

CM/1986(LI)

Annex IV

DIRECTORY OF NATIONAL OFFICES RESPONSIBLE OF
THE MANAGEMENT OF DISASTERS AND OTHER EMERGENCIES

COUNTRY	RESPONSIBLE NATIONAL OFFICES	EMERGENCY PLANS	DISASTER LEGISLATION
5. Burundi	General Secretariat of the President's Office		
6. Burkina Faso	National Committee of Control of Drought Effects, State Secretariat for Social/Action. Ministry of Health and Social Action Ministry of Provincial Administration and Security.	Plan of Action Against the Effects of Drought	-Decree No. 78/225 of 11 July, 1978 establishing an Office of the Director-General of Public safety. -Decree No. 78/235 of 31 August, 1978 amending Decree No. 78/225. -Order No. 13 of 10 October, 1984 on the Organization of the Ministry for Provincial Administration and Safety. -Decree No. 85/521 of 13 April, 1985 outlining the responsibilities of Public Protection Services. -Law No. 86/016 of 6 December, 1986 on the general reorganization of public safety measures.
8. Cape Verde	Ministry of Armed Forces Ministry of Planning and Co-operation.		Ministerial Resolution of 1987 programme for establishment of Public Safety Services under the Ministry of Armed Forces and Security.

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COUNTRY	RESPONSIBLE NATIONAL OFFICES	EMERGENCY PLANS	DISASTER LEGISLATION
1. Algeria	Ministry of Interior	Departmental Plans	-Decree No. 85-231 of 25.03.85 specifying conditions and modalities for implementing relief measures. -Decree No. 85-232 of 25.03.85 on disaster control.
2. Angola	National Interministerial Commission for Co-ordination of Emergency Operations (CIMAE)	National Emergency Plan, 1983.	
3. Benin	Ministry of Interior, Public Safety and Administration (MISPAT)	Emergency plans on the basis of case by case proposed by the National Public Protection Committee to be approved by the Minister of Interior.	-Decree No. 85-112 of 5 April, 1985 on the establishment, composition, terms of reference or function of the national Committee for Public Protection.
4. Botswana	Ministry of Finance and Development Planning, Commissioner of Police, The Botswana Defence Force	Drought programmes (at central and local levels)	-Setting-up of Interministerial Drought Committee (IMDC) and Rural Development Unit -Setting-up of an Early Warning Technical Committee (EWTC)

Country	Responsible National Offices	Emergency Plans	Disaster Legislation
9. Central African Republic	Chairman of the National Committee for the Control of Fire, Bush Fires and other Disasters.		<p>Order No. 83.013 of 7 February, 1983 providing for the establishment of a National Committee to oversee control of fire, bush fires and other disasters.</p> <p>Decree No. 83.027 of 12 March, 1983 on the organization and functions of the National Committee for the control of Fire, Bush Fires and other Disasters.</p>
10. Chad	Ministry of Food Security and Drought Affected Victims	Plan of Action for Food Security.	Decree No. 369/MSAP/DGA, 7 of 20 December 1987, establishing the Emergency Committee to look into Food Security and Emergency assistance (GASA).
11. Comoros	Ministry of Foreign Affairs Cabinet of the Minister of Interior	Plan CEEC CYCLOPES Special Plan Volcanic eruption (underway);	Circular Public Safety measures Against Cyclones Instruction of 12 November 1985 of No.85-150 of the State Secretariat responsible for transport and tourism.
12. Congo	Ministry of Defence and Public Safety. Ministry of Provincial Administration and People's Power.	Disaster Emergency Action Programme.	Decree of 1986 on Reorganization of the Public Safety measures. Law No. 4501 of 1981, Articles 102, 105-107, 126 and 128.

COUNTRY	RESPONSIBLE NATIONAL OFFICES	EMERGENCY PLANS	DISASTER LEGISLATION
13. Cote d'Ivoire	Ministry of Interior	Draft text of Relief Organization Plan	<p>-Circular No.12/INT/SNPC of 2 April, 1978: Directives for a departmental Disaster Relief Plan.</p> <p>-Circular No. 02L/INT/SNPC of 24 August, 1978 on Assistance to Victims of Disasters.</p> <p>-Decree No. 79.643 of 8 August, 1979 on the Organization of a Natural Disaster Relief Plan.</p> <p>-Ministerial Instruction of 21 January, 1980 regarding relief organization at national level in case of disaster or event of exceptional virulence.</p>
14. Djibouti	Ministry of Interior	'ORSEC' Plan providing for the Establishment of emergency measures on the basis of observation and experience.	<p>-Draft Decree No. 35.023 (1985) providing for the Establishment of a Relief Organization Plan</p> <p>Called "ORSEC Plan".</p>
15. Egypt	Ministry of Interior, Civil Defence Department.	National Emergency Plan	<p>-Law No. 143, enacted in 1959, and as amended by Law No. 10, in 1965. The Department of Civil Defence has responsibility for establishing a Plan for dealing with disasters in time of peace.</p>

COUNTRY	RELEVANT NATIONAL OFFICES	EMERGENCY PLANS	LEGISLATION
16. Ethiopia	Relief and Rehabilitation Commission	Emergency Relief Plan of Operation (in preparation to co-ordinate work of NGOs operating in the country 1966), Emergency measures by the AEC	Order No. 53 of 1974, cited as 'Relief and Rehabilitation Commission Order, 1974' Proclamation No. 173 of 1974, cited as 'Relief and Rehabilitation Commission Establishment Proclamation 1974' both of which have given the AEC responsibility not only for emergency relief but also for carrying reconstruction and rehabilitation programmes in drought prone areas and to the resettlement of people from degraded lands on fertile and underpopulated regions of the country.
17. Gabon	Ministry of Social Affairs, Natural Disasters, Social Security and Welfare Ministry of Provincial Administration and Local Communities.	Plan for organizing Public Safety.	Decree of 15 February 1972 providing for the Organization of Public Safety.
18. Gambia	President's Office Cabinet Committee on Drought Relief.		

COUNTRY	Ministry of the Interior National Relief Committee	EMERGENCY PLANS	DISASTER LEGISLATION
19. Ghana		Action Plan (in the process of being adopted)	Action on hand to give National disaster relief Committee legal existence.
20. Guinea-Bissau	Ministry of Planning Permanent Bureau for Food Security.	National Food Security Plan (within the framework of the current national plan)	
21. Kenya	Office of the President Head of Provincial Administration Department	Disaster Plan in preparation.	-Disaster Emergency Legislation in preparation.
22. Lesotho	Ministry of Employment, Social Welfare and Pensions.	Draft Plan 1985(not yet endorsed)	-Draft Law (1985)
23. Liberia	Ministry of Internal Affairs National Disaster Relief services Division of Research and Planning	National Disaster Relief Plan (approved 1987)	
24. Libyan Arab Jamahiriya	Civil Defence Department.		- Decree No. 72-377 of 20 October 1972 Relief -Decree No. 84-443 of 14 December 1984
25. Madagascar	Ministry of Interior National Relief Council	Disaster relief Organization 1979.	-Decree No.85 -329 of 13 February 1985 providing for the establishment of two disaster relief organs (1) National Co-ordination Committee (NCC) (2) The National Relief Council (NRC).

COUNTRY	RESPONSIBLE NATIONAL OFFICES	EMERGENCY PLANS	DISASTER LEGISLATION
26.	Malawi	Ministry of Community Services National Disaster Preparedness and Relief Committee.	-Established in January 1987 within the Government Administrative Machinery.
27.	Malawi	Ministry of Provincial Administra- tion and Grassroots Develop- ment Chairman of the National Committee for Assistance to Drought Victims. (NCADV).	-Decree No. 37/PG-RM of 9 April, 1973. Establishment of the National Committee for Assistance to Drought Victims -Draft Decree superseding and sup- planting Decree for 37/PG-RM 1973. -Other Drafts relating to the Permanent Secretariat, its organiza- tion and functions and the NCADV Technical Committee.
28.	Mauritania	Food Security Commissioner	-First Decree of April 1989 establish- ing a Public Safety Service. -Law of 1971 on the general organiza- tion of Public Safety. -Decree of 1973, strengthening several decrees and -Complementing existing texts on Public Safety. -Decree No. 00/087 of 2 May 1980 on the setting up of relief programmes.
29.	Mauritius	Prime Minister's Office	-ANNUAL CIRCULARS providing Cyclones Emergency Scheme Flood Emergency Scheme

COUNTRY	DESIGNABLE NATIONAL OFFICES	EMERGENCY PLANS	DISASTER LEGISLATION
30. Mozambique	Department of Prevention and Combat of Natural Calamities Ministry of Co-operation.	Plan of Prevention and Combat of Natural Calamities (in preparation)	Presidential Decree No. 44/80 Setembro. Creation of a co-ordinating Council for Prevention and Combat of Natural Calamities.
31. Niger	Head of the Department of Assistance to the population	Emergency relief measures.	
32. Rwanda	National Emergency Relief Agency		
33. Nigeria	Crisis Management Committee to come up with a plan depending on the type, area and cause of the disaster.	Case by case plans varying according to the type, area or cause of the disaster.	
34. Sao Tome & Principe	Through the Ministry of Foreign Affairs.		

COUNTRY	RESPONSIBLE NATIONAL OFFICES	EMERGENCY PLANS	LEGISLATIVE LEGISLATION
35. Senegal	Ministry of Interior	COSEC Plan according to Ministerial Instruction of Dec. 29, 1961.	Ministerial Instruction of Dec. 22, 1961 regarding Organization of Relief Operations. Law No. 64-53 of July 10, 1964 on the Organization of Civil defence. Decree No. 64-593 of July 30, 1964 Minister of Interior responsible for Public Safety. -Law No. 70-23 of June 6, 1970 on the General Organization of National Defence including Civil Defence.
36. Seychelles	Secretary of State, Department of Planning and External Relations	Major disaster Plan 1972.	
37. Somalia	Ministry of the Interior Directorate of Food Aid and Emergencies.	Preparedness and Relief Measures.	
38. Sudan	Commission for Relief and Rehabilitation	Formulation of National Disaster Plan (under way in 1967)	Act of 3 April 1966, the Commission of Relief and Rehabilitation Act, empowering RRC to deal with disaster relief.

COUNTRY	RESPONSIBLE NATIONAL OFFICES	EMERGENCY PLANS	DISASTER LEGISLATION
39. Swaziland	Head Office TINKHUNDLA		<p>-DRAFT DISASTER PREPAREDNESS AND RELIEF ACT, for establishing organization of, and containing guidelines for an Emergency Plan (under consideration of Cabinet).</p> <p>-Decree No. 84-131 of 25 June 1984, providing for the establishment, organization and mandate of the office of the Director of Public Safety.</p>
40. Togo	Ministry of Interior	Organization of protection rescue relief and prevention operation.	
41. Tunisia	Ministry of Interior Director of Public Safety	National Emergency Plan (under preparation in 1985)	<p>-Law No. 73, Establishment and organization of Public Safety Decree No. 73. Establishment and organization of the National Council and Regional Councils for public safety.</p> <p>-Decree No. 77-211 of 4 March, 1977 placing the Public Safety Directorate under the Ministry of Interior.</p> <p>-Financial Law No. 59 78 of 20 Dec. 1973 (Public Institution with financial autonomy).</p> <p>-Decree No. 84-755 of 30 April, 1984 Establishing the official status of Public Safety Agents.</p>
42. Uganda	Ministry of Rehabilitation		

COUNTRY	RESPONSIBLE NATIONAL OFFICES	EMERGENCY PLANS	DISASTER LEGISLATION
43. United Republic of Tanzania	Office of the Prime Minister and First Vice-President National Disaster Unit.	National Emergency Plan (still in draft, 1987)	Disaster legal basis being formulated. Formal establishment of Tanzania National Disaster Relief Committee (TANDREC) to be submitted/endorsed by the National Assembly in 1987.
44. Zaire	Executive Council of the People's Revolutionary Movement State Commissioner for Provincial Administration	Disaster Control and Management measures.	National measures for disaster and control and management in 1986.
45. Zambia	Cabinet Office Contingency Planning Unit.		
46. Zimbabwe	Ministry of Local Government, Rural and Urban Development Department of Civil Defence.	Draft National Emergency Plan.	"CIVIL DEFENCE ACT 1982 -1988 DRAFT CIVIL PROTECTION BILL (under discussion)

SOURCE: 1. UNLKO
2. OAU General Secretariat.

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Annex V

GLOSSARY OF DISASTER RELATED TERMS

GLOSSARY OF DISASTER RELATED TERMS

ACCIDENTS: Disasters in the form of industrial or technological accidents may take any of the following shapes: transportation (planes, trucks, automobiles, trains and ships); structural collapse (buildings, dams, bridges, mines and other structures); explosions; fires; mechanical (toxic waste and pollution), and biological.

BIOLOGICAL DISASTERS: Some authors define these as the accidental (or through warfare) release of harmful biological products; others use the definition of communicable disease epidemics and insect swarms (locusts, grasshoppers, etc...)

CIVIL DISASTER: This is caused by riots, non-peaceful demonstrations and internal strife.

CYCLONES: This is a term utilized for severe storms which are characteristic of the tropics and carry a variety of names according to the region in which they occur (i.e. hurricanes, typhoons, etc.). These storms may produce rotating wind currents with a velocity of 100- 400 km/h, a displacement speed of 50-70 km/h and are often accompanied by heavy rains or floods.

DAMAGE ASSESSMENT: The process of post-impact estimation of physical damage which is translated into financial loss or requirements for relief assistance.

DEVELOPMENT: A comprehensive economic, social, cultural and political process, which aims at the constant improvement of the well-being of the entire population and all individuals. The reduction of human vulnerability to disasters and the strengthening of people's coping capacity are among the primary goals of development.

DISASTER: an event, concentrated in time and space, on which a society (or a community) undergoes severe danger and incurs losses of its members and physical appertenances, to such an extent that the social structure is disrupted and the fulfillment of all or some of the essential functions of the society is prevented.

DISASTER EPIDEMIOLOGY: The systematic study of the relationship between environment, man and a causative agent or agents in order to establish disaster patterns, in an effort to develop preparedness contingency plans based on calculated risks and institute intervention programmes based on experience and expectations.

INTERNATIONAL DISASTER PLAN: A system for co-ordinating disaster responses and establishing priorities, duties and roles of different individuals and organizations at the international level. This also includes the actual state of preparedness.

DISASTER LEGISLATION: Laws instituted to mitigate the damaging effects of a disaster, principally in the field of physical and urban planning, public work and building construction.

DISASTER NATIONAL PLAN: A written plan of action applicable at the national level which delineates the roles and responsibilities of health sector personnel, as well as formal government organizations, having the responsibility of coping with disaster (This may involve private voluntary organizations as well).

DISASTER PREDICTION: Role of meteorology, seismology and volcanology in the prevention of certain negative consequences of a disaster.

DISASTER PREPAREDNESS: A readiness to predict, prevent, respond to and cope with the effects of a crisis. Preparedness should not be limited to short-term measures undertaken during a warning period before the impending impact of a disaster event; it must be supported by legislation and involve national operational planning, education and training of the population at large, the technical training of those who will be responsible for emergency intervention operations; as well as undertaking the country stock-piling of supplies; and emergency funding arrangements.

DISASTER PRONE COUNTRIES : Those countries which are classified as areas with exposure to disaster hazards and their possible impacts. The greatest vulnerability to risks exist in areas with a dense and vulnerable population.

DISASTER REHABILITATION The provision of services and facilities in order to restore a population's former living standard and support the community structure which encourages adjustment to the drastic changes caused by disaster; this includes psychological restoration and political stability.

DISASTERS THAT ORIGINATE UNDERGROUND: Common examples to be found are earthquakes, volcanic eruptions and tsunamis (seismic sea waves).

DISEASE CONTROL. Management procedures include all precautions taken to prevent outbreak of any communicable disease: including sanitation, immunization, environmental modification, vector and rodent eradication (as well as targeting breeding sites), prevention of over-crowding, ensuring utilization of aseptic techniques and food inspection.

DISEASE SURVEILLANCE The required monitorization necessitates continuous scrutiny of all aspects of occurrence and subsequent spread of a disease, which are pertinent to establishing effective disease control.

DISPLACED PERSONS. Persons forced to relocate as a result of natural or man-made disasters occurring within their home community.

DROUGHT: The prevalence of a serious deficiency of moisture in the soil with a subsequent inadequate supply of normal water requirements for plants. This also reflects an insufficient quantity of water for both human and animal consumption (Various levels of severity in a drought may lead to crop failure and food shortages).

EARLY WARNING SYSTEM. A collective system of indicators which are used to give a timely warning of an impending or probable event which may bring disastrous consequences in its aftermath. Such warning can greatly reduce the severity of those consequences and facilitate adequate community preparation.

EARTHQUAKE: A convulsion of the earth's crust produced by explosions deep inside the earth (telluric), by the activity of volcanos (volcanic), or by slipping movements of the layers of the earth's crust along faults (tectonic).

EMERGENCY: An emergency usually occurs after the onset of a sudden disaster. It may also develop when the effects of a slow onset or a disaster process have been allowed to reach the stage at which victims can no longer cope without external assistance.

EMERGENCY RELIEF: Immediate short-term emergency intervention initiated in order to ensure the immediate survival of victims. In a highly vulnerable population, emergency relief operations may have to be extended and reorganized to address the prolonged need of rehabilitation (see disaster rehabilitation).

EPIDEMIC: The occurrence of a disease, known or suspected to be of infectious or parasitic origin, that is of unusually large or unexpected proportion for a given place and time. An epidemic often evolves rapidly, requiring an instantaneous, effective response.

FAMINE: The effects of starvation and malnutrition caused by climatic, environmental, economic and/or other variables.

FLOOD: This includes slow-rising floods (floods of major river basins, such as the Congo, the Niger, the Nile and the Zambezi) and flash-floods which result from unusually heavy local rainfall. No country in Africa can be considered entirely free of the risk of sudden, local flash-floods. The more arid the region, the more rapid the surface run-off when heavy rains occur.

HAZARD: The probable occurrence of a potentially damaging phenomenon within a specific period of time, in a given area.

HAZARD MAPPING: The process of geographically establishing where potential disasters are most likely to threaten communities.

HEALTH NEEDS ASSESSMENT: Specific medical, epidemiological and administrative information about health problems being (or likely to be) experienced, hospitals in operation in a given area; their operational capacity pre and post disaster, and the availability of medical supplies.

METEOROLOGICAL DISASTER: Meteorological phenomena are responsible for many natural disasters: storms (hurricanes, tornados, cyclones, snowstorms), cold spells, heat waves and droughts which may result in famine.

NUTRITIONAL EMERGENCY: An emergency is created when mass starvation, caused by the interruption of food supply to the population over a long period of time occurs. Unusual food shortage may be caused by major crop failures, war and civil conflicts, or natural disasters.

NUTRITIONAL SURVEILLANCE: The process of continual monitorization of a population's nutritional status, based on standard criteria applied at different intervals.

NUTRITION SURVEY: One-time data collection to determine the impact of a disaster on the nutritional status, of a population, which then in turn affects the status of health and disease causation.

PUBLIC AWARENESS: The individual and community's understanding of the aims and potential benefits of counter-disaster programmes.

REFUGEE: Any person who, owing to a well-founded fear of persecution for reasons of race, religion, nationality, membership of a particular social group or political opinion is outside the country of his nationality and is unable to avail himself of the protection of that country. In the context of Africa the term 'refugee' shall also apply to every person who, owing to external aggression, occupation, foreign domination or events seriously disturbing public order in either part or the whole of his country of origin or nationality is compelled to leave his place of habitual residence, in order to seek refuge outside his country of origin.

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Annex VI

ACTIVITIES OF SOME RELEVANT ORGANIZATIONS DEALING
WITH DISASTERS IN AFRICA

Activities of some relevant organizations dealing
with disasters in Africa

1. World Health Organization (WHO)
2. World Food Programme (WFP)
3. World Meteorological Organization (WMO)
4. Economic Commission for Africa (ECA)
5. Inter-Governmental Authority on
Drought and Development (IGADD)
6. International Red Locust Control
Organization for Central and
Southern Africa (IRLCO-CSA)
7. Desert Locust Control Organization
for Eastern Africa (DLCO/EA)
8. Organization of African Unity (OAU)
General Secretariat
9. The International Centre for Insect
Physiology and Ecology (ICIPE)

1. World Health Organization (WHO)

The World Health Organization, through its headquarters and the Regional Office for African in Brazzaville and for the Eastern Mediterranean in Alexandria, works traditionally with the health ministries of its member States, supporting health development programmes. The Organization's policies and strategies are in full accordance with the Declaration of the Heads of State and Government of OAU, adopted at the 23rd Ordinary Session in 1987 (AHG/DECL.1 (XXIII), entitled "Health as a Foundation for Development."

2. The World Health Organization, through its Emergency Relief Operations and Emergency Preparedness and Response Programme, provides direct support to the member States in disaster preparedness training, planning, relief and rehabilitation of health services and infrastructures. The Regional Offices have established regional programmes and activities, which today include emergency programmes in Ethiopia, Mozambique, Angola, Namibia, Sudan, to name only a few. Regional and inter-regional meetings have taken place i.e. in Addis Ababa, Brazzaville, Bamako, Hammamet (Tunisia) and Alexandria, **coordinating** such support.

3. WHO's strong commitment to support disaster preparedness and response in Africa is illustrated by the establishment of the Pan-African Centre for Emergency Preparedness and response in Addis Ababa, in 1988. The Centre has started its training programmes, and has also participated in preparing the OAU meeting of Ministers of Health in Uganda in 1989.

4. WHO continues to pledge its cooperation with OAU in the future. The establishment of joint activities is important within the framework of the forthcoming "International Decade for Natural Disaster Reduction" 1990-2000 which has been designated by the UN General Assembly. The world Health Assembly in May 1989 adopted a resolution entitled "Fostering the goals for the International Decade for Natural Disaster Reduction in the Health Sector" (WHA 42.16). The WHO Regional Committees for Africa and for the Eastern Mediterranean have been discussing various disaster related issues and have adopted resolutions.

5. Based on the resolutions and other guidance from its Governing Bodies, the World Health Organization is prepared to support the member States in strengthening their ~~emergency~~ preparedness and ~~response~~ capacities. At the request of the member States, support will be given to planning health sector programmes. The activities for immediate implementation include the strengthening of the epidemic control in Africa, for which a programme is being finalized, having particularly in mind the recent yellow fever and meningitis epidemics which threaten several countries. other activities include emergency preparedness in the Frontline States of southern Africa and programmes for displaced people linking the emergency and health development programmes. Some of the suggested approaches and actions preparedness, management and training are included in the annexes.

2. WORLD FOOD PROGRAMMES (WFP)

1. The World Food Programme provides food aid for development and for emergency relief. Its development work is intended to help improve the social and economic situation of the poorest sectors of the population in the developing countries and thus shield and strengthen them to over come the adverse effects of economic and natural disasters. It also helps prevent and/or mitigate the extent of natural disasters through a variety of development projects.

2. On the other hand, WFP's intervention in disaster relief represents direct assistance to save lives, prevent starvation and malnutrition. It needs to be understood that food aid is but one resource in WFP projects undertaken generally in partnership with the governments and other financial agents. Nonetheless, such projects are often initiated on the basis of food aid input and many would not be economically viable without food aid.

3. Their paper contains a summary of WFP's present activities in the field of disaster preparedness and prevention and an outline of a plan of action adopted by the Programme within the framework of its involvement in IDNDR.

I. DISASTER PREPAREDNESS

(a) Because of WFP's heavy involvement in disaster relief (830,000 tons of emergency food aid in 1988), the Programme is vitally interested in **promoting** the establishment of disaster preparedness structure and early **working** systems in all countries prone to recurrent natural disasters and droughts. This concerns particularly countries in Sub-Saharan Africa, where drought is the most damaging phenomenon, and in Asia where floods and typhoons are the major natural disasters to contend with.

WFP therefore supports, occasionally finances, and helps establish co-ordinating machinery in countries concerned dealing with:

- identification and early assessment of the nature and extent of calamities;
- co-ordination of information on the extent of nutritional deterioration of the affected population for the purpose of establishing its requirements in food;
- collection and dissemination on the extent of nutritional deterioration of the affected population for the purpose of establishing its requirements in food;
- mapping of areas of greatest risk, particularly in relation to vulnerability of particular population to nutritional disasters following crop failures associated with droughts, pest infestation or extensive floods.

(b) WFP designs food aid projects which can serve to reduce the immediate risk of malnutrition and/or starvation:

- by ensuring that there is an adequate reserve in normal development projects to allow for rapid intervention in case of emergency. A reserve component following quick action in the event of emergencies has been built into "multi-purpose" rural development projects presently supported by WFP, mostly in disaster-prone countries in West Africa. These multi-purpose

projects also contain a flexibility clause which permits quick action and changes in food distribution by the addition of new activities in substitution for others according to needs. WFP presently supports about twelve such multi-purpose projects.

-by designing and executing vulnerable feeding programmes which can absorb - when needed - large numbers of additional beneficiaries during emergencies, thus providing the essential nutritional support.

c) WFP further promotes the design of projects, consisting of infra-structural and rural work activities which can be put in motion when disaster strikes so as to help the population withstand the onset of the emergency.

II. DISASTER PREVENTION

By targeting its assistance on rural poor and promoting their welfare through a variety of development projects including human resources, infrastructure, land and dairy development, WFP builds up the capacity of the population prone to disasters to withstand the effects of the emergency situations when they arise. Furthermore, by improving land, it helps prevent and/or mitigate the extent of natural disasters. The main, specific fields of activity are:

- construction of dykes, drainage canals, protecting walls and dams to prevent floods, tidal waves and tsunamis;
- construction of terraces, planting of trees and grass on steep slopes to prevent landslides, soil erosion and land degradation;
- construction of irrigation and drainage canals to increase crop production so as to strengthen the capacity of the population to face up to food shortages;

- construction of storage facilities, road and rail infrastructure; port facilities and setting-up (occasionally managing) transport facilities (both shipping and trucking) to handle emergency relief work;
- building up of emergency food reserves and helping to manage them in anticipation of food shortage situations;
- promoting design and providing initial capital(in grain) for the setting up of village-based cereal reserves as a buffer against crop failures;
- assisting nomadic populations to rebuild their economies by providing food over a period of time, allowing them to rebuild their livestock holdings (e.g. after drought of 1983-85 in Africa) to be able to withstand future calamities.

The number of projects relating to disaster prevention/reduction as described above and which are currently operational in 105, represent a value of 1 billion 410 million dollars.

III. PLAN OF ACTION WITHIN THE FRAMEWORK OF WFP INVOLVEMENT IN IDNDR.

a) All WFP country offices are being requested to collaborate with national IDNDR committees, wherever they exist, and otherwise identify what action is being taken at the national level for involvement in the Decade. As far as possible, WFP would seek to be represented on the national IDNDR committee:

ii) with a view to strengthening WFP's commitments and assistance to disaster preparedness/prevention/reduction activities, the Terms of Reference for WFP appraisal missions and evaluation-cum-appraisal missions will include an item on identification of activities within the projects which have or can have direct bearing on disaster prevention or reduction. Due attention will be given by the missions to the possibilities of introducing new activities or enhancing existing activities for disaster reduction and prevention in the future

iii) Project summaries will, whenever this is possible, include reference to effects on environment and prevention measures to protect it.

iv) Built-in monitoring and evaluation for projects with a disaster reduction component will be so designed as to quantify, as much as possible, the benefits of disaster reduction measures. A similar attempt should be made in evaluation missions.

v) With regard to the future, ideas will be explored with country offices on identification of present WFP activities which could be defined as demonstrative of WFP involvement in IDNDR within the accepted WFP programme objectives.

vi) Food security projects which exist and ideas for food security will be reviewed on a case-by-case basis by the country staff and by the Bureaux to see how far they are affected (or could be made more effective) as an instrument for disaster prevention and effective intervention.

vii) On an experimental basis, risk mapping exercises which are presently being carried out will be continued and new ones undertaken.

3. World Meteorological Organization (WMO)

1. WMO assists its member countries in establishing early warning systems for providing timely and accurate forecasts, together with precise assessments of risks, for tropical cyclones, tornadoes, other severe storms and extreme weather events, floods, droughts, avalanches, landslides, and wind-driven storm surges. WMO works with other agencies in developing adequate preparedness systems and in the organization and execution of the essential disaster prevention measures.

WMO welcomes the designation of the 1990s as the IDNDR and plans to co-operate effectively in its implementation. As a contribution to its preparations for the IDNDR, WMO organized during November 1988 in the WMO Headquarters in Geneva an international technical conference in the hydrology of disasters.

3. WMO has also prepared a comprehensive and detailed action plan and the WMO role in the IDNDR. The WMO action plan includes three specific projects which WMO might undertake and which would contribute very substantially to the goals of the IDNDR. Given adequate extra-budgetary resources, WMO plans to implement these projects which are given below:

3.1 System for technology - exchange for natural disasters (STEND)

3.2. Tropical cyclone warning system for the South-West Indian Ocean Region.

3.3. Comprehensive Risk Assessment.

4. WMO is ready to co-operate with the OAU and the ECA and other agencies concerned with the implementation of a plan of action for disaster preparedness and response in Africa. For this purpose, and subject to the availability of extra-budgetary funds, WMO proposes to co-operate with the OAU and the ECA in the implementation of illustrative project 3.2. above which is briefly described below.

5. Project - Tropical Cyclone Warning System for the South-west Indian Ocean Region.

5.1 The objective of the project is to substantially upgrade the tropical cyclone warning system in the South-West Indian Ocean region through the application of meteorological satellite and micro-computer technology and transfer of scientific knowledge. This will be accomplished by strengthening the capabilities of the National Meteorological Services to meet their responsibilities for provision of tropical cyclone warning services for their respective countries.

5.2 The aim is to:

- i) enhance the meteorological observational network and communication system for international exchange of meteorological data and processed products by installing DCPs and DCS/DRS systems in the region (using the METEOSAT meteorological satellite);

- ii) improve the data handling, data processing and tropical cyclone monitoring and forecasting by installing micro-computer systems, including the appropriate application software which will be provided by the SHARE programme;
- iii) train meteorologists in the science of tropical meteorological and in tropical cyclone forecasting using the scientific knowledge and the facilities (including the micro-computers), products and data available.

5.3. The project is concerned with technology transfer and human resources development. It is based on the WMO's World Weather Watch Programme aimed at the provision to Member countries, meteorological data and products in support of their services to users in real-time operations. It forms part of the Regional Co-operation Programme of the RA I Tropical Cyclone Committee for the South-West Indian Ocean under which Members will carry out their national responsibilities for the provision of cyclone warning services in accordance with a regionally co-ordinated and co-operative plan which includes support by a regional Tropical Cyclone Advisory Centre in Reunion. The project is complementary to other technical co-operation activities such as the SHARE programme which provide transfer of meteorological application software. The planned duration of the project is 3 years and the expected starting date is 1990.

5.4. The project will provide consultancy and expert services on the detailed planning for, as well as the acquisition and installation of the hardware and software, and two training workshops. The estimated cost is SFR 600,000 in total.

(4) THE ECONOMIC COMMISSION FOR AFRICA (ECA)

1. In resolution 3345(XXIX) adopted in 1974, the United Nations, inter alia, called for more assistance to developing countries to deal with disasters particularly drought. In 1980, the United Nations General Assembly adopted resolution 35/36 which again reiterated on the same issues. In 1982, resolution 37/206 was adopted in favour of assistance to island developing countries.
2. In 1984, the ECA organized an expert group meeting on disaster prevention and preparedness in Africa. Resolution 620 (XXII) and 645 (XXIII) adopted by the African Council of Ministers, in 1987 and 1988 respectively, sought support for the countries of South-Western Indian Ocean affected by tropical cyclones. The latter requested the Executive Secretary to co-ordinate activities that other organizations were conducting in the sub-region in co-operation with the CAU and UNDRR.

3. Currently, the ECA provides advisory services in combating droughts and desertification. The ECA is also involved in promoting technical co-operation in pollution control, a new kind but increasingly important technological disaster.

4. The ECA-sponsored institutions namely the African regional Centre for Services in Surveying, Mapping and Remote Sensing, in Nairobi, the Regional Centre for Training in Aero-Spatial Sciences (RECTAS) in Ile-Ife, the Regional Remote Sensing Centre in Ouagadougou are involved in monitoring and forecasting disasters. Presently, ECA together with The World Meteorological Organization (WMO) and other UN and donor agencies are promoting the establishment of the African Centre of Meteorological Applications for Development (ACMAD) in Niamey. Part of its activities will be to monitor weather and climatic factors and to provide early warning for drought, cyclones, floods and other disasters. It will also be used for monitoring global climatic change due to warming of the atmosphere caused by the accumulation of carbon dioxide (CO_2) through the 'greenhouse effect'.

5. It is predicted that global warming will increase the frequency of disasters such as floods, cyclones and droughts in Africa. Another effect will be a rise in sea levels causing inundation of land. The ECA will play an increasingly important role due to the global nature of the greenhouse effect, and the necessity for regional cooperation in dealing with these effects.

5. INTER-GOVERNMENTAL AUTHORITY ON DROUGHT AND DEVELOPMENT (IGADD)

1. From 1974 to 1984 Djibouti, Ethiopia, Kenya, Somali, Sudan and Uganda have experienced a successive severe drought episodes of varying duration. Due to extent of these drought and desertification beyond their national boundaries it became necessary to adopt concerted measures to combat this common scourge.

2. Pursuing a series of General Assembly of resolutions, the Ministers of member States reconfirmed their commitment to combat drought and other calamities. This culminated in the Heads of State meeting of January, 1986 signing the agreement establishing IGADD in Djibouti.

3. This organization was created with the following objectives:

- co-ordinate and supplement the efforts of member States to combat the effect of drought and other hazards and assist them in their efforts on medium and long term recovery and rehabilitation;
- assist member States to procure technical assistance in the project documents for rehabilitation stricken areas;
- to assist member States on the assessment of emergency needs, and to appeal and mobilize all resource necessary to implement short, medium and long term programmes;
- assist member States in setting guidelines and action programmes and their follow-up.

4. To take action on these objectives the Secretariat with the consent of Ministers of Member States concentrated on 6 priority areas namely - Food Security, Desertification, Water Resource, Communication, Research and Training. In preparing projects on these sectors two basic policies were followed: (a) use of national experts in the preparation of all project studies following precise T.O.R. and format of the International Consultant preparing the study; (b) workshop to be held after final draft report participated by experts of the Member States to have the endorsement of Member States.

5. Disaster preparedness although it ranks high in the mandate of IGADD, was lagging behind the other development sectors, however, the Secretariat is on the verge of taking action; starting recruitment of a consultant and workshop to assist the Secretariat in the way and means of handling this sector without duplicating what others are already doing. It is on these that IGADD needs major assistance at present.

(6) INTERNATIONAL RED LOCUST CONTROL ORGANIZATION FOR
CENTRAL AND SOUTHERN AFRICA (IRLCO-CSA)

Composed of the States of Botswana, Kenya, Malawi, Mozambique, Swaziland, Tanzania, Uganda, Zambia and Zimbabwe.

Current activities include:

1. Surveillance and control of locusts, other migrant pests and tse-tse fly in all Member States;
2. Development of an armyworm forecasting and early warning system for Central and Southern Africa;
3. Ecological studies of the red locust outbreak areas in relation to population development and distribution in different grass communities;
4. Insecticide screening with a view to selecting effective and cheap pesticides for migrant pest control;
5. Environment contamination monitoring in the red locust out-break areas;
6. Training nationals of Member States in the identification surveillance and management of migrant pests in the IRLCO-CSA region.

(7) DESERT LOCUST CONTROL
ORGANIZATION FOR EASTERN AFRICA
(DLCO-EA)

1. INTRODUCTION

The DLCO-EA was established as a successor to and inheritor of the former DLS (Desert Locust Survey) which originally started in 1949 under the British High Commission. It reverted to the independent Eastern Africa States in 1962 as a Desert Locust Control Organization for Eastern Africa (DLCO-EA) which was established by an international convention signed in Addis Ababa on 22nd August, 1962.

- 1.1 Member States: are Djibouti, Ethiopia, Kenya, Somalia, Sudan, Tanzania and Uganda.
- 1.2 The Objectives: according to the Convention are as follows:
- 1.2.1 to promote the most effective control of the Desert Locust in the Region of Eastern Africa;
- 1.2.2 to offer its services in the co-ordination and reinforcement of national action against the Desert Locust in the Region;
- 1.2.3 to assist member governments in the control of other migratory pests provided that the locust situation so permits and that the member government requiring such services provide chemicals and ground support facilities for such operations in so far as it concerns the control of Queda, Armyworm (*Spodoptera exempta*) and fly.
- 1.2.4 to maintain at strategic localities reserves of anti-locust equipment and supplies such as transport and insecticides, and to direct use of these strategic reserves to supplement the national resources of the contracting governments when they are faced with locust populations beyond the capacity of the national services to control or survey.
- 1.2.5 to maintain at least one Air Unit and direct its operations and provide it with equipment supplies, including insecticides adequate for the execution of operations in areas where it is considered control will be of the greatest benefits to the Region as a whole.
- 1.2.6 to maintain a field research station or stations with appropriate laboratory facilities to conduct operational research beyond the capacity of available national research facilities necessary to raise the efficiency of the Desert Locust Control and Survey.

1.2.7 to initiate and conduct training programme to fit personnel from the Region for service with or promotion within the Organization.

1.3 The Headquarters of DLCC-EA is situated in Addis Ababa, Ethiopia. Guidelines and directives are given from the Headquarters. The Headquarters linked to other bases by radio network, daily reports from the out-stations particularly those located within the "Front Line States of Ethiopia, Somalia, Djibouti and Sudan are sent to the central monitoring system of the Headquarters. Furthermore field survey and control teams are similarly linked through the mobile radio systems while all the aircraft are equipped for ground to air communication.

1.4 Regional Operational Bases

There are nine control reserve bases in the Region i.e. Djibouti (Djibouti), Asmara and Dire Dawa (Ethiopia), Nairobi (Kenya), Hargeisa and Mogadiscio (Somalia), Khartoum (Sudan) Arusha (Tanzania) and Kampala (Uganda). Out of the 10 stations the Nairobi Base houses the Air Unit with 10 aircraft for the survey and control of the Desert Locust as well as maintenance facilities. All the crew are stationed there and deployment of aircraft starts and finishes there.

(C) OAU GENERAL SECRETARIAT

1. The development of the whole of the Fouta Djallon Highlands was started with the assistance of UNDP and in line with the OAU Resolution CM/Res.756(XXXIII). Six countries are involved in the project which aims at the development of natural and human resources of the Fouta Djallon and the conservation of this area which includes the upper catchment of the main rivers of West Africa.

2. In addition, the OAU General Secretariat has been active in:

- (a) Drawing of the hydrogeological map of Africa. It is undertaken in collaboration with the Organization for Cartography and Remote Sensing. The Final report on the project will be ready by end 1990;
- (b) Revising the African Convention on the Conservation of Nature Natural Resources;
- (c) Establishing the OAU Special Emergency Assistance Fund for Drought and Famine in Africa. It is composed of 12 countries currently under the Chairmanship of Guinea;

- (d) Establishing the Semi-Arid Food Grain Research and Development Project in Burkina Faso. It is composed of 25 countries. Among other things, it aims at developing drought resistant food grains;
- (e) Rinderpest, better known as cattle plague, is most commonly observed in cattle and buffaloes. It causes a mortality (death rate) which could be as high as 90 per cent. Hence it is indeed a serious disease.

The first internationally Co-ordinated Control Programme and subsequent eradication attempt of rinderpest was launched in 1962 under the Joint Project 15 (JP15) and lasted up to 1976. It was carried out in 22 African countries.

JP15 was in many ways successful in that the disease was eliminated in some countries for a number of years while in others there was a dramatic decrease in the number of outbreaks from hundreds of thousands to just a few cases per year.

Unfortunately, because of a variety of reasons, namely, wars, civil disturbances and natural calamities, there was a resurgence of the disease around 1979. The disease began to spread again in some of the West African Countries.

This new threat prompted the OAU Summit meeting of Heads of State and Government that was held in Nairobi in July 1981 to instruct the OAU/IBAR to launch a continent-wide campaign against rinderpest. Hence the Pan-African Rinderpest Campaign (PARC) was initiated. This campaign is being carried out in 34 African countries which are affected and threatened with rinderpest.

The ultimate objective of this Campaign remains the same as that of JP15, that is, eradication of rinderpest but the strategy differs. Besides aiming at eradicating the disease, this campaign also aims at increasing livestock production by strengthening the veterinary infrastructure, improving the veterinary services in the participating countries and addressing the issue of desertification.

The campaign is being funded mainly by the European Economic Commission (EEC). Other donors that have contributed to PARC include: Food and Agriculture Organization of the United Nations (FAO), the governments of the Republic of Germany, France, Italy, Japan, Nigeria and the United Kingdom. The World Bank is supporting many countries by financing PARC along side other projects.

9. THE INTERNATIONAL CENTRE OF INSECT PHYSIOLOGY AND ECOLOGY (ICIPE)

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S U N H A P Y

It was some eight or nine thousand years ago that man first undertook the cultivation of crops for food and fibre. The wake of this achievement has been marred ever since by plague of locusts. The earliest available records of these insects as pests are carvings on tombs dating from the Sixth Dynasty (2420 - 2270 B.C.) at Saggara, and the account of the 'eighth Plague' (about 1300 B.C.) is recorded in the Book of Exodus.

Even today, Africa (and the adjoining regions in the Middle East), except the Antarctica, are liable to widespread and prolonged infestation by swarms of at least three major species of locusts; Schistocerca gregaria (Forsk.) - the Desert Locust; Locusts migratoria migratorioides (L. et F.) - the African Migratory Locust and Nomadacris septemfasciata (Serv.) - the Red Locust.

The Food and Agriculture Organization of the United Nations (FAO) has estimated that the locust swarms which invaded Southern Morocco for a six-week period during the 1954/55 citrus season, caused damage estimated at over U.S.\$14 million. These figures provide an indication as to the magnitude of the problem, but a consideration of the size, numbers and food requirements of a large swarm will serve to clarify the position further. In 1958, using aircraft, the size of a single swarm moving at a rate of 50 to 100 km per day through the Somali Republic was measured as covering 400 square miles - an area equivalent to 0.25 million acres. Such a swarm exhibits a population density of 100 to 200 million individuals per square mile; therefore at a conservative estimate, such an infestation comprises over 40,000 million locusts in total. Considering then, that each locust eats its weight (about 2 to 3 grams) of food daily, such a swarm would require more than 80 tons of food per day, i.e. sufficient grain to feed 400,000 people for one year.

Locusts and migratory grasshoppers have periodically devastated millions of acres of Africa, since biblical times. The locusts, billions in a flight, devour most of the vegetation, including trees, in the areas they swarm over.

Locust control, however, is costly, time-consuming and, obviously by its present reliance on chemical insecticide application, a threat to the environment. By tackling the very root of the problem, through investment in a long-term Research and Development (R&D) strategy for sustainable integrated locust management, it is envisaged that a range of solutions will emerge which will not only contain the locust plague but will abolish the constant threat that it imposes on the livelihood and economy of the perennially affected tropical and sub-tropical regions.

Such an objective meshes well with the philosophy of the International Centre of Insect Physiology and Ecology (ICIPE), which was established in April 1970. The mandate of the ICIPE covers research on integrated control methodologies for crop and livestock insect pests and other related arthropods, as well as insect vectors of tropical diseases crucial to rural health in the tropics; and the strengthening of scientific and technological capacities of developing countries in insect science and its application through training and collaborative work.

In fulfilling this mandate, the ICIPE is playing a vital role in the global strategy to increase food production and improving human health in the tropics, especially Africa. The present locust infestation in Africa, and its cyclical nature which often results into food deficiency is a matter of considerable concern.

To achieve sustainability in locust management the ICIPE is firmly convinced of the need for a long-term locust R&D strategy with an initial phase (Phase I) covering a period of at least ten (10) years. Experience from the Onchocerciasis Control Project (OCP), jointly sponsored by the World Bank, the United Nations Development Programme (UNDP), and the World Health Organization (WHO) through drugs and vector management of the black fly in West Africa, demonstrates clearly the logic and pay off of long-term investment in R&D. The OCP provides an excellent and successful model for resolving similar devastating pests such as the locust. It is visualised that a global and integrated locust R&D programme of action would incorporate various options (control elements) necessary for designing sustainable locust management strategy.

The ICIPE holds considerable comparative advantage in several R&D options, but the range of options and the crucial role of regional and national locust control organizations, calls for close institutional collaborative and cooperative working arrangements between the ICIPE and other locust R&D Institutions. Some of the areas where the ICIPE strength lies include, internationally recruited multi-disciplinary teams of scientific and technical staff; modern research facilities, including newly completed laboratories and field stations in contrasting ecological areas; an established Ph.D. training programme, the African Postgraduate Programme in Insect Science (APPIIS) in collaboration with fourteen African Universities; PESTNET (African Regional Pest Management R&D Network) a mechanism of collaboration between the ICIPE and several National Programmes in Africa within the area of pest management; and established quality control of internal and external review of research which was installed since the inception of ICIPE in April 1970.

Above all, the ICIPE is conscious of the role of regional locust control organizations with whom the experimental technologies would be tested in the field for their efficacy so as to assure long-term success of the field application. The role of FAO in providing the training of the field staff, and of backstopping field operations, is fully recognized in designing the R&D programme.

The success of this global and integrated programme to eliminate the natural disaster in the African continent will depend on funding at a level which can support these critical activities and over a long enough period to yield goal-oriented results from the R&D efforts as summarized in the below:

- (a) **Population Dynamics and Simulation Modelling:**
Development of models of multiplication and migration of recession populations in relation to weather and natural enemies so that potentially dangerous populations can be detected and managed.
- (b) **Pheromones and kairomones in locust control:**
Understanding the role of pheromonal, and kairomonal, responses in locust biology in relation to the potential to disrupt or modify normal development and behaviour.

- (c) **Endocrinology of Locust Phase Change and Gregarious behaviour:** Understanding the role of endocrine factors that **regular** phase polymorphism and changes from solitary to gregarious phase to pinpoint potential targets for insect growth regulators (IGR), such as hormone analogues and anti-hormonal agents etc. which may interfere with gregarisation and swarming and may also serve to control recession populations.
- (d) **Biological Control of Locusts and Grasshoppers:** Augmentation of the role of pathogens and parasites to reduce viability and multiplication of recession populations. Enhancement of the virulence of pathogens by genetic manipulation.
- (e) **New Approaches to the Use of Baits:** Evaluation of alternative products for baiting, chemical attractants in formulations and start encapsulation pathogenic material.
- (f) **Application of Research Discoveries:** Locust survey and control is undertaken by a number of national and international bodies in Africa. An active collaborative programme will be instigated to facilitate the interactive development and testing of the new technologies developed under this project in close cooperation with these organizations.
- (g) **Human Resource Capacity Development:** An active high-level training programme (Ph. D. level) is proposed as a mechanism to assure long-term sustainability in the management of locust and grasshoppers in Africa.