviet Union have responsibilities relating to disaster mitigation (e.g., civil defense, environment, construction, National Academy of Sciences). Because of the potential for confusion and misunderstanding among government agencies with interest in this area it was important for our Group of Experts to develop a brief report as soon as possible which provides guidance to each nation on options for establishing a national committee.

49. Mr. Bensari noted his nation's National Committee on Seismotectonics as an example of blending scientific expertise with more practical skills. He stated that it was important to maintain a minimum ratio of two parts scientific and technological to one part practice. Communication with the disaster management community and with the general public is often difficult; thus the involvement of disaster managers and political authorities is critical.

50. Mr. Krishna noted that in many places groups that might be called national committees already exist but that their efforts tend to be oriented to disaster relief activities. Thus, echoing Mr. Petersen's point, the critical goal of this group is to have new national committees for the Decade with a focus on pre-disaster mitigation and planning.

51. Mr. Arya suggested that disaster prevention and economic development must move forward together. Therefore, national committees for the Decade should have planning commission participation, as planners have historically not given high priority to disaster mitigation.

52. The discussion then shifted to Question 2, the roles of international scientific and technological organizations. The discussion leaders were Messrs. Keilis-Borok and Arya. Mr. Keilis-Borok noted that the task of the international scientific and technological organizations was to implement the revolution in knowledge which is the underpinning premise of the Decade. He described his vision of global networks with sufficient resolution for local needs, as well as of data banks and software for data processing. From the perspective of international scientific and technological organizations, the scope of the planning effort for the IDNDR should include the closing of gaps (as opposed to tackling all issues, many of which cannot be resolved during the course of the Decade); the mapping and probabilistic estimation of risk; and the formulation of reliable criteria for project selection. He noted as an example of a plausible project the enhancement of signal-to-noise ratios from existing seismological data using modern statistical techniques, pointing out the opportunity to enhance data by a factor of 10 without any additional stations or improved equipment. He envisioned the role of ICSU, for example, as the body that could bring these new practices into common worldwide use. With regard to actions, the Decade should be a set of essentially independent projects, rather than projects critically intertwined with one another. While good mechanisms for international cooperation exist, a mechanism needs to be developed to assure quality control. The process of technology transfer will require the establishment of knowledge centers at a regional level. The results of research will also have to be discussed periodically, and in this regard it would be preferable to utilize regular sessions of large existing

assemblies rather than creating new special meetings. With regard to organization, Mr. Keilis-Borok suggested the need for a small high-quality oversight body. He argued for a competitive merit-based approach to project selection. He also noted that it would be appropriate to initiate several pilot projects at the earliest possible time. One that he thought ought to be considered addressed the potential vulnerability of the world's largest cities when faced with the stress of a natural disaster. As a more intermediate-term project, he suggested consideration of improved methodologies for worldwide earthquake prediction.

53. Echoing earlier speakers, Mr. Morgenstern commented that the IDNDR would not be successful unless it embodied the interests and concerns of those outside the science and technology community. He suggested that, in broad terms, scientific issues should account for only about 20 percent of the total effort, with technology issues accounting for 40 percent, and social science and other practical implementation issues accounting for another 40 percent of the effort. He noted that ICSU does not represent the engineering community and that existing international engineering bodies are not yet effective mechanisms for coordination of effort. Of particular concern, however, is that the Decade not overlook the importance of socioeconomic planning and that it reach out to this community to assure its participation.

54. Mr. Arya added that a key contribution of international organizations will be to make the Decade a focal point at their periodic meetings. He noted as an example the quadrennial Earthquake Engineering Conference (the 9th in the series is being held in Japan in August of this year) as well as UNESCO-subsidized special meetings, such as one for non-engineered buildings.

55. Chairman Press summarized the prior discussion by indicating that international scientific and engineering organizations can contribute to the IDNDR by scheduling Decade-related activities during their regular meetings as well as by participating in demonstration projects, albeit with supplemental funding. He also reiterated the sense of the group that it was critical to seek out the involvement of implementation specialists if the Decade is to prove successful.

56. The Group then took up Question 3, relating to the role of U.N. System organizations. Mr. Kintanar, leading this discussion, noted that a compilation of present and proposed activities in the field of disaster mitigation would be most useful. Mr. Lechat, noting the U.N. System's historically strong orientation toward meeting humanitarian needs, suggested that the key to a successful decade was the development of a strong interface between those concerned with geophysical phenomena and those whose primary interest is in providing social services. He saw a major need to develop information systems, hazard mapping, and warning systems, wherever possible seeking out low-cost approaches which are easy to implement.

57. Mr. Bensari, addressing Questions 2, 3 and 4, suggested that U.N. agencies should participate in developing the plan of action and should also assist in mobilizing the means for implementing the Decade, via assistance to individual nations in the formation of national committees,

for example. He saw the U.N. agencies as a catalyst for the Decade. Mr. Hans Einhaus, the Chairman of the U.N. Steering Committee, noted that the document referred to by Mr. Kintanar is being modified and that it will be replaced by a subsequent version that is being prepared in accordance with an activities matrix, which is attached as Appendix H. Mr. Petrovski added that U.N. System organizations should be linked not only to national committees via their governments but also to regional organizations. While there should be national pilot projects, U.N. specialized agencies should make them accessible to other nations.

58. Mr. MacDonald led the discussion of Question 4, the role of regional and local organizations in the planning and implementation of the Decade. He indicated that regional organizations have often taken up the topic of hazard mitigation and that regional meetings that address the Decade specifically can precede the formal start date for the IDNDR. Such regional organizations may wish to review the impact of past disasters on the region--shared experiences and the possibilities for technical collaboration. He felt that the historic cooperation on weather hazard mitigation might serve as a precedent for other disaster, such as those of seismic origin. He noted, however, that even at regional levels, cultural and language differences can adversely affect the opportunity to undertake joint hazard mitigation efforts.

59. Mr. Giesecke reiterated the importance of planning on the regional level and suggested that a U.N. System program document analogous to the one described be Mr. Kintanar be developed on a regional basis. Mr. Morgenstern added that such a document should include an inventory of existing bilateral and multilateral efforts, in addition to U.N. efforts. Mr. MacDonald, responding to the points made by Messrs. Giesecke and Morgenstern, concurred on the importance of regional organizations, noting that these regional bodies often have considerable impact on individual national governments. Mr. Dooge added that the vast majority of smaller nations may not be in a position to set up meaningful committees, and that, therefore, regional organizations may prove to be a more viable approach to assuring global participation.

60. Chairman Press summarized this discussion by requesting that the Steering Committee assemble a list of bilateral and regional programs as a starting point for building a mechanism to enhance regional involvement.

61. Mr. Dooge led the discussion of Question 5, regarding the role of humanitarian and voluntary agencies, as well as of the private sector. He indicated that they can greatly enhance the level of awareness about mitigating strategies and that, as a group, they have wide access to the media. He suggested that they are beginning to take a longer term view and that the logical starting point for enhanced interaction with such groups is to reach out to the International Council of Voluntary Agencies (ICVA), which is located in Geneva. In particular, the ICVA might be asked to develop a substantial memorandum providing its perspectives on the role of voluntary agencies. Mr. M'Hamed Essaafi, the United Nations Disaster Relief Coordinator, indicated that his organization has good relations with ICVA and that he or his Deputy, Mr. Einhaus, would be pleased to contact them. In addition, Mr. Morgenstern spoke of the

potential role of the insurance industry in promoting hazard-resistant location and construction practices and of the investment aspects of the Decade.

62. The Chairman indicated that it was clear that voluntary agencies should be enabled to provide input to the IDNDR planning process, and asked Messrs. Dooge, Lechat, Morgenstern, and Einhaus to report to the group on how best to ensure voluntary agency participation.

63. Mr. Alan Davenport then made a detailed case study presentation of the problems and opportunities presented by wind energy disaster. Mr. Davenport is President of the International Wind Engineering Association and Chairman of the Committee for the International Decade for Natural Disaster Reduction of the Royal Society of Canada. His presentation is provided as Appendix I. Mr. Davenport opened his discussion with an enumeration of storm types: tropical storms (hurricanes, typhoons, cyclones), tornadoes, thunderstorms, downslope winds, rapidly intensifying depressions (The Atlantic Bomb), and extratropical depressions, giving examples of each and suggesting the magnitude of the disasters that each has wrought. He noted mitigating strategies that have been set in place as a result of past disasters, such as Cyclone Tracy that almost destroyed the entire city of Darwin, Australia on December 25, 1972, and which has led to a revision of building codes. He identified the ingredients of a disaster as being: inadequate warning, as the result of a failure either in forecasting or in communication; failure to identify the hazard; social restraints; lack of emergency planning; lack of suitable shelter; inadequate construction techniques; failure of strategic facilities (for example, many facilities in tropical developing countries built with foreign assistance will not survive hurricanes); lack of storm surge protection; lack of insurance; and shortage of trained personnel. He pointed out several areas where additional research would prove most valuable, including: studies of severe wind storms--programs need to be accompanied by a plan as to how studies affect forecasting ability or risk assessment; influence of topography--systematic studies are now possible with the increased availability of wind tunnels and supercomputers; storm surge modelling; risk assessment--cost/benefit analysis, design wind loading, insurance assessment, and insurance risk; and construction standards--adequacy of design standards, implementation, relationship to insurance premiums as a means for encouraging their adoption. He noted that progress in wind research is now good and that the IDNDR should not duplicate any ongoing efforts. The IDNDR should be viewed as a medium for setting new more difficult goals and as having a persuasive power to influence the insurance industry. In general, he would advocate activities related to the study of severe storms; improved construction; study of storm surges; and establishment of education and training programs. He suggested that an appropriate short-term action would be the establishment of a task force for wind disaster with a broad membership including wind engineers, meteorologists, representatives of key U.N. agencies, and participants from developing nations. This task force would be charged with developing a two-part report--including a discussion of the work program for the Decade as well as a presentation of a possible organizational structure.

64. After Mr. Davenport's presentation, the Group chose to take up Question 8, which addresses the various sectoral areas. Earthquakes were the first topic to be discussed, and Mr. Karnik led the discussion, noting that most nations have earthquake regulations but that most of the existing buildings are not up to modern standards. He felt that such structures should be the primary focus of Decade activities. Mr. Arya added that the institutional memory between disasters is short, leaving many nations ill-prepared. Mr. Lechat noted that the problem is becoming more severe despite improvements in engineering because of general increases in population and increasing urbanization. He views education and communication as critically valuable tools in reducing future risks. Mr. Giesecke pointed to the problems of microzoning and of too-rigid structures, noting that the economic consequences of avoiding regions or of abandoning structures at risk are too great for governments to address. Mr. Benblidia indicated that much of today's problem stems not from deficiencies in standards but from poor construction practices leading to structures that do not conform to the standards. Mr. Xie noted that China has confronted its earthquake vulnerability in the wake of the Tangshen disaster and has developed relatively simple ways to strengthen buildings—through making the roof lighter, connections tighter, the base firmer. These are relatively low-technology, low-cost methods, easy to communicate to construction workers.

65. The subject then shifted to infestations, and Mr. Odhiambo, leading the discussion, chose to concentrate on the problem of locusts. He noted that locusts—which are grasshoppers that mature simultaneously, and thus creating a ravenous horde—have plagued most of the drought affected regions of the world. He indicated that, unlike other natural disaster, we have not developed technologies in recent years that would greatly enhance locust control. Satellite imagery has improved our knowledge of where infestations are likely to occur--inasmuch as they are related to drought—but we can do relatively little because the only successful tool is long-lasting chemicals, which greatly constrain future use of these fragile ecological areas. The use of these chemicals is a difficult issue. The most effective chemicals (e.g., dieldrin) are banned in most industrialized nations, and they are reluctant to provide them even when a nation under siege makes a request. Progress in confronting locust infestation will require a three-pronged approach. First, an international coordinating system is needed. While financing is not a problem—UNDP has historically provided resources, and more recently the EEC has made contributions—a comprehensive international program does not exist, and piecemeal efforts are dependent on the FAO and on regional institutes. Second, there is a need for new technologies which have reduced environmental side-effects. As eradication is not feasible, we must focus on methodologies that will avoid swarming. And, third, there is a need to train a new leadership community for a mobilization capability.

66. As Thursday, July 7, was to be devoted to subgroup meetings, the Chairman used the last few minutes of the July 6 session to summarize the progress of the first two days and to review assignments for the subgroup efforts. He indicated his initial ideas on how the Group's report might be organized, noting the value of sections devoted to: the present state of matters; specific needs and the identification of pilot projects for

early implementation; the potential of the Decade--what it is possible to achieve; and implementation strategies, including organizational structure. Mr. Dooge concurred with this general outline and suggested that the Group of Experts ought to seek to have a near-complete draft report as its goal for the end of the third of its four meetings. Mr. Keilis-Borok suggested that a heavily annotated outline be our goal for the second meeting. With these points in mind, Chairman Press suggested that the subgroup members seek to have their material available in first-draft form for the second meeting of the Group, which would be in late September or early October.

67. The Friday, July 8, sessions began with a presentation of Brazilian natural disaster by Mr. Almeida. The most serious of these disaster is flooding, which has been exacerbated by both urban and rural development. Landslides are also increasingly serious, and their origins stem from unfortunate agricultural and urbanization processes.

68. The results of the Thursday, July 7, subgroup meetings were then presented. Mr. Arya, who chaired the Geotechnology subgroup, made the first presentation. He indicated that the discussions had covered the disaster of earthquakes, volcanoes, tsunamis, landslides, mudflows, and avalanches. Research gaps in each area were discussed, and linkages were identified in multihazard situations. The members of the subgroup plan to reach out to various professional groups, such as the International Association of Earthquake Engineering (IAEE), to obtain their suggestions for tangible projects that could be implemented in the near-term. Mr. Arya noted also that the Geotechnology subgroup feels strongly that improved information transfer should be an objective of the Decade. Getting the hazard mitigation message across to the general public could be a unifying theme for the Decade.

69. Mr. Petrovski made a brief presentation on earthquake disaster and opportunities for Decade activities. He pointed out the need for improved monitoring, including the improvement of data banks relevant to seismic zoning and microzoning; hazard assessment; risk assessment; land-use planning; economic and development planning; insurance; legislation; and public information. He noted that developing countries not only have limited financial resources but suffer from limited available expertise and inadequate organizational structures, all issues which must be addressed if the IDNDR is to contribute to hazard reduction in developing countries. He also suggested a series of near-term actions that would be most valuable, including improved earthquake monitoring systems, upgraded data banks, and more extensive regional modelling.

70. Mr. Morgenstern noted that the landslide community is looking forward to participation in the IDNDR, and hopes that such regional project successes as the efforts in Hong Kong can be translated into broader worldwide accomplishments in reducing landslide disaster.

71. Mr. Petersen added that with regard to geotechnological disaster a major breakthrough would be the development of reliable early-warning systems. For example, even a one-minute warning for earthquakes would save many lives. To this end, improvements in monitoring and data analysis may prove most valuable.

72. Mr. Ripert made the point to the Group that it would be particularly helpful for each member to address why the IDNDR, as a formally declared activity, would be particularly helpful in promoting disaster mitigation in their particular area of expertise. He suggested that this issue should be addressed in each of the technical papers that the members of the subgroups will be developing for the second meeting of the Group of Experts. In particular, they should consider the added value to their particular technical area that the Decade would bring, possibly in terms of more rapid accomplishment of results, enhanced quality of results, and greater efficiency.

73. Mr. Kintanar, chairman of the Atmosphere-Biosphere subgroup, then made a brief presentation, the written version of which is provided as Appendix J. He noted that this group of disaster had the potential for predictability and that reliable and timely early-warning systems can lead to disaster reduction. The value of the Decade, as his group saw it, was that its mere declaration will help to motivate a wide range of groups (e.g., social scientists, public health specialists) with major responsibilities beyond hazard mitigation to get together and focus on this issue. In this regard, the concept of a highly visible and prestigious Board of Trustees for the Decade was viewed most favorably. In addition to the presently listed set of disaster the Decade addresses, Mr. Kintanar suggested that droughts might also be considered because of the magnitude of their impact. This led to an open discussion of the pros and cons of doing so, with the Group ultimately being asked by its Acting Chairman, Mr. Rosenblueth, to give further consideration to this issue in advance of the second meeting. In the discussion, Mr. Karnik suggested that the slow onset of droughts made them less appropriate for consideration during the Decade, while Mr. Kintanar noted that they were the most important hazard facing Africa. The point was seconded by Mr. Lechat who also suggested that we give some consideration to shifting away from a disaster-specific approach and, instead, focus on the elements that ultimately cause a disaster, e.g., roof failure. Mr. Pelanda added to this point, noting that the social sciences view disasters as a process and not an event. He also felt that drought ought to be given consideration as one of the hazardous events that the Decade would address. Mr. Rosenblueth made the opposing points that the scale of drought research and intervention activities was such as to overwhelm the relatively smaller natural disaster programs and, further, that the management techniques were different. Mr. Hallgren added that the subject of drought was a dilemma; addressing the problem of drought was very important, but the response differs from that of other disaster and there already exist many drought programs.

74. The Acting Chairman then reviewed the work of the subgroup on Organization, beginning with the mechanics for subsequent meetings. It was the sense of the Group that four meetings would be most appropriate for it to carry out the assignment entrusted to it by the Secretary-General. Based on a brief survey of the Group, it was recommended that the second meeting take place at United Nations headquarters in New York City during either the last week in September or the first in October, with a slight preference among the Group for the first week in October. (The dates of October 3-6 have now been set for the second meeting.) The United Nations Secretariat was asked to evaluate the feasibility of these dates. In addition, a third meeting is

recommended for early January, and if the Government of Morocco wishes to host this session, the Group of Experts would be pleased to meet there. The fourth and final session, at which a final report will be presented, would take place in early April. The Group would be pleased to meet in Japan should that be the wish of the Japanese Government.

75. In view of early Group discussions calling for a stronger regional perspective in the organization and focus of the Decade, Mr. Rosenblueth suggested that one day of the second meeting be devoted to gaining a regional perspective on hazard risks, gaps in knowledge, and areas for priority research and implementation. In particular, the presentation should address deficiencies that can be addressed in a very few years, with a preliminary list of pilot projects. Of particular interest would be a list of projects with the potential for early implementation, and the reasons for their merit.

76. Mr. Rosenblueth then reported on the Organization subgroup's recommendations for the structure and management of the International Decade. He indicated that the subgroup had formed a consensus on a number of items but that there were still several issues that would have to be resolved at the Group's second meeting. There was agreement that the IDNDR effort should be led by a 7-10 member Board of Trustees appointed by the Secretary-General but operating independently once appointed. These trustees would be highly esteemed world leaders drawn from a variety of disciplines and recognized for their humanitarian interests and ability to set broad directions for such an activity. They would provide visibility for the Decade and, in so doing, attract governmental and private-sector financial resources to this endeavor. In addition, their personal credibility and enthusiasm would serve to attract further resources. Their third critical role would be that of providing a final quality control function, assuring that the Decade's programs were meeting their high expectations. There was also consensus on the need for a small but highly professional and efficient Secretariat with the ability to implement the IDNDR program on a day-to-day basis and to provide communication links with the diverse participant groups in the Decade. It was felt that this Secretariat would require an Executive Director with excellent management skills and a broad understanding of natural hazard issues, as well as additional staff members capable of communicating with the diversity of groups that would participate in the Decade. It was expected that the Secretariat would be housed in Geneva and that its staff would be a combination of professional staff engaged specifically for Decade activities, seconded individuals from participating national efforts, and U.N. System employees assigned to this effort. Less fully resolved at this point is the role of a Program Committee and/or an Executive Committee. It was recognized that there would be the need for a relatively small Executive Committee to interact with the Secretariat and to guide the Secretariat's activities, but there was no consensus as to the specific duties of this body. Some proposed that the Executive Committee should meet up to 6 times annually for extensive sessions with Secretariat staff, while others felt that the Secretariat might benefit from more passive oversight with greater authority resting in the hands of the Program Director. Similarly, there was not consensus as to whether the program would benefit from a relatively large (e.g., 50 person) Program Committee which could provide a forum for many diverse groups to come together to set guidelines and directions for the Executive

Committee. It was generally recognized that this approach would provide a useful mechanism to enable many groups to enter into the management process, but it was also seen as potentially cumbersome and costly. An additional question was the composition of the membership of these bodies and how the selection process would operate.

77. These issues will be placed on the agenda for the second meeting, and Chairman Press will be asked to provide his thoughts on organization at that time. In addition, Mr. Pelanda volunteered to provide to Chairman Press prior to the second meeting two or three alternative organizational concepts, and members of the Group were asked to submit any organizational ideas they might have to Chairman Press in writing in advance of the second meeting. Further, the U.N. Secretariat was asked to provide a synthesis of experiences with other International Decades so that the IDNDR might benefit from these prior experiences. Mr. Einhaus agreed to provide this paper to Chairman Press in advance of the second meeting.

78. Acting Chairman Rosenblueth indicated that it would be most useful if the Group had developed most of the basic materials for a rough-draft report by the completion of the second meeting. To this end, he indicated that it would be useful if the subcommittee reports could be completed in draft form prior to the second meeting, including the reports on the various hazard-specific areas. This would enable the Group to use its third meeting to develop a detailed list of pilot projects and to focus attention on a discussion of anticipated achievements for the Decade. The end of the third meeting would then see a tentative final version of the report, which could be reviewed and polished prior to the fourth meeting, when a final version could be approved and recommendations could be made for the implementation of proposals.

79. Mr. Kenzo Toki, consultant to the Steering Committee, presented 5 ideas that could become short-term projects. His list is attached as Appendix K. There was no discussion of these proposals at the meeting but it was agreed that the pilot projects would be put on the agenda for discussion at the second meeting.

80. Mr. Karnik raised the subject of whether the Group of Experts could stimulate the development of national committees by suggesting that the Secretary-General reach out to member nations. There was some discussion as to whether such a recommendation should be deferred to the second meeting, and Mr. Einhaus suggested that this would be undesirable, especially as the U.N. System Steering Committee had provided such a draft letter to the office of the Secretary-General. The consensus of the brief Group discussion was that it would be appropriate for the Secretary-General to begin a dialogue with member states on this issue but that more detailed recommendations from the Group should await the second meeting. Among the issues needing further consideration is the relative role of regional organizations versus national committees; the role of technical societies in helping to shape the program blueprint and in helping to stimulate the development of national committees; and whether a list of projects might be helpful as a means for illustrating the value of national involvement. Messrs. Morgenstern and Oyebande, while supporting the desirability of beginning a dialogue, cautioned that it would be important to have some clear ideas for what national committees might do immediately after they were organized. They are likely to have elaborate

launchings, but with inadequate preparation they may founder. An early action for any national committee, however, would be an inventory of activities underway in that nation and on a bilateral basis. This might be followed by a clarification of national needs, an arraying of pilot projects, and an analysis of the implications for subsequent funding requirements. The Group concurred that the Chairman should write a brief letter to the Secretary-General expressing the sense of the Group that nations ought to begin to consider how they might participate in the IDNDR.

81. Mr. Keilis-Borok noted that ICSU could be helpful in initiating some early projects such as one on the stability of large cities or another on alternative approaches to short-term weather prediction. He felt that such projects could be accepted without undue discussion and could be initiated in advance of the full structuring of the IDNDR.

82. Mr. Petrovski suggested that the early efforts could perhaps be scientific research projects, whose cost is lower than technology projects. Also, many in fact could be projects already in progress which could be given greater emphasis and visibility. He noted that pilot projects would be useful but, given resource constraints, they would not be as desirable as supporting existing research activities. Mr. MacDonald noted that as a first priority it was necessary to determine what is currently underway or planned. He suggested that some part of the second meeting be devoted to discussing the effectiveness of past projects in order to identify key elements for success.

83. Mr. Benblidia indicated support for pilot projects but noted that in the Group's planning it should take account of what is currently underway, particularly at the regional level.

84. The Acting Chairman summarized this discussion and requested that the Secretariat make an effort to provide information about recent and ongoing projects that might be relevant to the interests of the Group.

85. The Rapporteur then summarized the activities and conclusions of the first meeting.

86. Finally, the Acting Chairman reviewed the commitments of the Group and the Secretariat for the period prior to the second meeting. In particular, the Secretariat would provide a regional perspective for each of the five economic regions which would serve as inputs to the reports to be developed by members of the Group on the status of activities and areas of priority for their regions. Speaking for the Secretariat, Mr. Einhaus, noting the difficulty of the assignment, asked for flexibility and indicated that he would seek to have this regional perspective available in advance of the second meeting of the Group.

87. The Group assignments were: for Asia and the Pacific, Messrs. Xie and Arya on Geotechnology issues, with Messrs. Krishna and Kintanar on Atmosphere-Biosphere issues; for Africa, Mr. Benblidia on Geotechnology issues, with Mr. Oyebande on Atmosphere-Biosphere issues; for Europe, Mr. Petrovski on Geotechnology issues, with Mr. Lechat on Atmosphere-Biosphere issues; for North America and the Caribbean, Mr. Morgenstern on

Geotechnology issues, with Mr. Hallgren on Atmosphere-Biosphere issues; for South America, and to some degree the Caribbean as well, Mr. Giesecke on Geotechnology issues, with Mr. Almeida on Atmosphere-Biosphere issues relating to Brazil, with Mr. MacDonald taking a broader perspective.

88. The Acting Chairman also indicated to the chairmen of two subgroups, Mr. Kintanar for Atmosphere-Biosphere, and Mr. Arya for Geotechnology, that drafts of their subgroup reports would be needed in time for the second meeting. He suggested that they might wish to follow the outline that had been drafted by Mr. Stephen Rattien, which had been used in their subgroup discussions. (See Appendix L.) He also suggested that it would be appropriate for each of the members of these two subgroups to develop his respective technical area report in advance of the second meeting, following the framework attached as Appendix M., and giving consideration to the concepts raised by Mr. Davenport in his wind energy case example. In addition, he asked Mr. Odhiambo to describe in writing his views on the role of U.N. System organizations in the implementation of the Decade; Mr. Kintanar, on the role of regional organizations; Mr. Keilis-Borok, on the role of international science and technology organizations; and Messrs. Morgenstern and MacDonald, on the role of the private sector. A request was also made to the Chairman that he seek to identify one or two small but high-level projects that he might consider worthy of early implementation.

The meeting was adjourned at noon on Friday, July 8.