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**AFRICAN COMMON POSITION AND THE INTERNATIONAL DECADE
FOR NATURAL DISASTER REDUCTION AND THE WORLD CONFERENCE**

EXECUTIVE SUMMARY

1. By its resolution 42/169, the United Nations General Assembly decided to declare a decade for natural disaster reduction and by its resolution 44/236, proclaimed the 1990s as the International Decade for Natural Disaster Reduction (IDNDR). During this decade, the international community, under the auspices of the United Nations, would pay special attention to fostering international cooperation in the field of natural disaster reduction. This would reduce, through concerted international actions, the loss of life, property damage and social and economic disruption as a result of these disasters. Natural disasters, as the focus of the Decade, included windstorms (cyclones, hurricanes, tornadoes, typhoons), tsunamis, floods, landslides, volcanic eruptions, wildfires and other calamities of natural origin, such as grasshopper and locust infestations.
2. To achieve this objective, the Decade foresaw a strong emphasis on capacity development and strengthening in all countries likely to be inflicted by any of the disasters mentioned above, develop guidelines and strategies for actions, foster scientific research and disseminate the results as well as develop measures for the assessment, prediction, prevention and mitigation of natural disasters. This would be done through programmes of technical assistance and technology transfer, demonstration projects as well as education and training which would be tailored to specific hazards and locations and to evaluate the effectiveness of those programmes.
3. For Africa, the various disasters covered by the Decade have not only been a menace but a way of life, aggravated by poverty and underdevelopment. Worse still, other events that have resulted in the deprivation of human health through epidemics of various kinds have come to deplete human capacity and render a large percentage of the populations helpless. The affected countries have carried out valiant efforts to cope with the situation. The various subregional and regional organizations on the continent also have devoted considerable attention to the issue of disaster reduction within the resources at their disposal.
4. In response to this resolution on the Decade and in preparation for the World Conference on Disaster Reduction to be held in Yokohama, Japan in May 1994, a number of actions were taken to ensure the full participation of Africa. In view of the scourge of disasters that have plagued Africa and the multiplex and far-reaching impact on the economic, social and indeed political environment of affected countries, a multi-sectoral approach has been adopted.
5. This mid-term report for Africa on the implementation of the Decade is based on the assumption that the objectives of the IDNDR, and beyond, should also include the reduction in the incidence and mitigation of the effects of these "other" disaster types, induced by underdevelopment, that are prevalent in Africa. Furthermore, this synopsis includes a brief examination of actions taken at the continental level to fulfil the three specific targets of the Decade, as enunciated by the Scientific and Technical Committee and approved by the United Nations General Assembly. Continent-wide activities will be reviewed to gauge the extent to which they have minimized the effects of disaster phenomena - drought and desertification, geophysical hazards, hydrometeorological disasters and insect infestation - and promote sustainable development. These targets are:
 - (a) The comprehensive national assessments of risks from natural hazards as an integral part of development planning;
 - (b) National mitigation plans which incorporate long-term prevention, preparedness and community awareness; and
 - (c) Ready access to reliable early warning and dissemination systems. Performance indices used for the last objective are information systems (gathering, storage, analysis dissemination) and advocacy.

6. To crystallize the actions reported here into follow-up actions after the IDNDR mid-term review conference, a framework of an African programme of action for the second half of the Decade and beyond appears in part VII of this report as an African Common Position on follow-up activities. This Common Position is a statement of intention and determination to develop and strengthen existing capacity for natural disaster prevention, reduction, preparedness, mitigation and management as an integral part of national sustainable development planning and programme implementation aimed at eradicating poverty, within which is the greatest single factor in entrenching the vulnerability of populations to natural disasters.

7. In proposing the strategies for the implementation of the disaster mitigation and management measures, emphasis should be put on the urgency of providing assistance to those countries that are prone. This is important as the majority of the world's least developed countries, 34 out of 47, are in sub-Saharan Africa and are most acutely vulnerable to the various prevailing hazards precisely because of the concrete manifestations which reflect their poverty. Consequently, any concerted effort to reduce the impact and effects of natural disaster phenomena on their vulnerable populations must seek to satisfy the vital needs of such persons while simultaneously ensuring sustainable development as enunciated above. Furthermore, national responsibility is enshrined as a fundamental principle in the conception, strategy formulation, planning and implementation phases of measures aimed at natural disaster reduction. There is also consensus that internal resource inventory and mobilization should form the basis of and precede external initiatives if the latter is to succeed.

8. Accordingly, the proposed framework of action will be based principally on those actions at the national level which seek to ensure that a particular country's vulnerability to disaster phenomena is reduced by the increased and assured access of its citizens to food, clean water, durable shelter, renewable low-cost energy and preventive primary health care. This will be complemented by the proposed actions at the subregional and regional levels respectively that follow.

9. The information on existing institutions suggests that there is a rich potential in local capacity. There is, therefore, the need to develop and strengthen that capacity. Three areas of priority action become evident to enhance efforts in disaster reduction and mitigation:

(a) Development and strengthening of disaster information systems and relevant database, including the comprehensive mapping of actual and potential disaster-risk phenomena and areas;

(b) Development and strengthening of human resources and material capabilities and capacity of research and development institutions for disaster reduction and mitigation; and

(c) Development and strengthening of the capacity for the integration of dimensions of disaster reduction into national development plans and programmes.

10. The impact of actions in these areas can only be fully reaped if there is unison in action at the level of all member States with a common purpose and with genuine resolve.

I. INTRODUCTION

1. By its resolution 42/169, the United Nations General Assembly decided to declare a decade for natural disaster reduction and by its resolution 44/236, proclaimed the 1990s as the International Decade for Natural Disaster Reduction (IDNDR). During this decade, the international community, under the auspices of the United Nations, would pay special attention to fostering international cooperation in the field of natural disaster reduction. This would reduce, through concerted international actions, the loss of life, property damage and social and economic disruption as a result of these disasters. Natural disasters, as the focus of the Decade, included windstorms (cyclones, hurricanes, tornadoes, typhoons), tsunamis, floods, landslides, volcanic eruptions, wildfires and other calamities of natural origin, such as grasshopper and locust infestations.
2. To achieve this objective, the Decade foresaw a strong emphasis on capacity development and strengthening in all countries likely to be inflicted by any of the disasters mentioned above, develop guidelines and strategies for actions, foster scientific research and disseminate the results as well as develop measures for the assessment, prediction, prevention and mitigation of natural disasters. This would be done through programmes of technical assistance and technology transfer, demonstration projects as well as education and training which would be tailored to specific hazards and locations and to evaluate the effectiveness of those programmes.
3. These ideals were echoed by the Secretary-General's report prepared by the international Ad hoc Group of Experts on the IDNDR. In presenting the rationale for the Decade, he acknowledged that the majority of the fatalities and the most damaging economic losses have been borne by the developing countries, particularly in the least developed and most highly populated regions which bear the brunt of the increasing fatalities. As most of the African countries are among the poorest in the world, by whatever material indices of measurement are used, it is clear that the impact of disaster phenomena and vulnerability to new hazards are most acutely felt in these countries.
4. For Africa, the various disasters covered by IDNDR have not only been a menace but a way of life, aggravated by poverty and underdevelopment. Worse still, other events that have resulted in the deprivation of human health through epidemics of various kinds have come to deplete human capacity and render a large percentage of the populations helpless. The affected countries have carried out valiant efforts to cope with the situation. The various subregional and regional organizations on the continent also have devoted considerable attention to the issue of disaster reduction within the resources at their disposal.
5. Now attention is being focused within the context of the IDNDR. As the present exercise concentrates on the World Conference on Natural Disaster Reduction, to be held in Yokohama, Japan in May 1994, it is appropriate, nevertheless, to question some of the assumptions inherent in the exercise. For example, is the IDNDR process sensitive to the peculiarity of the African situation regarding disasters? This is relevant especially as the Conference is only part of a sustainable process aimed at disaster reduction which is, one would like to believe, an integral part of poverty reduction in development planning. In an attempt to answer this question, the present report seeks to present some of Africa's perceptions of the Decade, its present efforts and the expectations as well as a framework of action which could reduce the effects of disasters on its population, economy and society.
6. In response to this resolution on the Decade and in preparation for the World Conference on Disaster Reduction, a number of actions were taken to ensure the full participation of Africa. In view of the scourge of disasters that have plagued Africa and the multiplex and far-reaching impact on the economic, social and indeed political environment of affected countries, a multi-sectoral approach has been adopted.

7. In this respect, the fifth session of the African Ministerial Conference on the Environment (AMCEN) expressed its appreciation for the efforts of the Organization of African Unity, the Economic Commission for Africa, the World Health Organization and the IDNDR secretariat and urged African countries to take an active part in the ongoing initiatives. In addition, the meeting recommended that all African countries should endeavor to examine closely the proposals so as to make available their inputs to the secretariat in order to facilitate the finalization of the document for presentation to the OAU Council of Ministers in February 1994. It was expected that in line with usual practice, the Council of Ministers would take the necessary political decision regarding the Common Position on IDNDR. By its resolution CM/Res 1499(LIX) on Africa's preparations for the World Conference on Natural Disaster Reduction, the OAU Council of Ministers approved the drafts ad referendum, and further requested that the documents be presented to the ECA Conference of Ministers of Economic and Social Development and Planning at its next meeting in May 1994. This would give them the opportunity to make their inputs into the report. This process would ensure that the mid-term report was a clear and realistic indication of the implementation of the IDNDR in Africa and the potential for increased activities.

8. This IDNDR mid-term report for Africa is based on the assumption that the objectives of the Decade, and beyond, should also include the reduction in the incidence and mitigation of the effects of these "other" disaster types, induced by underdevelopment, that are prevalent in Africa. Furthermore, this synopsis includes a brief examination of actions taken at the continental level to fulfil the three specific targets of the Decade, as enunciated by the Scientific and Technical Committee and approved by the United Nations General Assembly. Continent-wide activities will be reviewed to gauge the extent to which they have minimized the effects of disaster phenomena - drought and desertification, geophysical hazards, hydrometeorological disasters and insect infestation - and promote sustainable development. These targets are:

(a) The comprehensive national assessments of risks from natural hazards as an integral part of development planning;

(b) National mitigation plans which incorporate long-term prevention, preparedness and community awareness; and

(c) Ready access to reliable early warning and dissemination systems. Performance indices used for the last objective are information systems (gathering, storage, analysis dissemination) and advocacy.

9. To crystallize the actions reported here into follow-up actions after the IDNDR mid-term review conference, a framework of an African programme of action for the second half of the Decade and beyond is therefore proposed. The proposed programme indicates Africa's determination to develop and strengthen existing capacity for natural disaster prevention, reduction, preparedness, mitigation and management as an integral part of national sustainable development planning. An added objective of the programme is that of eradicating poverty, within which is the greatest single factor in entrenching the vulnerability of populations to natural disasters.

II. AFRICA AND DISASTERS

A. Issues of definitional considerations and incidence

10. A disaster has been defined as "any disruption of the human ecology that exceeds the carrying capacity of the community to function normally".¹ In the African context, a modification of this definition is justified. Earthquakes, volcanic eruptions, storms and hurricanes are sudden, naturally occurring phenomena. They constitute a hazard or cause disaster only when human populations, property and settlements are involved or adversely affected. Strictly speaking, there are very few "natural" disasters *per se* in Africa. Instead, population mobility and the actions of human beings have provoked their occurrence in most cases.

11. In the case of Africa, the disequilibrium between population distribution in relation to resources added to rapid population growth in some countries, exacerbates the natural disaster management crisis, because the surface area for viable population carrying capacity is correspondingly diminishing through desertification and other related phenomena. In Africa, the major naturally occurring phenomena, which increase hazard vulnerability and ultimately lead to disasters, are closely related to the low levels of development, high population concentration and fragile structural zones.

12. Data derived from the Office of the United States Foreign Disaster Assistance (OFDA) suggest that these are hydrometeorological (26.3 per cent) while geophysical phenomena account for a very low percentage (3.4 per cent). The remainder of disasters in Africa fall under the category which by the IDNDR criteria would not be "natural".

13. The above-mentioned OFDA typology groups together phenomena such as drought, food shortage, famine and various forms of infestation (35.4 per cent). A second category embraces phenomena of massive and forced population movement of internally displaced persons and refugees (11.1 per cent). These two categories accounted for over 46 per cent of all disasters from 1969 to 1989, resulting in over 2.2 million deaths and affecting over 206 million persons. Recent events will certainly have increased the percentage share of civil strife and the resulting population displacement.

14. Furthermore, the responses of the majority of African countries to a questionnaire on disaster types listed drought, floods and soil erosion as the major disaster types on the continent, followed by locust infestation, landslides, cyclones and fires. The most authoritative expression of the situation acknowledges that disasters in Africa are due to a number of causes that include mainly "drought, locust, wars, civil strife, floods, cyclones, food shortage, epidemics and technological" phenomena. Its systematic classification of disasters lists "wars, civil strifes, refugees and displaced persons as progressive multi-causal phenomena".² For Africa, the IDNDR acronym could justifiably be truncated to read "the International Decade for Disaster Reduction" (IDDR).

¹ United Nations document A/144/322 Add.1, p.9.

² OAU CM/586(LI), pp. 1-3.

B. Major disaster phenomena in Africa and policy responses³

15. The major disaster types are drought and desertification, floods and soil erosion, followed by tropical cyclones, bushfires, landslides and earthquakes, all of which occur in the most vulnerable and least materially developed rural areas of Africa. Some of the major cities are, reportedly, vulnerable to industrial and technological hazards. The resident populations, irrespective of location, are considered to be at risk from the various disaster types. The losses from major disaster occurrences is estimated on average at 13.5 per cent of the annual gross national product (GNP) of a given country.

16. The various statements of African Heads of State and Government to the United Nations Conference on Environment and Development in 1992 provide eloquent testimony about the incidence, causes and impact of environmental degradation to disasters proportions on the continent. These interventions also demonstrate the inextricable linkage between poverty, economic vulnerability and the susceptibility of Africa to disasters. Deforestation and accompanying desertification in African countries constitute "a genuine scourge" affecting 2.5 million ha of land and causing annual losses of \$26 billion.⁴

17. The major disaster phenomenon is drought. The periodic and sometimes very severe droughts afflict major parts of the Sudano-Sahel region and southern Africa. A second related element is the problem of locust and other pest infestations which ravage sub-Saharan Africa. A third type of disaster, principally man-made, is the forced, massive population movement of refugees and internally displaced persons. This phenomenon provokes and aggravates desertification, deforestation, soil erosion and environmental degradation. Any measure to reduce natural disasters in Africa which ignores this category will have very little success and make negligible impact.⁵ These causes, together with their effects, are qualitatively similar; they are, perversely, causes and consequences of poverty.

III. COUNTRY NATURAL DISASTER PROFILE⁶

18. The summary of country responses show that although almost two-thirds of country respondents defined the hazardous regions, only a little over one-third identified the level of risk involved. Fewer still have conducted detailed analyses of risks. While half of the respondents have, reportedly, started disaster mitigation planning, very few have incorporated the process into national development plans or defined the basic criteria and standards or drafted relevant comprehensive legislation to give effect to the plans.

19. Although almost two-thirds reported having initiated some form of public awareness and information activities, only about one-fifth have developed the outlines of a disaster management training strategy. Such training, far from dealing with the disaster management cycle, is devoted almost exclusively to building an effective response capacity for sudden-onset disasters.

³ The data used here is from the "OAU Secretary-General's Report on Disasters in Africa: Guidelines for Disaster Preparedness and Response", document CM/586 (LI).

⁴ United Nations Report of the United Nations Conference on Environment and Development, 1993, p. 7.

⁵ Document OAU CM/586(LI) aptly illustrates the antecedents of these phenomena.

⁶ See document E/ECA/CM.20/CRP.5.

20. Likewise, regarding the institutional framework, the national committees which the majority of respondents have established are little more than institutions dedicated to providing relief in response to sudden disaster. Very few of the country respondents identified the institutions responsible for hazard and risk assessments, mitigation planning, planning standards and the implementation of risk reduction measures. Fewer respondents could identify the level of risk involved in respect of particular hazards.

21. Resource deficiencies constitute a major impediment to efficient disaster mitigation, according to the respondents. The overwhelming majority of countries lack the technical and material resources required for even modest mitigation activities, while half of them were unable to hire or retain the requisite human resources. Where special disaster funds exist, as in half of all responses, these are primarily or exclusively for relief purposes. Only an insignificant number of countries have reportedly begun to integrate risk reduction measures into their development programmes.

22. Training of decision makers in disaster management was accorded highest priority by respondents, followed by the creation of regional networks for the enhancement of disaster mitigation, with hazard and risk assessment studies ranking third. Multiple-choice questions about priorities for the future resulted in unspecified training being given top priority, followed by hazard and risk mapping, preparedness plans, monitoring and early-warning systems and information needs, in that order. Meagre financial resources and lack of appropriate technology remained the two most intractable problems encountered in project implementation. Most respondents emphasized the importance of having a permanent entity at national level for disaster mitigation.

23. The above situation in member States, therefore, attests to the seriousness of natural disasters within the definitions of IDNDR, their negative impacts on development and the constraints in the way of mitigating their impacts. Although the data is only indicative and extends only to 1989, they illustrate the argument in this report that the issues of poverty are crucial to disaster mitigation. If poverty is allowed to be a disaster itself, then the hopes of Africa for sustainable development within an ecologically healthy environment may remain a dream.

24. As will be seen below, there is a determined effort in some African countries to develop institutions and a legislative framework for coping with natural disasters. But unless these are complemented by a healthy state of governance embellished in transparency and the democratization of decision making, natural disasters will continue to nurture the man-made ones.

IV. SYNOPSIS OF NATURAL DISASTER RELATED ACTIVITIES

A. Drought and desertification

25. The Secretariat of the Organization of African Unity (OAU) prepared a very important document entitled "Africa's preliminary contribution to the elaboration of an international convention to combat desertification in those countries experiencing serious drought and/or desertification, particularly in Africa". It proposed the following as elements of the strategy to combat both phenomena: drought preparedness and management, infra-structural development, alternative pastoral systems, pastoral development, management of arid, semi-arid and dry sub-humid lands and the empowerment of grass-roots organizations. Implementation of the strategy requires, *inter alia*, efficient early warning systems, food security, transhumance control measures, introduction of drought-resistant fast-growing plants, strengthened capacity for better rangelands management, soil and water development and conservation and the provision of credit and appropriate incentives to rural communities to promote desert reclamation and environmentally sound land use in the affected areas.

26. For effective regional and subregional cooperation, the OAU document correctly advocates intensified and sustained exchange of appropriate technology, techniques and expertise. Measures and programmes to combat desertification also require systematic and sophisticated data collection and analysis, strengthened research and development, particularly in respect of drought-resistant crops and plants, alternative sources of renewable energy, control of domestic livestock numbers and the introduction of appropriate incentives directed towards new and environmentally sustainable systems of land use and tenure .

27. While most of the above proposals are relevant to drought situations, the OAU document also makes specific proposals for successful drought management. An effective early-warning system, combined with a food security strategy which incorporates reserve stocks, distribution, storage and marketing, is the recommended starting point. These measures are to be complemented, first, by the acquisition of low-cost but appropriate technology for ecologically sound water development, conservation and management and secondly, by the complementary management of vegetation cover, water-sheds, forests and pastoral lands, to ensure proper land use and soil protection.

28. An integral part of the strategy is also the advocacy in favour of programmes which exploit the particular environment to produce alternative and renewable sources of energy; from solar, wind, geothermal and, where feasible, biomass and hydrological sources. The transfer of low-cost appropriate technology, accelerated and sustained research and development endeavours, integrated information management and exchange systems and regular interaction between the local population and specialists are indispensable for transforming these programmes into the desired goals.

29. Specific and detailed proposals are also made regarding scientific and technical cooperation through human resource development and institution building. Particular emphasis is placed on strengthening interdisciplinary research and development, *inter alia*, in water resources, land use, geoplasm improvement, drought-resistant crops and plants and appropriate local technologies to combat both phenomena of drought and desertification. Similar emphasis are placed on the transfer, acquisition, development and adaptation of technology for indigenous application as well as on capacity building, education, public participation and international financial cooperation.

30. Complementary and substantive contributions have also been made in Programme 11 of the African Common Position on Environment and Development (ACPED) in which one of the seven priority areas is devoted to preventing and reversing desertification. The fruits of the advocacy are reflected in the adoption by UNCED of the drafting of a convention to combat desertification as one of its activities.

31. In addition, African Ministers of Economic Development and Planning adopted in 1993 the African Strategies for the implementation of Agenda 21 (document E/ECA/CM.19/8/Rev.1) which reiterated some of these fundamental issues. The "environment-development principle" views environmental degradation as a consequence of the implementation of programmes which ignore environmental conservation, particularly in the semi-arid zones. Desertification, being the result therefore of the imbalance between population, environment and development, required the urgent search for alternative patterns of livelihood, nurtured by popular participation and environmental education. It argues, forcefully and correctly, that desertification is as much a technical as well as a developmental challenge.

32. Within the programme of action to combat desertification, an array of measures has been proposed, starting with a strengthened and integrated information system for data collection, assessment, analysis, prediction, early-warning system and mitigation of the desertification process from the community to the national and subregional levels. It also proposes a decentralized approach to land resource management, land use and ownership,

particularly in favour of women, pastoral and nomadic groups, through enhanced rural credit and savings schemes and other incentives. These in turn should encourage alternative livelihood activities that can be simultaneously beneficial to participants and their endangered environment.

33. Furthermore, socio-economic baseline studies of resource and land tenure management and production systems are recommended as the means to compiling a comprehensive status inventory of natural resources in cooperation with the local population. Subsequently, appropriate technical packages could be deployed to conserve and manage such resources with the active participation of the populations inhabiting these fragile ecosystems. Strategies for ensuring food security are accorded priority, with the accent placed on integrating national and regional agro-meteorological forecasting and contingency crop planting, related food and fodder reserves and water conservation for effective drought management.

Institutional arrangements

34. To achieve these objectives, the normal pleas for multilateral and bilateral support to strengthen the capacities of the African Centre of Meteorological Applications for Development (ACMAD), AGRHYMET CILSS, the Intergovernmental Authority on Drought and Development (IGADD), the Southern Africa Development Community (SADC) and the Arab Maghreb Union (UMA) are made.

(a) Intergovernmental Authority on Drought and Development (IGADD)

35. At the subregional level, the Intergovernmental Authority on Drought and Development (IGADD), has continued to mobilize its member States to achieve effective drought management through a variety of means. It has executed specific studies in support of two major concerns: a food security strategy and a strategy to protect the environment and combat desertification for the IGADD region. Within its current five-year programme, there are 10 priority areas which address these concerns. The earlier activities of IGADD include the first phase in the development and expansion of early-warning and food information and remote sensing systems - financed by Italy, Japan, USAID and CIDA (Canada) and executed by FAO - designed to assist member States nationally and corporately as a subregion to manage the food situation. This first phase ended in 1993.

36. Phase two of this FAO-executed project depends on the results of fund raising initiatives currently in progress. A complementary water resources programme, funded by CIDA (Canada), is supporting several communities in the IGADD area with the drilling and construction of water wells and reservoirs for enhanced food and animal production. Concurrently, work is in progress to rehabilitate the tributaries of the Nile river in the water catchment areas of the Sudan and Ethiopia. The management of dry rangelands ravaged by drought has started through the German-financed environment assessment and monitoring systems programme. The IGADD Secretariat also plays an active role in the negotiation of the International Convention to Combat Desertification and Drought, particularly in Africa.

(b) Southern Africa Development Community (SADC)

37. "Maintaining and embedding an institutional capacity to mitigate future droughts is probably more cost effective than attempting to offset the adverse effects of droughts once they occur."⁷ This aptly sums up SADC's view of the close link between natural disaster reduction through innovative drought management and sustainable development through food security. In 1992, southern Africa experienced a severe drought which

⁷ SADC, "Regional overview of the response of institutions", Preface, p. 111, 1993.

affected all SADC member States. Timely and effective cooperation between the affected populations, their Governments, the SADC Secretariat, donors and the United Nations system ensured that famine did not result. In September 1993, the SADC Food Security Technical and Administrative Unit directed a regional workshop in Harare, Zimbabwe, some of whose objectives were to develop long-term national and subregional drought mitigation and preparedness strategies and to identify related training needs as well as policy-related research to fill gaps in existing knowledge.

38. Effective preparedness measures are characterized by workshop participants as those which enhance the predictive and managerial capacities of a drought episode "in advance of the actual rain failure". These include macro-level stabilization funds, national strategic grain reserves, distribution mechanisms, incentives and administrative measures by local and central governments which enable local communities and households to store adequate food and water reserves prior to the drought. The development and strengthening of information systems which monitor water resources and household food security was also considered a priority. Further investigations are considered necessary to develop both financial and physical reserves for food security. These contingency plans should be developed with full community and indigenous NGO participation.

39. SADC not only acknowledges that a regional preparedness strategy requires substantive coordination between food, agricultural and natural resources sectors on the one hand and health and other social sectors on the other, but also stresses the indispensability of having a cooperative early-warning and needs assessment mechanism between donors and the host subregion, in order to avoid duplication, delays and divergent interpretation of data. At the national level a strengthened and integrated information system on household food security and water resources can be achieved through the active participation of NGOs and local communities, particularly women, in the process.

40. Training for effective drought preparedness at all levels is needed in transport coordination and logistics, health surveillance and monitoring systems, grain reserves management and in overall rapid appraisal, monitoring and evaluation. Research into climate change and its relevance to the prediction of drought recurrence on the enhancement of early-warning indicators should proceed concurrently with efforts to understand better and strengthen the household-level drought management strategies of women and children.

41. The workshop also considered long-term drought mitigation measures to reduce the SADC region's vulnerability to future droughts, particularly since each successive rainfall failure tends to increase the negative impact of drought on a rapidly growing number of vulnerable persons. As climate change is perceptibly altering the planting cycle, it becomes imperative that the limited soil and water resources be subject to more scientific and imaginative land-use planning in order to respond adequately to the needs of a steadily growing population. Proper range management is also vital to arrest rapid land degradation due to high livestock retention levels.

42. The ZACPLAN (for the Zambezi river) constitutes the precursor of a subregional water master plan. Alongside the economic pricing of water for agricultural use, small-scale irrigation schemes and the exploitation of alternative and renewable sources of energy, the ZACPLAN should increase sustainable agricultural productivity. As sustainable agricultural practices depend on the preservation of natural resources, the achievement of the former requires urgent research into the acceptance levels, large-scale production and storage of quick maturing and drought-resistant alternatives to maize, such as sorghum and millet. Incentives for acceptance of new varieties could be considered simultaneously with extension services, storage and processing options. The local and international NGOs and the Community partners have a crucial role to play in these matters. Above all, the dumping of subsidized grains must be discouraged. The workshop also concluded that economic diversification could convince and encourage the rural population to remain sedentary. Proper land distribution and management, increased numbers of non-farm activities such as local processing and small-scale manufacturing

industries should achieve this, if governments, their development partners and the private sector provided the necessary infrastructure, training, credit facilities, priority social sector expenditure and, where applicable, labour-intensive public works.

(c) African Centre of Meteorological Applications for Development (ACMAD)

43. The African Centre of Meteorological Applications for Development (ACMAD) was established by member States of ECA as a centre of excellence for training and research in meteorology and climatology. In 1992-1993, for example, 80 scientists and senior meteorologists from 28 countries were seconded to ACMAD. It also promotes meteorological applications for socio-economic development and provides "state of the art" climatological and meteorological watch for Africa. Its activities seek to minimize the negative effects of natural disasters of meteorological origin on life and property, by designing response strategies and protective measures.

44. Since November 1991, ACMAD has been assembling data, producing and disseminating its 96 hours continental weather forecasts in English and French to over 40 of its member States and also trains senior African weather forecasters on new techniques of numerical weather prediction. Other activities include the programme on climate impact studies and response strategies within the framework of the climatology network of AMCEN. The scientific coordination of national projects on evaluation of precipitation by remote sensing, the testing and maintenance of new receiving satellite stations enables national meteorological services to benefit fully from global satellite dissemination of meteorological products, in real time.

45. ACMAD benefits from fruitful interaction with seconded scientists, technical and financial support from several bilateral donors, ECA, WMO, UNEP and the Government of the Niger. The fourth Technical Conference on Management for Development of Meteorological Services in Africa, held in Mauritius in November 1992, made a very positive evaluation of its activities. Similar and more recent endorsement of ACMAD's role has emanated from the executive bodies of the WMO (in June 1993) and ECA (in May 1993).

B. Pest infestations - Locusts and grasshoppers

46. Experts identify at least five locust species and subspecies in Africa: the desert locust, the tropical migratory locust, the red locust, the brown locust and the Senegalese grasshopper. The desert locust is considered to be the most formidable, resilient and destructive. Through continuing research, spearheaded by the International Centre for Insect Physiology (ICIPE), the behaviour pattern of locusts in Africa is gradually being better understood. This is an important step in reducing its devastating impact on vegetation and the lives and livelihood of major portions of Africa's rural population. The current strategy is first to know the behaviour of locusts intimately and thereby interrupt those mechanisms that regulate their behaviour. The declared objective is to induce locusts to become sedentary and solitary by changing their physiology and behaviour between the solitary and gregarious phases. Other options being considered include the use of natural enemies of the locusts such as parasitoids, and pathogens, certain locusticides and a modern locust forecasting and monitoring system.⁸ (World Bank 1991).

47. The African Association of Insect Scientists (AAIS), based in Nairobi, Kenya, promotes the development, advancement and dissemination of knowledge on insect science and acts as a coordinating body for problem-solving research. It fosters communication and exchange of information through the organization of

⁸ T.R. Odhiambo, "Managing drought and locust invasions in Africa", pp. 80-81, in A. Kreimer and M. Munasinghe (eds.) Managing Natural Disasters and the Environment.

scientific symposia, seminars and workshops as well as through publications such as the AAIS Newsletter, and the Bulletin of African Insect Science in English and French. Through its contacts with the African Academy of Sciences and the African Biosciences Network, based in Senegal, and the International Centre of Insect Physiology, the Association could provide a useful forum for the exchange of ideas and new developments in the fight against the ravages of grasshoppers and desert locusts in Africa.

C. Hydrometeorological hazards

48. Hydrometeorological hazards are those arising from dramatic changes in meteorological conditions causing storms, hurricanes, cyclones floods, etc.

(a) ACMAD

49. As indicated above, ACMAD was established as a centre of excellence for training and research in meteorology and climatology. In this context, it is also involved in all activities having to do with hydro-meteorological hazards.

(b) The Tropical Cyclone Committee for the South-west Indian Ocean

50. Significant work continues to be carried out by this Committee which includes Botswana, Comoros, Madagascar, Malawi, Mauritius, Mozambique, Seychelles, Swaziland, the United Republic of Tanzania, Zambia and Zimbabwe. A project "Reduction of natural disaster related to tropical cyclones in the South-West Indian Ocean" has been submitted to the United Nations Development Programme (UNDP) for funding in the context of the IDNDR. The response, to date, has been unfavourable. A Regional and Specialized Meteorological Centre for Tropical Cyclones started operating in Réunion in July 1993, while WMO held roving seminars on tropical cyclone forecasting in Mozambique and Réunion for English- and French- speaking countries respectively, in 1991. Meteorological data distribution systems have already been installed by at least six members (Madagascar, Malawi, Mauritius, Mozambique, Swaziland, and Zimbabwe).

51. On the hydrological activities of the Committee, several working groups have prepared various technical reports which were presented to a meeting in Côte d'Ivoire in December 1993. Already, seven members have established a hurricane observation and monitoring system (HOMS) National Reference Centre [Comoros, France (Réunion), Madagascar, Malawi, Mauritius, Mozambique and Zimbabwe]. This is particularly useful when components for flood forecasting are obtained and used. While WMO continues to encourage member States in the Group to use the new methodology for the management overview of flood forecasting system (MOFFS): there are, however, outstanding challenges of adapting it to benefit small island countries.

52. As its contribution to the IDNDR, WMO is executing three demonstration projects aimed at improving the disaster prevention capabilities of countries vulnerable to hydrometeorological disasters. One of these is the comprehensive risk assessment project which is intended to promote a comprehensive approach to risk management and thereby reduce loss of life and livelihood as a result of floods, cyclones and other hydrometeorological phenomena.

53. Training activities continue principally under the auspices of WMO. Its regional meteorological centres in the region are complemented by some of the national training institutions in neighbouring countries. WMO's training library and its audio-visual aids and computer-based learning systems have proved invaluable to several users.

D. Geophysical hazards (earthquakes, volcanoes and landslides)

1. International Commission for Earth Sciences in Africa (ICESA)

54. The first regional assembly of the International Commission for Earth Sciences in Africa was held in Nairobi in August 1990, with the support of the International Association of Seismology and Physics of the Earth's Interior (IASPEI). The stated purpose, as inscribed in the relevant resolution, is "to facilitate and coordinate geo-scientific work in Africa and to link with international organizations in earth sciences". Other objectives and planned activities include the exchange of scientific personnel and information between African countries, the organization of workshops and seminars for the exchange of ideas, the institution of training programmes for African scientists and technicians in earth sciences and the identification, initiation and support of regional scientific projects.

55. The ICESA bureau met in November 1992 and established four working groups in the following areas:

- (a) Rift systems in Africa;
- (b) Regional seismological networks in Africa;
- (c) Geo-scientific data acquisition and exchange of information;
- (d) Pre-Cambrian evolution and metallogenic provinces in Africa.

56. Since 1991, the ICESA Secretariat, based in Ibadan, Nigeria, publishes annual newsletters for the African continent, in English and French. ICESA has initiated several research projects in collaboration with scientific bodies in Europe and the United States of America. It also organized a symposium in 1993 on the IDNDR during the sixteenth International Colloquium of African Geology, in Ezulwini, Swaziland. Nigeria, a member of ICESA, will be hosting the second Regional Geodesy and Geophysics Assembly in Africa in November 1994.

2. African Regional Organization for Standardization (ARSO)

57. The African Regional Organization for Standardization (ARSO), UNCHS (Habitat) and the Commonwealth Science Council sponsored three workshops in Ghana, Kenya and Malawi in 1988 and 1989. The outcome included the promotion of new standards on local building materials, including the draft Ghana standards on building lime and stabilized blocks, the draft Kenya standards on stabilized soil blocks and the draft Malawi standards on fibre-concrete roofing components for dissemination to and adoption by other African countries. The workshop also recommended:

- (a) Joint research and demonstration projects for acceleration of a local technological capacity;
- (b) Sustenance of the Journal of the Network of African Countries on Local Building Materials and Technologies;
- (c) Support with technology and information transfer from international cooperating bodies on walling materials, the Intermediate Technology Development Group (ITDG) on cementitious materials, etc.;
- (d) Collaborative research with other international bodies.

E. Other hazards and disasters

1. Multidisciplinary institutions

(a) Regional Centre for Training in Aerospace Surveys (RECTAS)

58. Established in 1972 under the auspices of ECA, this Centre conducts research, offers theoretical and practical training and provides advisory and consultancy services in aerospace surveying to its eight member States and other African countries. As part of its research and consultancy activities, it has executed projects on small dam monitoring for flooding, aquatic weed invasion and siltation, and impact assessment of a proposed 250-km high-voltage electricity transmission line in Nigeria.

59. Pending successful negotiations, RECTAS could be participating in a collaborative study of greenhouse gas emission reduction in one of its member States, with the objective of understanding the micro-economic impact and identifying the least cost reduction strategies.

(b) The African Centre for Technological Studies (ACTS)

60. The African Centre for Technological Studies (ACTS), based in Nairobi, also seeks to provide training opportunities and increase public awareness of the benefits of applying science and technology to achieve sustainable development.

V. NATURAL DISASTER AWARENESS AND PREPAREDNESS IN AFRICA

61. From the above review, it is evident that African countries and African research and development institutions are fully aware of the major natural disaster events that have afflicted their society and economy within the past 15 years and even as early as three decades ago. All are able to cite details of the numbers of persons adversely affected, the dead, injured, displaced as well as the number who lost property. However, very few had assessed the impact of such events on their national economy, using the proxy index of the number of United States dollars lost directly as a result of the devastation or indirectly due to loss in productive activity and diverted national resources for relief, rehabilitation and reconstruction efforts. This may suggest, already, the difficulty that some policy makers, planners and administrators have in establishing a direct link between disaster mitigation and sustainable development.

62. Although several countries have instituted mitigation and reduction measures in response to recent disaster events, not many have progressed beyond the policy development stage. The most notable exception to this trend is the drought phenomenon where many drought-prone States, particularly in the SADC and IGADD areas, have embarked on the introduction of various measures such as the planting of drought-resistant crops and water harvesting.

63. Nigeria and Zaire offer impressive examples of mitigation actions over a wide spectrum of natural disaster phenomena (floods, grasshopper infestations, earthquakes, cyclones, landslides and riverine erosion). Besides these, there is very little evidence of cost-benefit analyses in making these decisions although it is implied. There is, perhaps, a case for planners to make appropriate comparisons between two successive disaster events in order to demonstrate to all the beneficial effects of reduction measures represented by indices such as number of lives saved, value of property saved and investments protected.

64. African countries are aware of the probability of certain hazards - caused by a combination of demographic change, industrialization, new urban settlement and land-use patterns - imminently becoming actual disasters. Among such imminent hazards are land erosion particularly of coastal areas, creeping desertification, landslides and mud slides. However, only a few of these States have conducted detailed studies to predict the possible effects of disasters on vulnerable populations, including the estimates of the consequences for the economy of the areas at risk.
65. Furthermore, only an insignificant proportion of all African countries have commenced, let alone completed, detailed risk analyses of the probable consequences of the identified hazard. Consequently, no thoroughgoing risk-reduction measures have been implemented, or where applicable preventive action taken.
66. Almost two years after the UNCED Summit, there is a remarkable absence of a clearly defined and published national strategy for natural disaster reduction - either as an integral part of a national sustainable development strategy or as a complement to it - in most of the African countries south of the Sahara. Nevertheless, most of the other respondents envisage, or acknowledge the necessity of, establishing such a national strategy. Components of the strategy often cited are the enactment of national disaster management legislation and the development of a comprehensive national disaster management plan. Mozambique, for example, expects to complete both exercises shortly.
67. Almost all countries have conceived, or are in the process of implementing, the first phase of priority disaster reduction programmes, which derive directly from their experiences of past traumatic disaster events, such as droughts, floods or tropical storms. Without exception, their perceived major constraint in the realization of the programme is financial.
68. While several States possess some legislative instruments on disasters, the major emphasis of such documents is the provision of relief to victims in response to natural catastrophes. However, most African countries do not have comprehensive legislation and accompanying administrative regulations, which incorporate the whole disaster management cycle or which emphasize mitigation.
69. Available evidence indicates that most of the mitigation activities being carried out within States are by the government irrespective of the type of disaster phenomenon. The private sector, NGOs, universities, research and development institutions, do not play a leading or significant supporting role in cooperating with local communities to reduce their vulnerability to disasters. This lack of concerted action by these other key actors in the process has several manifestations and consequences. First, it rapidly exhausts the already very limited central governmental resources at the earliest stages of mitigation initiatives, leading to skepticism. Second, the unwitting absence or indifference of the private sector from participation in the conception, design and implementation processes, prevents it from appreciating, first hand, opportunities which may exist for investing in community-based programmes and satisfying the profit imperative and sustainable development simultaneously.
70. Third, the response to the recent drought episode in southern Africa illustrated the value of interaction between the private sector, research and development institutions, local NGOs and vulnerable communities in relief and rehabilitation efforts. Similar cooperation has been evident also in certain areas of the Sahel in the continuing efforts to arrest desertification. There is, therefore, much value in promoting cooperation between these several entities, on grounds of their corporate and concrete self-interest.
71. Internal resources mobilization efforts for mitigation activities appear to be haphazard in most countries and do not conform to a coherent internal strategy and resulting plan. For several activities aimed at disaster

mitigation - hazard mapping, risk evaluation, risk reduction, information system development, early-warning system installation, research and development - there were, reportedly, severe resource constraints in the way of their initiation. Such internal resources as existed are restricted to early-warning systems, principally for drought, tropical storms or, in rare cases, floods.

72. To compound the above-mentioned paucity of internal resources, most countries did not indicate, in the responses to the questionnaire, their strategy for filling these resource gaps internally.

73. The responses to their requests for complementary external support have been very poor. The case of Zaire, for example, illustrates the trend. In 1992, it requested funds from various multilateral and bilateral sources to complement internal resources for the implementation of a project to combat soil erosion caused by river water. Two international multilateral development organizations expressed inability to support the request on the grounds, firstly, that its funds were exclusively for relief and, secondly, because of internal budgetary constraints.

VI. THE CONTEXT OF THE IDNDR

74. Some skepticism is inevitable in treating yet another United Nations decade or conference devoted to an aspect of the perennial problem of underdevelopment. In 1992, it was the United Nations Conference on Environment and Development in which "The African Common Position on Environment and Development" was articulated. This year there will also be a Conference on Population and Development, to be followed by a World Summit on Social Development in 1995. Perhaps in an effort to synthesis these different perspectives, the recent Tokyo Conference on African Development was held. Its conclusions have tremendous relevance to a central concern of the continent - poverty and underdevelopment - as well as to the IDNDR. The persistence of poverty and underdevelopment are a major cause of Africa's incapacity to promote sustainable disaster mitigation strategies. Under the circumstances, it is pertinent to ask whether the various conclusions and programmes of action of these "decades" and conferences have materially improved the lives of the intended beneficiaries in Africa in alleviating their poverty. If they have not, then the reasons for the failure need to be known and serve as a guide to avoiding the same pitfalls. It is only within this framework that the IDNDR and its sequel can have meaning.

A. Status review of IDNDR objectives in Africa

75. There have been several regional meetings sponsored by OAU on this subject. Yet, almost mid-way through the Decade, it is evident that the objectives are known only to an insignificant proportion of national policy makers and not at all to the ultimate beneficiaries, the African population who suffer the effects of the disaster phenomena mentioned above. It is appropriate, therefore, to examine the reason for this gap in awareness and knowledge.

76. The immediate answer is that the IDNDR objectives, as defined, do not appear relevant to the fundamental concerns of policy makers and the mass of the population whom they represent. Moreover, the methods used for raising awareness merely serve to compound the error. More of the same approaches which treat conference conclusions and plans of actions as ends in themselves will prevail unless a profound self-evaluation leads to fundamental changes in thought and action among Africa's policy makers and bureaucrats.

77. It is argued here that the Decade will assume relevance for Africa only when at least the following conditions are met:

(a) Disaster reduction policies and practices must be based on a full understanding of the causes and dynamics of mass population movements, which are always directly or indirectly attributable to conflict between human needs and environmental capabilities to meet them;

(b) The fundamental fragility and vulnerability of African countries to cope with disaster situations, due to their economic underdevelopment, poor resource base, low levels of technology and insignificant low social sector expenditure, need to form the basis for appropriate strategies for natural disaster reduction in Africa;

(c) Any analysis must be based on an acknowledgement that these classical disaster phenomena are the culmination of individual grass-root African population responses to the challenge of survival in a deteriorating ecology;

(d) The very high rates of population growth in African countries leading to abnormal settlement patterns, particularly in urban areas, merit serious consideration in any comprehensive and "popular" analysis and policy orientation aimed at natural disaster reduction. Without concurrent and complementary population stabilization programmes, success in disaster reduction would be elusive;

(e) Before policy recommendations and plans of action are elaborated, their authors need to understand the rationale and dynamics of the African rural and urban populations in their pursuit of basic survival needs, such as food security, water availability, shelter, health care and remunerative activities. Problem definition, strategic planning and implementation must be with, rather than for, the intended beneficiaries.

B. Obstacles to the realization of disaster-reduction objectives

78. The above pre-conditions are important as they demand major shifts in awareness and perceptions from African policy makers. But there are also several internal and external obstacles which are perceived by the policy makers, and acutely felt by the rural poor, as impediments to the attainment of natural disaster reduction. Among the internal obstacles, the first is "uncontrolled" or "explosive" population growth, mentioned by some contributors during the Rio Summit.⁹ Others cite "poverty" as the fundamental obstacle. Referring to the crisis of energy, in particular the use of wood for fuel and housing, President Nujoma of Namibia stated that "unless we are able to address the problem of poverty successfully, we will not succeed in addressing the problem of environment".¹⁰

79. President Jawara of the Gambia presented the third obstacle as "the limitations of national capacity" with reference to the failure of afforestation and reforestation programmes aimed at combating desertification. The obligation to respond to the vital needs of the population in African countries also conflicts with measures to reduce vulnerability to disasters. Physical factors such as the decline in rainfall levels also compound the above problems. The inability to communicate effectively with the communities, potentially or actually vulnerable to disasters, constitutes yet another obstacle for policy making.¹¹

⁹ Document A/CONF.151/26/Rev.1(Vol.III), p. 103.

¹⁰ UNCED (Vol.III), 1993, p. 22.

¹¹ UNCED (Vol.III), p. 144.

80. Another obstacle is characterized by the poor management of natural resources and the low investment in drinking water, health and education in the community. To the above should be added the largely unsuccessful regional initiatives effort aimed at the resolution of conflicts which lead to forced and massive population movement of refugees and internally displaced persons.

81. External obstacles form the backdrop to the internal constraints. The most intractable and frequently cited obstacle is the burden of debt servicing and debt repayment. The debilitating effects of debt repayment, it is argued, are exacerbated by "trade protectionism, low commodity prices and prohibitive taxes and tariffs, by unfair and depressive international economic relations (which) deepened poverty and underdevelopment". Furthermore, the inadequacy of the Global Environment Facility (GEF), as a means of promoting disaster reduction through environmentally sound policies, was highlighted and criticized.

C. Enabling measures for poverty alleviation and disaster reduction

82. Reversing the above trends points to some of what needs to be done. But disaster reduction strategies can only be effective if situated within the wider context of efforts aimed at the alleviation of poverty. Interventions by several African leaders at UNCED 1992 suggest some international and external policy measures in this direction. These include the internal restructuring of production activities through structural adjustment programmes, the definition of programmes which integrate environmental considerations into the rational and efficient exploitation of the heritage of nations, reinforcing regional and subregional cooperation to achieve ecological balance and food self-sufficiency. In all this, policies which address poverty alleviation as a priority stood a better chance of solving environmental problems.

83. The exploitation of alternative energy sources, geo-thermal power, hydro-electric power and solar energy was advocated as a solution to problem of environmental degradation which is aggravated by tree-felling for shelter, fuel and other domestic uses. Environmental protection laws could be strengthened by incentives for local communities to intensify reforestation measures and as a means of arresting soil erosion, improving rainfall prospects, prevention of landslides and protection of plants of medicinal value.

84. Furthermore, implied in the African Common Position and articulated in the African Strategies for the implementation of Agenda 21¹² are policies and measures which pursue the goals of food security, energy sufficiency, sustained economic development and productive employment and the improvement of the inhabitants of the continent.

85. Improved fresh-water management programmes were also seen as indispensable for increased agricultural production and improved human health. Another important prerequisite for success was the involvement of "women and local communities" in environmental and natural resource management. "We must, at national levels, encourage and support their active participation in all matters that affects them", "promote national capacity-building at all levels especially that of the community".¹³

86. Others advocated integrated multisectoral programmes to combat desertification through the rational use of production potential. Furthermore, in order to achieve these goals, it was necessary to "build an indigenous, scientific and technological capacity, a network of international centres for research and training in high

¹² See document E/ECA/CM.19/8/Rev.1.

¹³ UNCED, 1993, p. 46.

technology and environmental science". Alongside this, national policies, in recognition of the phenomenon of youth in urban areas, should recognize the creativity of young people and their right to be heard.

87. Also, respect for the traditions of communities must be taken into consideration and upheld while introducing modern methods. Concerning community participation, it is held that the environmental management of neighbourhood and villages by their inhabitants is the assured vehicle through which democracy will ultimately take root.

D. External enabling mechanisms

88. Debt relief was considered by Africa's leaders an urgent and vital ingredient of any poverty alleviation strategy as "a country ... cannot win this struggle while their economies suffer the spectrum of external debt and continuing pressure on economic relation". The prospect of converting outstanding debts into grants could permit increased social sector expenditure which, in strengthening environmental sustainability, would reduce vulnerability to disasters.

89. Second, an International Convention on Desertification is considered an urgent requirement. The presentation on behalf of OAU by Botswana's President Masire aptly summarizes the other enabling requirements. New and additional resources to address the problems of environmental degradation were urgently required.

90. Other urgent prerequisites are favourable technological transfers on concessionary terms, additional resource flows, reduction of the trading balance and a comprehensive review of the scope and procedures of the Global Environmental Facility (GEF).¹⁴ The implementation of components of Agenda 21 relevant to Africa requires large-scale funding, especially as environment and development are two sides of the same coin. A plea for the rest of the world to pay "the full price" for Africa's natural resources to remove existing tariff barriers to processed and manufacturing groups was made.

91. The above has addressed the internal and external mechanisms required for disaster reduction through poverty alleviation. It has not, however, considered other important issues, notably how these elements could be linked to the objective and who the principal actors would be. Secondly, action has to occur at several levels: subregional, national and local.

92. In the follow up to the IDNDR mid-term review in Africa, the emphasis will be a framework of action at the "grass-roots" community level. This is justified on the grounds that past failures have been largely attributed to "intellectual arrogance (which) has prevented us from building on what the people know. Their knowledge unlike much of our own is based on personal experience and the accumulated experiences of their phobias".¹⁵

93. The case for a self-reliant participatory rural development is thus an unassailable one. Evidence from evaluation studies of some of the work on natural disaster reduction in Africa confirms that the failure of many programmes and projects is directly attributable to the "lack of understanding of the social and cultural values ... their needs and their priorities" of rural communities. "There still exists very little research on the indigenous methods for a control of erosion and agricultural production on the varieties of local harvest and on the

¹⁴ UNCED, 1993, p. 229.

¹⁵ Burkey, 1993, p. 55.

methods of sylvi-culture adapted to the Sudano-Sahelian region".¹⁶ The above remarks related to desertification control apply equally to other efforts aimed at the reduction of other natural disaster phenomena.

E. Multilateral support

94. Programme 37, sub-programme 2 of the current five-year programme, 1992-1997, of the United Nations General Assembly, states that "prevention and preparedness are the first steps" in disaster management. The objectives are "the permanent improvements in disaster mitigation" and "temporary measures for protection or evasion of disaster impact". UNDHA's responsibility to disaster prone developing countries is to:

(a) Transmit to them "relevant knowledge and implementing capacity on preventive and mitigating policies, in advance, to reduce the impact of disaster occurrence";

(b) Enhance the flow and exchange of information between all agencies and institutions dealing with prevention and mitigation techniques;

(c) Exchange between, and disseminate relevant technology to, disaster prone countries;

(d) Ensure a vibrant disaster management training programme (DMTP) to strengthen the capacity of disaster-prone countries to mitigate the effects of natural disasters.

95. Prior to, and during the first part of the Decade, several African States sought various forms of multi-lateral assistance to strengthen their capacity for disaster management and thereby reduce their vulnerability to natural disasters. Unfortunately, the responses to such requests have been poor and indifferent, principally due to the paucity of financial resources at the disposal of UNDHA. Document E/ECA/CM.20/CRP.5 illustrates the situa-tion graphically. This poses a tremendous challenge to the Department to display greater resourcefulness and ingenuity in obtaining adequate financial resources to meet the rapidly increasing requests from member States, to promote the culture of prevention and mitigation. But it also requires that donors invest their financial resources more in prevention than in response as is currently the case.

VII. CONCLUSIONS AND RECOMMENDATIONS: Framework of action to reduce natural and related disasters

96. The foregoing discussion is evidence of the fact that disaster reduction is only a part of a greater challenge of poverty alleviation. The same prerequisites which apply to the latter are relevant to the former. Experience has shown that the lessons of nature must be adapted to the process: a tree does not grow downwards from its leaves to its roots, nor can a house be built from the roof downwards to the foundation. Consequently, the major flaw in present strategies for poverty alleviation and, by implication, disaster reduction, is the undue emphasis placed on blueprints which assume intimate and infallible knowledge of how the poor think and why they behave in the way they do.

97. To correct this error, it is suggested that greater emphasis than hitherto be place on understanding how the poor in rural communities combat the problems of poverty and vulnerability to disaster and what they need to reduce such vulnerability. By a process of accumulation, relevant national policies could be built upon this foundation of knowledge.

¹⁶ UNDP, 1992, p. xii.

98. A comprehensive inventory of resources indigenous to Africa at the community, national, subregional and regional levels in various fields of human activity aimed at the satisfaction of basic needs is an urgent requirement. Upon its results could be based efficient and effective solution-oriented networks for reducing the incidence and effects of disasters.

99. The African situation reveals that there is the need to strengthen national capacities, both government and non-government, particularly at the community level. An appropriate theme for Africa for the second half of the Decade can be "preventing the avoidable and mitigating the inevitable", the details of which will be amplified in the subsequent paragraphs.

100. The African situation also illustrates the high level of awareness of the devastating effects of disasters among African policy makers and planners. The poor inhabitants of Africa's rural communities and its urban areas are even more directly and painfully aware of the destruction caused by the recurrent drought, advancing desertification, floods, pest infestations and other hazards.

101. Notwithstanding this, the desired technical cooperation through the exchange of scientific knowledge, transfer of technology for disaster reduction to Africa, have not materialized. Likewise, the expected support from multilateral agencies to the continent's regional, subregional and national centres of research and development in disaster mitigation have been, at best, modest. The virtual absence of the private sector, the scientific community and the media from the efforts of many countries in disaster reduction initiatives possibly mirrors the low priority which central government authorities attach to translating their awareness of the devastation of natural disasters into concrete reduction strategies and programmes within the framework of sustainable development. In addition, the indigenous private sector in Africa - itself only a minor part of the continent's private sector - does not seem convinced of its short- and long-term benefits in investing in mitigation.

A. Effective natural disaster reduction and mitigation in Africa:
Short-term action

102. Certain principles are fundamental to effective disaster-reduction measures in Africa. First, there is an imperative need for policy makers and planners to be convinced of the merit of incorporating disaster prevention and mitigation into policy and planning for sustainable development, environmental conservation and poverty alleviation. The second requires that the population of vulnerable communities participate fully and effectively in all aspects of reducing their vulnerability to past disasters and other natural hazards, including risk assessment, early warning, information and the search for solutions based on the interaction between local knowledge and modern technological innovations. The various country and subregional case studies prepared as part of Africa's contribution to the negotiations for the Intergovernmental Negotiating Committee on the International Convention on Drought (INCD), stress and reiterate this imperative. Without exception, the country presentations of Botswana, Mali, Tunisia, Uganda as well as the subregional contributions of the Arab Maghreb Union, CILSS and IGADD emphasize this element and, with varying degrees of emphasis, highlight the crucial role of women in all phases and aspects of the strategies and programmes to combat and arrest desertification.

103. Thirdly, imaginative and sustained mobilization of internal material, technical and human resources are indispensable national responsibilities which must be complemented by external support, upon receipt of sound proposals for the transfer of the required technology, materials and finances.

104. Fourthly, the objectives, activities and specific targets of the IDNDR are, and ought to be, situated within the ambit of sustainable development. The comprehensive national assessment of risks from natural hazards should, therefore, be an integral part of national sustainable development plans.

105. The preparations leading to the Yokohama Conference and the deliberations at the Conference itself have permitted several African States to address natural disaster reduction as an integral part of Agenda 21 for the first time. It is, therefore, vital that the first post-Yokohama activity for Africa should be a series of subregional workshops to be organized by the IDNDR Secretariat of the Department of Humanitarian Affairs, in close cooperation with the AMCEN Secretariat (OAU, ECA and UNEP).

106. Diligent preparation will be indispensable to the success of the endeavour. Certain core prerequisites include one written country presentation, the result of corporate effort of the spectrum of participants who would normally constitute a national implementing task force (NITF). Conforming to a prescribed framework, the report will be submitted to the organizing secretariat in advance of each workshop on a specified date. Country participation in the workshop would, ideally, reflect the range of actors central to the development of a country's natural disaster-reduction programme.

107. The results of the workshop should be the precursor of country-specific strategies and action programmes. It is acknowledged that some countries are at relatively more advanced stages than others, the proceedings of these workshops should offer a unique, efficient and cost-effective opportunity for exchange of ideas, learning of new approaches and development of appropriate country strategies.

108. Several priority tasks must be accomplished urgently by existing and new subregional research and development institutions, to complement efforts of national counterparts, if the major objectives of disaster reduction are to be achieved by 1999. These should be done on the basis of proven expertise and comparative advantage relative to specific disaster types but with the possibility of sharing common didactic and dissemination techniques of proven value across specializations, for example, in obtaining active public participation. These tasks are outlined in the paragraphs that follow.

B. Medium- and long-term strategies

109. In the specific context of Africa, an appropriate and relevant starting point is the framework provided by African Ministers of Economic Development and Planning in their document entitled "African Strategies for the Implementation of the United Nations Conference on Environment and Development Agenda 21".¹⁷ This document identifies, in the light of the ACPED, the areas that are of priority relevance to Africa. It considers the priority concerns of sustainable development to be the following:

- (a) Management of demographic change and pressures;
- (b) Development of human settlements;
- (c) Achieving food security;
- (d) Efficient and equitable use of water resources;
- (e) Energy efficiency and self-sufficiency;
- (f) Management of ecosystems;

¹⁷ E/ECA/CM.19/8 of May 1993 (ECA, Addis Ababa).

(g) Optimal environmentally clean industrial production.

110. In proposing the strategies for implementing the disaster mitigation and management measures, emphasis should be put on the urgency of providing assistance to those countries that are prone. This is important as the majority of the world's least developed countries, 34 out of 47, are in sub-Saharan Africa and are most acutely vulnerable to the various prevailing hazards precisely because of the concrete manifestations which reflect their poverty. Consequently, any concerted effort to reduce the impact and effects of natural disaster phenomena on their vulnerable populations must seek to satisfy the vital needs of such persons while simultaneously ensuring sustainable development as enunciated above. Furthermore, national responsibility is enshrined as a fundamental principle in the conception, strategy formulation, planning and implementation phases of measures aimed at natural disaster reduction. There is also consensus that internal resource inventory and mobilization should form the basis of and precede external initiatives if the latter is to succeed.

111. Accordingly, the proposed framework for action will be based principally on those actions at the national level which seek to ensure that a particular country's vulnerability to disaster phenomena is reduced by the increased and assured access of its citizens to food, clean water, durable shelter, renewable low-cost energy, and preventive primary health care. This will be complemented by proposed actions at the subregional and regional levels respectively.

112. The information on existing institutions suggests that there is a rich potential in local capacity. There is, therefore the need to develop and strengthen that capacity. Three areas of priority action become evident to enhance efforts in disaster reduction and mitigation:

(a) Development and strengthening of disaster information systems and relevant database, including the comprehensive mapping of actual and potential disaster-risk phenomena and areas;

(b) Development and strengthening of human resources and material capabilities and capacity of research and development institutions for disaster reduction and mitigation;

(c) Development and strengthening of the capacity for the integration of dimensions of disaster reduction into national development plans and programmes.

113. The impact of actions in these areas can only be fully reaped if there is unison in action at the level of all member States with a common purpose and genuine resolve.