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African Compendium of Environment Statistics



Recueil des
statistiques africaines
de l'environnement

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Statistics Division
Division de la statistique

African Compendium of Environment Statistics

1993

Recueil des
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de l'environnement

E/ECA/STAT/ACE/93

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Introduction

This second issue of the biennial series of the African Compendium of Environment Statistics, presents environmental and environment-related data for the African region. Like the first issue, it is also in many ways experimental but covers wider topics. A special feature of this issue is greenhouse gas emissions and mineral production in Africa.

A short enquiry was conducted about the first issue of the Compendium, particularly as regards its usefulness and shortcomings, suggestions for improvement and subject areas to be incorporated in future publications. Several constructive comments and suggestions were received and were considered in the preparation of the present issue. The Statistics Division of ECA wishes to thank all those who took their time to fill-in the short enquiry on the first issue of the Compendium and would welcome any corrections, suggestions, or comments on this edition to enable us to further improve and expand future publications.

Although this compendium is the 1993 issue, the data presented are upto 1992. It, therefore, has no data on Eritrea, a new member State which became independent on 24 May 1993. Data for Eritrea will be incorporated in future editions.

The sources of data for each table and figure are given in the technical notes and at the bottom of the table and figures. Because of the complexity of the data, Table 16, on natural disaster in Africa, is in English only, but a glossary and lists of abbreviations in both French and English are given at the beginning of the Table. Efforts will be made to provide with French and English versions of this Table in future editions.

Agroclimatological data are not included in this issue, awaiting for an updated version of FAO's *Agroclimatological Data for Africa, Volumes 1 and 2, 1984*. Users who are interested in these data should refer to the African Compendium of Environment Statistics, 1991. The present issue, otherwise, updates and supersedes all estimates and projections of the 1991 issue.

Environment statistics is a relatively new branch of statistics and few African countries have yet started systematic data collection or have any statisticians trained in this branch. Many data sets are therefore incomplete but this is a situation which should show considerable improvement in the coming years as the relevance of environmental issues is recognised, particularly following the 1992 United Nations Conference on Environment and Development and in light of Agenda 21 and the Addis Ababa Plan of Action for Statistical Development in Africa in the 1990s.

Introduction

Cette seconde édition de la série biennale du Recueil des statistiques africaines de l'environnement, présente des données sur l'environnement et des données connexes pour la région africaine. Comme la première édition, celle-ci est aussi expérimentale en plusieurs aspects mais avec une couverture plus large de sujets. Une caractéristique spéciale de cette édition concerne les données sur les dégagements de gaz de serres et sur la production minière en Afrique.

Une petite enquête a été menée au sujet de la première édition du Recueil, en particulier en ce qui concerne son utilité et ses imperfections, les suggestions pour son amélioration et les domaines à inclure dans les éditions futures. De nombreux commentaires et suggestions constructifs ont été reçus, et ont été pris en compte au moment de la préparation de la présente édition. La Division de la statistique de la CEA remercie tous ceux qui ont consacré une partie de leur temps pour remplir le petit questionnaire relatif à la première édition du Recueil, et souhaite recevoir des corrections, suggestions ou commentaires sur la présente édition, afin de nous aider à améliorer et développer davantage les éditions futures.

Bien que ce Recueil soit l'édition de 1993, les données présentées vont jusqu'à 1992. Il ne comporte pas, en conséquence, de données sur l'Eritrée, un nouveau pays membre devenu indépendant le 24 mai 1993. Des données sur ce pays figureront dans les éditions futures.

Les sources des données de chaque tableau et graphique figurent dans les notes techniques et en bas de ces tableaux et graphiques. En raison de la complexité de sa présentation, le tableau 16 sur les calamités naturelles en Afrique est présenté uniquement en anglais, mais un glossaire et des listes d'abréviations en anglais et en français figurent au début du tableau. On s'efforcera dans les éditions futures, à présenter ce tableau en français et en anglais.

Les données agroclimatologiques ne figurent pas dans cette édition. Nous attendons une version mise à jour des Volumes 1 et 2 des *Données agroclimatologiques pour l'Afrique de la FAO, 1984*. Les utilisateurs intéressés par ces données peuvent se référer au Recueil des statistiques africaines de l'environnement de 1991. Autrement, l'édition actuelle met à jour et remplace toutes les estimations et projections de l'édition 1991.

Les statistiques de l'environnement constituent une branche relativement nouvelle de la statistique, et peu de pays africains ont commencé la collecte systématique des données dans ce domaine, ou ont des statisticiens formés dans ce secteur. Plusieurs séries de données sont par conséquent incomplètes, mais il s'agit d'une situation qui devrait connaître des améliorations considérables dans les années à venir, avec la prise de conscience de l'importance des questions relatives à l'environnement, en particulier à la suite de la Conférence des Nations Unies de 1992 sur l'Environnement et le développement, et à la lumière de l'Agenda 21 et du Plan d'Action d'Addis-Abeba pour le développement de la statistique en Afrique dans les années 90.

TECHNICAL NOTES

Tables 1 to 4 and Figures 1 and 2 are derived from the FAO AGROSTAT/PC database and Production Yearbooks 1991 and 1992, with the exception of the population figures which are from *World Population Prospects 1992*, United Nations, New York, 1993 and data on percentage of population with access to safe drinking water are from *World Resources 1992-93*, the World Resources Institute in collaboration with the United Nations Environment Programme and the United Nations Development Programme, New York, 1992.

Table 1. TOTAL SURFACE AREA, TOTAL POPULATION, POPULATION DENSITY.

Land area is the total area of a country excluding the area under inland water bodies (major rivers and lakes).

Area under inland water bodies is the difference of total area and land area.

Population density is calculated as persons per hectare of land area.

Table 2. SELECTED INDICATORS ON LAND USE

These indicators are derived from Table 3. Total agricultural land comprises arable land, land under permanent crops and permanent meadows and pastures.

Table 3. LAND USE

Definitions used by reporting countries vary considerably and items classified under the same category often relate to greatly differing kinds of land.

1. *Arable land* refers to land under temporary crops (double-cropped areas are counted only once), temporary meadows for mowing or pasture, land under market and kitchen gardens (including cultivation under glass), and land temporarily fallow (less than five years). The abandoned land resulting from shifting cultivation is not included in this category.

2. *Land under permanent crops* refers to land cultivated with crops that occupy the land for long periods and need not be replanted after each harvest, such

as cocoa, coffee and rubber; it includes land under shrubs, fruit trees, nut trees and vines, but excludes land under trees grown for wood or timber.

3. *Permanent meadows and pastures* refers to land used permanently (five years or more) for herbaceous forage crops, either cultivated or growing wild (wild prairie or grazing land). The dividing line between this category and the category "Forests and woodland" is rather indefinite, especially in the case of shrubs, savannah, etc., which may have been reported either under one or the other of these two categories.

4. *Forests and woodland* refers to land under natural or planted stands of trees, whether productive or not, and includes land from which forests have been cleared but that will be reforested in the foreseeable future. The question of shrub land, savannah, etc., raises the same problem as that in the category "Permanent meadows and pastures".

5. *Other land* refers to any other land not specifically listed under items 1 through 4. It includes built-on areas, roads, barren land, etc. In Egypt only, rough grazing land is included under other land.

Table 4. AREA IRRIGATED.

This refers to areas purposely provided with water, including land flooded by river water for crop production or pasture improvement, whether this area is irrigated several times or only once during the year stated.

Table 5. PRODUCTION OF ROUNDWOOD.

Figures are given in solid volume of roundwood (or roundwood equivalent) without bark:

Fuelwood + charcoal: The commodities included are fuelwood, coniferous and non-coniferous, and the roundwood equivalent of charcoal, using a factor of 6.0 to convert from weight (t) to solid volume units (m³).

Fuelwood : Wood in the rough (from trunks, and branches of trees) to be used as fuel for purposes such as cooking, heating or power production. Wood for charcoal, pit kilns and portable ovens is included.

Industrial roundwood: The commodities included are sawlogs and veneer logs, pulpwood and other industrial roundwood.

Figures 3 and 4 and Tables 6 to 8 are derived from the *World Resources 1992-93*, New York, 1992.

Table 6. CLIMATIC CLASSES AND SOIL CONSTRAINTS

Pertinent basic information on climatic classes and soil constraints is given in Table 6.

Tables 7 and 8. GREENHOUSE GAS EMISSIONS

Data on carbon dioxide, methane and chlorofluorocarbons emissions with the technical notes is given in Table 7 and on greenhouse index ranking in Table 8.

Tables 9 to 12. URBANIZATION IN AFRICA.

These tables are derived from *World Urbanization Prospects - the 1992 Revision*, United Nations, New York, 1993. Annual rates of growth or change refer to annual exponential rates. More detailed data by country, extending back to 1950, and details of sources of data, are given in this publication.

Africa in these tables refers to all countries of Africa, including South Africa.

Urban is defined differently from country to country and the national definitions incorporated in the latest available censuses are used. When necessary and possible the data from earlier censuses and surveys were adjusted to be consistent with those of the latest census. Examples of the range of definitions used are: Nigeria: Towns with 20,000 or more inhabitants whose occupations are not mainly agrarian; Kenya: Towns with 2,000 or more inhabitants; Malawi: All townships, town planning areas and district centres; Uganda: Population of all settlements as small as trading centres with as few as 100 inhabitants; Zimbabwe: 19 main towns.

Urban agglomeration refers to the population contained within the contours of a contiguous territory inhabited at urban levels without regard to administrative boundaries. It incorporates population in a city or town plus suburban fringe lying outside of, but adjacent to, the city boundaries.

Urbanization rate is defined as the average annual exponential rate of change of the percent urban. The rate of urbanization equals the difference between the growth rate of the urban population and the growth rate of the total population. Rounding may cause differences of 0.1% in some cases.

Tables 13 and 14. MINERALS PRODUCTION

Mineral production refers to physical quantities of minerals and non-ferrous metals. Table 13 gives a summary of minerals production in developing Africa. Map 2 depicts the minerals production by each country for 1991 and Table 14 gives details by country for the period 1985 to 1991.

Tables 15 and 16. DISASTERS IN AFRICA

The WHO definition of a disaster is: "Any occurrence which causes damage, ecological disruption, loss of human lives, deterioration of health and health services on a scale sufficient to warrant an extra-ordinary response from outside the affected community".

The main sources of information are the data base on African Disasters 1980-89 from the Panafrican Centre for Emergency Preparedness and Response, the Environmental Data Reports of UNEP (1989/90 and 1991/92), and the World Food Programme Food Aid Review 1990, 1991 and 1992. These and additional sources are acknowledged at the end of each country.

Information given in these tables is not complete, particularly for Congo, Libyan Arab Jamahiriya and Namibia. Clearly, some other countries are also under-reporting disasters, possibly because they have no official centre for data collection and dissemination. Estimates of numbers of deaths, injuries and people affected are often revised considerably after the event when figures from different sources have been gathered and analyzed.

Accidents are only reported when they are caused by environmental factors or when they have an environmental impact.

Epidemics are included because they are almost always affected by environmental factors such as polluted water supplies, overcrowded housing etc.

Many of the categories are interlinked. For example, poor distribution of rainfall may result in crop failure even though total rainfall may be above average. Infestations or destruction of crops by fire or flood, as well as drought or crop failure, may result in food shortages. Where inter-relationships are known, they are given in the tables.

Table 15 gives a summary of disasters for each country over the time period 1980 to 1992. Maps 3 and 4 illustrate the disasters experienced by each country during the whole time period.

Table 16 gives details of each disaster. Values of aid received and damage are usually given in US dollars. Values of appeals are given in the currency used in the appeal (usually US dollars, Swiss Francs or CFA francs). Where alternative estimates of numbers dead, injured or affected are known, these are given in the notes column.

NOTES TECHNIQUES

Les tableaux 1 à 4 sont dérivés de la banque de données AGROSTAT/PC et des Annuaires sur la production de 1991 et 1992 de la FAO, à l'exception des données sur la population, qui proviennent de *World Population Prospects 1992*, Nations Unies, New York, 1993, et des données sur le pourcentage de la population ayant accès à l'eau potable de *World Resources de 1992-1993*, de l'Institut de "World Resources", en collaboration avec le Programme des Nations Unies sur l'environnement, et du Programme des Nations Unies pour le développement, New York, 1992.

Tableau 1. SUPERFICIE TOTALE, POPULATION TOTALE, DENSITE DE LA POPULATION.

Superficie des terres: il s'agit de la superficie totale d'un pays moins la superficie des eaux intérieures (principaux cours d'eau et lacs).

Superficie des eaux intérieures: c'est la différence entre la superficie totale et la superficie des terres.

Densité de la population: c'est le nombre de personnes par hectare de superficie.

Tableau 2. INDICATEURS SELECTIONNES RELATIFS A L'UTILISATION DES TERRES

Ces indicateurs sont issus du tableau 3. Le total des terres agricoles comprend les terres arables, les terres à culture permanente, ainsi que les prairies et pâturages permanents.

Tableau 3. UTILISATION DES TERRES.

Les définitions dont se servent les pays varient beaucoup, et, selon les pays, une même rubrique englobe des catégories de terres très différentes.

1. *Terres arables:* ce sont les terres affectées aux cultures temporaires (les superficies récoltées deux fois n'étant comptées qu'une fois), les prairies temporaires

à faucher ou à pâturer, les jardins maraîchers ou potagers (y compris les cultures sous verre) et les terres en jachère temporaire (moins de cinq ans). Les terres abandonnées à la suite de cultures itinérantes ne sont pas prises en compte dans cette catégorie.

2. *Terres à cultures permanentes*: il s'agit des terres consacrées à des cultures qui occupent le terrain pendant de longues périodes et ne doivent pas être replantées après chaque récolte, comme le cacao, le café et le caoutchouc. Cette rubrique comprend les superficies couvertes d'arbustes, d'arbres fruitiers et de vignes, mais non les terres plantées en arbres destinés à la production de bois ou de grumes.

3. *Prairies et pâturages permanents*: ce sont des terres consacrées de façon permanente (cinq ans au minimum) aux herbacées fourragères, cultivées ou sauvages (prairies sauvages ou pâturages). La limite entre cette catégorie et la catégorie "Forêts et terrains boisés" n'est pas très nette, en particulier pour les zones arbustives, la savane, etc., qui peuvent avoir été prises en compte dans l'une ou l'autre de ces deux catégories.

4. *Forêts et terrains boisés*: ce sont des terres comportant des arbres naturels ou plantés, qu'ils soient productifs ou non. Cette rubrique comprend les terres déboisées, mais dont le reboisement est envisagé dans un proche avenir. La question des terres arbustives, de la savane, etc., pose le même problème que pour la catégorie "Prairies et pâturages permanents".

5. *Autres terres*: toutes autres terres non expressément mentionnées dans les catégories 1 à 4, notamment terrains construits, routes, terres incultes, etc. En Egypte les pâturages sauvages sont inclus dans "Autres terres".

Tableau 4. SUPERFICIES IRRIGUÉES.

Celles-ci concernent les superficies irriguées volontairement - y compris les terres inondées par l'eau de la rivière - à des fins de culture ou pour améliorer les pâturages, qu'elles aient été irriguées plusieurs fois ou une seule fois dans l'année.

Tableau 5. PRODUCTION DE BOIS ROND.

Les chiffres se réfèrent au volume solide de bois brut (ou équivalent en bois rond) sans écorce.

Bois de chauffage + charbon de bois: Les produits compris sous cette rubrique sont le bois de chauffage, de conifères et de non-conifères; on a également

inclus l'équivalent en bois rond du charbon de bois en utilisant un coefficient de 6,0 pour convertir les unités de poids (t) en unités de volume solide (m³).

Bois de chauffage: C'est le bois brut (provenant du tronc et des branches des arbres) destiné à servir de combustible pour la cuisine, le chauffage, la production d'énergie, etc. Cette rubrique comprend le bois de carbonisation, le bois carbonisé en meules et les fours mobiles.

Bois rond industriel: Sont compris sous cette rubrique les grumes de sciage et de placage, les bois de trituration, et les autres bois ronds d'oeuvre et d'industrie.

Graphiques 3 et 4 et tableau 6 sont issus du *World Resources 1992-93*, New York, 1992.

Tableau 6. GROUPES CLIMATIQUES ET CONTRAINTES DU SOL

Des informations pertinentes de base relatives aux groupes climatiques et aux contraintes du sol figurent dans le tableau 6.

Tableaux 7 et 8. DEGAGEMENTS DE GAZ DE SERRE

Les données sur les dégagements de dioxyde de carbone, de méthane et de chlorofluorocarbène, ainsi que les notes techniques, figurent dans le tableau 7; le classement de l'indice de serre se trouve dans le tableau 8.

Tableaux 9 à 12: URBANISATION EN AFRIQUE

Ces tableaux sont dérivés de: *World Urbanisation Prospects, Revision de 1992*, Nations Unies, New York 1993. Les taux annuels de croissance ou de changement se rapportent aux taux annuels exponentiels. Des données plus détaillées par pays remontant jusqu'en 1950 et des détails sur leurs sources sont fournis dans la publication.

Afrique dans ces tableaux se rapporte à tous les pays d'Afrique, y compris l'Afrique du Sud.

La définition de la *Zone Urbaine* varie d'un pays à l'autre et la définition retenue est celle utilisée par les pays lors des derniers recensements disponibles. On a chaque fois, en cas de besoin et dans la mesure du possible, corrigé les insuffisances ou les contradictions des données de recensements et enquêtes

précédents par rapport à celles des plus récents recensements. Des exemples de l'ordre de variation des définitions utilisées sont: Nigéria: villes de 20.000 habitants ou plus, dont l'occupation n'est pas essentiellement agricole; Kenya: villes de 2000 habitants ou plus; Malawi: toutes les communes, zones loties et districts; Ouganda: population de tous les établissements de la taille des centres commerciaux avec un effectif de l'ordre de 100 habitants; Zimbabwe: 19 villes principales.

Agglomération urbaine se rapporte à la population à l'intérieur du pourtour d'un territoire inhabité contigu au milieu urbain, sans considération des frontières administratives. Elle inclut la population des villes et la frange suburbaine qui s'étend au-delà des frontières de la ville, mais adjacente à celles-ci.

Le taux d'urbanisation est défini comme le taux annuel exponentiel moyen de changement de pourcentage urbain. Le taux d'urbanisation est égal à la différence entre le taux de croissance de la population urbaine et le taux de croissance de la population totale. L'arrondi peut, dans certains cas, causer des différences de 0,1 %.

Tableaux 13 et 14: PRODUCTION MINIERE

La production minière se rapporte aux quantités physiques de minéraux et métaux non ferreux. Le tableau 13 donne un sommaire de la production minière de l'Afrique en développement. La carte No.2 présente la production minière de chaque pays pour 1991; et le tableau 14 en donne les détails par pays pour la période 1985-1991.

Tableaux 15 et 16: CALAMITES EN AFRIQUE.

La définition de l'OMS du mot désastre est la suivante: tout événement qui cause des dommages, des dislocations écologiques, des pertes de vies humaines, la détérioration de la santé et des services de santé à un degré suffisant pour provoquer une réponse extraordinaire de l'extérieur de la communauté affectée.

Les principales sources d'information sont les bases de données des désastres africains 1980-89 produites par le Centre panafricain pour la préparation et l'intervention rapide, les rapports de données sur l'environnement du PNUE (1989/90 et 1991/92) ainsi que la revue sur l'aide du PAM 1990, 1991 et 1992. Ces sources ainsi que d'autres sont indiquées à la fin de chaque pays.

Les informations contenues dans ces tableaux sont incomplètes, plus particulièrement dans le cas du Congo, de la Jamahiriya Arabe Libyenne et de la Namibie. Evidemment, d'autres pays ne rapportent pas aussi suffisamment leurs désastres: ceci est probablement dû au fait qu'il n'existe pas de centre efficace de

collecte et de diffusion de données. Les estimations des nombres de morts, de blessés et de personnes affectées sont fréquemment révisées après l'événement, lorsque les données de différentes origines ont été assemblées et analysées.

Les accidents ne sont rapportés que lorsqu'ils sont causés par des facteurs environnementaux, ou ont un impact sur l'environnement.

Les épidémies sont incluses parce qu'elles sont presque toujours causées par des facteurs environnementaux tels que l'eau polluée, le surpeuplement des habitations, etc...

Plusieurs catégories sont liées entre elles. Par exemple, une mauvaise distribution des précipitations peut avoir comme effet une mauvaise récolte, même quand le total annuel des précipitations est supérieur à la moyenne. Les invasions ou la destruction des cultures par les incendies ou l'inondation, et aussi la sécheresse ou la mauvaise récolte, peuvent avoir pour effet des disettes. Là où les corrélations sont connues, elles sont décrites dans les tableaux.

Le tableau 15 donne un résumé des désastres par pays pour la période 1980 à 1992. Les cartes 3 et 4 illustrent les désastres que les pays ont endurés pendant toute la période.

Le tableau 16 fournit les détails de chaque désastre. Le montant de l'aide reçue et les dommages sont habituellement exprimés en dollars des EU. La valeur des appels est exprimée en monnaie utilisée dans l'appel (habituellement dollars des EU, francs suisses ou CFA). Chaque fois que d'autres estimations du nombre de morts, de personnes blessées ou affectées sont disponibles, elles sont données dans la colonne des notes.

ABBREVIATIONS AND SYMBOLS

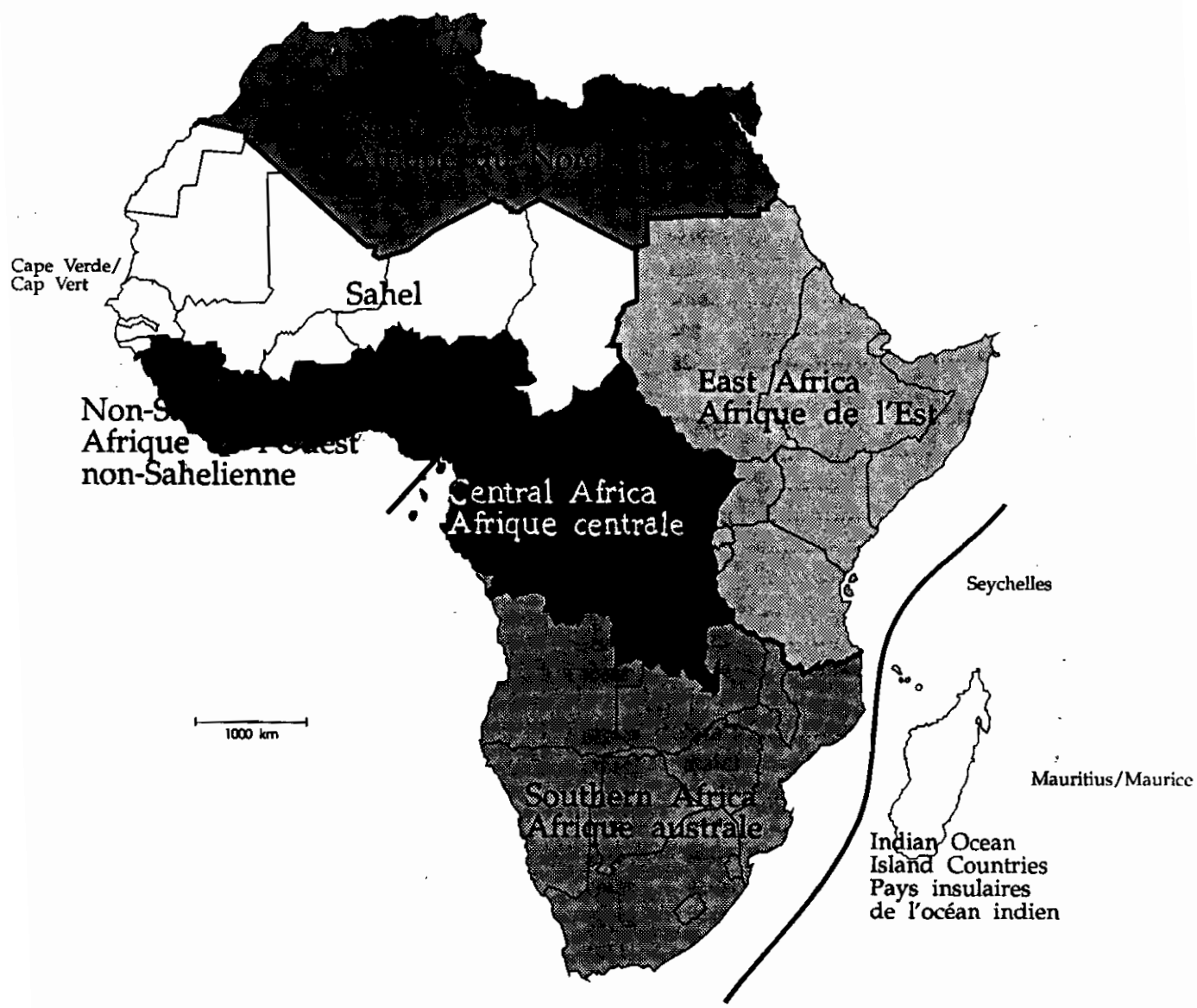
...	data not available
-	Magnitude zero or less than half of the unit used
*	ECA estimates
t	Tons
'000	Thousands

ABBREVIATIONS ET SIGLES

...	Données non disponibles
-	Résultats rigoureusement nuls ou inférieurs à la moitié de l'unité utilisée
*	Estimations de la CEA
t	Tonnes
'000	Milliers

Map/Carte 1

Regional Groupings Regroupement des régions



**Table 1 : Total area, total population and some population
and environment related basic indicators**

**Tableau 1 : Superficie totale, population totale et quelques indicateurs
de base relatifs à la population et à l'environnement**

Sub-region / Sous-région	Total area* ('000 ha)	Land area* ('000 ha)	Area under inland water bodies as percent of total area	Total mid-year population** ('000)			
Country / Pays	Superficie totale ('000 ha)	Superficie ('000 ha)	Superficie au fond des eaux en pourcentage de la superficie totale	Population au milieu de l'année ('000)			
	1992	1992	1992	1980	1985	1990	1992
INDIAN OCEAN							
ISLAND COUNTRIES	59159	58607	0.9	10201	11784	13699	14571
Comoros	223	223	0.0	383	455	543	591
Madagascar.....	58704	58154	0.9	8790	10242	12010	12803
Mauritius.....	204	203	0.5	966	1020	1075	1106
Seychelles	28	27	3.6	62	67	71	71
EAST AFRICA	369827	345712	6.5	103392	118849	138605	149681
Burundi	2783	2565	7.8	4130	4750	5492	5812
Djibouti	2320	2318	0.1	304	380	440	433
Ethiopia	122190	110100	9.9	38749	43083	49831	52214
Kenya	58037	56969	1.8	16632	19873	23585	25876
Rwanda	2634	2467	6.3	5163	5960	7027	7754
Somalia	63766	62734	1.6	6713	7875	8677	7872
Uganda	23588	19955	15.4	13120	15033	17560	20271
United Republic of Tanzania	94509	88604	6.2	18581	21895	25993	29449
SOUTHERN AFRICA	476369	469250	1.5	42007	48592	56236	62016
Angola	124670	124670	0.0	6993	7976	9194	10595
Botswana	58173	56673	2.6	902	1068	1238	1399
Lesotho	3035	3035	0.0	1339	1538	1747	1880
Malawi	11848	9408	20.6	6183	7335	9582	9415
Mozambique	80159	78409	2.2	12095	13547	14200	16524
Namibia	82429	82329	0.1	1066	1235	1439	1895
Swaziland	1736	1720	0.9	565	659	751	847
Zambia	75261	74339	1.2	5738	6864	8138	9122
Zimbabwe	39058	38667	1.0	7126	8370	9947	10339

**Table 1 : Total area, total population and some population
and environment related basic indicators**

**Tableau 1 : Superficie totale, population totale et quelques indicateurs
de base relatifs à la population et à l'environnement**

Population density (Persons per 1000 hectares of of land area			Average annual population growth rate (%)	Population doubling time in years		Percentage of population with access to safe drinking water*** 1988			Sub-region / Sous-région
Densité de la population (personnes par 1000 hectares de superficie)			Taux moyen annuel de croissance (%)	Doublement de la population (années)		Pourcentage de la population ayant accès à l'eau salubre, 1988			Country / Pays
1980	1985	1992	1990-95			Urban/	Rural/	Total/	
						Urbain	Rural	Total	
PAYS INSULAIRES DE L'OCEAN INDIEN									
174	201	249	3.08	23					
1758	2076	2650	3.68	19	19	-	-	-	Comores
151	176	220	3.29	21	21	62	10	22	Madagascar
5222	5514	5978	1.00	69	64	100	92	95	Maurice
2333	2407	2593	0.89	78	81	-	-	-	Seychelles
AFRIQUE DE L'EST									
296	345	433	3.84	18	21				
1611	1844	2266	2.88	24	23	100	34	37	Burundi
131	153	187	3.01	23	23	50	21	44	Djibouti
352	391	474	3.05	23	23	70	11	18	Ethiopie
292	353	454	3.35	21	19	-	-	-	Kenya
2093	2473	3143	3.40	20	20	46	64	63	Rwanda
85	102	125	3.18	22	29	50	29	36	Somalie
657	784	1016	3.00	23	19	45	12	15	Ouganda
213	257	332	3.36	21	18	75	46	54	République-Unie de Tanzanie
AFRIQUE AUSTRALE									
92	106	132	3.14	22	22				
62	70	85	3.72	19	25	75	19	34	Angola
16	19	25	2.92	24	20	70	-	-	Botswana
441	507	619	2.47	28	24	59	45	48	Lesotho
657	780	1001	3.00	23	19	66	49	51	Malawi
154	175	211	2.83	24	26	44	17	23	Mozambique
16	18	23	3.18	22	22	-	-	-	Namibie
327	386	492	2.68	26	19	100 a	7 a	79	Swaziland
77	94	123	2.84	24	18	76	43	59	Zambie
184	214	267	2.96	23	22	95	80	84	Zimbabwe

Table 1 continued

Tableau 1 suite

Sub-region / Sous-région	Total area* ('000 ha)	Land area* ('000 ha)	Area under inland water bodies as percent of total area	Total mid-year population** ('000)			
Country / Pays	Superficie totale ('000 ha)	Superficie ('000 ha)	Superficie au fond des eaux en pourcentage de la superficie totale	Population au milieu de l'année ('000)			
	1992	1992	1992	1980	1985	1990	1992
CENTRAL AFRICA	408251	398416	2.4	40763	47593	55782	57986
Cameroon	47544	46540	2.1	8655	9969	11524	12662
Central African Republic	62298	62298	0.0	2313	2631	3008	3218
Congo	34200	34150	0.1	1669	1922	2229	2424
Equatorial Guinea	2805	2805	0.0	217	312	352	369
Gabon	26767	25767	3.7	806	985	1159	1253
Sao Tome & Principe	96	96	0.0	94	107	119	126
Zaire	234541	226760	3.3	27009	31667	37391	37934
SAHEL	533908	527979	1.1	32697	37505	43030	45747
Burkina Faso	27420	27380	0.1	6957	7881	8993	9520
Cape Verde	403	403	0.0	289	324	363	395
Chad	128400	125920	1.9	4477	5018	5553	5973
Gambia	1130	1000	11.5	641	745	861	909
Guinea Bissau	3612	2812	22.1	795	873	964	1005
Mali	124019	122019	1.6	6863	7915	9214	9812
Mauritania	102552	102522	0.0	1551	1766	2024	2142
Niger	126700	126670	0.0	5586	6608	7731	8247
Senegal	19672	19253	2.1	5538	6375	7327	7744
NON-SAHEL WEST AFRICA ..	206953	203555	1.5	113034	132655	156184	166766
Benin	11262	11062	1.8	3459	3985	4630	4928
Côte d'Ivoire	32246	31800	1.4	8194	9936	11980	12951
Ghana	23854	22754	3.6	10736	12839	15020	16009
Guinea	24586	24586	0.0	4461	4987	5755	6113
Liberia	9775	9675	1.0	1876	2199	2575	2747
Nigeria	92377	91077	1.4	78430	92016	108542	115884
Sierra Leone	7174	7162	0.2	3263	3665	4151	4373
Togo	5679	5439	4.2	2615	3028	3531	3761
NORTH AFRICA	825870	811439	1.7	107105	123193	140375	147680
Algeria	238174	238174	0.0	18740	21788	24960	26387
Egypt	100145	99545	0.6	40875	46511	52426	54820
Libyan Arab Jamahiriya	175954	175954	0.0	3043	3786	4545	4886
Morocco	44655	44630	0.1	19382	22025	25061	26342
Sudan	250581	237600	5.2	18681	21822	25203	26702
Tunisia	16361	15536	5.0	6384	7261	8180	8543
TOTAL AFRICA	2880337	2814958	2.3	449199	520171	603911	644447

Sources : * FAO, Production Yearbook 1992, Rome, 1993

** UN, World Population Prospects - The 1992 Revision, New York, 1993

*** World Resources, 1992-93, New York, 1993

Table 1 continued

Tableau 1 suite

Population density (Persons per 1000 hectares of of land area)			Average annual population growth rate (%)	Population doubling time in years	Percentage of population with access to safe drinking water*** 1988			Sub-region / Sous-région
Densité de la population (personnes par 1000 hectares de superficie)			Taux moyen annuel de croissance (%)	Doublement de la population (années)	Pourcentage de la population ayant accès à l'eau salubre, 1988			Country / Pays
1980	1985	1992	1990-95		Urban/ Urbain	Rural/ Rural	Total/ Total	
100	117	146	2.94	24				AFRIQUE CENTRALE
186	216	272	2.83	24	100	96	98	Cameroun
37	42	52	2.62	26	13	11	12	République centrafricaine
49	57	71	3.00	23	92	2	38	Congo
77	111	132	2.55	27	-	-	-	Guinée équatoriale
31	38	49	3.31	21	90	50	67	Gabon
979	1115	1313	2.20	32	...	...	...	Sao Tomé et Principe
116	134	167	3.17	22	59	17	33	Zaire
62	71	87	3.06	23				SAHEL
254	288	348	2.81	25	44	72	70	Burkina Faso
717	804	980	2.88	24	87	65	71	Cap Vert
36	40	47	2.71	26	-	-	-	Tchad
641	745	909	2.60	27	92	73	77	Gambie
283	310	357	2.14	32	18	27	25	Guinée Bissau
56	65	80	3.17	22	100	36	48	Mali
15	17	21	2.86	24	67	65	66	Mauritanie
44	52	65	3.26	21	100	52	61	Niger
288	331	402	2.70	26	79 a	38 a	53	Sénégal
555	651	818	3.28	21				AFRIQUE DE L'OUEST
313	360	445	3.11	22	66	46	53	NON SAHELIENNE
258	312	407	3.68	19	100	75	85	Bénin
467	558	696	3.00	23	93	39	56	Côte d'Ivoire
181	203	249	3.04	23	55	24	32	Ghana
194	227	284	3.32	21	93	22	53	Guinée
961	1010	1272	3.13	22	100	20	47	Libéria
456	512	611	2.66	26	83	22	41	Nigéria
481	557	691	3.18	22	100	61	70	Sierra Leone
132	152	182	2.54	27				Togo
79	91	111	2.71	26	-	-	-	AFRIQUE DU NORD
411	467	551	2.20	32	96	82	88	Algérie
17	22	28	3.47	20	100	80	94	Egypte
434	494	590	2.40	29	100	25	60	Jamahiriya Arabe Libyenne
79	92	112	2.78	25	90 b	20 b	35	Maroc
411	467	550	2.06	34	100	31	68	Soudan
160	185	229	3.06	23				Tunisie
								TOTAL AFRIQUE

Notes: a - 1985 data / données de 1985

b - 1986 data / données de 1986

Table 2: Selected indicators on land use
Tableau 2: Quelques indicateurs sur l'utilisation des terres

Sub-region Sous-région	Total agricultural land percent of total area				Arable land as percent of total area			
Country Pays	Ensemble des terres agricoles en pourcentage de la superficie totale				Terres arables en pourcentage de la superficie totale			
	1975	1980	1985	1992	1975	1980	1985	1992
INDIAN OCEAN ISLAND COUNTRIES	62.5	62.9	63.0	63.1	3.8	4.2	4.6	4.7
Comoros	47.1	47.5	50.2	51.6	33.6	33.6	33.6	35.0
Madagascar.....	63.2	63.6	63.7	63.8	3.5	3.9	4.3	4.4
Mauritius.....	55.9	55.9	55.9	55.4	49.0	49.0	49.0	49.0
Seychelles	18.5	18.5	22.2	22.2	3.7	3.7	3.7	3.7
EAST AFRICA	55.8	56.0	56.2	56.2	6.7	7.0	7.1	7.5
Burundi	81.3	86.4	87.1	88.0	40.5	41.7	43.3	43.7
Djibouti	8.6	8.6	8.6	8.6	0.0	0.0	0.0	0.0
Ethiopia	53.9	53.8	53.7	53.3	11.4	11.8	11.9	12.0
Kenya	70.8	70.9	71.0	71.2	2.9	3.1	3.1	3.4
Rwanda	61.1	63.5	65.9	65.0	21.2	27.8	30.8	34.5
Somalia	70.1	70.1	70.2	70.2	1.5	1.5	1.6	1.6
Uganda	36.1	37.5	42.1	42.7	18.9	20.2	20.4	25.1
United Republic of Tanzania	43.2	43.3	43.3	43.3	3.0	3.0	3.0	3.1
SOUTHERN AFRICA	42.3	42.4	42.5	42.6	3.6	3.6	3.7	3.8
Angola	26.0	26.0	26.0	26.0	2.3	2.3	2.3	2.3
Botswana	60.6	60.6	60.6	60.7	2.1	2.3	2.4	2.4
Lesotho	78.2	75.5	75.8	76.4	12.1	12.3	9.6	10.5
Malawi	26.5	26.9	28.6	30.0	10.8	11.2	12.8	14.2
Mozambique	60.0	60.0	60.1	60.2	3.6	3.6	3.6	3.7
Namibia	46.9	47.0	47.0	47.0	0.8	0.8	0.8	0.8
Swaziland	76.3	75.1	74.7	81.3	8.7	9.7	10.8	11.6
Zambia/Zambie	47.1	47.2	47.3	47.4	6.7	6.7	6.9	7.1
Zimbabwe	19.1	19.1	19.6	19.8	6.0	6.4	6.4	7.0
CENTRAL AFRICA	14.5	14.7	14.7	14.8	3.6	3.7	3.9	3.9
Cameroon	31.6	32.7	32.8	32.9	11.6	11.9	12.7	12.8
Central African Republic	7.8	7.9	8.0	8.0	2.8	2.9	3.0	3.1
Congo	29.7	29.7	29.8	29.8	0.4	0.4	0.4	0.4
Equatorial Guinea	11.9	11.9	11.9	11.9	4.5	4.6	4.6	4.6
Gabon	20.1	20.0	20.0	20.1	0.7	0.9	1.1	1.1
Sao Tome & Principe	38.5	38.5	39.6	39.6	1.0	1.0	1.0	2.1
Zaire	9.9	10.0	10.1	10.1	3.0	3.0	3.1	3.2

Table 2: Selected indicators on land use
Tableau 2: Quelques indicateurs sur l'utilisation des terres

Irrigated land as percent of arable land				Percentage change in forest and woodland	Sub-region
Terres irriguées en pourcentage des terres arables				Variation en pourcentage des forêts et des terrains boisés	Country
1975	1980	1985	1992	1985-1992	Pays
PAYS INSULAIRES DE L'OCEAN INDIEN					
19.4	24.6	31.1	35.2	-3.8	
0.0	0.0	0.0	0.0	0.0	..... Comores
20.3	25.7	32.6	36.9	-3.8	..... Madagascar
15.2	16.0	17.0	17.0	0.0	..... Maurice
0.0	0.0	0.0	0.0	0.0	..... Seychelles
AFRIQUE DE L'EST					
1.7	2.0	2.0	2.2	-1.4	
4.3	5.0	5.9	6.4	1.5	..... Burundi
				0.0	..... Djibouti
1.2	1.2	1.2	1.2	-1.5	..... Ethiopie
2.3	2.2	2.2	3.0	-3.4	..... Kenya
0.6	0.5	0.5	0.5	-2.1	..... Rwanda
10.4	10.7	10.9	11.9	-0.4	..... Somalie
0.1	0.1	0.2	0.2	-3.5	..... Ouganda
1.9	4.4	4.7	5.6	-1.2	.... République-Unie de Tanzanie
AFRIQUE AUSTRALE					
1.1	1.8	2.2	2.4	-3.1	
0.0	0.0	0.0	0.0	-5.5	..... Angola
0.1	0.1	0.1	0.1	-0.4	..... Botswana
0.0	0.0	0.0	0.0	0.0	..... Lesotho
1.2	1.2	1.2	1.2	-11.4	..... Malawi
1.4	2.3	3.3	4.0	-3.3	..... Mozambique
0.6	0.6	0.6	0.6	-0.8	..... Namibie
33.5	31.4	38.8	31.0	0.0	..... Swaziland
0.4	0.4	0.5	0.6	-1.0	..... Zambie
2.8	6.4	7.2	8.1	-1.7	..... Zimbabwe
AFRIQUE CENTRALE					
0.1	0.2	0.2	0.3	-0.7	
0.2	0.2	0.4	0.6	-1.8	..... Cameroun
0.0	0.0	0.0	0.0	-0.1	..... République centrafricaine
1.5	2.2	2.9	2.8	-0.5	..... Congo
0.0	0.0	0.0	0.0	0.0	..... Guinée équatoriale
0.0	0.0	0.0	0.0	0.0	..... Gabon
0.0	0.0	0.0	0.0	0.0	..... Sao Tomé et Principe
0.0	0.1	0.1	0.1	-0.8	..... Zaïre

Table 2 continued

Tableau 2 suite

Sub-region Sous-région	Total agricultural land percent of total area				Arable land as percent of total area			
Country Pays	Ensemble des terres agricoles en pourcentage de la superficie totale				Terres arables en pourcentage de la superficie totale			
	1975	1980	1985	1992	1975	1980	1985	1992
SAHEL	28.7	28.9	28.9	29.0	2.4	2.4	2.7	2.9
Burkina Faso	45.8	46.7	47.6	49.5	8.1	9.2	10.1	13.0
Cape Verde	16.1	16.1	16.1	15.9	9.4	9.4	9.4	9.2
Chad	38.1	38.2	38.2	38.3	2.3	2.4	2.5	2.5
Gambia	24.2	24.6	25.5	26.8	13.0	15.2	15.6	17.8
Guinea Bissau	48.5	48.5	49.8	50.3	8.7	9.1	9.1	10.7
Mali	26.1	26.3	26.3	26.3	1.4	1.5	1.7	1.7
Mauritania	38.5	38.5	38.5	38.5	0.3	0.2	0.2	0.2
Niger	10.1	10.4	9.9	9.9	2.1	1.7	2.8	2.8
Senegal	28.3	28.3	28.3	28.3	12.2	12.2	12.2	12.1
NON-SAHEL WEST AFRICA	56.1	56.3	56.9	57.9	16.2	16.4	16.7	18.0
Benin	20.0	20.2	20.6	20.8	10.5	12.0	12.2	12.7
Côte d'Ivoire	50.0	50.6	52.1	52.7	5.3	5.7	6.1	7.6
Ghana	34.8	34.3	33.8	33.9	4.4	4.6	4.8	5.0
Guinea	27.8	27.9	28.0	28.0	2.3	2.4	2.4	2.5
Liberia	62.7	62.7	62.7	62.8	1.3	1.3	1.3	1.3
Nigeria	76.9	77.3	78.1	79.9	30.1	30.2	30.6	32.7
Sierra Leone	38.5	38.9	39.4	39.7	5.6	5.9	6.3	6.8
Togo	44.1	44.3	44.8	45.4	9.7	10.0	10.2	11.0
NORTH AFRICA	20.2	20.6	21.0	22.4	4.0	4.2	4.2	4.4
Algeria	0.9	0.9	0.9	0.9	2.6	2.9	2.9	3.0
Egypt	2.8	2.5	2.5	2.7	2.7	2.7	2.3	2.3
Libyan Arab Jamahiriya	8.0	8.6	8.8	8.8	1.0	1.0	1.0	1.0
Morocco	60.3	64.8	65.7	68.8	15.9	16.3	16.9	19.5
Sudan	46.4	46.5	47.4	51.7	4.9	5.1	5.2	5.4
Tunisia	52.7	51.8	51.7	51.1	20.9	22.1	20.5	18.7
TOTAL AFRICA	32.7	32.9	33.1	33.6	4.8	5.0	5.1	5.4

Table 2 continued

Tableau 2 suite

Irrigated land as percent of arable land				Percentage change in forest and woodland	Sub-region Sous-région
Terres irriguées en pourcentage de terres arables				Variation en pourcentage des forêts et des terrains boisés	Country Pays
1975	1980	1985	1992	1985-1992	
2.6	2.6	3.0	3.2	-3.7	SAHEL
0.3	0.4	0.4	0.7	-3.6	Burkina Faso
5.3	5.3	5.3	5.4	0.0	Cap Vert
0.2	0.2	0.3	0.3	-2.5	Tchad
6.6	6.4	7.3	6.7	-14.3	Gambie
0.0	0.0	0.0	0.0	0.0	Guinée Bissau
6.2	7.4	9.0	9.8	-1.7	Mali
5.7	5.7	6.3	5.9	-10.9	Mauritanie
0.8	0.6	0.8	1.3	-11.3	Niger
6.8	7.3	7.5	7.7	-1.9	Sénégal
2.6	2.7	2.7	2.8	-5.9	AFRIQUE DE L'OUEST NON SAHELIENTE
0.3	0.4	0.4	0.4	-5.6	Bénin
1.9	2.3	2.3	2.8	-12.7	Côte d'Ivoire
0.7	0.6	0.6	0.7	-3.4	Ghana
1.0	1.4	3.0	4.4	-1.6	Guinée
1.6	1.6	1.6	1.6	-4.5	Libéria
3.0	3.0	3.0	2.9	-9.6	Nigéria
3.1	4.4	5.9	7.0	-1.4	Sierra Leone
1.1	1.1	1.2	1.1	-2.5	Togo
18.0	17.7	18.5	18.8	-1.1	AFRIQUE DU NORD
3.6	3.7	4.9	5.6	-14.1	Algérie
105.0	107.0	108.3	111.9	0.0	Egypte
11.5	12.8	13.1	13.7	2.9	Libye
14.5	16.2	15.8	13.9	1.9	Maroc
14.0	14.1	14.7	15.0	-2.6	Soudan
3.6	4.9	7.9	10.0	13.7	Tunisie
6.1	6.2	6.5	6.8	-2.1	TOTAL AFRIQUE

Table / Tableau 3

Land use

Utilisation des terres

Figure 1: Land use - WORLD
Utilisation des terres - MONDE

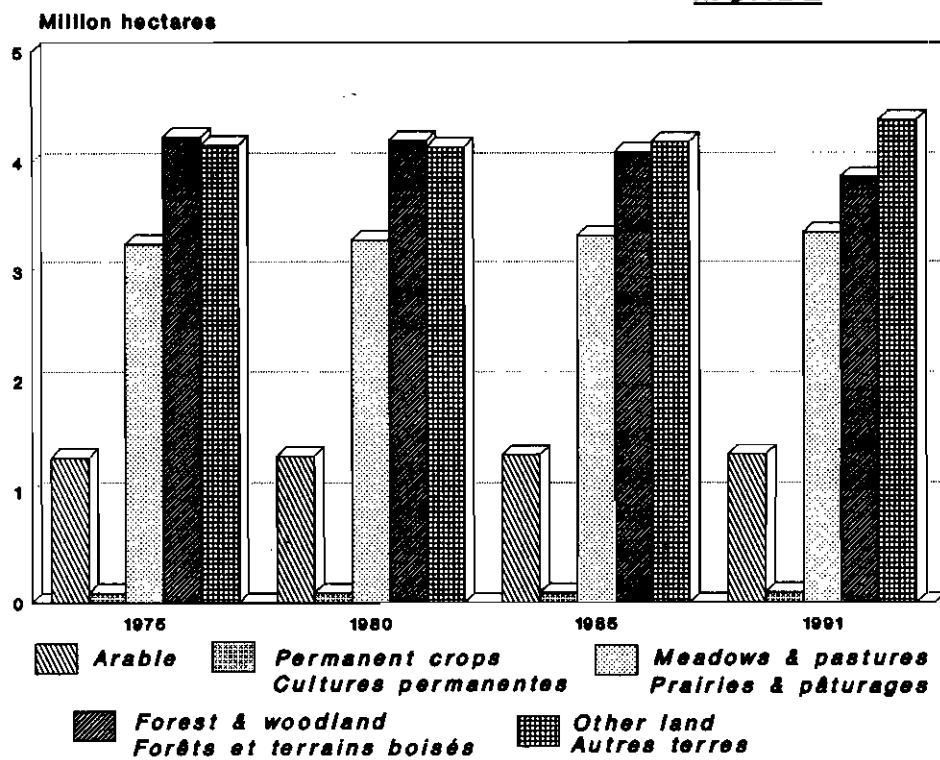


Figure 2: Land use - AFRICA
Utilisation des terres - AFRIQUE

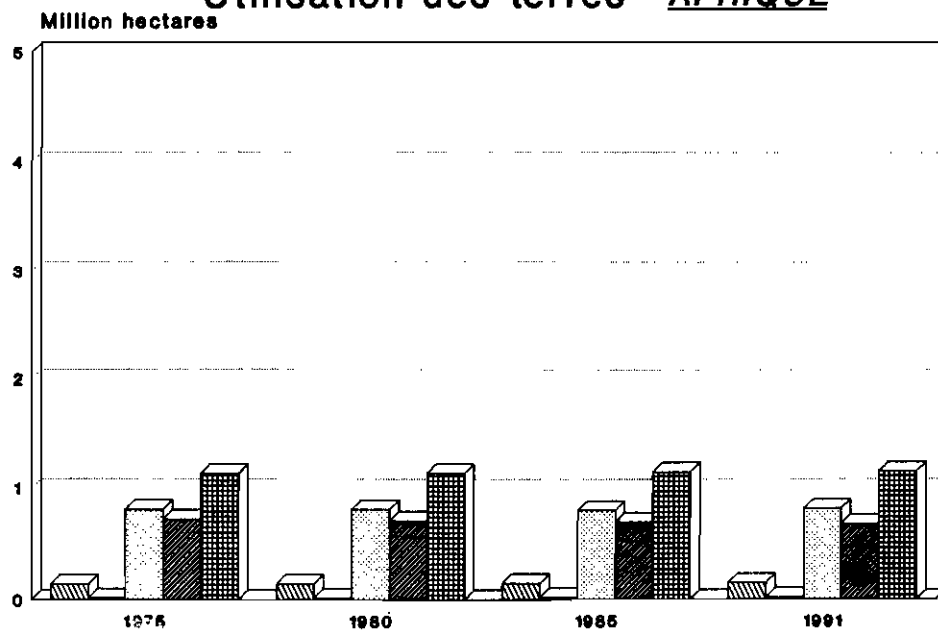


Table 3 : Land use
Tableau 3 : Utilisation des terres

Arable land, land under permanent crops, permanent meadows, forest and woodland, and other land (thousands of hectares).

Terres arables, cultures permanentes, prairies et pâturages permanents, forêts et terrains boisés, et autres terres (milliers d'hectares).

Sub-region / Sous-région	Year	Arable land	Land under permanent crops	Permanent meadows & pastures	Forest and woodland	Other land
Country / Pays	Année	Terres Arables	Cultures permanentes	Prairies et pâturages permanents	Forêts et terrains boisés	Autres terres
INDIAN OCEAN ISLANDS -						
PAYS INSULAIRES DE						
L'OCEAN INDIEN						
	1975	2472	489	34022	17878	3746
	1980	2686	517	34022	17128	4254
	1985	2707	543	34022	16378	4957
	1988	2738	552	34022	15927	5368
	1989	2749	556	34022	15777	5503
	1990	2759	555	34022	15627	5644
	1991	2759	556	34022	15477	5793
	1992	2769	556	34022	15327	5933
Comoros - Comores						
	1975	75	15	15	35	83
	1980	75	16	15	35	82
	1985	76	21	15	35	76
	1988	77	22	15	35	74
	1989	78	22	15	35	73
	1990	78	22	15	35	73
	1991	78	22	15	35	73
	1992	78 *	22 *	15 *	35 *	73
Madagascar						
	1975	2296	463	34000	17780	3615
	1980	2510	490	34000	17030	4124
	1985	2530	510	34000	16280	4834
	1988	2560	518	34000	15830	5246
	1989	2570	522	34000	15680	5382
	1990	2580	522	34000	15530	5522
	1991	2580	522	34000	15380	5672
	1992	2590 *	522 *	34000 *	15230 *	5812

Table 3 continued

Tableau 3 suite

Sub-region / Sous-région	Year	Arable land	Land under permanent crops	Permanent meadows & pastures	Forest and woodland	Other land
Country / Pays	Année	Terres Arables	Cultures permanentes	Prairies et pâturages permanents	Forêts et terrains boisés	Autres terres
Mauritius - Maurice	1975	100	7	7	58	31
	1980	100	7	7	58	31
	1985	100	7	7	58	31
	1988	100	7	7	57	32
	1989	100	7	7	57	32
	1990	100	6	7	57	33
	1991	100	6	7	57	33
	1992	100 *	6 *	7 *	57 *	33
Seychelles	1975	1	4	0	5	17
	1980	1	4	0	5	17
	1985	1	5	0	5	16
	1988	1	5	0	5	16
	1989	1	5	0	5	16
	1990	1	5	0	5	16
	1991	1	6	0	5	15
	1992	1 *	6 *	0 *	5 *	15
EAST AND SOUTH AFRICA -	1975	24179	3635	165176	90153	62569
AFRIQUE DE L'EST ET	1980	24574	3906	164962	88682	63588
AUSTRALE	1985	25646	4068	164667	87139	64192
	1988	25805	4100	164492	86231	65084
	1989	25829	4105	164435	85929	65414
	1990	25858	4116	164376	85626	65736
	1991	25884	4154	164323	85324	66027
	1992	25906	4166	164269	85021	66350
Burundi	1975	1070	185	830	58	422
	1980	1110	195	910	62	288
	1985	1120	205	910	64	266
	1988	1120	214	912	65	254
	1989	1120	216	914	66	249
	1990	1125	218	914	66	242
	1991	1130	220	915	67	233
	1992	1130 *	222 *	915 *	67 *	231

Table 3 continued

Tableau 3 suite

Sub-region / Sous-région	Year	Arable land	Land under permanent crops	Permanent meadows & pastures	Forest and woodland	Other land
Country / Pays	Année	Terres Arables	Cultures permanentes	Prairies et pâturages permanents	Forêts et terrains boisés	Autres terres
Djibouti	1975	0	0	200	6	2112
	1980	0	0	200	6	2112
	1985	0	0	200	6	2112
	1988	0	0	200	6	2112
	1989	0	0	200	6	2112
	1990	0	0	200	6	2112
	1991	0	0	200	6	2112
	1992	0	0	200	6	2112
Ethiopia - Ethiopie	1975	13000	730	45650	28600	22120
	1980	13150	730	45400	28132	22688
	1985	13200	730	45150	27600	23420
	1988	13200	730	45000	27300	23870
	1989	13200	730	44950	27200	24020
	1990	13200	730	44900	27100	24170
	1991	13200	730	44850	27000	24320
	1992	13200 *	730 *	44800 *	26900 *	24470
Kenya	1975	1768	472	38100	2640	13989
	1980	1790	480	38100	2540	14059
	1985	1880	490	38100	2440	14059
	1988	1930	495	38100	2380	14064
	1989	1930	498	38100	2360	14081
	1990	1930	500	38100	2340	14099
	1991	1930	510	38100	2320	14109
	1992	1930 *	514 *	38100 *	2300 *	14125
Rwanda	1975	686	226	596	599	360
	1980	760	255	552	584	316
	1985	827	292	507	569	272
	1988	849	304	480	560	274
	1989	849	304	471	557	286
	1990	850	305	462	554	296
	1991	850	310	458	551	298
	1992	851 *	310 *	454 *	548 *	304

Table 3 continued

Tableau 3 suite

Sub-region / Sous-région	Year	Arable land	Land under permanent crops	Permanent meadows & pastures	Forest and woodland	Other land
Country / Pays	Année	Terres Arables	Cultures permanentes	Prairies et pâturages permanents	Forêts et terrains boisés	Autres terres
Somalia - Somalie	1975	960	15	43000	9210	9549
	1980	984	16	43000	9160	9574
	1985	1009	16	43000	9110	9599
	1988	1016	17	43000	9080	9621
	1989	1019	17	43000	9070	9628
	1990	1022	17	43000	9060	9635
	1991	1022	17	43000	9050	9645
	1992	1022 *	17 *	43000 *	9040 *	9655
Uganda - Ouganda	1975	4025	1382	1800	6300	6448
	1980	4080	1600	1800	6060	6415
	1985	4900	1700	1800	5810	5745
	1988	4960	1705	1800	5660	5830
	1989	4980	1705	1800	5610	5860
	1990	5000	1710	1800	5560	5885
	1991	5020	1730	1800	5510	5895
	1992	5040 *	1735 *	1800 *	5460 *	5920
Tanzania, United Republic of/ Tanzanie, République Unie de	1975	2670	625	35000	42740	7569
	1980	2700	630	35000	42138	8136
	1985	2710	635	35000	41540	8719
	1988	2730	635	35000	41180	9059
	1989	2731	635	35000	41060	9178
	1990	2731	636	35000	40940	9297
	1991	2732	637	35000	40820	9415
	1992	2733 *	638 *	35000 *	40700 *	9533

Table 3 continued

Tableau 3 suite

Sub-region / Sous-région	Year	Arable land	Land under permanent crops	Permanent meadows & pastures	Forest and woodland	Other land
Country / Pays	Année	Terres Arables	Cultures permanentes	Prairies et pâturages permanents	Forêts et terrains boisés	Autres terres
SOUTHERN AFRICA - AFRIQUE AUSTRALE	1975	17009	818	183839	155075	112509
	1980	17132	838	183798	152994	114488
	1985	17590	854	183816	150494	116496
	1988	17866	861	183871	148904	117748
	1989	17930	863	183876	148374	118207
	1990	17980	865	183881	147004	119520
	1991	18095	867	183881	146534	119873
	1992	18125	869	183886	146064	120306
Angola	1975	2900	500	29000	54200	38070
	1980	2900	500	29000	53760	38510
	1985	2900	500	29000	53310	38960
	1988	2900	500	29000	53040	39230
	1989	2900	500	29000	52950	39320
	1990	2900	500	29000	52000	40270
	1991	2950	500	29000	51950	40270
	1992	2950 *	500 *	29000 *	51900 *	40320
Botswana	1975	1330	0	33000	11060	11283
	1980	1360	0	33000	11012	11301
	1985	1360	0	33000	10960	11353
	1988	1380	0	33000	10930	11363
	1989	1380	0	33000	10920	11373
	1990	1380	0	33000	10910	11383
	1991	1400	0	33000	10900	11373
	1992	1410 *	0 *	33000 *	10890 *	11373
Lesotho	1975	372	0	2000	0	663
	1980	292	0	2000	0	743
	1985	300	0	2000	0	735
	1988	320	0	2000	0	715
	1989	320	0	2000	0	715
	1990	320	0	2000	0	715
	1991	340	0	2000	0	695
	1992	340 *	0 *	2000 *	0 *	695

Table 3 continued

Tableau 3 suite

Sub-region / Sous-région	Year	Arable land	Land under permanent crops	Permanent meadows & pastures	Forest and woodland	Other land
Country / Pays	Année	Terres Arables	Cultures permanentes	Prairies et pâturages permanents	Forêts et terrains boisés	Autres terres
Malawi	1975	1280	18	1840	4830	1440
	1980	1325	20	1840	4731	1492
	1985	1520	26	1840	4180	1842
	1988	1600	27	1840	3850	2091
	1989	1620	29	1840	3740	2179
	1990	1640	29	1840	3630	2269
	1991	1660	29	1840	3520	2359
	1992	1680 *	29 *	1840 *	3410 *	2449
Mozambique	1975	2850	230	44000	16050	15279
	1980	2850	230	44000	15460	15869
	1985	2860	230	44000	14860	16459
	1988	2870	230	44000	14500	16809
	1989	2870	230	44000	14380	16929
	1990	2900	230	44000	14260	17019
	1991	2900	230	44000	14140	17139
	1992	2900 *	230 *	44000 *	14020 *	17259
Namibia - Namibie	1975	652	1	38000	18600	25076
	1980	655	2	38000	18450	25222
	1985	660	2	38000	18350	25317
	1988	660	2	38000	18200	25467
	1989	660	2	38000	18150	25517
	1990	660	2	38000	18120	25547
	1991	660	2	38000	18090	25577
	1992	660 *	2 *	38000 *	18060 *	25607
Swaziland	1975	167	3	1143	105	302
	1980	185	4	1102	103	326
	1985	160	4	1120	104	332
	1988	186	4	1175	104	251
	1989	200	4	1180	104	232
	1990	200	4	1185	104	227
	1991	205	4	1185	104	222
	1992	205 *	4 *	1190 *	104 *	217

Table 3 continued

Tableau 3 suite

Sub-region / Sous-région	Year	Arable land	Land under permanent crops	Permanent meadows & pastures	Forest and woodland	Other land
Country / Pays	Année	Terres Arables	Cultures permanentes	Prairies et pâturages permanents	Forêts et terrains boisés	Autres terres
Zambia - Zambie	1975	4993	7	30000	29900	9439
	1980	5100	8	30000	29548	9683
	1985	5180	8	30000	29200	9951
	1988	5230	8	30000	28990	10111
	1989	5260	8	30000	28920	10151
	1990	5260	8	30000	28850	10221
	1991	5260	8	30000	28780	10291
	1992	5260 *	8 *	30000 *	28710 *	10361
Zimbabwe	1975	2465	59	4856	20330	10957
	1980	2465	74	4856	19930	11342
	1985	2650	84	4856	19530	11547
	1988	2720	90	4856	19290	11711
	1989	2720	90	4856	19210	11791
	1990	2720	92	4856	19130	11869
	1991	2720	94	4856	19050	11947
	1992	2720 *	96 *	4856 *	18970 *	12025
CENTRAL AFRICA/ AFRIQUE CENTRALE	1975	14773	1739	41205	284165	56534
	1980	15385	1956	41105	281800	58170
	1985	15572	2057	41105	279455	60227
	1988	15661	2069	41105	278065	61516
	1989	15666	2071	41105	277575	61999
	1990	15681	2085	41105	277105	62440
	1991	15711	2088	41105	276495	63017
	1992	15721	2090	41105	276025	63475
Cameroon - Cameroun	1975	5550	845	8300	26180	5665
	1980	5910	1020	8300	25640	5670
	1985	5910	1055	8300	25090	6185
	1988	5925	1062	8300	24760	6493
	1989	5930	1064	8300	24650	6596
	1990	5940	1068	8300	24540	6692
	1991	5950	1070	8300	24430	6790
	1992	5960 *	1072 *	8300 *	24320 *	6888

Table 3 continued

Tableau 3 suite

Sub-region / Sous-région	Year	Arable land	Land under permanent crops	Permanent meadows & pastures	Forest and woodland	Other land
Country / Pays	Année	Terres Arables	Cultures permanentes	Prairies et pâturages permanents	Forêts et terrains boisés	Autres terres
Central Africa Republic/ République centrafricaine	1975	1820	70	3000	35940	21468
	1980	1870	75	3000	35895	21458
	1985	1900	83	3000	35850	21465
	1988	1920	86	3000	35820	21472
	1989	1920	86	3000	35810	21482
	1990	1920	86	3000	35800	21492
	1991	1920	86	3000	35790	21502
	1992	1920 *	86 *	3000 *	35780 *	21512
Congo	1975	130	12	10000	21470	2538
	1980	134	14	10000	21360	2642
	1985	140	22	10000	21260	2728
	1988	144	24	10000	21220	2762
	1989	144	24	10000	21180	2802
	1990	144	24	10000	21160	2822
	1991	144	25	10000	21140	2841
	1992	144 *	25 *	10000 *	21120 *	2861
Equatorial Guinea/ Guinée équatoriale	1975	130	100	104	1295	1176
	1980	130	100	104	1295	1176
	1985	130	100	104	1295	1176
	1988	130	100	104	1295	1176
	1989	130	100	104	1295	1176
	1990	130	100	104	1295	1176
	1991	130	100	104	1295	1176
	1992	130 *	100 *	104 *	1295 *	1176
Gabon	1975	232	137	4800	20000	598
	1980	290	162	4700	20000	615
	1985	290	162	4700	20000	615
	1988	290	162	4700	20000	615
	1989	290	162	4700	20000	615
	1990	295	162	4700	20000	610
	1991	295	162	4700	19860	750
	1992	295 *	162 *	4700 *	19860 *	750

Table 3 continued

Tableau 3 suite

Sub-region / Sous-région	Year	Arable land	Land under permanent crops	Permanent meadows & pastures	Forest and woodland	Other land
Country / Pays	Année	Terres Arables	Cultures permanentes	Prairies et pâturages permanents	Forêts et terrains boisés	Autres terres
Sao Tome and Principe/ Sao Tomé-et-Principe	1975	1	35	1	0	59
	1980	1	35	1	0	59
	1985	2	35	1	0	58
	1988	2	35	1	0	58
	1989	2	35	1	0	58
	1990	2	35	1	0	58
	1991	2	35	1	0	58
	1992	2 *	35 *	1 *	0 *	58
 Zaire - Zaïre	1975	6910	540	15000	179280	25030
	1980	7050	550	15000	177610	26550
	1985	7200	600	15000	175960	28000
	1988	7250	600	15000	174970	28940
	1989	7250	600	15000	174640	29270
	1990	7250	610	15000	174310	29590
	1991	7270	610	15000	173980	29900
	1992	7270 *	610 *	15000 *	173650 *	30230
 SAHEL	1975	12505	58	139171	48846	327399
	1980	14498	65	138213	47466	327737
	1985	14794	69	137585	46467	329064
	1988	15444	75	137485	45579	329396
	1989	15462	75	137465	45283	329694
	1990	15482	76	137445	44487	330489
	1991	15508	81	137425	44191	330774
	1992	15522	81	137405	43895	331076
 Burkina Faso	1975	2523	13	10000	7500	7344
	1980	2772	13	10000	7200	7395
	1985	3022	13	10000	6900	7445
	1988	3551	13	10000	6720	7096
	1989	3551	13	10000	6660	7156
	1990	3550	13	10000	6600	7217
	1991	3549	13	10000	6540	7278
	1992	3548 *	13 *	10000 *	6480 *	7339

Table 3 continued

Tableau 3 suite

Sub-region / Sous-région	Year	Arable land	Land under permanent crops	Permanent meadows & pastures	Forest and woodland	Other land
Country / Pays	Année	Terres Arables	Cultures permanentes	Prairies et pâturages permanents	Forêts et terrains boisés	Autres terres
Cape Verde - Cap-Vert	1975	38	2	25	1	337
	1980	38	2	25	1	337
	1985	38	2	25	1	337
	1988	37	2	25	1	338
	1989	37	2	25	1	338
	1990	37	2	25	1	338
	1991	37	2	25	1	338
	1992	37 *	2 *	25 *	1 *	338
Chad - Tchad	1975	2997	3	45000	13900	64020
	1980	3145	5	45000	13532	64238
	1985	3150	5	45000	13130	64635
	1988	3200	5	45000	12890	64825
	1989	3200	5	45000	12810	64905
	1990	3200	5	45000	12730	64985
	1991	3200	5	45000	12650	65065
	1992	3200 *	5 *	45000 *	12570 *	65145
Gambia - Gambie	1975	152	0	90	245	513
	1980	156	0	90	216	538
	1985	165	0	90	186	559
	1988	175	0	90	168	567
	1989	178	0	90	162	570
	1990	178	0	90	156	576
	1991	180	0	90	150	580
	1992	180 *	0 *	90 *	144 *	586
Guinea-Bissau/ Guinée-Bissau	1975	255	30	1080	1070	377
	1980	255	30	1080	1070	377
	1985	290	30	1080	1070	342
	1988	300	35	1080	1070	327
	1989	300	35	1080	1070	327
	1990	300	35	1080	1070	327
	1991	300	40	1080	1070	322
	1992	300 *	40 *	1080 *	1070 *	322

Table 3 continued

Tableau 3 suite

Sub-region / Sous-région	Year	Arable land	Land under permanent crops	Permanent meadows & pastures	Forest and woodland	Other land
Country / Pays	Année	Terres Arables	Cultures permanentes	Prairies et pâturages permanents	Forêts et terrains boisés	Autres terres
Mali	1975	1847	3	30000	7400	82769
	1980	2047	3	30000	7255	82714
	1985	2070	3	30000	7100	82846
	1988	2090	3	30000	7010	82916
	1989	2090	3	30000	6980	82946
	1990	2090	3	30000	6950	82976
	1991	2100	3	30000	6920	82996
	1992	2100 *	3 *	30000 *	6890 *	83026
Mauritania - Mauritanie	1975	193	3	39250	4580	58496
	1980	192	3	39250	4534	58543
	1985	192	3	39250	4980	58097
	1988	196	3	39250	4950	58123
	1989	196	3	39250	4940	58133
	1990	202	3	39250	4430	58637
	1991	202	3	39250	4420	58647
	1992	202 *	3 *	39250 *	4410 *	58657
Niger	1975	2154	0	10626	2900	110990
	1980	3552	0	9668	2600	110850
	1985	3530	0	9040	2300	111800
	1988	3560	0	8940	2120	112050
	1989	3575	0	8920	2060	112115
	1990	3590	0	8900	2000	112180
	1991	3605	0	8880	1940	112245
	1992	3620 *	0 *	8860 *	1880 *	112310
Senegal - Sénégal	1975	2346	4	3100	11250	2553
	1980	2341	9	3100	11058	2745
	1985	2337	13	3100	10800	3003
	1988	2335	14	3100	10650	3154
	1989	2335	14	3100	10600	3204
	1990	2335	15	3100	10550	3253
	1991	2335	15	3100	10500	3303
	1992	2335 *	15 *	3100 *	10450 *	3353

Table 3 continued

Tableau 3 suite

Sub-region / Sous-région	Year	Arable land	Land under permanent crops	Permanent meadows & pastures	Forest and woodland	Other land
Country / Pays	Année	Terres Arables	Cultures permanentes	Prairies et pâturages permanents	Forêts et terrains boisés	Autres terres
NON-SAHEL WEST AFRICA/ AFRIQUE DE L'OUEST NON-SAHELIENNE	1975	33371	6445	74286	62380	27321
	1980	33966	6387	74286	58559	30605
	1985	35226	6322	74286	54630	33339
	1988	35578	6378	74286	52330	35231
	1989	35589	6385	74286	51570	35973
	1990	36571	6408	74286	50800	35738
	1991	36618	6411	74286	49979	36509
	1992	36670	6435	74286	49260	37152
Benin - Bénin	1975	1330	440	442	4220	4630
	1980	1350	445	442	3970	4855
	1985	1390	448	442	3720	5062
	1988	1410	450	442	3570	5190
	1989	1410	450	442	3520	5240
	1990	1410	450	442	3470	5290
	1991	1420	450	442	3420	5330
	1992	1420 *	450 *	442 *	3370 *	5380
Côte d'Ivoire	1975	1815	1100	13000	11130	4755
	1980	1955	1140	13000	9880	5825
	1985	2380	1200	13000	8630	6590
	1988	2420	1240	13000	7880	7260
	1989	2420	1240	13000	7630	7510
	1990	2430	1260	13000	7380	7730
	1991	2430	1260	13000	7079	8031
	1992	2440 *	1280 *	13000 *	6880 *	8200
Ghana	1975	1050	1860	5000	9120	5972
	1980	1090	1710	5000	8770	6432
	1985	1120	1570	5000	8420	6892
	1988	1135	1577	5000	8210	7080
	1989	1140	1580	5000	8140	7142
	1990	1142	1581	5000	8070	7209
	1991	1144	1582	5000	8000	7276
	1992	1146 *	1584 *	5000 *	7930 *	7342

Table 3 continued

Tableau 3 suite

Sub-region / Sous-région	Year	Arable land	Land under permanent crops	Permanent meadows & pastures	Forest and woodland	Other land
Country / Pays	Année	Terres Arables	Cultures permanentes	Prairies et pâturages permanents	Forêts et terrains boisés	Autres terres
Guinea - Guinée	1975	580	110	6150	15480	2266
	1980	590	112	6150	15180	2554
	1985	610	115	6150	14880	2831
	1988	610	116	6150	14700	3010
	1989	610	118	6150	14640	3068
	1990	610	118	6150	14580	3128
	1991	610	120	6150	14520	3186
	1992	610 *	120 *	6150 *	14460 *	3246
Liberia - Libéria	1975	126	240	5700	2140	1469
	1980	126	245	5700	2046	1558
	1985	126	245	5700	1840	1764
	1988	127	245	5700	1780	1823
	1989	128	245	5700	1760	1842
	1990	128	245	5700	1740	1862
	1991	128	245	5700	1720	1882
	1992	128 *	245 *	5700 *	1700 *	1902
Nigeria - Nigéria	1975	27500	2500	40000	16400	4677
	1980	27850	2535	40000	14900	5792
	1985	28550	2535	40000	13400	6592
	1988	28800	2535	40000	12500	7242
	1989	28800	2535	40000	12200	7542
	1990	29765	2535	40000	11900	6877
	1991	29800	2535	40000	11600	7142
	1992	29835 *	2535 *	40000 *	11300 *	7407
Sierra Leone	1975	425	130	2204	2140	2263
	1980	450	135	2204	2113	2260
	1985	475	140	2204	2090	2253
	1988	486	146	2204	2070	2256
	1989	486	148	2204	2070	2254
	1990	486	150	2204	2060	2262
	1991	486	150	2204	2050	2272
	1992	486 *	152 *	2204 *	2040 *	2280

Table 3 continued

Tableau 3 suite

Sub-region / Sous-région	Year	Arable land	Land under permanent crops	Permanent meadows & pastures	Forest and woodland	Other land
Country / Pays	Année	Terres Arables	Cultures permanentes	Prairies et pâturages permanents	Forêts et terrains boisés	Autres terres
Togo	1975	545	65	1790	1750	1289
	1980	555	65	1790	1700	1329
	1985	575	69	1790	1650	1355
	1988	590	69	1790	1620	1370
	1989	595	69	1790	1610	1375
	1990	600	69	1790	1600	1380
	1991	600	69	1790	1590	1390
	1992	605 *	69 *	1790 *	1580 *	1395
NORTH AFRICA/ AFRIQUE DU NORD	1975	34124	2988	168778	62273	543276
	1980	34184	3161	172566	61083	540445
	1985	34550	3317	169100	59860	544612
	1988	35184	3699	177127	59393	536036
	1989	35614	3715	179322	59127	533661
	1990	35678	3819	179383	59277	533282
	1991	35700	3951	179535	59034	533219
	1992	35758	3990	179722	58788	533181
Algeria - Algérie	1975	6845	650	36258	4122	190299
	1980	6875	634	36321	4384	189960
	1985	6910	601	31540	4384	194739
	1988	7070	541	31175	4699	194689
	1989	7098	535	31175	4699	194667
	1990	7091	563	31041	4061	195418
	1991	7085	568	31000	4050	195471
	1992	7064 *	582 *	30995 *	4037 *	195496
Egypt - Egypte	1975	2691	134	0	31	96689
	1980	2286	159	0	31	97069
	1985	2305	192	0	31	97017
	1988	2310	271	0	31	96933
	1989	2310	275	0	31	96929
	1990	2330	277	0	31	96907
	1991	2267	376	0	31	96871
	1992	2267 *	376 *	0 *	31 *	96871

Table 3 continued

Tableau 3 suite

Sub-region / Sous-région	Year	Arable land	Land under permanent crops	Permanent meadows & pastures	Forest and woodland	Other land
Country / Pays	Année	Terres Arables	Cultures permanentes	Prairies et pâturages permanents	Forêts et terrains boisés	Autres terres
Libyan Arab Jamahiriya/ Jamahiriya arabe libyenne	1975	1740	315	12000	560	161339
	1980	1753	327	13000	600	160274
	1985	1787	340	13300	650	159877
	1988	1800	345	13300	680	159829
	1989	1805	345	13300	685	159819
	1990	1805	350	13300	690	159809
	1991	1810	350	13300	695	159799
	1992	1810 *	350 *	13300 *	700 *	159794
Morocco - Maroc	1975	7293	424	19200	7715	9998
	1980	7530	474	20900	7790	7936
	1985	7878	526	20900	7865	7461
	1988	8328	574	20900	7915	6913
	1989	8661	580	20900	7930	6559
	1990	8713	614	20900	9000	5403
	1991	8800	620	20900	9050	5260
	1992	8880 *	625 *	20900 *	9100 *	5125
Sudan - Soudan	1975	12115	45	98000	49340	78100
	1980	12550	57	99000	47738	78255
	1985	12600	58	100000	46340	78602
	1988	12740	58	108000	45440	71362
	1989	12830	60	110000	45140	69570
	1990	12830	70	110000	44840	69860
	1991	12830	70	110000	44540	70160
	1992	12830 *	72 *	110000 *	44240 *	70458
Tunisia - Tunisie	1975	3440	1420	3320	505	6851
	1980	3190	1510	3345	540	6951
	1985	3070	1600	3360	590	6916
	1988	2936	1910	3752	628	6310
	1989	2910	1920	3947	642	6117
	1990	2909	1945	4142	655	5885
	1991	2908	1967	4335	668	5658
	1992	2907 *	1985 *	4527 *	680 *	5437

Table 3 continued

Tableau 3 suite

Sub-region / Sous-région	Year	Arable land	Land under permanent crops	Permanent meadows & pastures	Forest and woodland	Other land
Country / Pays	Année	Terres Arables	Cultures permanentes	Prairies et pâturages permanents	Forêts et terrains boisés	Autres terres
TOTAL AFRICA /	1975	138433	16172	806477	720770	1133354
TOTAL AFRIQUE	1980	142425	16830	808952	707712	1139287
	1985	146085	17230	804581	694423	1152887
	1988	148276	17734	812388	686429	1150379
	1989	148839	17770	814511	683635	1150451
	1990	150009	17924	814498	679926	1152849
	1991	150275	18108	814577	677034	1155212
	1992	150471	18187	814695	674380	1157473

Source: FAO, *Agricultural Yearbooks 1991 and 1992*.
 Agrostat database, version 2.1

Table / Tableau 4

Area irrigated

Superficie irriguée

Table 4: Area irrigated
Tableau 4: Superficie irriguée

Sub-region / Sous-région Country / Pays	Area irrigated Superficie irriguée ('000 hectares)						Area irrigated as percent of crop land in 1992
	1975	1980	1985	1990	1991	1992	Superficie irriguée en pourcentage des terres cultivées en 1992
INDIAN OCEAN ISLANDS -							
PAYS INSULAIRES DE L'OCEAN INDIEN	480	661	843	937	947	957	
Comoros - Comores.....	...	...	...	...	...	...
Madagascar.....	465	645	826	920	930	940 *	30.1
Mauritius - Maurice.....	15	16	17	17	17	17 *	16.0
Seychelles.....	...	...	...	...	...	...
EAST AFRICA - AFRIQUE DE L'EST							
Burundi.....	46	56	66	72	74	75 *	5.6
Djibouti.....	...	...	...	...	...	...
Ethiopia - Ethiopie.....	158	160	162	162	162	162	1.2
Kenya.....	40	40	42	54	55	56 *	2.3
Rwanda.....	4	4	4	4	4	4 *	0.3
Somalia - Somalie.....	100	105	110	118	118	118 *	11.4
Uganda - Ouganda.....	4	6	9	9	9	9 *	0.1
United Republic of Tanzania - République-Unie de Tanzanie.....	52	120	127	150	152	154 *	4.6
SOUTHERN AFRICA - AFRIQUE AUSTRALE							
Angola.....	-	-	-	-	-	-	
Botswana.....	1	2	2	2	2	2 *	0.1
Lesotho.....	-	-	-	-	-	-	0.0
Malawi.....	13	18	18	20	20	20 *	0.8
Mozambique.....	40	65	93	115	115	115 *	3.7
Namibia - Namibie.....	4	4	4	4	4	4 *	0.6
Swaziland.....	56	58	62	62	64	65 *	31.9
Zambia - Zambie.....	18	19	28	32	32	32 *	0.6
Zimbabwe.....	70	157	192	220	220	220 *	7.8
CENTRAL AFRICA - AFRIQUE CENTRALE							
Cameroon - Cameroun.....	10	14	21	30	30	31 *	0.4
Central African Republic - République Centrafricaine.....	...	...	...	...	...	...
Congo.....	2	3	4	4	4	4 *	2.4
Equatorial Guinea - Guinée Equatoriale.....	...	...	...	...	...	...
Gabon.....	...	...	...	...	...	...
Sao Tome and Principe - Sao Tomé-et-Principe.....	...	...	...	...	...	...
Zaire - Zaïre.....	-	7	9	10	11	11 *	0.1

Table 4 continued

Tableau 4 suite

Sub-region / Sous-région							Area irrigated as percent of crop land in 1992
							Superficie irriguée en pourcentage des terres cultivées en 1992
Country / Pays	1975	1980	1985	1990	1991	1992	
SAHEL	330	384	440	481	481	483	
Burkina Faso.....	8	10	12	20	20	20 *	0.6
Cape Verde - Cap-Vert.....	2	2	2	2	2	2 *	5.1
Chad - Tchad.....	6	6	10	10	10	10 *	0.3
Gambia - Gambie.....	10	10	12	12	12	12 *	6.7
Guinea-Bissau - Guinée-Bissau.....	...	...	...	...	...	...
Mali.....	115	152	187	205	205	205 *	9.8
Mauritania - Mauritanie.....	11	11	12	12	12	12 *	5.9
Niger.....	18	23	30	40	40	42 *	1.2
Senegal - Sénégal.....	160	170	175	180	180	180 *	7.7
NON-SAHEL WEST AFRICA - AFRIQUE DE L'OUEST							
NON-SAHÉLIENNE	884	917	968	1016	1024	1032	
Benin - Bénin.....	4	5	6	6	6	6 *	0.3
Côte d'Ivoire.....	34	44	54	64	66	68 *	1.8
Ghana.....	7	7	7	8	8	8 *	0.3
Guinea - Guinée.....	6	8	18	25	26	27 *	3.7
Liberia - Libéria.....	2	2	2	2	2	2 *	0.5
Nigeria - Nigéria.....	812	825	846	870	875	880 *	2.7
Sierra Leone.....	13	20	28	34	34	34 *	5.3
Togo.....	6	6	7	7	7	7 *	1.0
NORTH AFRICA - AFRIQUE DU NORD	6154	6066	6372	6633	6694	6726	
Algeria - Algérie.....	244	253	338	384	388	392 *	5.1
Egypt - Egypte.....	2825	2445	2497	2607	2643	2650 *	100.0
Libyan Arab Jamahiriya - Jamahiriya arabe libyenne.....	200	225	234	244	246	248 *	11.5
Morocco - Maroc.....	1060	1217	1245	1270	1275	1280 *	13.1
Sudan - Soudan.....	1700	1770	1848	1900	1910	1920 *	14.9
Tunisia - Tunisie.....	125	156	210	228	232	236 *	5.2
TOTAL AFRICA - TOTAL AFRIQUE.....	8466	8866	9576	10135	10222	10280	

Source : FAO, Production Yearbooks, 1991 and 1992.

Regional and sub-regional totals do not include countries for which data are not available.

Les totaux par région et par sous-région n'incluent pas les pays pour lesquels les données ne sont pas disponibles.

Table / Tableau 5

Total production of
roundwood, fuelwood and
charcoal, and industrial
roundwood

Production totale de bois ronds,
de bois de chauffage et charbon
de bois, et de bois ronds
industriels

**Table 5: Total production of roundwood, fuelwood and charcoal,
and industrial roundwood**

**Tableau 5 : Production totale de bois ronds, de bois de chauffage et
charbon de bois, et de bois ronds industriels**
('000 m3)

Sub-region / Sous région	Year	Total roundwood	Fuelwood and charcoal	Industrial roundwood	Total roundwood production index
Country / Pays	Année	Bois ronds total	Bois de chauffage et charbon de bois	Bois ronds industriels	Indices de la production totale de bois ronds (1975 = 100)
INDIAN OCEAN ISLANDS - PAYS INSULAIRES DE L'OCEAN INDIEN	1975	5127	4639	488	100.0
	1980	6184	5359	825	120.6
	1985	7040	6228	812	137.3
	1986	7246	6432	814	141.3
	1987	7462	6643	819	145.5
	1988	7678	6858	820	149.8
	1989	7898	7076	822	154.0
	1990	8123	7305	818	158.4
	1991	8352	7531	821	162.9
Comoros - Comores	1975	-	-	-	-
	1980	-	-	-	-
	1985	-	-	-	-
	1986	-	-	-	-
	1987	-	-	-	-
	1988	-	-	-	-
	1989	-	-	-	-
	1990	-	-	-	-
	1991	-	-	-	-
Madagascar	1975	5085	4617	468	100.0
	1980	6142	5335	807	120.8
	1985	7023	6216	807	138.1
	1986	7222	6415	807	142.0
	1987	7429	6622	807	146.1
	1988	7644	6837	807	150.3
	1989	7866	7059	807	154.7
	1990	8096	7289	807	159.2
	1991	8335	7528	807	163.9
Mauritius - Maurice	1975	42	22	20	100.0
	1980	42	24	18	100.0
	1985	17	12	5	40.5
	1986	24	17	7	57.1
	1987	33	21	12	78.6
	1988	34	21	13	81.0
	1989	32	17	15	76.2
	1990	27	16	11	64.3
	1991	17	3	14	40.5

Table 5 continued

Tableau 5 suite

Sub-region / Sous région	Year	Total roundwood	Fuelwood and charcoal	Industrial roundwood	Total roundwood production index
Country / Pays	Année	Bois ronds total	Bois de chauffage et charbon de bois	Bois ronds industriels	Indices de la production totale de bois ronds (1975 = 100)
Seychelles	1975	-	-	-	-
	1980	-	-	-	-
	1985	-	-	-	-
	1986	-	-	-	-
	1987	-	-	-	-
	1988	-	-	-	-
	1989	-	-	-	-
	1990	-	-	-	-
	1991	-	-	-	-
EAST AND SOUTH AFRICA -	1975	87495	82896	4599	100.0
AFRIQUE DE L'EST ET AUSTRALE	1980	105501	99669	5832	120.6
	1985	123722	116987	6735	141.4
	1986	127684	120630	7054	145.9
	1987	131891	124444	7447	150.7
	1988	135986	128408	7578	155.4
	1989	141046	133314	7732	161.2
	1990	144440	136593	7847	165.1
	1991	149096	141099	7997	170.4
Burundi	1975	2883	2851	32	100.0
	1980	3179	3144	35	110.3
	1985	3641	3597	44	126.3
	1986	3750	3705	45	130.1
	1987	3859	3812	47	133.9
	1988	3971	3923	48	137.7
	1989	4093	4044	49	142.0
	1990	4210	4162	48	146.0
	1991	4343	4291	52	150.6
Djibouti	1975	-	-	-	-
	1980	-	-	-	-
	1985	-	-	-	-
	1986	-	-	-	-
	1987	-	-	-	-
	1988	-	-	-	-
	1989	-	-	-	-
	1990	-	-	-	-
	1991	-	-	-	-

Table 5 continued

Tableau 5 suite

Sub-region / Sous région	Year	Total roundwood	Fuelwood and charcoal	Industrial roundwood	Total roundwood production index
Country / Pays	Année	Bois ronds total	Bois de chauffage et charbon de bois	Bois ronds industriels	Indices de la production totale de bois ronds (1975 = 100)
Ethiopia - Ethiopie	1975	29737	28423	1314	100.0
	1980	33564	32099	1465	112.9
	1985	37478	35693	1785	126.0
	1986	38340	36574	1775	129.0
	1987	39304	37539	1765	132.2
	1988	40327	38571	1756	135.6
	1989	41405	39656	1749	139.2
	1990	42518	40793	1725	143.0
	1991	43686	41973	1713	146.9
Kenya	1975	21475	20524	951	100.0
	1980	24799	23402	1397	115.5
	1985	29827	28278	1549	138.9
	1986	30912	29320	1592	143.9
	1987	32020	30385	1635	149.1
	1988	33169	31483	1686	154.5
	1989	34357	32626	1731	160.0
	1990	35580	33816	1764	165.7
	1991	36861	35063	1798	171.6
Rwanda	1975	5001	4941	60	100.0
	1980	4796	4520	276	95.9
	1985	5842	5602	240	116.8
	1986	5842	5602	240	116.8
	1987	5842	5602	240	116.8
	1988	5842	5602	240	116.8
	1989	6608	6368	240	132.1
	1990	5581	5353	228	111.6
	1991	5620	5392	228	112.4
Somalia - Somalie	1975	3106	3051	55	100.0
	1980	5095	5022	73	164.0
	1985	6065	5983	82	195.3
	1986	6272	6188	84	201.9
	1987	6493	6408	85	209.0
	1988	6710	6623	87	216.0
	1989	6929	6840	89	223.1
	1990	7133	7042	91	229.7
	1991	7326	7233	93	235.9

Table 5 continued

Tableau 5 suite

Sub-region / Sous région	Year	Total roundwood	Fuelwood and charcoal	Industrial roundwood	Total roundwood production index
Country / Pays	Année	Bois ronds total	Bois de chauffage et charbon de bois	Bois ronds industriels	Indices de la production totale de bois ronds (1975 = 100)
Uganda - Ouganda	1975	9055	7837	1218	100.0
	1980	10600	9201	1399	117.1
	1985	12628	10979	1649	139.5
	1986	13088	11381	1707	144.5
	1987	13572	11805	1767	149.9
	1988	14066	12246	1820	155.3
	1989	14590	12704	1886	161.1
	1990	15142	13187	1955	167.2
	1991	15715	13689	2026	173.6
Tanzania, United Republic of / Tanzanie, République-Unie de	1975	16238	15269	969	100.0
	1980	23468	22281	1187	144.5
	1985	28241	26855	1386	173.9
	1986	29471	27860	1611	181.5
	1987	30801	28893	1908	189.7
	1988	31901	29960	1941	196.5
	1989	33064	31076	1988	203.6
	1990	34276	32240	2036	211.1
	1991	35545	33458	2087	218.9
SOUTHERN AFRICA - AFRIQUE AUSTRALE	1975	36247	30565	5682	100.0
	1980	43103	37563	5540	118.9
	1985	49695	44008	5687	137.1
	1986	51026	45325	5701	140.8
	1987	52623	46727	5896	145.2
	1988	53822	47728	6094	148.5
	1989	54859	48646	6213	151.3
	1990	56032	49586	6446	154.6
	1991	57111	50549	6562	157.6
Angola	1975	4695	3607	1088	100.0
	1980	5159	4269	890	109.9
	1985	5709	4842	867	121.6
	1986	5833	4969	864	124.2
	1987	5965	5102	863	127.1
	1988	6108	5240	868	130.1
	1989	6278	5388	890	133.7
	1990	6448	5539	909	137.3
	1991	6593	5661	932	140.4

Table 5 continued

Tableau 5 suite

Sub-region / Sous région	Year	Total roundwood	Fuelwood and charcoal	Industrial roundwood	Total roundwood production index
Country / Pays	Année	Bois ronds total	Bois de chauffage et charbon de bois	Bois ronds industriels	Indices de la production totale de bois ronds (1975 = 100)
Botswana	1975	804	755	49	100.0
	1980	960	901	59	119.4
	1985	1154	1083	71	143.5
	1986	1198	1124	74	149.0
	1987	1243	1166	77	154.6
	1988	1291	1211	80	160.6
	1989	1339	1256	83	166.5
	1990	1389	1303	86	172.8
	1991	1440	1351	89	179.1
Lesotho	1975	410	410	-	100.0
	1980	463	463	-	112.9
	1985	532	532	-	129.8
	1986	547	547	-	133.4
	1987	563	563	-	137.3
	1988	579	579	-	141.2
	1989	596	596	-	145.4
	1990	613	613	-	149.5
	1991	631	631	-	153.9
Malawi	1975	4895	4622	273	100.0
	1980	5892	5523	369	120.4
	1985	6872	6555	317	140.4
	1986	7112	6786	326	145.3
	1987	7368	7032	336	150.5
	1988	7629	7282	347	155.9
	1989	7901	7543	358	161.4
	1990	8215	7814	401	167.8
	1991	8515	8103	412	174.0
Mozambique	1975	10164	9239	925	100.0
	1980	13245	12306	939	130.3
	1985	15216	14270	946	149.7
	1986	15590	14643	947	153.4
	1987	15972	15022	950	157.1
	1988	15994	15022	972	157.4
	1989	16010	15022	988	157.5
	1990	16036	15022	1014	157.8
	1991	16065	15022	1043	158.1

Table 5 continued

Tableau 5 suite

Sub-region / Sous région	Year	Total roundwood	Fuelwood and charcoal	Industrial roundwood	Total roundwood production index
Country / Pays	Année	Bois ronds total	Bois de chauffage et charbon de bois	Bois ronds industriels	Indices de la production totale de bois ronds (1975 = 100)
Namibia - Namibie.	1975	...	...	...	...
	1980	...	...	...	...
	1985	...	...	...	...
	1986	...	...	...	...
	1987	...	...	...	...
	1988	...	...	...	...
	1989	...	...	...	...
	1990	...	...	...	...
	1991	...	...	...	...
Swaziland	1975	2529	468	2061	100.0
	1980	2154	543	1611	85.2
	1985	2223	560	1663	87.9
	1986	2223	560	1663	87.9
	1987	2223	560	1663	87.9
	1988	2223	560	1663	87.9
	1989	2223	560	1663	87.9
	1990	2223	560	1663	87.9
	1991	2223	560	1663	87.9
Zambia - Zambie	1975	7713	7294	419	100.0
	1980	8866	8404	462	114.9
	1985	10820	10285	535	140.3
	1986	11258	10708	550	146.0
	1987	11716	11142	574	151.9
	1988	12166	11565	601	157.7
	1989	12650	12012	638	164.0
	1990	13215	12466	749	171.3
	1991	13719	12952	767	177.9
Zimbabwe	1975	5037	4170	867	100.0
	1980	6364	5154	1210	126.3
	1985	7169	5881	1288	142.3
	1986	7265	5988	1277	144.2
	1987	7573	6140	1433	150.3
	1988	7832	6269	1563	155.5
	1989	7862	6269	1593	156.1
	1990	7893	6269	1624	156.7
	1991	7925	6269	1656	157.3

Table 5 continued

Tableau 5 suite

Sub-region / Sous région	Year	Total roundwood	Fuelwood and charcoal	Industrial roundwood	Total roundwood production index
Country / Pays	Année	Bois ronds total	Bois de chauffage et charbon de bois	Bois ronds industriels	Indices de la production totale de bois ronds (1975 = 100)
CENTRAL AFRICA - AFRIQUE CENTRALE	1975	39871	33964	5907	100.0
	1980	45156	38068	7088	113.3
	1985	56109	47953	8156	140.7
	1986	57648	49405	8243	144.6
	1987	59257	50811	8446	148.6
	1988	61750	52711	9039	154.9
	1989	63056	53731	9325	158.2
	1990	65314	55388	9926	163.8
	1991	66822	56972	9850	167.6
Cameroon - Cameroun	1975	8522	7011	1511	100.0
	1980	9570	7374	2196	112.3
	1985	12266	9496	2770	143.9
	1986	12588	9801	2787	147.7
	1987	12935	10121	2814	151.8
	1988	13184	10461	2723	154.7
	1989	13700	10809	2891	160.8
	1990	14337	11177	3160	168.2
	1991	14637	11523	3114	171.8
Central African Republic / République centrafricaine	1975	2719	2220	499	100.0
	1980	3011	2485	526	110.7
	1985	3423	2925	498	125.9
	1986	3424	2990	434	125.9
	1987	3451	3055	396	126.9
	1988	3494	3055	439	128.5
	1989	3538	3055	483	130.1
	1990	3490	3055	435	128.4
	1991	3444	3055	389	126.7
Congo	1975	1720	1225	495	100.0
	1980	2338	1520	818	135.9
	1985	2589	1767	822	150.5
	1986	2795	1822	973	162.5
	1987	3071	1883	1188	178.5
	1988	3472	1952	1520	201.9
	1989	3567	2009	1558	207.4
	1990	3682	2079	1603	214.1
	1991	3760	2147	1613	218.6

Table 5 continued

Tableau 5 suite

Sub-region / Sous région	Year	Total roundwood	Fuelwood and charcoal	Industrial roundwood	Total roundwood production index
Country / Pays	Année	Bois ronds total	Bois de chauffage et charbon de bois	Bois ronds industriels	Indices de la production totale de bois ronds (1975 = 100)
Equatorial Guinea / Guinée équatoriale	1975	434	384	50	100.0
	1980	445	421	24	102.5
	1985	607	447	160	139.9
	1986	607	447	160	139.9
	1987	607	447	160	139.9
	1988	607	447	160	139.9
	1989	607	447	160	139.9
	1990	607	447	160	139.9
	1991	607	447	160	139.9
Gabon	1975	3660	2197	1463	100.0
	1980	3113	1766	1347	85.1
	1985	3540	2158	1382	96.7
	1986	3533	2238	1295	96.5
	1987	3541	2319	1222	96.7
	1988	3781	2400	1381	103.3
	1989	3905	2483	1422	106.7
	1990	4200	2567	1633	114.8
	1991	4286	2653	1633	117.1
Sao Tome and Principe - Sao Tomé-et-Principe	1975	5	-	5	100.0
	1980	8	-	8	160.0
	1985	6	-	6	120.0
	1986	7	-	7	140.0
	1987	8	-	8	160.0
	1988	9	-	9	180.0
	1989	9	-	9	180.0
	1990	9	-	9	180.0
	1991	9	-	9	180.0
Zaire - Zaïre	1975	22811	20927	1884	100.0
	1980	26671	24502	2169	116.9
	1985	33678	31160	2518	147.6
	1986	34694	32107	2587	152.1
	1987	35644	32986	2658	156.3
	1988	37203	34396	2807	163.1
	1989	37730	34928	2802	165.4
	1990	38989	36063	2926	170.9
	1991	40079	37147	2932	175.7

Table 5 continued

Tableau 5 suite

Sub-region / Sous région	Year	Total roundwood	Fuelwood and charcoal	Industrial roundwood	Total roundwood production index
Country / Pays	Année	Bois ronds total	Bois de chauffage et charbon de bois	Bois ronds industriels	Indices de la production totale de bois ronds (1975 = 100)
SAHEL	1975	19379	17780	1599	100.0
	1980	22736	20895	1841	117.3
	1985	26067	23971	2096	134.5
	1986	26874	24719	2155	138.7
	1987	27450	25234	2216	141.6
	1988	27988	25710	2278	144.4
	1989	28567	26229	2338	147.4
	1990	29697	27295	2402	153.2
	1991	30640	28169	2471	158.1
Burkina Faso	1975	5413	5167	246	100.0
	1980	6766	6456	310	125.0
	1985	7659	7313	346	141.5
	1986	7861	7506	355	145.2
	1987	8066	7701	365	149.0
	1988	8285	7910	375	153.1
	1989	8513	8128	385	157.3
	1990	8745	8350	395	161.6
	1991	8995	8588	407	166.2
Cape Verde - Cap-Vert	1975	-	-	-	-
	1980	-	-	-	-
	1985	-	-	-	-
	1986	-	-	-	-
	1987	-	-	-	-
	1988	-	-	-	-
	1989	-	-	-	-
	1990	-	-	-	-
	1991	-	-	-	-
Chad - Tchad	1975	2865	2458	407	100.0
	1980	3179	2729	450	111.0
	1985	3566	3062	504	124.5
	1986	3653	3136	517	127.5
	1987	3746	3217	529	130.8
	1988	3835	3292	543	133.9
	1989	3937	3381	556	137.4
	1990	4034	3463	571	140.8
	1991	4141	3553	588	144.5

Table 5 continued

Tableau 5 suite

Sub-region / Sous région	Year	Total roundwood	Fuelwood and charcoal	Industrial roundwood	Total roundwood production index
Country / Pays	Année	Bois ronds total	Bois de chauffage et charbon de bois	Bois ronds industriels	Indices de la production totale de bois ronds (1975 = 100)
Gambia - Gambie	1975	776	766	10	100.0
	1980	904	894	10	116.5
	1985	886	865	21	114.2
	1986	898	877	21	115.7
	1987	904	883	21	116.5
	1988	910	889	21	117.3
	1989	922	901	21	118.8
	1990	928	907	21	119.6
	1991	940	919	21	121.1
Guinea-Bissau - Guinée-Bissau	1975	502	394	108	100.0
	1980	549	422	127	109.4
	1985	557	422	135	111.0
	1986	559	422	137	111.4
	1987	561	422	139	111.8
	1988	563	422	141	112.2
	1989	565	422	143	112.5
	1990	567	422	145	112.9
	1991	569	422	147	113.3
Mali	1975	3797	3551	246	100.0
	1980	4165	3898	267	109.7
	1985	4803	4502	301	126.5
	1986	4949	4637	312	130.3
	1987	5099	4774	325	134.3
	1988	5256	4920	336	138.4
	1989	5418	5072	346	142.7
	1990	5589	5232	357	147.2
	1991	5768	5400	368	151.9
Mauritania - Mauritanie	1975	9	5	4	100.0
	1980	10	6	4	111.1
	1985	10	6	4	111.1
	1986	11	7	4	122.2
	1987	12	7	5	133.3
	1988	12	7	5	133.3
	1989	12	7	5	133.3
	1990	12	7	5	133.3
	1991	13	8	5	144.4

Table 5 continued

Tableau 5 suite

Sub-region / Sous région	Year	Total roundwood	Fuelwood and charcoal	Industrial roundwood	Total roundwood production index
Country / Pays	Année	Bois ronds total	Bois de chauffage et charbon de bois	Bois ronds industriels	Indices de la production totale de bois ronds (1975 = 100)
Niger	1975	2989	2805	184	100.0
	1980	3580	3359	221	119.8
	1985	4235	3974	261	141.7
	1986	4374	4104	270	146.3
	1987	4513	4235	278	151.0
	1988	4655	4368	287	155.7
	1989	4802	4506	296	160.7
	1990	4956	4650	306	165.8
	1991	5116	4800	316	171.2
Senegal - Sénégal	1975	3028	2634	394	100.0
	1980	3583	3131	452	118.3
	1985	4351	3827	524	143.7
	1986	4569	4030	539	150.9
	1987	4549	3995	554	150.2
	1988	4472	3902	570	147.7
	1989	4398	3812	586	145.2
	1990	4866	4264	602	160.7
	1991	5098	4479	619	168.4
NON-SAHEL WEST AFRICA - AFRIQUE DE L'OUEST NON-SAHELIENNE	1975	104036	92311	11725	100.0
	1980	119395	103857	15538	114.8
	1985	136905	122422	14483	131.6
	1986	140799	126576	14223	135.3
	1987	144566	130451	14115	139.0
	1988	148229	134406	13823	142.5
	1989	152356	138451	13905	146.4
	1990	157085	142467	14618	151.0
	1991	160947	146349	14598	154.7
Benin - Bénin	1975	3313	3137	176	100.0
	1980	3766	3569	197	113.7
	1985	4329	4108	221	130.7
	1986	4466	4230	236	134.8
	1987	4604	4363	241	139.0
	1988	4742	4495	247	143.1
	1989	4889	4633	256	147.6
	1990	5046	4775	271	152.3
	1991	5203	4924	279	157.0

Table 5 continued

Tableau 5 suite

Sub-region / Sous région	Year	Total roundwood	Fuelwood and charcoal	Industrial roundwood	Total roundwood production index
Country / Pays	Année	Bois ronds total	Bois de chauffage et charbon de bois	Bois ronds industriels	Indices de la production totale de bois ronds (1975 = 100)
Côte d'Ivoire	1975	9887	5501	4386	100.0
	1980	12018	6657	5361	121.6
	1985	12012	8071	3941	121.5
	1986	12055	8385	3670	121.9
	1987	11972	8708	3264	121.1
	1988	11790	9042	2748	119.2
	1989	12190	9387	2803	123.3
	1990	12654	9751	2903	128.0
	1991	13061	10129	2932	132.1
Ghana	1975	10556	8848	1708	100.0
	1980	12932	11951	981	122.5
	1985	16540	15459	1081	156.7
	1986	16584	15483	1101	157.1
	1987	16825	15724	1101	159.4
	1988	17025	15924	1101	161.3
	1989	17169	16068	1101	162.6
	1990	17739	16068	1671	168.0
	1991	17122	15512	1610	162.2
Guinea - Guinée	1975	3429	2911	518	100.0
	1980	3167	2676	491	92.4
	1985	3520	2992	528	102.7
	1986	3444	3073	371	100.4
	1987	3541	3160	381	103.3
	1988	3644	3252	392	106.3
	1989	3753	3350	403	109.4
	1990	3868	3453	415	112.8
	1991	3988	3560	428	116.3
Liberia - Libéria	1975	3305	2744	561	100.0
	1980	4856	3996	860	146.9
	1985	4461	3916	545	135.0
	1986	5306	4626	680	160.5
	1987	5646	4692	954	170.8
	1988	5909	4752	1157	178.8
	1989	5979	4818	1161	180.9
	1990	6056	4890	1166	183.2
	1991	6134	4962	1172	185.6

Table 5 continued

Tableau 5 suite

Sub-region / Sous région	Year	Total roundwood	Fuelwood and charcoal	Industrial roundwood	Total roundwood production index
Country / Pays	Année	Bois ronds total	Bois de chauffage et charbon de bois	Bois ronds industriels	Indices de la production totale de bois ronds (1975 = 100)
Nigeria - Nigéria	1975	66368	62259	4109	100.0
	1980	79521	72161	7360	119.8
	1985	92527	84658	7869	139.4
	1986	95547	87479	7868	143.7
	1987	98287	90419	7868	148.1
	1988	101336	93468	7868	152.7
	1989	104493	96625	7868	157.4
	1990	107732	99864	7868	162.3
	1991	111059	103191	7868	167.3
Sierra Leone	1975	6591	6453	138	100.0
	1980	2473	2315	158	37.5
	1985	2745	2602	143	41.6
	1986	2805	2665	140	42.6
	1987	2870	2730	140	43.5
	1988	2938	2798	140	44.6
	1989	3014	2874	140	45.7
	1990	3086	2948	138	46.8
	1991	3146	3024	122	47.7
Togo	1975	587	458	129	100.0
	1980	662	532	130	112.8
	1985	771	616	155	131.3
	1986	792	635	157	134.9
	1987	821	655	166	139.9
	1988	845	675	170	144.0
	1989	869	696	173	148.0
	1990	904	718	186	154.0
	1991	1234	1047	187	210.2
NORTH AFRICA - AFRIQUE DU NORD	1975	21473	19185	2288	100.0
	1980	25031	22480	2551	116.6
	1985	29279	26019	3260	136.4
	1986	29900	26740	3160	139.2
	1987	30700	27464	3236	143.0
	1988	31304	28202	3102	145.8
	1989	32411	28960	3451	150.9
	1990	33070	29728	3342	154.0
	1991	34484	30518	3966	160.6

Table 5 continued

Tableau 5 suite

Sub-region / Sous région	Year	Total roundwood	Fuelwood and charcoal	Industrial roundwood	Total roundwood production index
Country / Pays	Année	Bois ronds total	Bois de chauffage et charbon de bois	Bois ronds industriels	Indices de la production totale de bois ronds (1975 = 100)
Algeria - Algérie	1975	1394	1219	175	100.0
	1980	1627	1427	200	116.7
	1985	1889	1659	230	135.5
	1986	1943	1707	236	139.4
	1987	1996	1754	242	143.2
	1988	2050	1802	248	147.1
	1989	2105	1851	254	151.0
	1990	2162	1901	261	155.1
	1991	2221	1953	268	159.3
Egypt - Egypte	1975	1556	1484	72	100.0
	1980	1752	1671	81	112.6
	1985	1995	1902	93	128.2
	1986	2045	1950	95	131.4
	1987	2095	1998	97	134.6
	1988	2146	2046	100	137.9
	1989	2197	2095	102	141.2
	1990	2248	2144	104	144.5
	1991	2300	2193	107	147.8
Libyan Arab Jamahiriya / Jamahiriya arabe libyenne	1975	526	488	38	100.0
	1980	628	536	92	119.4
	1985	636	536	100	120.9
	1986	637	536	101	121.1
	1987	639	536	103	121.5
	1988	640	536	104	121.7
	1989	641	536	105	121.9
	1990	643	536	107	122.2
	1991	645	536	109	122.6
Morocco - Maroc	1975	1226	738	488	100.0
	1980	1586	1115	471	129.4
	1985	2160	1277	883	176.2
	1986	2013	1297	716	164.2
	1987	2041	1318	723	166.5
	1988	1861	1339	522	151.8
	1989	2136	1361	775	174.2
	1990	1977	1382	595	161.3
	1991	2549	1405	1144	207.9

Table 5 continued

Tableau 5 suite

Sub-region / Sous région	Year	Total roundwood	Fuelwood and charcoal	Industrial roundwood	Total roundwood production index
Country / Pays	Année	Bois ronds total	Bois de chauffage et charbon de bois	Bois ronds industriels	Indices de la production totale de bois ronds (1975 = 100)
Sudan - Soudan	1975	14570	13140	1430	100.0
	1980	16919	15327	1592	116.1
	1985	19747	17908	1839	135.5
	1986	20334	18444	1890	139.6
	1987	20924	18982	1942	143.6
	1988	21530	19534	1996	147.8
	1989	22155	20103	2052	152.1
	1990	22791	20682	2109	156.4
	1991	23449	21279	2170	160.9
Tunisia - Tunisie	1975	2201	2116	85	100.0
	1980	2519	2404	115	114.4
	1985	2852	2737	115	129.6
	1986	2928	2806	122	133.0
	1987	3005	2876	129	136.5
	1988	3077	2945	132	139.8
	1989	3177	3014	163	144.3
	1990	3249	3083	166	147.6
	1991	3320	3152	168	150.8
TOTAL AFRICA - TOTAL AFRIQUE	1975	313628	281340	32288	100.0
	1980	367106	327891	39215	117.1
	1985	428817	387588	41229	136.7
	1986	441177	399827	41350	140.7
	1987	453049	411774	42175	144.7
	1988	465757	424023	42734	148.8
	1989	480193	436407	43786	153.1
	1990	493761	448362	45399	157.4
	1991	507452	461187	46265	161.8

Source: FAO, AGROSTAT database

Base de données AGROSTAT de la FAO

Figures 3 and/et 4

Soil degradation

Dégradation du sol

Table / Tableau 6

**Climatic classes and
soil constraints**

**Groupes climatiques et
contraintes du sol**

Soil degradation

Erosion degrades the soil by reducing its ability to retain water, depleting soils of their nutrients and reducing the depth available for the roots to take hold. Land, therefore, loses its productivity and croplands shrink. Farmers are thus forced to overuse remaining land and to move into forests and rangelands. Erosion, besides degrading the soil, silts-up reservoirs, rivers, lakes and ports thus reducing reservoir storage capacity and increasing the incidence and severity of floods.

Figure 3 depicts that soil erosion from water is a serious environmental problem both in the World and in Africa. In Africa the more serious types of soil erosion are water (46%) and wind (38%).

The main causes of soil degradation are deforestation over-exploitation of vegetation for fuelwood in dry areas, overgrazing by livestock, inappropriate pattern of land use, and industrial and waste accumulation and acidification by airborne pollutants.

Overgrazing is the most serious cause of soil degradation in Africa (50%) and the World (35%) as can be observed from Figure 4. Overgrazing by livestock causes loss of vegetation thus exposing the soil to water and wind erosion. Faulty agricultural practices, such as cultivating hillsides, expose the soil to water and wind erosion during fallow periods and it accounts for 24% of soil degradation in Africa followed by deforestation (14%) and fuelwood collection (13%).

Dégradation du sol

L'érosion dégrade le sol en réduisant sa capacité à retenir l'eau; en démunissant les sols de leurs substances nutritives et en réduisant les profondeurs que disposent les racines pour ne pas lâcher prise. Comme conséquence, la terre perd sa productivité avec un rétrécissement des parties arables. Les agriculteurs sont donc obligés de sur-utiliser le reste des terres, et de se déplacer vers les forêts et les régions classées. En plus de la dégradation du sol, l'érosion envase les bassins, les rivières, les lacs et les ports, et réduit par conséquent la capacité de stockage des bassins tout en augmentant l'incidence et la rigueur des flux.

Le graphique no.3 montre que l'érosion du sol causée par l'eau est un problème sérieux de l'environnement à la fois dans le monde et en Afrique. En Afrique, les types d'érosion du sol les plus importants sont l'eau (46%) et le vent (38%).

Les principales causes de dégradation du sol sont le déboisement, la surexploitation de la végétation pour le bois de chauffage dans les régions sèches, le surpâturage par le bétail, l'utilisation des terres de façon inappropriée, et la prolifération des industries et des déchets ainsi que l'acidification au moyen de polluants en suspension dans l'air.

Le surpâturage est la plus sérieuse cause de dégradation du sol en Afrique (50%) et dans le monde (35%) comme l'indigne le graphique 4. Le surpâturage par le bétail endommage la végétation et expose de ce fait le sol à l'érosion par l'eau et par le vent. Les pratiques agricoles défectueuses, telles que la culture au flanc des montagnes, exposent le sol à l'érosion par l'eau et par le vent durant les périodes de jachère, et cela compte pour 24% de la dégradation du sol en Afrique, suivi par le déboisement (14%) et le ramassage du bois de chauffage (13%).

Figure 3: Types of soil degradation/Types de dégradation du sol

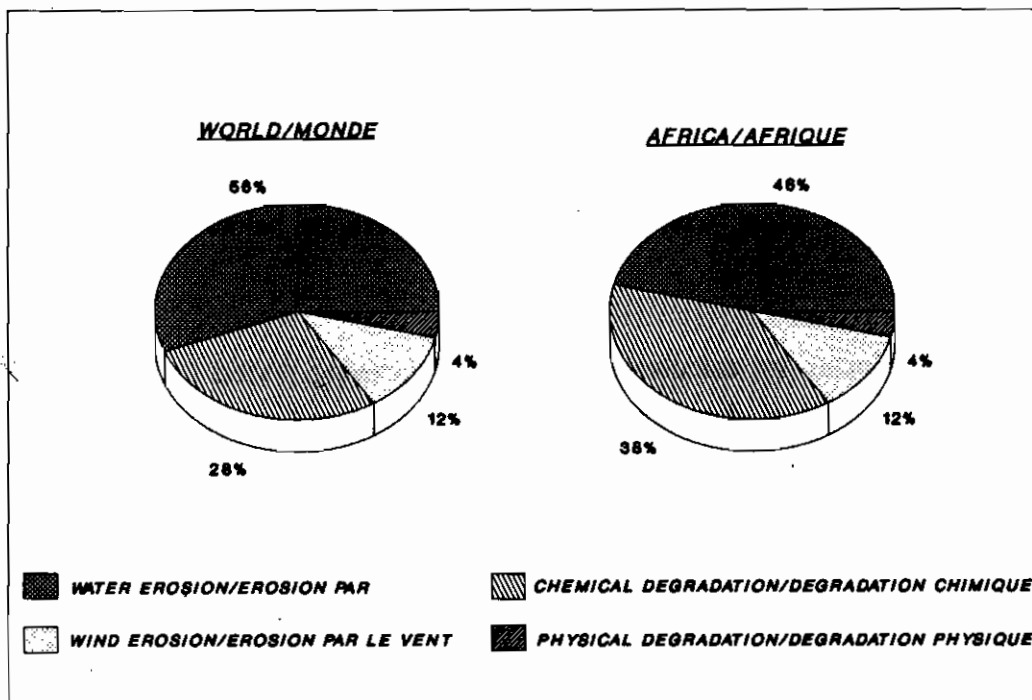
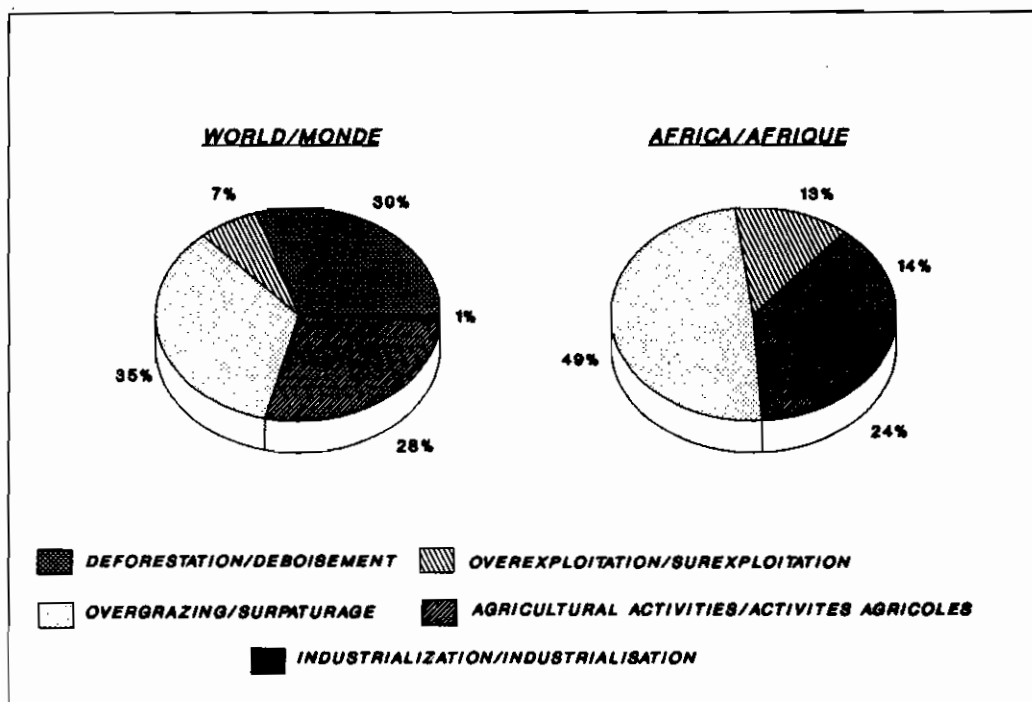


Figure 4: Causes of soil degradation/Causes de dégradation du sol



Source: World Resources 1992-93, Figures 8.1 and 8.2

Table 6

Climatic classes and soil constraints

Temperature zones in Africa fall under *tropical* with monthly mean temperature above 18°C, and *subtropical*, with monthly mean temperature below 18°C for one or more months.

Climatic classes are calculated by length of growing period (LGP). LGP is defined as the number of days when both temperature and moisture permit crop growth. Days with mean temperatures above 5°C and with soil moisture resulting from rainfall at least equivalent to half potential evapotranspiration are considered favourable to growth. Accordingly areas are classified as *arid* if LGP is less or equal to 75 days; *semi-arid* if LGP is between 75 and 120 days; *humid* if LGP is between 180 and 365 days; and *cold* for zero LGP. Detailed information on LGP and other pertinent agroclimatological data by country and selected weather stations is given in the African Compendium of Environment Statistics, 1991.

Land with no inherent soil constraints refers to land whose soil has no chemical and physical constraints that will significantly affect agronomic management and agricultural productivity.

World Resources 1992-93, p. 284.

Tableau 6

Groupes climatiques et contraintes du sol

Les zones de température en Afrique sont soit *tropicales* avec une température moyenne mensuelle de plus de 18°C, soit *sous-tropicales* avec une température moyenne mensuelle au-dessous de 18°C pendant un ou plusieurs mois.

Les groupes climatiques sont déterminés par la longueur de la période de culture (LGP). Celle-ci est définie comme le nombre de jours pendant lesquels la température et l'humidité permettent à la culture de pousser. Les jours considérés comme favorables à cette croissance sont ceux avec des températures moyennes dépassant 5°C et une humidité du sol résultant d'une pluviométrie au moins équivalente à la moitié de l'évapotranspiration potentielle. En conséquence, les zones sont classées *arides* si la LGP est inférieure ou égale à 75 jours; *semi-arides* si la LGP est comprise entre 75 et 120 jours; *humides* si la LGP est comprise entre 180 et 365 jours; et *froides* pour une LGP égale à zero. Des informations détaillées sur la LGP et sur d'autres données agroclimatologiques pertinentes par pays et suivant des stations de météo choisies, sont données dans le Recueil des statistiques africaines de l'environnement de 1991.

Les terres sans contraintes inhérentes du sol concernent les terres dont le sol n'a aucune contrainte chimique et physique qu'affectent de façon significative la gestion agronomique et la productivité agricole.

World resources 1992-93, p. 284.

Table 6: Climatic classes and soil constraints
Tableau 6: Groupes climatiques et contraintes du sol

Sub-region / country	Total land area* (‘000 ha)	Percent of total land area by temprature zones		Percent of total land area by climatic classes			
		Tropical	Sub-tropical	Arid	Semi-arid	Humid	Cold
Sous-région / pays	Superficie totale* (‘000 ha)	Pourcentage de la superficie totale par zones de température		Pourcentage de la superficie totale par groupes climatiques			
		Tropical	Sous-tropical	Aride	Semi-aride	Humide	Froid
INDIAN OCEAN							
ISLAND COUNTRIES	58607	100	0	5	8	87	0
Comoros	223	100	0	0	0	100	0
Madagascar.....	58154	100	0	5	8	87	0
Mauritius.....	203	100	0	0	0	100	0
Seychelles	27	...	...	...	...	...	...
EAST AFRICA	345712	100	0	43	13	43	1
Burundi	2565	100	0	0	0	100	0
Djibouti	2318	100	0	100	0	0	0
Ethiopia	110100	100	0	38	16	44	2
Kenya	56969	100	0	71	14	15	0
Rwanda	2467	100	0	0	0	100	0
Somalia	62734	100	0	93	7	0	0
Uganda	19955	100	0	0	5	95	0
United Republic of Tanzania ..	88604	100	0	7	15	78	0
SOUTHERN AFRICA	469250	90	10	24	16	60	0
Angola	124670	99	1	4	8	87	0
Botswana	56673	87	13	62	38	0	0
Lesotho	3035	100	0	15	13	66	6
Malawi	9408	100	0	0	0	100	0
Mozambique	78409	100	0	8	9	82	0
Namibia	82329	59	41	78	21	1	0
Swaziland	1720	14	86	0	26	74	0
Zambia/Zambie	74339	100	0	0	2	98	0
Zimbabwe	38667	100	0	8	41	51	0
CENTRAL AFRICA	398416	100	0	0	0	100	0
Cameroon	46540	100	0	0	1	99	0
Central African Republic	62298	100	0	0	0	100	0
Congo	34150	100	0	0	0	100	0
Equatorial Guinea	2805	100	0	0	0	100	0
Gabon	25767	100	0	0	0	100	0
Sao Tome & Principe	96	...	...	...	...	...	...
Zaire	226760	100	0	0	0	100	0

Table 6: Climatic classes and soil constraints
Tableau 6: Groupes climatiques et contraintes du sol

Land with no inherent soil constraints					Sub-region / country
('000 hectares)	Of which percent				
	Arid	Semi-arid	Humid	Cold	
Terres sans contrainte inhérente du sol					Sous-région / pays
('000 hectares)	dont, en pourcentage				
	Aride	Semi-aride	Humide	Froid	
PAYS INSULAIRES					
DE L'OCEAN INDIEN					
2323	7	30	63	0	
43	0	0	100	0	..... Comores
2273	7	30	62	0	..... Madagascar
7	0	0	100	0	..... Maurice
					..... Seychelles
AFRIQUE DE L'EST					
49116	46	17	35	2	
66	0	0	100	0	..... Burundi
757	100	0	0	0	..... Djibouti
30079	38	21	38	3	..... Ethiopie
7342	79	11	10	0	..... Kenya
91	0	0	100	0	..... Rwanda
4519	98	2	0	0	..... Somalie
1210	0	8	92	0	..... Ouganda
5052	6	21	74	0	..... République-Unie de Tanzanie
AFRIQUE AUSTRALE					
39438	36	16	48	0	
15726	17	15	68	0	..... Angola
4792	72	27	1	0	..... Botswana
1	100	0	0	0	..... Lesotho
1097	0	0	100	0	..... Malawi
4952	7	7	86	0	..... Mozambique
9308	81	18	1	0	..... Namibie
178	0	7	93	0	..... Swaziland
2426	0	0	100	0	..... Zambie
958	12	65	23	0	..... Zimbabwe
AFRIQUE CENTRALE					
7849	0	0	100	0	
1949	0	2	98	0	..... Cameroun
800	0	0	100	0	..... République centrafricaine
0	0	0	0	0	..... Congo
21	0	0	100	0	..... Guinée équatoriale
0	0	0	0	0	..... Gabon
					..... Sao Tomé et Principe
5079	0	0	100	0	..... Zaire

Table 6 continued

Sub-region / country	Total land area* ('000 ha)	Percent of total land area by temperature zones		Percent of total land area by climatic classes			
		Tropical	Sub-tropical	Arid	Semi-arid	Humid	Cold
Sous-région / pays	Superficie totale* ('000 ha)	Pourcentage de la superficie totale par zones de temperature		Pourcentage de la superficie totale par groupes climatiques			
		Tropical	Sous-tropical	Aride	Semi-aride	Humide	Froid
SAHEL	521979	78	22	70	10	20	0
Burkina Faso	27380	100	0	1	15	84	0
Cape Verde	403	100	0	100	0	0	0
Chad	125920	84	16	67	7	27	0
Gambia	1000	100	0	0	0	100	0
Guinea Bissau	2812	100	0	0	0	100	0
Mali	122019	77	23	64	15	21	0
Mauritania	102522	60	40	94	5	1	0
Niger	126670	77	23	86	13	1	0
Senegal	19253	100	0	7	14	80	0
NON-SAHEL WEST AFRICA	203555	100	0	0	4	96	0
Benin	11062	100	0	0	1	99	0
Côte d'Ivoire	31800	100	0	0	0	100	0
Ghana	22754	100	0	0	0	100	0
Guinea	24586	100	0	0	0	100	0
Liberia	9675	100	0	0	0	100	0
Nigeria	91077	100	0	0	8	92	0
Sierra Leone	7162	100	0	0	0	100	0
Togo	5439	100	0	0	0	100	0
NORTH AFRICA	811439	30	70	81	5	13	1
Algeria	238174	2	98	92	3	5	0
Egypt	99545	3	97	100	0	0	0
Libyan Arab Jamahiriya	175954	0	100	98	1	0	0
Morocco	44630	0	100	54	10	23	13
Sudan	237600	99	1	55	11	34	0
Tunisia	15536	0	100	66	16	19	0
TOTAL AFRICA	2814958	74	26	46	8	46	0

Source : World Resources 1992-93, Table 18.6

* - FAO Production Yearbook 1992, Vol. 46., 1993

Tableau 6 suite

Land with no inherent soil constraints					Sub-region / country
('000 hectares)	Of which percent				
	Arid	Semi-arid	Humid	Cold	
Terres sans contrainte inhérente du sol					Sous-région / pays
('000 hectares)	dont, en pourcentage				
	Aride	Semi-aride	Humide	Froid	
185575	86	5	10	0	SAHEL
6899	1	19	80	0	Burkina Faso
84	100	0	0	0	Cap Vert
34160	81	1	17	0	Tchad
355	0	0	100	0	Gambie
0	0	0	0	0	Guinée Bissau
40865	81	8	10	0	Mali
58867	99	1	0	0	Mauritanie
41388	94	5	0	0	Niger
2957	10	20	71	0	Sénégal
					AFRIQUE DE L'OUEST
11098	0	4	96	0	NON SAHELIENNE
360	0	6	94	0	Bénin
730	0	0	100	0	Côte d'Ivoire
878	0	0	100	0	Ghana
479	0	0	100	0	Guinée
348	0	0	100	0	Libéria
7797	0	6	94	0	Nigéria
187	0	0	100	0	Sierra Leone
319	0	0	100	0	Togo
					AFRIQUE DU NORD
243256	93	2	4	0	
96958	99	0	1	0	Algérie
24633	100	0	0	0	Egypte
54004	100	0	0	0	Jamahiriya Arabe Libyenne
12968	70	10	11	9	Maroc
50390	77	8	15	0	Soudan
4303	86	9	6	0	Tunisie
538655	78	6	16	0	TOTAL AFRIQUE

Tables 7 and 8
Greenhouse gases

Tableaux 7 et 8
Gaz de serres

Table 7
Greenhouse gases

These gases allow the sun's rays to penetrate to the earth's surface but retard the return flow of solar radiation and therefore warm the earth's surface thereby producing what is known as the 'greenhouse effect'. The greenhouse gases include carbon dioxide (CO₂), methane (CH₄), chlorofluorocarbons (CFCs), nitrous oxide (NO₂), ozone and water vapour. CO₂ is currently the most important contributor to the greenhouse effect, accounting for at least 50 percent of the damage.

The major sources of greenhouse gases are energy production, industry, transport, agriculture and deforestation. The release of CO₂ is caused primarily by the burning of fossil fuel and to a lesser extent by deforestation for agricultural purposes.

The most serious consequence of the continued production of greenhouse gases is increased global warming. The doubling of pre-industrial levels of CO₂, which could occur by 2035 at present level of production, can cause an average temperature increase of 1.5°C to 4.5°C. If present trend continues in the production of CO₂, the frequency and severity of drought, heatwaves and tropical storms is expected to increase. The greenhouse effect would also bring a rise in sea levels because of melting of ice and also thermal expansion of water. Estimates are for a 10 to 30 cm rise in sea levels by 2030 and upto 1 metre if warming continues to 2100. Such a rise would inundate low-lying coastal cities and agricultural areas. It could also drastically affect agricultural production and trading patterns by influencing rainfall patterns.

Tableau 7
Gaz de serres

Ces gaz permettent aux rayons de soleil de pénétrer la surface de la terre tout en retardant le mouvement inverse de la radiation solaire. Ils chauffent par conséquent la surface de la terre et produisent ce qui est connu sous l'expression "effet de serre". Les gaz de serres comprennent le dioxyde de carbone (CO_2), le méthane (CH_4), le chlorofluorocarbure (CFC_2), l'oxyde nitrique (NO_2), l'ozone et la vapeur d'eau. Le CO_2 contribue présentement de façon très importante à l'effet de serre, étant responsable d'au moins 50% des dégâts.

Les principales sources des gaz de serres sont la production d'énergie, l'industrie, le transport, l'agriculture et le déboisement. Le dégagement de CO_2 provient en premier lieu des brûlures de combustibles, et dans une moindre mesure, du déboisement à des fins agricoles.

La conséquence la plus sérieuse de la production continue des gaz de serres est l'augmentation de la température globale. Le doublement des niveaux pré-industriels du CO_2 , qui pourrait se produire vers l'an 2035 en tenant compte du niveau actuel de production, peut causer une augmentation moyenne de température de $1,5^\circ\text{C}$ à $4,5^\circ\text{C}$. Si la tendance actuelle persiste au niveau de la production du CO_2 , on s'attend à une augmentation de la fréquence et de la rigueur de la sécheresse, des vagues de chaleur et des tempêtes tropicales. L'effet de serre pourrait provoquer aussi une augmentation des niveaux de la mer, du fait de la fonte de la glace et aussi de l'expansion thermique de l'eau. Il est estimé que les niveaux de la mer augmenteraient de 10 à 30 cm d'ici à l'an 2030, et jusqu'à 1 m si la chaleur continuait jusqu'en l'an 2100. Une telle augmentation pourrait inonder les villes côtières et les zones agricoles à basse altitude. Elle pourrait aussi affecter d'une façon rigoureuse la production agricole et le commerce par son influence sur la pluviométrie.

Table 7: Greenhouse emissions, 1989
Tableau 7 : Dégagement de gaz de serres, 1989

Sub-region Sous-région	CO ₂ emissions from Industry Landuse		Methane	CFCs	Sub-region Sous-région		
Country Pays	Dégagement de CO ₂ Industries Utilisation des terres		Méthane	CFCs	Country Pays		
INDIAN OCEAN			PAYS INSULAIRES				
ISLAND COUNTRIES	1952	120000	875	0	DE L'OCEAN INDIEN		
Comoros	51	...	11	...	Comores		
Madagascar.....	901	120000	860	0	Madagascar		
Mauritius.....	1000	...	4	...	Mauritius		
Seychelles .....	...	...	...	...	Seychelles
EAST AFRICA			12578	81830	3841	0	AFRIQUE DE L'EST
Burundi	176	530	34	...	Burundi		
Djibouti	326	...	11	...	Djibouti		
Ethiopia	2565	30000	1400	...	Ethiopie		
Kenya	5192	13000	640	0	Kenya		
Rwanda	381	2100	46	0	Rwanda		
Somalia	960	5200	760	...	Somalie		
Uganda	879	10000	210	...	Ouganda		
United Republic of Tanzania ..	2099	21000	740	...	République-Unie de Tanzanie		
SOUTHERN AFRICA			27618	166600	1097	1	AFRIQUE AUSTRALE
Angola	4965	33000	340	...	Angola		
Botswana	1700	2600	97	...	Botswana		
Lesotho	0	...	...	...	Lesotho
Malawi	634	58000	73	...	Malawi		
Mozambique	1205	30000	130	...	Mozambique		
Namibia	0	...	...	...	Namibie
Swaziland	443	...	27	...	Swaziland		
Zambia	2612	27000	120	...	Zambie		
Zimbabwe	16059	16000	310	1	Zimbabwe		
CENTRAL AFRICA			19565	226100	812	0	AFRIQUE CENTRALE
Cameroon	5774	60000	230	...	Cameroun		
Central African Republic	264	13000	100	...	République centrafricaine		
Congo	1773	12000	21	...	Congo		
Equatorial Guinea	106	1800	1	...	Guinée équatoriale		
Gabon	7826	9300	170	0	Gabon		
Sao Tome & Principe .....	...	...	...	...	Sao Tomé et Principe
Zaire	3822	130000	290	...	Zaire		

Table 7 continued

Tableau 7 suite

Sub-region Sous-région	CO ₂ emissions from Industry Landuse		Methane	CFCs	Sub-region Sous-région
Country Pays	Dégagement de CO ₂ Industries Utilisation des terres		Méthane	CFCs	Country Pays
SAHEL	8736	78000	1322	0	SAHEL
Burkina Faso	520	17000	170	...	Burkina Faso
Cape Verde	77	...	2	...	Cap Vert
Chad	202	15000	220	...	Tchad
Gambia	183	1900	18	...	Gambie
Guinea Bissau	147	18000	72	...	Guinée Bissau
Mali	425	7700	310	...	Mali
Mauritania	3023	...	140	...	Mauritanie
Niger	1008	7400	230	...	Niger
Senegal	3151	11000	160	0	Sénégal
AFRIQUE DE L'OUEST					
NON-SAHEL WEST AFRIC	94117	744000	4568	2	NON SAHELIEENNE
Benin	667	9500	54	...	Bénin
Côte d'Ivoire	7595	350000	200	1	Côte d'Ivoire
Ghana	3521	31000	120	1	Ghana
Guinea	1000	37000	300	...	Guinée
Liberia	773	39000	63	0	Libéria
Nigeria	79263	270000	3700	0	Nigéria
Sierra Leone	671	4600	97	...	Sierra Léone
Togo	627	2900	34	0	Togo
AFRIQUE DU NORD					
NORTH AFRICA	203198	98000	3530	5	AFRIQUE DU NORD
Algeria	46492	...	970	1	Algérie
Egypt	79483	...	670	3	Egypte
Libyan Arab Jamahiriya	37842	...	290	...	Jamahiriya Arabe Libyenne
Morocco	22120	...	310	1	Maroc
Sudan	3338	98000	1200	...	Soudan
Tunisia	13923	...	90	0	Tunisie
TOTAL AFRICA	367764	1514530	16045	8	TOTAL AFRIQUE

Source : World Resources 1992-93, Tables 24.1 and 24.2

Table 8

**Greenhouse index ranking and
Percent share of global emissions, 1989**

A country's contribution or relative share of the global warming potential for a given year is given by a Greenhouse Index. The index enables rank countries according to the degree of emissions of the greenhouse gases. There are various approaches on the construction of indexes that represent the combined effect of each nation's greenhouse emissions. The index in Table 8 follows the World Resources method (*World Resources 1992-93*, pp. 205-212).

Table 8 gives the national rank and percent share of the global warming potential attributable to the top 50 countries that emitted the most CO₂, methane and CFCs in 1989. Three African countries, South Africa, Nigeria and Côte d'Ivoire, ranked among the top 25 countries contributing to the warming while a total of eight African countries are found among these 50 countries, although their relative contribution was on the lower side.

Tableau 8

**Classement des indices de serre et parts en pourcentage
des dégagements globaux en 1989**

La contribution d'un pays ou la part dans le potentiel global de chauffage pour une année donnée est représentée par un indice de serre. Cet indice permet de ranger les pays selon leur degré de dégagement de gaz de serre. Il existe plusieurs approches pour l'élaboration d'indices représentant l'effet combiné des dégagements de serre de chaque pays. L'indice du tableau 8 suit la méthode "Ressources du Monde" (*Ressources du Monde 1992-93*, pages 205 à 212).

Le tableau 8 indique le rang d'un pays et sa part en pourcentage du potentiel global de chauffage imputable aux 50 premiers pays ayant dégagé le plus de CO₂, de méthane et du CFCs en 1989. Trois pays africains: l'Afrique du Sud, le Nigéria et la Côte d'Ivoire, sont classés parmi les 25 premiers pays contribuant à ce chauffage, tandis qu'en tout huit pays africains se trouvent parmi ces 50 pays, bien que leur part relative soit assez faible.

Table 8: Greenhouse index ranking and percent share of global emissions, 1989

Tableau 8: Classification des indices de serre et part en pourcentage des dégagements globaux en 1989

Country Pays	Percent Pourcentage	Rank Rang	Country Pays	Percent Pourcentage	Rank Rang
United States/Etats Unis	18.4	1	Philippines	0.7	26
USSR (former)/ Ex-URSS	13.5	2	Romania/Roumanie	0.7	27
China/Chine	8.4	3	Lao People' Dem. Rep.	0.7	28
Japan/Japon	5.6	4	Viet Nam	0.6	29
Brazil/Brésil	3.8	5	Saudi Arabia/Arabie Saudite	0.6	30
India/Inde	3.6	6	Iran, Islamic Rep./	0.6	31
Germany ¹ /Allemagne	3.5	7	Rep. Islamique d'Iran		
United Kingdom/	2.4	8	Netherlands/Pays-Bas	0.6	32
Royaume Uni			Argentina/Argentine	0.5	33
Mexico/Mexique	2	9	Venezuela	0.5	34
Italy/Italie	1.8	10	Yugoslavia/Yougoslavie	0.5	35
France	1.7	11	Ecuador/Rep. de l'Equateur	0.5	36
Canada	1.7	12	Pakistan	0.5	37
Indonesia/Indonésie	1.6	13	Peru/Pérou	0.5	38
Poland/Pologne	1.4	14	Korea, Dem. People's Rep./	0.5	39
Thailand/Thaïlande	1.4	15	Rep. Populaire de Koré		
Colombia/Colombie	1.4	16	Turkey/Turquie	0.4	40
Australia/Australie	1.1	17	Belgium/Belgique	0.4	41
South Africa/Afrique du Sud	1.1	18	Madagascar	0.4	42
Myanmar	1.1	19	Zaire	0.4	43
Spain/Espagne	1.1	20	Bulgaria/Bulgarie	0.3	44
Nigeria/Nigéria	1.1	21	Greece/Grèce	0.3	45
Côte d'Ivoire	0.9	22	Sudan/Soudan	0.3	46
Korea, Rep./Rep. de Koré	0.8	23	Egypt/Egypte	0.3	47
Czechoslovakia (former)/	0.7	24	Bangladesh	0.3	48
Ex-Czechoslovaquie			Cameroon/Cameroun	0.3	49
Malaysia/Malaisie	0.7	25	Hungary/Hongarie	0.3	50

Source: *World Resources 1992-93, Table 13.4*

Note:

¹ includes both the former Federal Republic of Germany and the German Democratic Republic
y compris les anciennes République Fédérale et République Démocratique d'Allemagne

Tables 9 to 12
Urbanization in Africa

Tableaux 9 à 12
Urbanisation en Afrique

Tables 9 to 12

Urbanization in Africa

Total, urban and rural population in Africa and other major regions is given in Table 9. It can be observed from the table that all regions, with the exception of Africa and Asia, made the transition from predominantly rural to predominantly urban prior to 1975. These two regions are expected to pass through the transition between 2015 and 2020. Africa's urban growth rate also remains higher than all other regions during the entire reporting period (Figure 5 and Table 10).

Urbanization in Africa is changing rapidly. The urbanization level was 14.5 percent in 1950 and has increased to 28 and 34 percent in 1980 and 1990, respectively (Table 11). It is expected to reach the 50 percent mark by 2020. The regional data, however, hides variations by country. The level of urbanization ranged from 5 percent in Burundi to 82 percent in the Libyan Arab Jamahiriya in 1990. Among the sub-regions, North Africa shows high level of urbanization while it is the lowest in East Africa from 1980 to 1990. Same trend is expected to continue upto 2020.

In many African countries most urban people are concentrated in a single primate city, which is usually the capital city. Only 17 countries had urban agglomerations with over a million inhabitants in 1992 (Table 12). Among these only three countries had two urban agglomerations with more than one million people, Egypt, Morocco and Nigeria. No African city ranked in the top fifteen urban agglomerations in the world in 1992. The largest agglomeration in the world was Tokyo (Japan) followed by Sao Paulo (Brazil) and New York (USA).

Tableaux 9 à 12

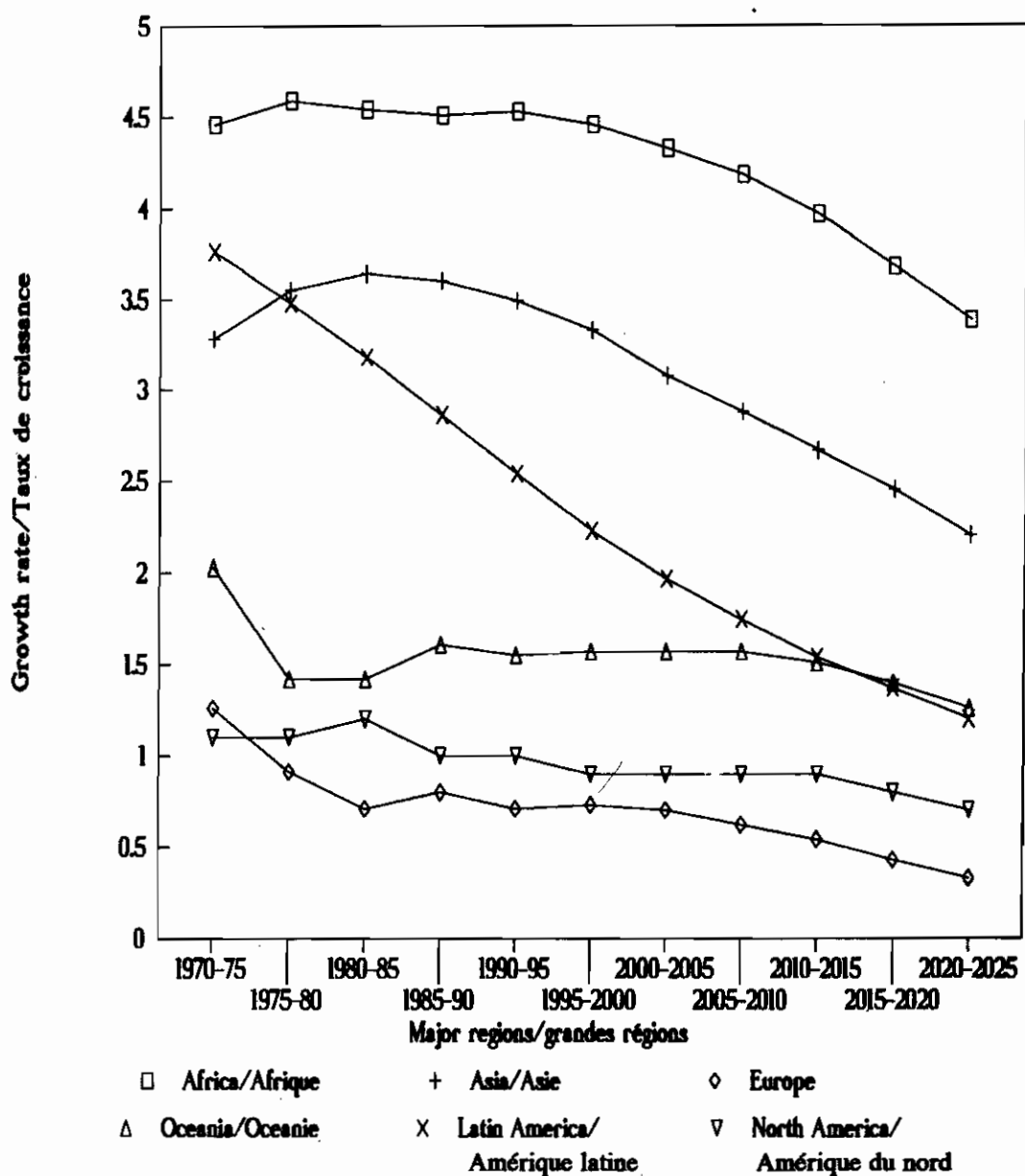
Urbanisation en Afrique

Le tableau 9 présente les populations totale, urbaine et rurale de l'Afrique et d'autres grandes régions. Ce tableau montre qu'avant 1975, toutes les régions, à l'exception de l'Afrique et de l'Asie, ont fait leur transition en passant de l'étape de population à prédominance rurale à l'étape de population à prédominance urbaine. On s'attend à ce que ces deux régions franchissent aussi cette étape entre les années 2015 et 2020. Par ailleurs, pour toute la période considérée, le taux de croissance urbaine de l'Afrique reste le plus élevé que ceux de toutes les autres régions (graphique 5 et tableau 10).

L'urbanisation change rapidement en Afrique. Son niveau qui était de 14.5% en 1950, a augmenté à 28 et 34% en 1980 et 1990 respectivement (tableau 11). On s'attend à ce que cette augmentation atteigne 50% vers l'an 2020. Les données au niveau régional cachent cependant des variations suivant les pays. En 1990 le niveau d'urbanisation a été de 5% au Burundi contre 82% dans la Jamahiriya arabe libyenne. Parmi les sous-régions, l'Afrique du Nord a un taux élevé d'urbanisation tandis que l'Afrique de l'Est enregistre le taux le plus faible de 1980 à 1990. On s'attend à ce que la même tendance persiste jusqu'en l'an 2020.

Dans plusieurs pays africains, la majeure partie de la population urbaine est concentrée dans une seule ville, habituellement la capitale. Le tableau 12 indique que 17 pays seulement avaient, en 1992, des agglomérations urbaines de plus d'un million d'habitants. Parmi ceux-ci, il n'y avait que trois pays ayant deux agglomérations urbaines de plus d'un million d'habitants: l'Egypte, le Maroc et le Nigéria. Aucune ville africaine ne figure dans la liste des quinze premières agglomérations urbaines du monde en 1992. La plus grande agglomération du monde était Tokyo, au Japon, suivie de Sao Paulo au Brésil et New York, Etats-Unis.

Figure 5: Urban growth rate by major areas (percent)
Taux de croissance urbaine par grandes régions
 (pourcentage)



Source : Table 10 / Tableau 10

Table 9 : Total, urban and rural population in Africa and other major regions, 1975 – 2020 (in millions)

Tableau 9 : Population totale, urbaine et rurale en Afrique et dans les autres grandes régions du monde, 1975 – 2020 (en millions)

Population group	1975	1980	1985	1990	1995	2000	2005	2010	2015	2020	Group de population
World											Monde
Total	4077	4446	4854	5296	5759	6228	6689	7149	7609	8049	totale
Urban	1536	1751	1997	2283	2602	2962	3354	3778	4233	4705	urbaine
Rural	2541	2695	2857	3013	3156	3266	3335	3371	3376	3344	rural
Africa											Afrique
Total	415	480	554	643	744	856	980	1116	1264	1421	totale
Urban	104	131	164	206	258	322	400	493	601	723	urbaine
Rural	311	349	390	437	486	534	580	623	663	698	rural
Latin America											Amérique latine
Total	320	359	399	441	483	523	562	600	637	671	totale
Urban	196	233	273	315	358	401	442	482	521	558	urbaine
Rural	124	126	126	126	124	122	120	118	116	113	rural
Northern America											Amérique du nord
Total	238	252	264	277	292	306	319	330	342	351	totale
Urban	176	186	197	209	223	238	252	266	281	294	urbaine
Rural	62	66	67	68	69	68	67	64	61	57	rural
Asia											Asie
Total	2355	2584	2843	3118	3408	3692	3957	4214	4461	4688	totale
Urban	568	678	814	974	1160	1370	1598	1846	2110	2386	urbaine
Rural	1787	1906	2029	2144	2248	2322	2359	2368	2351	2302	rural
Europe											Europe
Total	481	492	500	509	516	523	531	536	540	542	totale
Urban	331	346	359	373	387	401	416	429	441	450	urbaine
Rural	150	146	141	136	129	122	115	107	99	92	rural
Oceania											Océanie
Total	21	23	24	27	28	31	33	36	38	40	totale
Urban	15	16	17	19	20	22	24	26	28	30	urbaine
Rural	6	7	7	8	8	9	9	10	10	10	rural
USSR (Former)*											URSS (Ancienne)*
Total	246	258	269	281	288	297	307	317	328	336	totale
Urban	146	161	173	186	196	208	222	236	251	264	urbaine
Rural	100	97	96	95	92	89	85	81	77	72	rural

Source: United Nations, World Urbanization Prospects, The 1992 Revision, New York, 1993

 : Regions making the transition from predominantly rural to predominantly urban in the period specified.

Régions faisant la transition de la population à prédominance rurale sur prédominance urbaine entre la période spécifiée.

* - Including Armenia, Azerbaijan, Belarus, Georgia, Republic of Moldova, Russian Federation, Ukraine, Kazakhstan, Krygystan, Tajikistan, Turkmenistan and Uzbekistan. Estonia, Latvia and Lithuania are included in Europe.

Comprend: Arménie, Azerbaïdjan, Biélorussie, Géorgie, République de Moldova, Fédération russe, Ukraine, Kazakhstan, Kirghizistan, Tadjikistan, Turkménistan et Ouzbékistan. Estonie, Lettonie et Lituanie sont incluses dans l'Europe.

**Table 10 : Average annual rate of growth of total, urban and rural populations
and rate of urbanization in Africa and other major regions,
1975 - 2025**

**Tableau 10 : Taux moyen annuel d'accroissement de la population totale, urbaine,
et rurale et taux d'urbanisation en Afrique et dans les autres
grandes régions du monde, 1975 - 2025
(percentage - pourcentage)**

Major area or region	1975- 1980	1980- 1985	1985- 1990	1990- 1995	1995- 2000	2000- 2005	2005- 2010	2010- 2015	2015- 2020	2020- 2025	région ou zone principale
World											monde
Total growth rate	1.73	1.75	1.74	1.68	1.57	1.42	1.33	1.25	1.13	1.02	taux d'accroissement total
Urban growth rate	2.61	2.63	2.66	2.63	2.59	2.48	2.39	2.27	2.12	1.95	taux d'accroissement urbain
Rural growth rate	1.17	1.17	1.07	0.93	0.68	0.42	0.21	0.03	-0.19	-0.35	taux d'accroissement rural
Urbanization rate	0.88	0.87	0.92	0.95	1.02	1.06	1.05	1.02	0.99	0.92	taux d'urbanisation
Africa											Afrique
Total growth rate	2.88	2.91	2.95	2.93	2.81	2.70	2.61	2.50	2.33	2.15	taux d'accroissement total
Urban growth rate	4.59	4.54	4.51	4.53	4.46	4.33	4.19	3.97	3.68	3.39	taux d'accroissement urbain
Rural growth rate	2.27	2.26	2.26	2.13	1.88	1.65	1.44	1.25	1.02	0.78	taux d'accroissement rural
Urbanization rate	1.71	1.63	1.56	1.60	1.65	1.63	1.58	1.48	1.35	1.24	taux d'urbanisation
Latin America											Amérique latine
Total growth rate	2.28	2.16	1.96	1.79	1.61	1.45	1.31	1.18	1.04	0.90	taux d'accroissement total
Urban growth rate	3.48	3.18	2.86	2.54	2.23	1.97	1.75	1.54	1.37	1.20	taux d'accroissement urbain
Rural growth rate	0.24	0.12	-0.13	-0.22	-0.30	-0.35	-0.38	-0.38	-0.51	-0.65	taux d'accroissement rural
Urbanization rate	1.19	1.02	0.90	0.75	0.62	0.52	0.44	0.36	0.33	0.30	taux d'urbanisation
Northern America											Amérique du nord
Total growth rate	1.09	1.12	1.16	1.32	1.26	1.16	1.12	1.06	0.96	0.81	taux d'accroissement total
Urban growth rate	1.10	1.20	1.00	1.00	0.90	0.90	0.90	0.90	0.80	0.70	taux d'accroissement urbain
Rural growth rate	1.01	0.33	0.36	0.23	-0.12	-0.50	-0.79	-1.08	-1.14	-1.24	taux d'accroissement rural
Urbanization rate	0.02	0.20	0.20	0.26	0.32	0.36	0.38	0.40	0.36	0.32	taux d'urbanisation
Asia											Asie
Total growth rate	1.86	1.91	1.85	1.78	1.60	1.39	1.26	1.14	1.00	0.88	taux d'accroissement total
Urban growth rate	3.55	3.64	3.60	3.49	3.33	3.08	2.88	2.67	2.46	2.21	taux d'accroissement urbain
Rural growth rate	1.29	1.25	1.10	0.95	0.65	0.32	0.08	-0.14	-0.42	-0.59	taux d'accroissement rural
Urbanization rate	1.70	1.74	1.76	1.71	1.73	1.69	1.62	1.53	1.47	1.33	taux d'urbanisation
Europe											Europe
Total growth rate	0.45	0.31	0.38	0.27	0.30	0.27	0.20	0.14	0.07	-0.00	taux d'accroissement total
Urban growth rate	0.91	0.71	0.80	0.71	0.73	0.70	0.62	0.54	0.43	0.33	taux d'accroissement urbain
Rural growth rate	-0.60	-0.68	-0.74	-0.99	-1.07	-1.21	-1.39	-1.55	-1.62	-1.70	taux d'accroissement rural
Urbanization rate	0.46	0.40	0.42	0.44	0.44	0.43	0.42	0.40	0.36	0.33	taux d'urbanisation
Oceania											Océanie
Total growth rate	1.49	1.51	1.64	1.52	1.46	1.37	1.29	1.16	1.05	0.91	taux d'accroissement total
Urban growth rate	1.42	1.42	1.61	1.55	1.57	1.57	1.57	1.51	1.40	1.26	taux d'accroissement urbain
Rural growth rate	1.67	1.75	1.73	1.44	1.17	0.87	0.53	0.18	-0.00	-0.23	taux d'accroissement rural
Urbanization rate	-0.07	-0.10	-0.04	0.03	0.11	0.20	0.29	0.35	0.35	0.35	taux d'urbanisation
USSR (Former)*											URSS (Ancienne)*
Total growth rate	0.86	0.89	0.84	0.51	0.57	0.65	0.68	0.65	0.52	0.47	taux d'accroissement total
Urban growth rate	1.76	1.47	1.40	1.10	1.18	1.25	1.27	1.21	1.02	0.92	taux d'accroissement urbain
Rural growth rate	-0.56	-0.13	-0.21	-0.70	-0.78	-0.85	-0.95	-1.10	-1.23	-1.27	taux d'accroissement rural
Urbanization rate	0.91	0.59	0.56	0.59	0.60	0.60	0.59	0.56	0.50	0.45	taux d'urbanisation

Source: United Nations, World Urbanization Prospects - The 1992 Revision, New York, 1993

* - Including Armenia, Azerbaijan, Belarus, Georgia, Republic of Moldova, Russian Federation, Ukraine, Kazakhstan, Kyrgyzstan, Tajikistan, Turkmenistan and Uzbekistan. Estonia, Latvia and Lithuania are included in Europe.

Comprend: Arménie, Azerbaïdjan, Biélorussie, Géorgie, République de Moldova, Fédération russe, Ukraine, Kazakhstan, Kirghizstan, Tadjikistan, Turkménistan et Ouzbékistan. Estonie, Lettonie et Lituanie sont incluses dans l'Europe.

Table 11 : Percentage of population residing in urban areas

Tableau 11 : Pourcentage de population résidant dans les zones urbaines

Sub-region	Year / Année					Sous-région
Country	1980	1990	2000	2010	2020	Pays
INDIAN OCEAN ISLAND COUNTRIES	20.9	25.5	31.8	39.3	47.2	PAYS INSULAIRES DE L'OCEAN INDIEN
Comoros	23.2	27.8	34.1	41.8	49.7	Comores
Madagascar.....	18.3	23.8	30.8	38.6	46.6	Madagascar
Mauritius.....	42.3	40.6	41.8	46.7	54.4	Maurice
Seychelles	43.5	59.2	68.8	74.1	78.3	Seychelles
EAST AFRICA	12.3	16.0	20.6	26.4	33.3	AFRIQUE DE L'EST
Burundi	2.2	5.3	7.0	9.8	14.1	Burundi
Djibouti	73.7	80.7	84.3	86.7	88.9	Djibouti
Ethiopia	10.5	12.3	14.9	19.5	26.2	Ethiopie
Kenya	16.1	23.6	31.8	39.7	47.6	Kenya
Rwanda	4.7	5.6	6.7	8.9	12.6	Rwanda
Somalia	22.2	24.2	27.8	33.9	41.9	Somalie
Uganda	8.8	11.2	14.2	18.8	25.1	Ouganda
United Republic of Tanzania ..	14.8	20.8	28.2	36.3	44.3	République-Unie de Tanzanie
SOUTHERN AFRICA	23.1	31.1	38.9	46.2	49.3	AFRIQUE AUSTRALE
Angola	21.0	28.3	36.2	44.2	51.9	Angola
Botswana	15.1	25.0	36.7	46.9	54.5	Botswana
Lesotho	13.2	19.4	27.0	35.3	43.3	Lesotho
Malawi	9.1	11.8	15.6	21.0	27.9	Malawi
Mozambique	13.1	26.8	41.1	50.5	57.7	Mozambique
Namibia	22.8	27.8	34.4	42.1	50.0	Namibie
Swaziland	17.9	26.4	36.1	45.4	53.0	Swaziland
Zambia	39.8	42.0	44.7	49.7	56.5	Zambie
Zimbabwe	22.3	28.5	36.0	43.9	51.7	Zimbabwe
CENTRAL AFRICA	30.3	32.5	37.1	44.1	51.5	AFRIQUE CENTRALE
Cameroon	31.4	40.3	49.3	57.4	63.9	Cameroun
Central African Republic	38.3	46.7	54.6	61.5	67.5	République centrafricaine
Congo	35.8	40.5	46.7	54.0	60.9	Congo
Equatorial Guinea	27.2	28.7	33.0	40.2	48.1	Guinée équatoriale
Gabon	35.7	45.6	53.8	60.7	66.8	Gabon
Sao Tome & Principe	33.0	42.0	50.7	58.0	64.4	Sao Tomé et Principe
Zaire	28.7	28.1	31.0	37.9	45.9	Zaire

Table 11 continued

Tableau 11 suite

Sub-region	Year / Année					Sous-région
Country	1980	1990	2000	2010	2020	Pays
SAHEL	19.2	26.0	33.6	41.3	48.8	SAHEL
Burkina Faso	8.5	15.2	24.2	33.5	41.4	Burkina Faso
Cape Verde	23.5	28.7	35.7	43.5	51.5	Cap Vert
Chad	20.5	31.6	41.8	49.7	57.0	Tchad
Gambia	18.3	22.6	28.9	36.7	44.7	Gambie
Guinea Bissau	16.9	19.8	25.2	32.7	40.6	Guinée Bissau
Mali	18.5	23.8	30.4	38.1	46.1	Mali
Mauritania	29.0	46.8	59.0	65.3	70.8	Mauritanie
Niger	13.2	19.5	26.8	34.4	42.4	Niger
Senegal	35.9	39.8	45.1	51.7	58.9	Sénégal
NON-SAHEL WEST AFRICA	32.1	39.6	47.2	54.6	57.8	AFRIQUE DE L'OUEST NON SAHELIENNE
Benin	31.6	38.2	45.5	53.1	60.1	Bénin
Côte d'Ivoire	34.8	40.4	46.9	54.1	61.0	Côte d'Ivoire
Ghana	31.2	34.0	39.2	46.6	54.2	Ghana
Guinea	19.1	25.8	33.6	41.6	49.5	Guinée
Liberia	35.0	45.4	55.4	63.3	69.1	Libéria
Nigeria	27.1	35.2	43.3	51.1	58.3	Nigéria
Sierra Leone	24.5	32.2	40.2	48.1	55.6	Sierra Leone
Togo	22.9	28.5	33.7	40.6	48.5	Togo
NORTH AFRICA	40.2	43.8	48.4	54.4	60.7	AFRIQUE DU NORD
Algeria	43.4	51.7	59.6	66.4	71.7	Algérie
Egypt	43.8	43.9	46.4	51.8	58.9	Egypte
Libyan Arab Jamahiriya	69.6	82.4	88.3	90.7	92.1	Jamahiriya Arabe Libyenne
Morocco	41.0	46.1	50.9	56.8	63.2	Maroc
Sudan	20.0	22.5	27.3	34.4	42.4	Soudan
Tunisia	50.3	56.0	62.0	67.9	73.0	Tunisie
TOTAL AFRICA	28.2	34.1	40.5	47.2	50.1	TOTAL AFRIQUE

Source : United Nations, World Urbanization Prospects - the 1992 Revision, New York, 1993

**Table 12 : Urban agglomerations in Africa with populations
of one million or more in 1992; world rank in 1992
and population growth, 1985–2000**

**Tableau 12: Agglomérations urbaines en Afrique avec les populations
de un million et plus en 1992; rang mondial en 1992
et taux d'accroissement 1985–2000**

Rank in 1992	Agglomeration	Population			Average annual rate of growth (%)			Agglomération
Rang en 1992		(in millions - en millions)			Taux moyen annuel d'accroissement (%)			
		1985	1992	2000	1985- 1990	1990- 1995	1995- 2000	
19	Cairo/Giza (Egypt)	7.69	9.03	10.76	2.31	2.23	2.17	Le Caire (Egypte)
21	Lagos (Nigeria)	5.83	8.67	13.48	5.68	5.68	5.41	Lagos (Nigeria)
64	Alexandria (Egypt)	2.84	3.34	4.01	2.34	2.30	2.29	Alexandrie (Egypte)
66	Algiers (Algeria)	2.46	3.29	4.51	4.15	4.08	3.86	Algiers (Algerie)
76	Casablanca (Morocco)	2.41	3.00	3.82	3.11	3.11	2.97	Casablanca (Maroc)
81	Tripoli (Libyan Arab Jamahiriya)	1.94	2.85	3.98	5.84	4.64	3.91	Tripoli (Jamahiriya arabe libyenne)
98	Kinshasa (Zaire)	2.78	3.77	5.11	4.72	4.33	3.97	Kinshasa (Zaire)
104	Abidjan (Côte d'Ivoire)	1.65	2.38	3.44	5.43	4.76	4.46	Abidjan (Côte d'Ivoire)
124	Khartoum (Sudan)	1.53	2.14	3.06	4.84	4.56	4.44	Khartoum (Soudan)
132	Addis Ababa (Ethiopia)	1.49	1.96	2.74	3.90	4.01	4.29	Addis Abeba (Ethiopie)
136	Tunis (Tunisia)	1.43	1.88	2.40	4.09	3.44	2.84	Tunis (Tunisie)
139	Luanda (Angola)	1.24	1.85	2.87	5.61	5.92	5.26	Luanda (Angola)
144	Maputo (Mozambique)	1.09	1.81	3.18	7.16	7.28	6.93	Maputo (Mozambique)
148	Dakar (Senegal)	1.26	1.76	2.44	4.95	4.30	4.02	Dakar (Sénégal)
153	Nairobi (Kenya)	1.13	1.72	2.75	5.94	6.12	5.75	Nairobi (Kenya)
176	Dar-es-Salaam (United Republic of Tanzania)	1.10	1.56	2.15	5.40	4.07	4.01	Dar-es-Salaam (République Unie de Tanzanie)
183	Accra (Ghana)	1.18	1.51	2.05	3.42	3.66	3.92	Accra (Ghana)
205	Rabat (Morocco)	1.00	1.38	1.94	4.52	4.52	4.13	Rabat (Maroc)
207	Ibadan (Nigeria)	1.12	1.36	1.74	2.80	2.80	3.18	Ibadan (Nigeria)
264	Douala (Cameroon)	0.72	1.12	1.69	6.52	5.59	4.89	Douala (Cameroun)

Source: United Nations, *World Urbanization Prospects—The 1992 Revision*, New York 1993

Tables 13 and 14
Mineral production

Tableaux 13 et 14
Production minière

Tables 13 and 14

Mineral production

A summary of mineral production in developing Africa is given in Table 13. Mineral production by country is presented in Table 14. Map 2 depicts production by country. These tables do not include gems production for it is grossly under-reported because of large scale illicit mining. Estimates of mineral reserves are not included for they change continuously as further exploration takes place. It is not also easy to define what are considered as economically recoverable reserves since this also varies according to prices and technology.

It is difficult to ascertain or measure the impact of mineral production on the environment from the given tables. However, it is known that the search for new and exploitation of existing minerals put increasing environmental stress on vegetation cover and soil and may upset ecological balances. In some countries decades of large scale hard rock mining and other extractive activities has produced local and regional environment impacts such as loss of bio-diversity, disruption of traditional economic activities such as fishing and hunting, forced relocation and displacement. The Rio Declaration on Environment and Development and the programme of action on sustainable development as contained in Agenda 21 emphasizes that mineral extraction should be conducted in a way that does not cause serious damage to the national and regional environment.

Tableaux 13 et 14

Production minière

Le tableau 13 donne un résumé de la production minière de l'Afrique en développement. Le tableau 14 en donne la situation par pays qui est reflétée dans la carte No.2. Ces tableaux n'incluent pas la production de pierres précieuses qui est grossièrement sous estimée à cause des exploitations illicites à grande échelle. Les estimations des réserves minières ne sont pas données car elles changent continuellement au fur et à mesure des explorations. Par ailleurs, il n'est pas facile de définir ce qu'on considère comme réserves économiquement récupérables, vu que celles-ci aussi varient selon les prix et la technologie.

Il est difficile d'appréhender ou de mesurer l'impact de la production minière sur l'environnement à partir des tableaux présentés. Cependant, on sait que la recherche de nouvelles réserves et l'exploitation des mines existantes imposent des contraintes croissantes, sur le plan environnemental, sur la végétation et le sol et peuvent déranger l'équilibre écologique. Dans certains pays, des décennies d'exploitation minière à grande échelle et d'autres activités extractives ont eu des conséquences sur l'environnement aux niveaux local et régional, telles que la perte de la biodiversité, la rupture des activités économiques traditionnelles comme la pêche et la chasse, le changement d'établissement et le déplacement forcés. La Déclaration de Rio sur l'Environnement et le développement et le programme d'action concernant le développement durable contenu dans l'Agenda 21, soulignent que l'extraction minière devrait être menée de telle manière à ne pas causer de sérieux dommages à l'environnement national et régional.

Table 13 : Summary of mineral production in developing Africa

Tableau 13 : Sommaire de la production minière de l'Afrique en développement

Base product	'000 t							Index 1991
Produit de base	1985	1986	1987	1988	1989	1990	1991	(1985=100)
Aluminium :								
Bauxite.....	15336	16435	18005	19553	19496	19358	19233	125
Alumina - Alumine.....	577	571	542	593	626	642	650	113
Refined - Raffiné.....	309	383	401	425	435	441	441	143
Asbestos - Amiante.....	199	185	220	209	214	197	180	90
Barytes - Baryte.....	489	358	409	396	444	424	460	94
Chromite - Chrome.....	660	649	683	739	794	802	724	110
Cobalt.....	15	19	16	15	14	15	14	93
Copper - Cuivre :								
Cu Metal ¹ - Minerai.....	1135	1118	1116	1035	1033	935	789	70
Smelter - Fondu.....	1082	1062	1067	964	962	857	734	68
Refined - Raffiné.....	762	734	746	682	702	680	595	78
Fluorspar - Spath Fluor.....	178	158	172	213	273	240	240	135
Iron Ore - Minerai de fer...	31982	29876	29904	29960	30990	27686	27600	86
Lead - Plomb :								
Pb Metal ¹ - Minerai.....	187	140	130	119	104	102	100	53
Smelter - Fondu.....	115	110	121	128	120	115	111	97
Manganese.....	2675	2858	2681	2553	2762	2666	2840	106
Nickel :								
Ni Metal ¹ - Minerai.....	31	30	29	35	33	32	31	100
Refined - Raffiné.....	12	16	17	18	19	19	16	133
Phosphate.....	32303	34044	33516	39258	33131	34784	31730	98
Tin								
Tin Metal ¹ - Minerai.....	7	5	6	6	5	5	5	71
Refined - Raffiné.....	3	1	2	2	1	1	1	33
Titanium minerals ²	77	93	109	129	145	161	170	221
Uranium.....	8	7	7	7	7	7	6	75
Zinc :								
Zn Metal ¹ - Minerai.....	185	201	196	183	173	172	150	81
Smelter - Fondu.....	125	113	94	101	95	73	72	58

Source: Table/Tableau 14

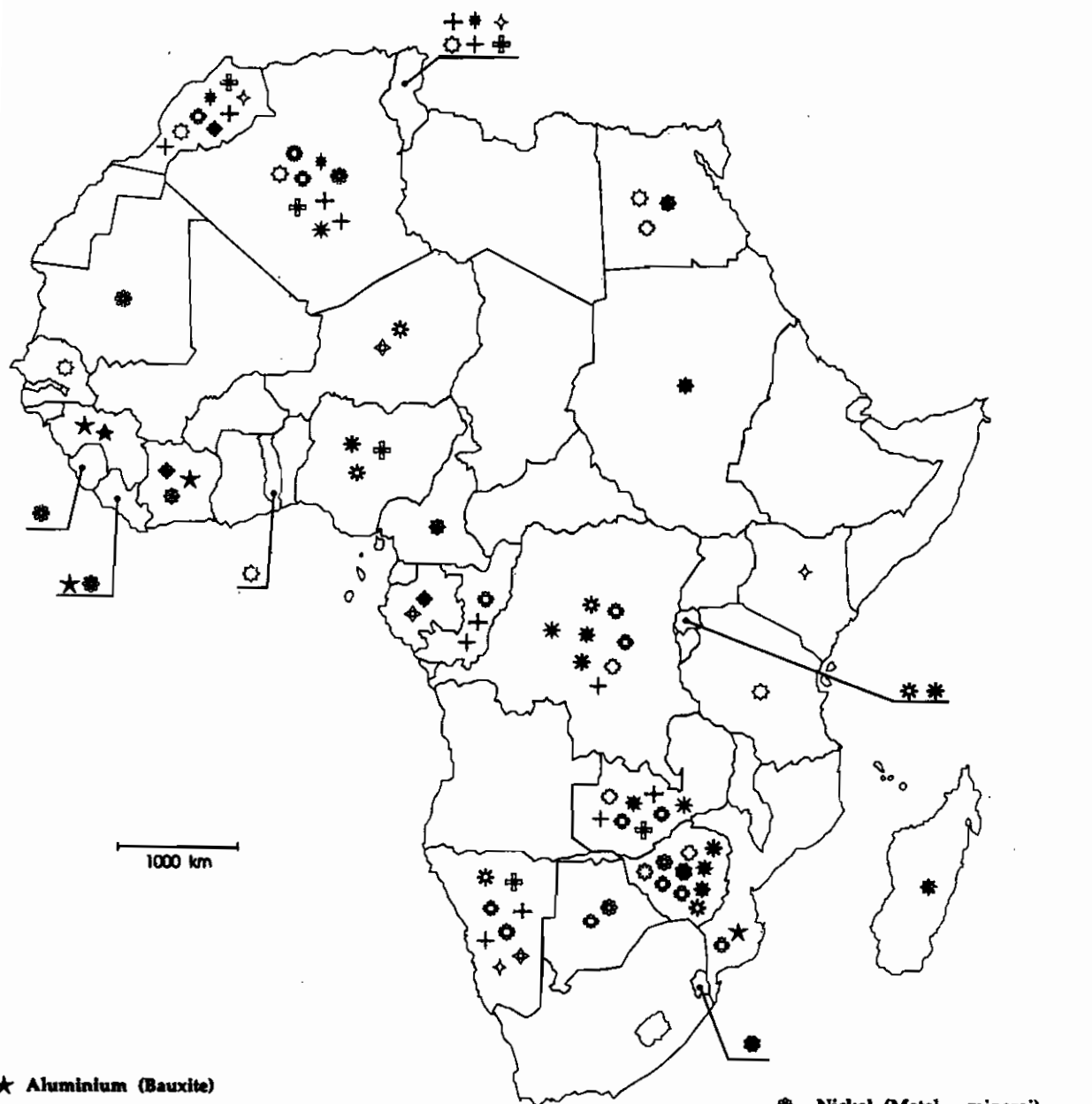
Note :

¹ - Metal content of mine production / contenu en métal de la production minière² - TIO - content of ores and concentrates / contenu en minerais et en concentrés

Map/Carte 2

Mineral Production Production minière

More than 1000 metric tons
Supérieur à 1000 tonnes métriques



★ Aluminium (Bauxite)

★ Alumina - Alumine

⊗ Aluminium (Refined - raffiné)

⊗ Asbestos - Amiante

* Barytes - Baryte

* Chromite - Chrome

* Cobalt

⊗ Copper - Cuivre (Metal - minéral)

⊗ Copper - Cuivre (Smelter - fondu)

○ Copper - Cuivre (Refined - raffiné)

◇ Fluorspar - Spath fluor

⊗ Iron Ore - Minéral de fer

+ Lead - Plomb (Metal - minéral)

⊗ Lead - Plomb (Smelter - fondu)

◆ Manganese

⊗ Mercury (Refined - raffiné)

⊗ Nickel (Metal - minéral)

○ Nickel (Refined - raffiné)

○ Phosphate

* Tin (Metal - minéral)

* Tin (Refined - raffiné)

⊗ Titanium (Minerals - minéral)

◇ Uranium

+ Zinc (Metal - minéral)

* Zinc (Smelter - fondu)

Table 14: Mineral production in developing Africa
 Tableau 14: Production minière de l'Afrique en développement

'000 tonnes

Minerals by country Minerais par pays	1985	1986	1987	1988	1989	1990	1991
ALUMINIUM - Bauxite							
Guinea - Guinée	13956	14961	16413	17859	17547	17524	17524
Sierra Leone	1185	1242	1391	1403	1562	1445	1288
Ghana	170	204	196	285	381	381	413
Mozambique	5	4	5	7	6	7	7
Zimbabwe	21	24	...	...	...	...	...
Total	15337	16436	18005	19553	19496	19358	19233
ALUMINA - ALUMINE							
Guinea - Guinée	577	571	542	593	626	642	650
Total	577	571	542	593	626	642	650
ALUMINIUM - Refined/Raffiné							
Cameroon - Cameroun	82	81	72	80	87	88	86
Egypt - Egypte	179	177	179	181	180	180	180
Ghana	49	125	150	164	169	174	175
Total	309	383	401	425	435	441	441
ASBESTOS - AMIANTE							
Swaziland	25	21	26	23	27	17	...
Zimbabwe	174	164	194	187	187	180	180
Total	199	185	220	209	214	197	180
BARYTES - BARYTE							
Algeria - Algérie	60	60	60	60	60	60	60
Morocco - Maroc	415	278	135	322	370	364	...
Tunisia - Tunisie	14	20	15	14	14	...	...
Total	489	358	210	396	444	424	60

Table 14 continued

Tableau 14 suite

Minerals by country Minerais par pays	1985	1986	1987	1988	1989	1990	1991
CHROMITE - CHROME							
Madagascar	127	89	106	171	160	152	144
Sudan - Soudan	7	7	7	7	7	7	7
Zimbabwe	526	553	570	562	627	643	573
Total	660	649	683	740	794	802	724
COBALT							
Zaire	11	14	12	10	9	10	9
Zambia - Zambie	4	4	4	5	4	5	5
Zimbabwe	-	-	-	-	-	-	-
Total	15	19	16	15	14	15	14
COPPER - metal¹ / CUIVRE - Minerai							
Botswana	22	21	19	24	22	21	21
Morocco - Maroc	33	18	14	14	14	15	16
Namibia - Namibie	48	45	37	39	31	33	35
Zaire	501	503	500	465	441	356	292
Zambia - Zambie	511	513	527	476	510	496	412
Zimbabwe	21	18	19	16	16	15	14
Total	1135	1118	1116	1035	1033	935	789
COPPER - smelter / CUIVRE - Fondu							
Namibia - Namibie	43	42	33	33	28	33	33
Zaire	470	476	472	436	425	338	268
Zambia - Zambie	544	514	532	467	485	461	409
Zimbabwe	24	30	30	28	23	24	24
Total	1082	1062	1068	964	962	857	734

Table 14 continued

Tableau 14 suite

Minerals by country Minerais par pays	1985	1986	1987	1988	1989	1990	1991
COPPER - refined / CUIVRE Raffiné							
Egypt - Egypte	2	3	4	4	4	4	4
Zaire	227	218	210	203	204	173	140
Zambia - Zambia	510	487	509	448	470	479	428
Zimbabwe	23	25	23	28	24	24	24
Total	762	734	746	682	702	680	595
FLUORSPAR - SPATH FLOUR							
Kenya	62	46	60	80	114	99	...
Morocco - Maroc	74	79	78	89	105	87	...
Namibia - Namibie	...	...	...	...	54	54	...
Tunisia - Tunisie	41	33	33	44	...	...	...
Total	178	158	172	213	273	240	
IRON ORE - MINERAI DE FER							
Algeria - Algérie	...	...	...	3120	2750	2930	...
Liberia - Libéria	15300	15300	13700	12810	11850	5100	6700
Mauritania - Mauritanie	9300	8900	9000	10000	11100	12000	10900
Total	24600	24200	22700	25930	25700	20030	17600
LEAD - Metal¹ / PLOMB Minerais							
Algeria - Algérie	4	4	2	2	2	1	2
Congo	3	1	...	...	...	...	...
Morocco - Maroc	107	72	74	70	65	67	70
Namibia - Namibie	49	37	30	23	24	21	17
Tunisia - Tunisie	3	2	2	2	2	2	1
Zambia - Zambia	23	24	23	21	12	12	11
Total	187	140	130	119	104	102	100

Table 14 continued

Tableau 14 suite

Minerals by country Minerais par pays	1985	1986	1987	1988	1989	1990	1991
LEAD - Smelter / PLOMB - Fondu							
Algeria - Algérie	...	4	4	4	4	5	5
Morocco - Maroc	64	55	65	71	66	67	67
Namibia - Namibie	39	40	41	44	44	35	33
Nigeria - Nigéria	1	1	0	1	1	3	3
Tunisia - Tunisie	2	2	2	...	...	...	...
Zambia - Zambie	10	7	9	8	5	5	3
Total	115	110	121	128	120	115	111
MANGANESE							
Gabon	2321	2507	2403	2250	2446	2350	2500
Ghana	307	307	245	273	282	272	284
Morocco - Maroc	47	44	33	30	34	44	56
Total	2675	2858	2681	2553	2762	2666	2840
MERCURY - Refined / MERCURE - Raffiné							
Algeria - Algérie	801	764	756	681	643	655	610
Total	801	764	756	681	643	655	610
NICKEL - Metal¹ / Minerais							
Botswana	20	19	17	23	20	19	19
Zimbabwe	11	11	12	12	13	13	11
Total	31	30	29	35	33	32	31
NICKEL - Refined / Raffiné							
Zimbabwe	12	16	17	18	19	19	16
Total	12	16	17	18	19	19	16

Table 14 continued

Tableau 14 suite

Minerals by country Minerais par pays	1985	1986	1987	1988	1989	1990	1991
PHOSPHATE							
Algeria - Algérie	...	...	...	1332	1224	1102	1170
Egypt - Egypte	...	...	...	1146	1397	1143	1300
Morocco - Maroc	...	...	...	24783	17988	21189	17814
Senegal - Sénégal	...	...	...	2415	2393	2289	1890
Tanzania - Tanzanie	...	...	...	15	18	25	30
Togo	...	...	...	3464	3356	2314	2965
Tunisia - Tunisie	...	...	...	6103	6621	6566	6401
Total				39258	32997	34628	31570
TIN - Metal¹ / ETAIN - Minerais							
Namibia - Namibie	1	1	1	1	1	1	1
Niger	-	-	-	-	-	-	-
Nigeria - Nigéria	1	1	1	1	1	1	1
Rwanda	1	1	1	1	1	1	1
Zaire	3	2	2	2	2	2	2
Zimbabwe	1	1	1	1	1	1	1
Total	7	5	6	6	5	5	5
TIN - refined / ETAINE - Raffiné							
Nigeria - Nigéria	1	-	1	1	-	-	-
Rwanda	1	-	-	-	-	-	-
Zaire	-	-	-	-	-	-	-
Zimbabwe	1	1	1	1	1	1	1
Total	3	1	2	2	1	1	1
TITANIUM MINERALS² or NATURAL RUTILE							
Sierra Leone	77	93	109	129	145	161	170
Total	77	93	109	129	145	161	170

Table 14 continued

Tableau 14 suite

Minerals by country Minerais par pays	1985	1986	1987	1988	1989	1990	1991
URANIUM							
Gabon	1	1	1	1	1	1	1
Namibia - Namibie	3	3	4	4	3	3	2
Niger	3	3	3	3	3	3	3
Total	8	7	7	7	7	7	6
ZINC - Metal¹ / Minerais							
Algeria - Algérie	13	14	9	8	8	8	6
Morocco - Maroc	15	12	11	11	17	18	18
Congo	2	2	-	-	-	-	-
Namibia - Namibie	31	35	40	32	39	41	33
Tunisia - Tunisie	6	5	6	9	10	7	5
Zaire	68	81	75	76	75	62	62
Zambia - Zambie	51	51	56	47	24	36	25
Total	185	201	196	183	173	172	150
ZINC - Smelter / Fondu							
Algeria - Algérie	36	30	19	20	28	24	24
Zaire	66	61	54	61	54	38	42
Zambia - Zambie	23	22	21	20	13	11	7
Total	125	113	94	101	95	73	72

Note :

¹ - Metal content of mine production / contenu en métal de la production minière² - TiO - content of ores and concentrates / contenu en minerais et en concentrés

Source:

*Metals and Minerals Annual Review, 1990 and 1991**Mining Annual Review, 1990**Uranium Resources, Production and Demand, OECD, 1990**US Bureau of Mines, Minerals Yearbooks, 1984-1988**World Metal Statistics Yearbook 1990, 1991 and 1992**Africa Research Bulletin, November 1992**Commodity Yearbook, Commodity Research Bureau, USA, 1992**Industrial Minerals, August 1991*

Tables 15 and 16
Natural disasters in Africa
1980 – 1992

Tableaux 15 et 16
Calamités
naturelles en Afrique
1980 – 1992

Table 15 – Summary of Natural Disasters in Africa
Tableau 15 – Sommaire des calamités naturelles en Afrique

Countries/pays	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992
INDIAN OCEAN ISLANDS - PAYS INSULAIRES DE L'OCEAN INDIEN													
Comoros - Comores				C		C		C		EC			
Madagascar		DC		C	CC	Q	CF	C	CD	CD		D	
Mauritius - Maurice	E		CC	C						C			
Seychelles													
EAST AFRICA - AFRIQUE DE L'EST													
Burundi										F			
Djibouti	D	F		D					D	F			
Ethiopia - Ethiopie		F		D		EF		IDD	IFDEI FIEIF	D EQ	DH	D	DE
Kenya			BFB		D		BFB		T		F		DE
Rwanda					H				F		HU		U
Somalia - Somalie		F				EA	E	DFD	D	F			
Uganda - Ouganda					HE			D	TKQ	D	EEE		D
Tanzania, United Republic of République-Unie de Tanzanie	E		F	E	DE	E	IF	E	FD	FFHI	FE		
SOUTHERN AFRICA - AFRIQUE AUSTRALE													
Angola						D		E	EE	EFD DF	D		
Botswana		D	D	D	D	D	DI	D	FE		E		
Lesotho					D	F		T			F		
Malawi								HDI	IU	FTQE	D	F	
Mozambique	DE	DH		E	CD	FBT		D	IC	DFH EH	H	H	H
Namibia - Namibie											D		
Swaziland				D	C							D	
Zambia - Zambie	H		E				I			F	EE	E	E
Zimbabwe					D							D	BDE
CENTRAL AFRICA - AFRIQUE CENTRALE													
Cameroon - Cameroun					O		O	IF	EF			EU	E
Central African Republic - République centrafricaine		T							F				
Congo													
Equatorial Guinea - Guinée Equatoriale								F					
Gabon									EF				
Sao Tome and Principe Sao Tomé et Príncipe				D			E			E			
Zaire					D			E	F	O		H	

Table 15 continued

Tableau 15 suite

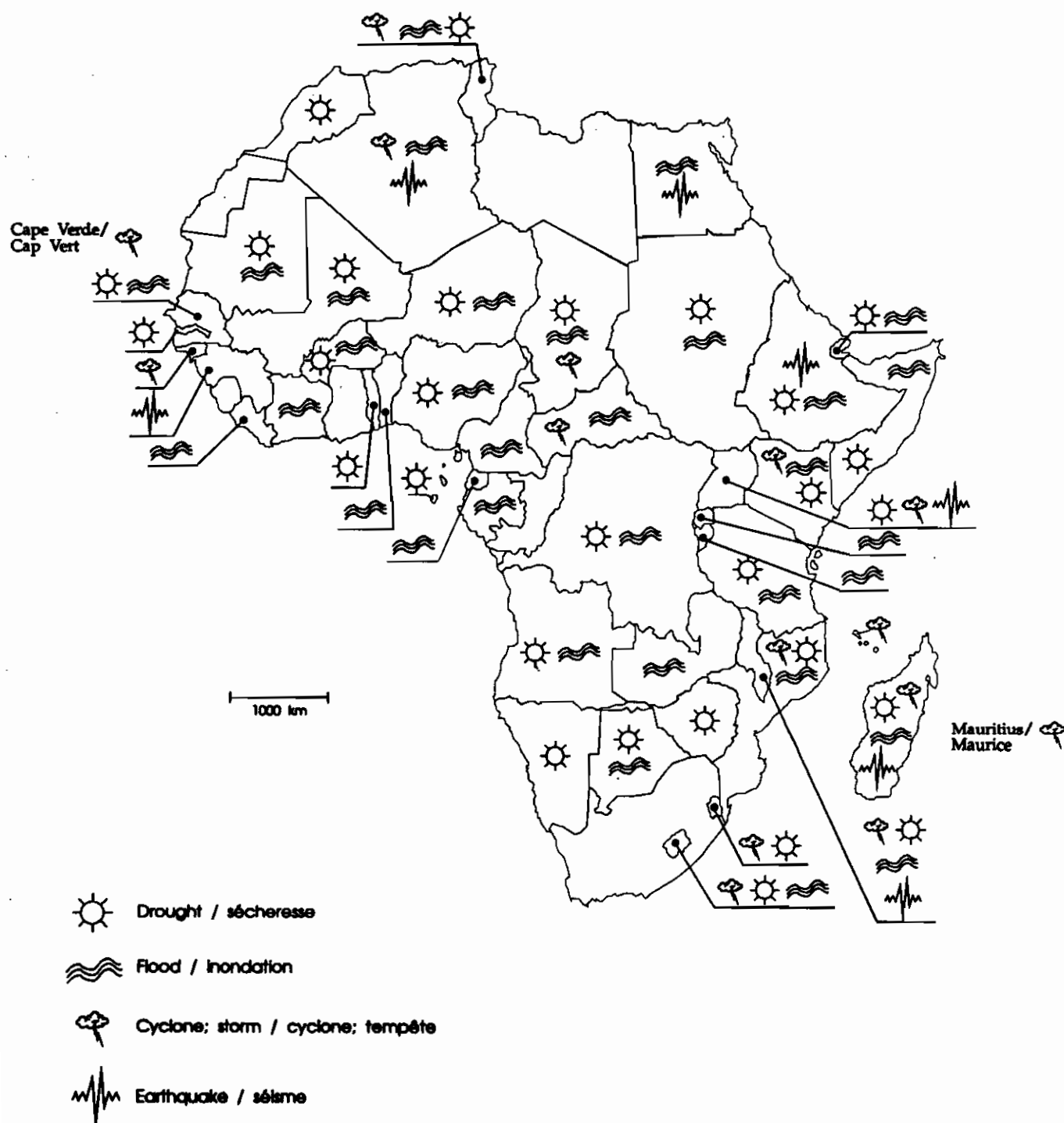
Countries - pays	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992
SAHEL													
Burkina Faso		EE		DED	EFE	FE	I	I	DF				
Cape Verde - Cap-vert			T		T				I				
Chad - Tchad	D				D		I	II	EDEITF			DEI	
Gambia - Gambie	D				B		I	BI	II			D	
Guinea Bissau - Guinée-Bissau							I	ITE		B			
Mali		E	D		EE	IE		IEEE	EHF				
Mauritania - Mauritanie			E	D	F	I	F	IEI	FIE		E	DI	
Niger			B	D			I	I	DIFT	EE		DHEE	
Senegal - Sénégal				DF		EF		I	F				
NON-SAHEL WEST AFRICA - AFRIQUE DE L'OUEST NON SAHÉLIENNE													
Benin - Bénin			F		B	F		EE	EF	E			
Côte d'Ivoire				E						F			
Ghana			H	E	E	B			E	E			
Guinea - Guinée				Q				E	B				
Liberia - Libéria	E		O					BF	B				
Nigeria - Nigéria						F	EAIE	FDIE	FPO	BAEE		EE	
								EAE		EFE			
Sierra Leone					A	E							
Togo									D	E			
NORTH AFRICA - AFRIQUE DU NORD													
Algeria - Algérie	Q	F	PQ		F	QT		QI	IT	Q			
Egypt - Egypte					B			FA	B		E		Q
Libyan Arab Jamahiriya Jamahiriya arabe libyenne													
Morocco - Maroc			A		D			II	OI				
Sudan - Soudan				DFF		E	IH	IIFED	HIEI		D	D	
									FE				
Tunisia - Tunisie			F				F		DIII	DT	FF		

Note :

- | | |
|--------------------------|-------------------------------------|
| A - Accident | H - Food shortage / disette |
| B - Fire / feu | I - Infestation / invasion |
| C - Cyclone | O - Other / autre |
| D - Drought / sécheresse | Q - Earthquake / Séisme |
| E - Epidemic / épidémie | T - Storm / tempête |
| F - Flood / inondation | U - Crop failure / mauvaise récolte |

Map/Carte 3

Droughts, floods, cyclones, storms and earthquakes Sécheresses, inondations, cyclones, tempêtes et séismes 1980-1992



Map/Carte 4

Epidemics, infestations, fires, food shortages, crop failures and other disasters
Epidémies, invasions, feux, disettes, mauvaises récoltes et autres désastres
1980-1992

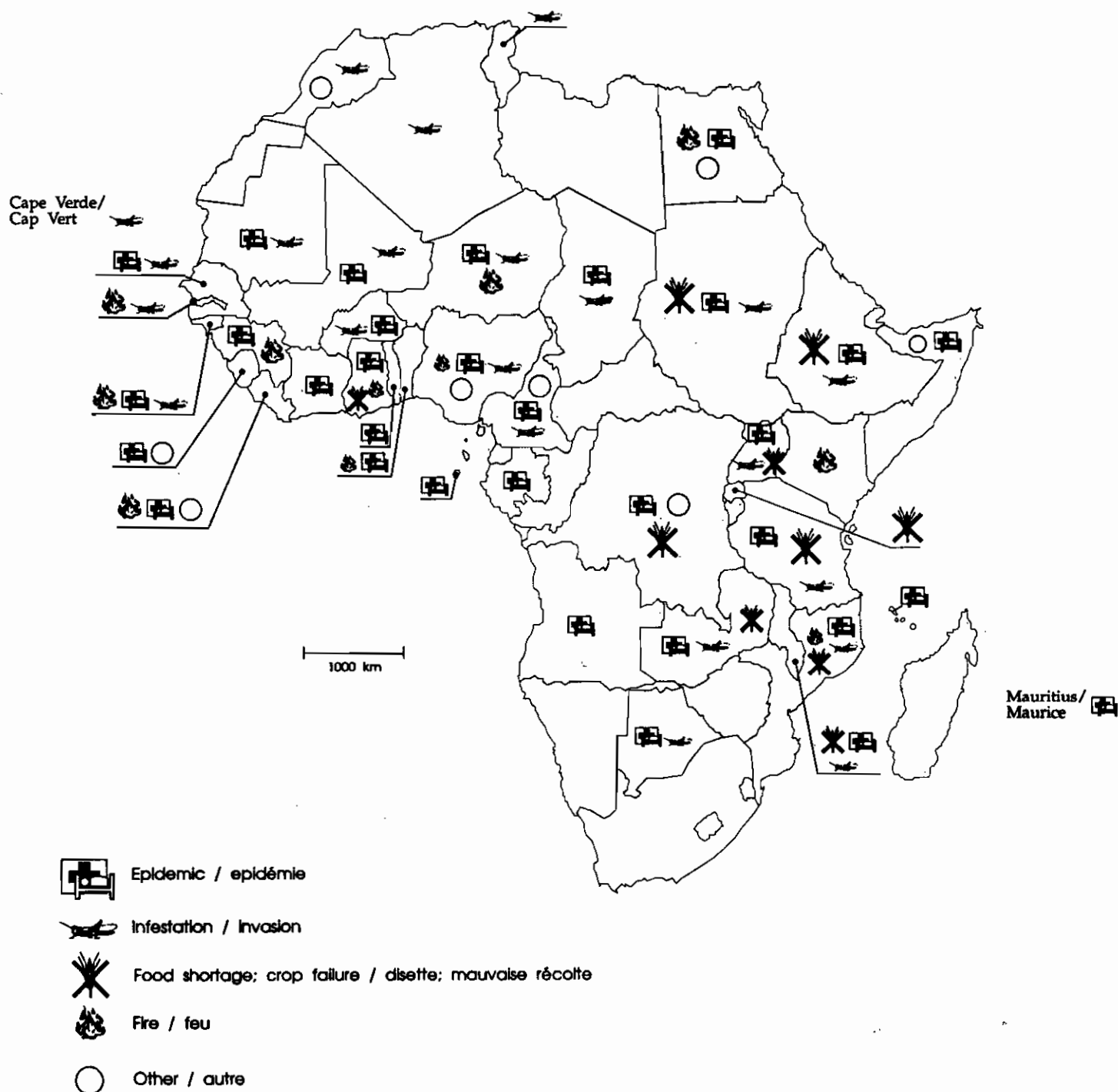


Table 16 – Disasters in Africa : List of Countries by Sub-regions

Tableau 16 – Calamités en Afrique : Liste des pays par sous-régions

INDIAN OCEAN ISLANDS -

PAYS INSULAIRES DE L'OCEAN INDIEN

Comoros - Comores
Madagascar
Mauritius - Maurice
Seychelles

EAST AFRICA/AFRIQUE DE L'EST

Burundi
Djibouti
Ethiopia - Ethiopie
Kenya
Rwanda
Somalia - Somalie
Uganda - Ouganda
Tanzania, United Republic of -
République-Unie de Tanzanie

SOUTHERN AFRICA/AFRIQUE AUSTRALE

Angola
Botswana
Lesotho
Malawi
Mozambique
Namibia - Namibie
Swaziland
Zambia - Zambie
Zimbabwe

CENTRAL AFRICA - AFRIQUE CENTRALE

Cameroon - Cameroun
Central African Republic -
République centrafricaine
Congo
Equatorial Guinea - Guinée équatoriale
Gabon
Sao Tome and Principe -
Sao Tomé et Principe
Zaire

SAHEL

Burkina Faso
Cape Verde - Cap-vert
Chad - Tchad
Gambia - Gambie
Guinea Bissau - Guinée-Bissau
Mali
Mauritania - Mauritanie
Niger
Senegal - Sénégal

NON-SAHEL WEST AFRICA -

AFRIQUE DE L'OUEST NON SAHELIENNE

Benin - Bénin
Côte d'Ivoire
Ghana
Guinea - Guinée
Liberia - Libéria
Nigeria - Nigéria
Sierra Leone
Togo

NORTH AFRICA - AFRIQUE DU NORD

Algeria - Algérie
Egypt - Egypte
Libyan Arab Jamahiriya -
Jamahiriya arabe libyenne
Morocco - Maroc
Sudan - Soudan
Tunisia - Tunisie

TABLE 16 - ABBREVIATIONS

AFRO	WHO Regional Office for Africa
BBC	British Broadcasting Corporation
CDS	Communicable Diseases Section
CRED	Centre for Research on the Epidemiology of Disasters
ECA	Economic Commission for Africa
FAO	Food and Agriculture Organisation of the United Nations.
ha	Hectares
K	Thousand
LRCS	League of Red Cross Societies
m	Million
MOH	Ministry of Health
MSF	Médecins sans frontières
OAU	Organisation of African Unity
OFDA	Office of US Foreign Disaster Assistance
ORS	Oral rehydration salts
PANA	Pan African News Agency
Sitrep	Situation report telexes from UNDRO
Stats	Statistics Division of ECA
SW frs	Swiss francs
t	Metric tons
UNCRD	United Nations Centre for Regional Development, Nagoya, Japan.
UNDRO	Office of UN Disaster Relief Co-ordinator
UNEP	United Nations Environment Programme
UNHCR	Office of the United Nations High Commissioner for Refugees
UNICEF	United Nations Children's Fund
USAID	United States Agency for International Development
WR	WHO Country Representative
WFP	World Food Programme
WHO	World Health Organisation
WMO	World Meteorological Organisation
>	More than

TABLEAU 16 - ABBREVIATIONS

AFRO	Bureau régional de l'OMS en Afrique
BBC	British Broadcasting Corporation
CDS/SMC	Section des maladies contagieuses
CRED	Centre de recherche sur l'épidémiologie et des désastres
ECA/CEA	Commission économique pour l'Afrique
FAO	Organisation des Nations Unies pour l'alimentation et l'agriculture
ha	Hectares
K	Millier
LRCS	Ligue des Société de la Croix Rouge
m	Million
MOH	Ministère de la santé
MSF	Médecins sans frontières
OAU/OUA	Organisation de l'Unité Africaine
OFDA	Bureau américain d'assistance aux désastres étrangers
ORS	Sels de Rehydratation orale
PANA	Pan African News Agency
Sitrep	Telex de rapport sur la situation (UNDRO)
Stats	Division de la statistique de la CEA
SW frs	Francs suisses
t	tonnes
UNCRD	Centre des Nations Unies pour le développement régional, Nagoya, Japan
UNDRO	Bureau du coordinateur de l'assistance en cas de désastres
UNEP/PNUE	Programme des Nations Unies pour l'environnement
UNHCR	Haut commissariat des Nations Unies pour les réfugiés
UNICEF	Fonds des Nations Unies pour l'enfance
USAID	Aide internationale des Etats-Unis pour le développement
WR	Représentant de pays de l'OMS
WFP/PAM	Programme alimentaire mondial
WHO/OMS	Organisation mondiale de la santé
WMO/OMM	Organisation météorologique mondiale
>	Plus de

Table 16 – Glossary

Tableau 16 – Glossaire

Allocation	Octroi	Guinea worm	Ver de guinée
Appeal	Appels	Hail	Grêle
Armyworms	Noctuidés	Harvest	Moisson
Asylum	Asile	Heavy rain	Pluies diluviennes
Available	Disponible	Homeless	Sans abris
Basic kits	Trousses de base	Homes	Maisons
Beans	Haricots	Infestation	Invasion
Bridges	Ponts	Initial relief	Premiers secours
Bubonic plague	Peste bubonique	Injured	Blessé
Buildings	Bâtiments	Isolated	Isolé
Cash	Argent liquide	Landslide	Eboulement
Cassava	Manioc	Lethal gas	Gas mortel
Cattle	Bovins	Livestock	Bétail
Crop failure	Mauvaise récolte	Locust	Criquet
Crops	Récoltes	Measles	Rougeole
Dam	Barrage	Medicine	Médicament
Damage	Dégats	Millet	Mil
Dead	Mort	Other	Autre
Destroyed	Détruit	Outbreak	Eclatement
Disease	Maladie	Particularly	Particulièrement
Drought	Sécheresse	Primary source	Source principale
Drugs	Médicaments	Printout	Rapports
Earthquake	Séisme	Property	Possessions
Emergency	Urgence	Rabies	Rage
Epidemic	Epidémie	Reliable	Fiable
Estimates	Estimations	Relief	Secours
Farmland	Champs	Relocation	Déplacement
Figures	Données	Repairs	Réparations
Fire	Feu	Resettlement	Réinstallation
Flood	Inondation	Rice	Riz
Food aid	Assistance alimentaires	Roads	Routes
Food rations	Rations alimentaires	Severe	Grave
Food shortage	Disette	Sorghum	Sorgho
Food stocks	Stocks alimentaires	Toxic waste	Déchets toxiques
Gastritis	Gastrites	Undiagnosed	Non-diagnostiqué
Grasshopper	Sauterelle	Yellow Fever	Fièvre jaune

**INDIAN OCEAN ISLANDS/
PAYS INSULAIRES DE L'OCEAN INDIEN**

COMOROS

	DISASTER	DATE	DEAD	INJURED	AFFECTED	HOME LESS	DAMAGE	NOTES/ APPEALS
3 islands	cyclone	10/01/83	33	52	30000		\$23m	(1) cyclone Elinah/ UNDRO figures are 40 dead & \$8800K damage
Anjouan and Grand Comore	cyclone	14/02/85	2		35000		homes, roads, crops	(2)
Grande Comore, Anjouan, Moheli	cyclone	03/01/87	247				crops, roads, buildings	(3) serious damage to crops, buildings, and roads; 24 persons missing
Anjouan	epidemic/ typhoid-like disease	01/01/89	3		> 600			(4) 600 cases in Dcomoni between 1/14 and 3/22
Anjouan island	cyclone	28/01/89					OFDA: \$5,236K	(5) cyclones Firinga and Kalafandji; houses, farmland destroyed and supply lines damaged
Source (1) OFDA 83010 (2) OFDA 85023 (3) OFDA 87122 (4) OFDA 89023 (5) UNDRO 89/0272 and OFDA 89129								

MADAGASCAR

	DISASTER	DATE	DEAD	INJURED	AFFECTED	HOME LESS	DAMAGE	NOTES/ APPEALS
Toliary, Tolagnaro	drought	1981			1000000			(1) date in CRED printout given as 10/11/81
Countrywide	cyclone	20/12/81	107		118000	5000	\$250000K	(2) heavy rains, cyclones/ homeless figure from UNDRO '89
Countrywide	cyclone	10/12/83	42		13560	13560	\$25K	(3) 3 cyclones/floods

Table 16 continued
MADAGASCAR (continued)

Tableau 16 suite

	DISASTER	DATE	DEAD	INJURED	AFFECTED	HOME- LESS	DAMAGE	NOTES/ APPEALS
-	cyclone	84/01/25	30			> 200	-	(4) thousands homeless; 3 villages and crops destroyed
Northern part particularly Antsiranana and Mahajanga	cyclone	84/04/09	68	215	100000	100000	\$250K	(5) cyclone Kamisy/WMO: 82 dead
-	earthquake	85/08/02					-	(4) earthquakes shook island for 9 hours; tremors reached 5.2 on Richter scale; 49 separate tremors recorded; numbers dead and damage not known
Toamasina and 4 surrounding villages	cyclone	86/03/14	99	424	83885	83885	\$27m	(6) cyclone Honorina; government estimates given; UNDRO estimate puts numbers affected at 120000; damage data from UNDRO; WMO '87: cyclone 5.5 on Dvorak scale
Antananarivo area	flood	86/12/29			28223		-	(7) heavy rains caused serious damage to houses and rice fields
Antananarivo	cyclone	87/01/01					crops and property	(8) torrential rains, floods, dams broken/primary source : UNDRO
-	cyclone	88/01/00	6		> 200		-	(9) cyclone Calidera/hundreds homeless
-	drought	88/04/00			116500		-	(10) four departments in far south; 23000 families in need of food assistance
Particularly Fianarantoa province	cyclone	89/12/31	46			5346	-	(11) UNDRO provided \$15K/ Source: OFDA update Feb. '90 disaster declared 90/01/24; obligation = \$20K construction materials/medicine/cash/rice (2K \$)
Androy region in south	drought	89/02/15			> 75000			(12) 2000 t rice, cost \$933K, from WFP
Southern part, particularly Toliary	drought	91/00/00						

Source

- (1) OFDA 81170
- (2) OFDA 82009
- (3) OFDA 84026
- (4) UNDRO in Africa 84/85
- (5) OFDA 84031 and WMO '87
- (6) OFDA 86012

- (7) OFDA 87119
- (8) OAU
- (9) UNEP Mar 88 (supp.)
- (10) OFDA 88033
- (11) UNDRO 90/0126 (2)
- (12) WFP Food Aid Review 1990

Table 16 continued

Tableau 16 suite

MAURITIUS

	DISASTER	DATE	DEAD	INJURED	AFFECTED	HOME- LESS	DAMAGE	NOTES/ APPEALS
Widespread	epidemic/ typhoid	80/01/00			108			(1)
Rodrigues island	cyclone	82/01/13			32000		\$650K	(2) cyclone Damia/ Source: UNDRO '89: cyclone of 82/02/00 affected 500 persons; damage \$323K
Rodrigues island	cyclone	82/02/00			500		\$323K	(3)
Agalega islands	cyclone	83/12/08	1	1	350			(4) cyclone Andry
-	cyclone	89/01/28	1	507	4000	4000	\$60000K	(5) cyclone Firinga; damage included 844 houses, 75-95% crops, 10-15% sugar cane & 5000t stored sugar cane.

Source

(1) OFDA 80013

(2) OFDA 82010

(3) UNDRO '89

(4) OFDA 84014

(5) UNDRO 89/0264 and OFDA 89131

Tableau 16 suite

BURUNDI

Source

(1) UNDRO 89/0368 and AFRO '89

Source

(1) OFDA 80022

(2) OFDA 81012

(3) OFDA 84029

(4) OFDA 88162

(S) UNDRO '89 and UNDRO Mar/Apr 89

Table 16 continued

Tableau 16 suite

ETHIOPIA

	DISASTER	DATE	DEAD	INJURED	AFFECTED	HOME- LESS	DAMAGE	NOTES/ APPEALS
-	flood	81/00/00			20000		-	(1)
-	drought	83/00/00			5000000		-	(2) govt. estimate of nos. affected
Wollo, Tigray, Eritrea, Shoa, Gondar, Hararghe, Sidamo	drought	83/00/00	300000		775000		-	(3) no reliable figure for no. killed; estimates ranged from 250,000 to 1,000,000
Refugee camps near Wollo	epidemic/ cholera	85/Q1/23	> 200		5000		-	(4) hundreds died - figures not available
Rift Valley Region	flood	85/08/00	9			8000	-	(5)
Makelle	epidemic/ pneumonia	85/08/07	> 300				-	(4) death rate about 150 per month
-	infestation	87/00/00					-	(6) locust and other insect infestations
Eritrea, Tigray, Wollo, Shoa	drought	87/00/00			7000000		-	(7) preliminary figures for numbers affected/ WHO: rainfall 40% of norm or less
Ogaden	drought	87/01/00	367		330000		-	Somali nomads affected; extensive livestock losses 25-90%
	infestation	87/00/00					-	(10) Primary source OFDA. Not recorded OFDA '88 document.
	floods	88/00/00	45				-	(10) Primary source: OFDA. Not in OFDA '88 document.
Wollo, Hararghe, Tigray, Eritrea, Gondar, Northern Shoa	drought	88/01/01			5200000		-	(9) information gathered from WR, LRCS, UNDRO & UNICEF
Addis Ababa	epidemic/ meningitis	88/02/01	15		165		-	WR: 1m t food/LRCS: 5m sw frs/UNICEF: \$22000K (9) WR informed AFRO/WHO response was 55K doses of vaccine
-	infestation	88/06/00					-	WR: 2m doses of vaccine (10) primary source : OFDA/not recorded in OFDA '88 document
-	infestation	88/06/00					-	(11) desert locusts in Tigray and Eritrea; armyworms throughout country except for Tigray and Eritrea

Table 16 continued
ETHIOPIA continued...

Tableau 16 suite

	DISASTER	DATE	DEAD	INJURED	AFFECTED	HOME- LESS	DAMAGE	NOTES/ APPEALS
Gambella, Itang refugee camps	flood	88/08/01			45000			(9) primary source : UNDRO
Countrywide	epidemic/ meningitis	88/09/00	1168		28567			(13) figures are up to March '89/sick are recorded cases/epidemic started in western regions
Eritrea, Wollo	infestation	88/09/01					500K ha land	(9) locusts/primary source : UNDRO
Sidamo province (Dollo)	flood	88/09/25	45		2240	2240	thousands of animals drowned	(14) flash floods
Gamugofa, Gojjam, Hararghe, Sidamo, Wollega, Wollo, Shoa	epidemic/ meningitis	89/02/00	1168		28000			(15) WK informed AFRO; WHO provided 20K capsules chloramphenicol 100K doses vaccine and \$20K; WHO report available/also OFDA 89028
Assab	earthquake	89/08/20					roads, 2 bridges	(15) primary source: UNDRO
Eritrea, Tigray, Wollo, Eritrea & Tigray	drought/ drought	89/09/00 89/11/02			18000000 > 3200000			(16) LRCS appeal on 26/10/89 for 330K t food and (12, Failures of rains led to serious food shortages. 17) Numbers affected probably far higher but inaccessible 41000 t food aid, cost \$9,971K, from WFP benefited 478,000 persons.
Eritrea, Tigray, Gondar and Wollo		90/01/00			3383670			(18) Source: RRC/ FAO 89/12/27 telex:1.1m t food (700K emergency relief/400K struc. & project food aid) needed for '90/ BEC 90/03/05: need 800K t for 5m persons food aid requirement: 662709 t

Table 16 continued

Tableau 16 suite

ETHIOPIA continued...

	DISASTER	DATE	DEAD	INJURED	AFFECTED	HOME- LESS	DAMAGE	NOTES/ APPEALS
Gojjam & Hararghe	drought	90/09/26			110000			(17) Severe food shortages & malnutrition as a result of exhaustion of reserves. Total failure of maize crop in Hararghe lowlands & poor prospects for sorghum 5000 t wheat, cost \$1707K, from WFP.
North, mainly Eritrea; also Tigray, N. Wollo & Hararghe	drought	91/01/00			4855000			(19) Emergency food assistance for 4 to 6 months, cost \$101000K from WFP.
Southeast	drought	91/01/00			300000			(19) Emergency food assistance for 4 months, cost \$9400K from WFP.
Omo, Hararghe, Tigray	drought	91/00/00			2175000			(20) Crop failure in the north. Limited rainfall adversely affected the nomadic populations of the Ogaden. WFP food aid \$98000k worth.
	drought	1991/92			289000			(21) 289k Ethiopian refugees in Sudan. Assistance is 83160t of food costing about \$30m by WFP.
Jijiga Awraja	malaria	92/11/00	300					(22) Affected areas Togochale, Alaibede and Danode. Upto 14 people reported dead on different localities in Jijiga. Appeal made to govt & aid agencies for emergency medical care.

Source

- (1) UNDRO '89
- (2) OFDA 84103
- (3) OFDA 85001
- (4) UNDRO in Africa 84/85
- (5) OFDA 85183
- (6) OFDA 87044
- (7) OFDA 87052 and WMO '88
- (8) OFDA 87038 and OAU
- (9) AFRO '88
- (10) CREB
- (11) OFDA 88051

- (12) WFP Food Aid Review 1990
- (13) UNDRO news Mar/Ap
- (14) OFDA 88241
- (15) AFRO '89
- (16) WFP telex
- (17) WFP Food Aid Review 1991
- (18) Ethiopian Herald, 90/01/26
- (19) WFP, 24/07/91
- (20) WFP, Food aid annual Review 1992
- (21) WFP, Food aid annual Review 1992
- (22) Ethiopian Herald, 92/11/13

Table 16 continued
KENYA

Tableau 16 suite

	DISASTER	DATE	DEAD	INJURED	AFFECTED	HOME- LESS	DAMAGE	NOTES/ APPEALS
Lamu	fire	82/05/30	2		4000	4000	-	(1)
Near Lake Victoria	flood	82/10/00	75		3000	3000	-	(2) flash floods
Mathare	fire	82/11/22			10000	10000	-	(3)
East and northeast	drought	84/00/00			600000		-	(4) WMO '85, animals died and agricultural productivity seriously reduced
Western Aberdares in Central Kenya	fire	86/01/28					4000 ha heath, grasslands & moors	(5) primary source: the Daily Nation, Kenya 89/02/04; week long fire put out on 4 Feb; said to be caused by honey hunters
	flood	86/05/06	21				damage and loss of property	(6) 13 died in Nairobi storms/ UNEP Jul/Aug 86 info: heavy rains during last week of April; 15 dead throughout country
Tsavo West National Park	fire	86/08/22					1000 ha vegetation	(7) primary source: Associated Press; fire started by poachers or honey gatherers
Lake Victoria shores	storm	88/03/01	70				5000 homes flooded in Nyando	(8)
East Gaussia district and Masai Mara reserve in south west	flood	90/02/25	5					(9) primary source: Reuters
Northern, eastern & central regions	drought	1992			1600000			(10) WFP assistance 79k t of emergency food. Malnutrition rates as high as 40% in some parts of the northern districts.
Rift Valley	yellow fever epidemic	1992	500					(11) UN and Denmark donated funds for vaccines.

Source

- | | |
|----------------------|--------------------------------|
| (1) OFDA 82023 | (6) WMO '87 |
| (2) OFDA 83105 | (7) UNEP Nov/Dec 86 (supp.) |
| (3) OFDA 83109 | (8) UNEP Dec 88 (supp.) |
| (4) OFDA 84133 | (9) Ethiopian Herald 90/02/28 |
| (5) UNEP May/June 86 | (10) Ethiopian Herald 93/01/02 |
| | (11) Ethiopian Herald 93/01/11 |

Table 16 continued

Table 16 sub

RWANDA

	DISASTER	DATE	DEAD	INJURED	AFFECTED	HOME- LESS	DAMAGE	NOTES/ APPEALS
-	food shortage	84/00/00			420000		-	(1)
Ruhengeri, Gitarama, Giseyni, Gikongoro, Kibuye	flood	88/05/01	48	50	21628		4000 homes; 45 bridges, 49 roads	(2) WHO gave 1 basic kit; WR & UNDRO cited as primary WR: \$149K
Most of the country	food shortage	90/01/21			1000000		-	(3) extensive crop failure due to drought and pest damage. Primary source : Reuters; WFP to donate \$2600K of food, 6400t maize, 1000 t beans, 200 t oil government: 136K t food aid
South	crop failure	90/01/30			> 400000			(4) 1989 drought & crop infestation led to malnutrition, marasmus & kwashiokor in the south. 1990 harvest equally poor requiring expansion of project, 10710 t food aid, cost \$3326K, from WFP.

Source

(1) OPDA 85102

(2) AFRO '88

(3) Ethiopian Herald 90/01/21-90/02/04

(4) WFP Food Aid Review 1991

Table 16 continued
SOMALIA

Tableau 16 suite

	DISASTER	DATE	DEAD	INJURED	AFFECTED	HOME- LESS	DAMAGE	NOTES/ APPEALS
Hiran, Juba province	flood	81/03/00			20000	> 60000	-	(1,2
Northwest	epidemic/ cholera	85/03/22	1262		4815		-	(3) outbreak mainly in refugee centre in Hargeisa
-	accident	85/08/24					-	(4) ship loaded with chemicals ran aground and burned
South and northwest	epidemic/ cholera	86/00/00	1307		7093		-	(5)
12 regions in central area	drought	87/00/00	600		500000		-	(6) heavy livestock losses
Mogadishu, central and north west areas	flood	87/05/01			> 200		crops, 1000s of domestic animals	(7) torrential rains; 100s affected; primary source: UNDRO
-	drought	87/06/01	740		1600000		crops & cattle rearing	(7) damage to sorghum crops; primary sources: UNDRO and OFDA
Awdal and Gedo regions	drought	88/00/00			53500		-	(8) food shortages; numbers affected are those needing food assistance
Koryaleh province, down- stream Shabelle river	flood	89/06/05			50000		40K ha farmland	(9) telex in WHO/epr sitrep file/ OFDA: 40K affected

Source

- | | |
|----------------|--------------------------------------|
| (1) OFDA 81122 | (6) OFDA 87032 |
| (2) UNEP 1991 | (7) OAU |
| (3) OFDA 85029 | (8) OFDA 88146 |
| (4) OFDA 85047 | (9) UNDRO 89/1200 (1) and OFDA 89156 |
| (5) OFDA 86014 | |

Table 16 continued

Tableau 16 suite

UGANDA

	DISASTER	DATE	DEAD	INJURED	AFFECTED	HOME- LESS	DAMAGE	NOTES/ APPEALS
Lowero Bush Region	food shortage/ epidemic	84/02/08	150000					(1) food shortages, high prevalence of kwashiorkor, and epidemics of pneumonia and measles
Karamoja	drought	87/00/00			331000			(2) inadequate spring rains led to crop failure; affected figure is numbers needing food assistance
West Nile, Arura	invasion/stor	88/00/00						(3) Locust invasion & very heavy rains destroyed crops
West Nile	earthquake	88/08/08			2000	2000		(4) earthquake followed by two hours of heavy rain
	drought/ disease	89/6/27			600000			(3) Drought & mosaic disease reduced cassava crop. Child malnutrition increased. 6885t food aid, cost \$2260K, from WFP
South-western region	outbreak/ dysentery	90/01/17	11	30				(5)
Kampala and Arua	epidemic/ meningitis	90/01/31	53		187			(6) primary source : Reuters
Mainly western districts also Mbale in east	epidemics/ meningitis	90/09/17	41		168			(7) Cases refer to June to August only. Vaccine received from Danish Red Cross (200000 doses). MOH requested US Mission donate 500000 doses.
Karamoja region	drought	1991			335000			(8) Dramatic decline in vegetation cover due to drought 15678t food aid, cost \$ 3580k from WFP.

Source

(1) UNDRO in Africa 84/85

(2) OFDA 88007

(3) WFP Food Aid Review 1990

(4) OFDA 88235

(5) Ethiopian Herald 90/01/17

(6) Ethiopian Herald 90/01/31

(7) WHO/CDS Geneva

(8) WFP Food Aid Review 1992

Table 16 continued

Table 16 suite

TANZANIA

	DISASTER	DATE	DEAD	INJURED	AFFECTED	HOME- LESS	DAMAGE	NOTES/ APPEALS
-	epidemic/ bubonic plague	80/05/00	12				-	(1)
Mbeya	flood	82/06/04			40000		-	(2)
Kilwa District	epidemic	83/04/00	163				-	(3) Undiagnosed disease
-	drought	84/00/00			1900000		-	(4)
Lake Manyara and Tarangire National Parks	epidemic/ anthrax	84/02/11					-	(5) 1200 animals, mainly antelopes, died.
Northern part	epidemic/ bubonic plague	85/12/00	10		118		-	(6)
Western areas	infestation	86/00/00					-	(7) red locust swarms
Ifakara, Morogoro districts	flood	86/03/00			> 6000		-	(8) primary source: Sunday Nation, Kenya 86/03/30; thousands homeless; 6000 affected by floods in low-lying Morogoro district
Kigoma near Lake Tanganyika	epidemic/ cholera	87/11/00	90		500		-	(9) number of cases as of January 1988
Coastal, Morogoro, Mbeya, Mtwara	flood	88/04/00	5		141000	9700 houses damaged		(10) WR and UNDRO information to AFRO; WHO provided 20 emergency kits and drugs/ OFDA 88173: 6500 affected; 1300 families displaced in Iringa
Lindi Region	drought	88/09/01			110000		-	(10) primary source : LRCS LRCS: 2.6m sw frs
Ifakara District and Morogoro Region	flood	89/03/00	10		300000	houses and crops		(8, primary source: UNEP, 1991 11)

Table 16 continued
TANZANIA (continued)

Tableau 16 suite

	DISASTER	DATE	DEAD	INJURED	AFFECTED	HOME- LESS	DAMAGE	NOTES/ APPEALS
Mahurunga, Kilambo, Kihimika, Pangazo and Kitunguli	flood	89/04/07	12		3200		3K ha land	(11) extensive damage 12)
Zanzibar, Unguja & Pemba islands	food shortage infestation	89/10/20			165000		Cassava & banana crops	(13) Wealy bug infestation affected cassava in Zanzibar in 1988 then spread to other islands. Black sigatoka destroyed 40-60% banana plantations in Zanzibar. 3000 t food aid, cost \$945000, from WFP.
Southern areas Lindi & Mtwara regions	floods	90/05/25		69	17000		Crop losses Extensive damage	(14) Torrential rains in first half April caused extensive flooding, & loss of estimated 46430 t food. Emergency food aid of 2157 t, cost \$435K, from WFP.
Arusha & Kilimanjaro spread to Mara & Dodoma	epidemic/ meningitis	90/11/01		56	686			(15) Began August, spread south in September.

Source

- | | |
|-----------------------------|--------------------------------|
| (1) OFDA 80167 | (9) OFDA 88116 |
| (2) OFDA 82154 | (10) AFRO '88 |
| (3) OFDA 83166 | (11) UNEP 1991 |
| (4) OFDA 85103 | (12) UNDRO 89/0727 (1) |
| (5) UNDRO in Africa 84/85 | (13) WFP Food Aid Review, 1990 |
| (6) OFDA 86121 | (14) WFP Food Aid Review, 1991 |
| (7) OFDA 86030 | (15) WHO/CDS Geneva |
| (8) UNEP Jul/Aug 86 (supp.) | |

Table 16 continued

Tableau 16 suite

SOUTHERN AFRICA/AFRIQUE AUSTRALE

ANGOLA

	DISASTER	DATE	DEAD	INJURED	AFFECTED	HOME- LESS	DAMAGE	NOTES/ APPEALS
-	drought	85/00/00			500000		-	(1) famine caused by drought
Luanda Region	epidemic/ cholera	87/06/00	59		673		-	(3) U.N.\$24600K
SWAPO refugee camps	epidemic/ cholera	88/02/00					-	(4) WR informed AFRO/WHO response:\$20K worth of supplies.
Most of the country	epidemic/ cholera	88/02/01	2168		30000		-	(5) Primary source cited for CRED is OFDA/ WR informed AFRO/WHO response:2500 ringer lactate solution 15K ors ,30K tetracycline (AFRO).
Luanda, Benguela	epidemic/ cholera	89/01/00	766		15525		-	(6) WR informed AFRO/WHO provided 50K ors, 28K ringer lactate, 50K tetracycline,and \$20K/epidemic lasted till June 1989/WHO report available
Kwanza Norte, Bengo	flood	89/01/00			140000		houses and infrastructure	(6) primary source : UNDR0; floods continued till 89/04/00 / OFDA 89139: 100,000 affected; severe rains caused rivers to overflow banks
Huila, Namibe, Kwanza Sul, Benguela	drought	89/01/00			2000000		crop failure	(7) primary source : UNDR0/ problem persisted throughout the year/ appeal for information from PANA in newspaper government: 127m t food
Southern provinces	drought/ floods	89/10/13			92000			(8) Resettlement necessary for internally displaced persons & returnees. 5040 t food aid, cost \$1989K, from WFP.
Four southern provinces	drought	90/04/12			800000			(9) 6540 t emergency food aid for 100,000, cost \$1944K, from WFP.

Source

(1) OFDA 85134

(2) OFDA 87194

(3) AFRO '88

(4) CRED & AFRO '88

(5) AFRO '89

(6) AFRO '89/ Ethiopian Herald 89/12/16

(7) WFP, Food Aid Review, 1990

(8) WFP, Food Aid Review, 1991

Table 16 continued

Tableau 16 suite

BOTSWANA

	DISASTER	DATE	DEAD	INJURED	AFFECTED	HOME- LESS	DAMAGE	NOTES/ APPEALS
-	drought	81/00/00			1037300		-	(1) significant crop and cattle losses
Countrywide	drought	82/00/00			409770		-	(2)
Countrywide	drought	82/00/00 to 85/			880000		-	(3) date disaster declared 85-08-12; 4th successive year of drought
-	drought	82/00/00 to 87/			671000		-	(4) disaster declared on 87-04-09/6th successive year of drought
-	infestation	86/00/00					-	(5) red and migratory locusts threat
Central, South, & Kweneng districts	flood	88/02/01	8	7	12000		-	(6) primary source cited for CRED is OAU and for AFRO is UNICEF UNICEF:\$250K
Countrywide, specially in Northern areas	epidemic/ malaria	88/05/00	183		14618		-	(7) outbreak followed first good rains in several years
Boletl area	outbreak/ bubonic plague	90/01/26	5		19		-	(8) primary source: Reuters

Source

(1) OFDA 84032

(2) OFDA 82017

(3) OFDA 85042

(4) OFDA 87027

(5) OFDA 86032

(6) CRED & AFRO '88

(7) OFDA 88177

(8) Ethiopian Herald 90/01/26

Table 16 continued

Tableau 16 suite

LESOTHO

	DISASTER	DATE	DEAD	INJURED	AFFECTED	HOME- LESS	DAMAGE	NOTES/ APPEALS
-	drought	84/00/00			500000		-	(1)
Mokhotlong District	flood	85/02/09			80000		-	(2)
Several villages	storm	87/10/01	20		100000		livestock killed; infrastructure	(2) primary sources are USAID telex 20/10/87 and Reuters; snowstorm and blizzard; villages isolated; reports of snow blindness and typhoid /see also OFDA 89149
Tele river	flood	90/01/30	10					(4) worst affected was area near Tele river at Quthing/primary source : Agence France Presse

Source

(1) OFDA 84131

(2) OFDA 85020

(3) Disaster News

(4) Ethiopian Herald 90/01/30

Table 16 continued

Tableau 16 suite

MALAWI

	DISASTER	DATE	DEAD	INJURED	AFFECTED	HOME- LESS	DAMAGE	NOTES/ APPEALS
South and east	food shortage/ drought infestation	87/08/00			878000			(1) CRED figure for affected is 1429267/ drought in south, mealybug infestation, and influx of Mozambican refugees led to food shortages
Northern regions	infestation/ crop failure	88/02/01			206000			(3) mealy bug infestation resulted in crop shortage; primary source : LRCS LRCS: 5m sw fire
Central and Southern Nsanje, Chikwana, Zomba, Zomba, Machinga	flood	89/03/00	7		245000	100000	\$17650m	(3, UNDR0 telex 89/0675 (2) info: figures for homeless 4) and damage; total crop loss; approximate \$2.6m pledged by 1 April /AFRO '89 info: WHO gave \$20K, UNEP: 137000 affected. Thousands evacuated from refugees camps.
Karonga district	tornado	89/03/00			2000		houses and buildings	(5) primary source : UNDR0
Salima district	earthquake	89/03/09	9				buildings, bridges, infrastructure	(5) WR informed AFRO/ UNDR0 sitrep 89/0675 (2): 6) earthquake measured 5.7 on Richter scale. UNEP gives magnitude 6.2. Damage severe.
Countrywide	epidemic/ meningitis drought	89/10/00 90/10/24	35		444 2900000			(4) WR informed AFRO (8) Low 1990 rainfall caused loss of three quarters of smallholders maize crops. 10000 t maize, cost \$2292K, from WFP for 370400 of most affected people.
South, Palumbo District	flood/ landslides	91/03/00	500		130000	8000		(9) Crops, infrastructure, houses destroyed. Appeal for K59m but only K7m raised. Still dying from starvation 8 months later.

Source

(1) OFDA 88015

(2) AFRO '88

(3) UNEP 1991

(4) AFRO '89

(5) WFP Food Aid Review 1990

(6) WFP Food Aid Review 1991

(7) BBC 91/11/12

Table 16 continued

Tableau 16 suite

MOZAMBIQUE

	DISASTER	DATE	DEAD	INJURED	AFFECTED	HOME- LESS	DAMAGE	NOTES/ APPEALS
6 provinces	drought	80/00/00			6000000		-	(1)
7 provinces	epidemic/ cholera	80/04/00	10		200		-	(2)
Southern & central	drought	81/00/00			4000000		-	(3)
7 provinces	drought	81/00/00			4750000		-	(4) crop production down by 70-80% in affected areas
6 provinces	drought	81/00/00	100000		2466000		-	(5) continued food shortages
6 drought affected districts	epidemic/ cholera	83/01/00	189				-	(6)
Maputo and Gaza	cyclone	84/01/29	109		350000	49000	\$75m	(7) cyclone Domoina/ see also OFDA 84021
-	drought	84/03/01	5000				-	(8) primary source : UNCRD, Japan
South and central areas	flood	85/02/07	8		500000		\$500K	(9) extensive damage to infrastructure in river valleys
Matola	fire	85/02/27				3700	600t pesticides valued at \$3.7m	(10) warehouse fire destroyed pesticides; hundreds evacuated
Maputo province	storm	85/03/26					-	(11) damage to electrical transmission towers, houses and warehouses
Inhambane province	drought	87/09/01	50		8000		-	(12) affected persons near Massinga/no rain for six years
Maputo, Niassa	infestation	88/00/00					-	(13) mealy bug; primary source : the UN

Table 16 continued
MOZAMBIQUE (continued)

Tableau 16 suite

	DISASTER	DATE	DEAD	INJURED	AFFECTED	HOME- LESS	DAMAGE	NOTES/ APPEALS
Sofala province	cyclone	88/03/01	> 100			28000	crops destroyed worth \$10 m.	(14) OFDA information: cyclone Filao hit Quelimane area; (15) caused floods 100 dead and 4000 affected and homeless; UNEP gives > 100 dead, > 4500 homeless. \$358.4m
Central (Sofala)	drought flood	89/01/00	2				crop failure, roads and bridges	(16) primary source : UNDRO
Nampula	food shortage	89/01/00	5200				-	(16) primary source : UNDRO; famine conditions persisted throughout the year/ see also UNDRO 90/0375 (3)
Tete province	epidemic/ food	89/03/03	12		371		-	(17) last case appeared in July
Countrywide	shortage	89/08/02 to 90/00/00			752000			(18) Many displaced persons. Adverse weather also reduced harvest in some areas. Aid continued through 1990. 75050 t food aid cost \$23436K, from WFP.
	food shortage	92/05/01 to 93/10/31			440000			(19) Food assistance for displaced persons affected by foodshortage and civil strife. 101630 t food aid cost \$39173K, from WFP.

Source

- (1) OFDA 81109
- (2) OFDA 80166
- (3) OFDA 83129
- (4) OFDA 84003
- (5) OFDA 85016
- (6) OFDA 83188
- (7) UNDRO and WMO '85
- (8) CRED
- (9) OFDA 85021

- (10) OFDA 85152 & UNEP May 85 (supp.)
- (11) OFDA 85028
- (12) UNEP Nov/Dec 87 (supp.)
- (13) AFRO '88
- (14) WMO '89 and OFDA 88163
- (15) UNEP 1991
- (16) AFRO '89
- (17) WR to AFRO
- (18) WFP Food Aid Review 1990, 1991
- (19) WFP Food Aid Review 1992

Table 16 continued

Tableau 16 suite

NAMIBIA

	DISASTER	DATE	DEAD	INJURED	AFFECTED	HOME- LESS	DAMAGE	NOTES/ APPEALS
	drought	90/04/12			150000			(1) Drought, which has persisted for several years, worsened in 1989 & malnutrition increased. Subsistence farmers & livestock herders most affected. 11574 t foodaid, cost \$5418K, from WFP, to last until next harvest in mid 1991.

Source

(1) WFP Food Aid Review 1991

SWAZILAND

	DISASTER	DATE	DEAD	INJURED	AFFECTED	HOME- LESS	DAMAGE	NOTES/ APPEALS
Entire country	drought	83/00/00	500				-	(1)
	cyclone	84/01/28	53		632000	500	\$54,152K	(2) cyclone Domoina/ ECA: damage to transport and agricultural infrastructure interrupted production, particularly of sugar
Shiselweni & Lubombo regions	drought	91/00/00			31000			(3) Low precipitation in 1989/90 rainy season resulted in crop & livestock losses. 635 t food costing \$157 k from WFP.

Source

(1) OFDA 83131

(2) OFDA 84019 and ECA/Stats.

(3) WFP Food Aid Review 1992

Table 16 continued
ZAMBIA

Tableau 16 suite

	DISASTER	DATE	DEAD	INJURED	AFFECTED	HOME- LESS	DAMAGE	NOTES/ APPEALS
	food shortage	80/00/00	15		23000		-	(1)
Mwinilunga	epidemic/ measles	82/07/00	51				-	(2)
Kafue Flats and Northern province	infestation	86/00/00					-	(3) red and African migratory locusts
Lusaka, southern, eastern, western	flood	89/01/00			800000		infrastructure	(4) see also sitreps 89/1152 1,2,& 3; damage to roads /AFRO'89 information:WHO gave \$20K
Lusaka, Ndola	epidemic/ cholera	90/02/06	80		970		-	(5) latest figures from Ethiopian Herald issue of 90/02/22. Primary source: Agence France Presse authorities \$13m
North	epidemic/ cholera	90/09/00	500					(6)
North	epidemic/ cholera	91/10/10	56		480			(6) Began in Zaire in Sept. & spread across border. Similar to last year.
	epidemic/ cholera	92/11/01	>300		>10000			(7) Over 1000 people crowded in hospitals

Source

(1) OFDA 81007

(2) OFDA 82160

(3) OFDA 86033

(4) UNDRO 89/1152(4) & OFDA 89128

(5) Ethiopian Herald 90/02/10

(6) BBC 91/10/10

(7) BBC, Focus on Africa, Vol. 4 No.1

Table 16 continued
ZIMBABWE

Tableau 16 suite

	DISASTER	DATE	DEAD INJURED	AFFECTED	HOME- LESS	DAMAGE	NOTES/ APPEALS
-	drought	84/00/00				\$1m	(1) 3rd successive year of drought; damage figure for cattle losses only in 1984
Eastern part	epidemic/ cholera	92/12/00	25	755			(2) Mostly Mozambican refugees fleeing war and famine in their country.
	drought	1991 to 1992		> 5000000			(3) Drought induced shortage & electricity forced many industries to close. Nearly 6000 t maize imported in 1992. About 300 kt expected to be imported in 1993, although heavy rains have broken the severe drought
Northern province and Southern Matabeleland	epidemic/ cholera	92/11/0	275	>6000			(4) Disease broke out in late November along the Mozambican border.
Chimanimani district	forest fire	92/9/22				>2000 ha of forest land	(5)

Source

- (1) OFDA 84101
- (2) Ethiopian Herald of 19/12/92
- (3) Ethiopian Herald of 10/01/93
- (4) Ethiopian Herald 25/02/93
- (5) BBC, Focus on Africa, Vol. 4 No. 1

Table 16 continued

Tableau 16 suite

CENTRAL AFRICA/AFRIQUE CENTRALE

CAMEROON

	DISASTER	DATE	DEAD	INJURED	AFFECTED	HOME- LESS	DAMAGE	NOTES/ APPEALS
Lake Monoun	unusual phenomena	84/08/15	37				-	(1) release of lethal carbon dioxide from Lake Monoun in north-west chain of volcanic mountains
Lake Nyos	unusual phenomena	86/08/21	1734		4634	4634	-	(2) Lake Nyos lethal gas (CO) eruption/ CRED information 1746 dead
-	infestation	87/00/00					-	(3) grasshopper infestation
Douala	flood	87/10/12	8				-	(4) -
Northern provinces	epidemic/ meningitis	88/07/01	39		340		-	(5) primary source: OAU for CRED and UNICEF for AFRO
-	flood	88/08/00	2		1000	1000	-	(6) torrential rains
Kousseri in North	epidemic/ cholera	91/05/24	7		49		-	(7) Outbreak began 19 May in a prison. Cases given to 24 May. Epidemic links with that of N'djamena (Chad).
Northern province	crop failure	91/00/00			186900		-	(8) Dry spell followed by locust attacks in August 1991. WFP aid 5382t at \$2026k.
Northern provinces	epidemic/ meningitis	92/00/00	500		6000		-	(9) Epidemic resurfaces almost every year during the dry season.

Source

(1) OFDA 84176

(2) OFDA 86034

(3) OFDA 87026

(4) UNEP Feb 88 (sup.)

(5) CRED & AFRO '88

(6) OFDA 88127

(7) WHO/CDS Geneva

(8) WFP Food Aid Review 1992

(9) Ethiopian Herald, 26/02/93

Table 16 continued
CENTRAL AFRICAN REPUBLIC

Tableau 16 suite

	DISASTER	DATE	DEAD	INJURED	AFFECTED	HOME- LESS	DAMAGE	NOTES/ APPEALS
Bimbo	storm	81/11/18		50	900	900	\$125K	(1)
	flood	88/02/01	25				-	(2) primary source : Sigma

Source

(1) OFDA 82002

(2) CRED

EQUATORIAL GUINEA

	DISASTER	DATE	DEAD	INJURED	AFFECTED	HOME- LESS	DAMAGE	NOTES/ APPEALS
Malabo	fire	87/02/11			313		-	(1) urban fire in slum area

Source

(1) OFDA 87020

GABON

Tableau 16 suite

DISASTER	DATE	DEAD	INJURED	AFFECTED	HOME- LESS	DAMAGE	NOTES/ APPEALS
Libreville	epidemic/ cholera	88/04/01		132		-	(1) WR informed AFRO/WHO gave tetracycline, ORS, and laboratory equipment
Lambarene, Port Gentil, Makokou, Koulamoutou, Mouila, Njole	flood	88/11/00			300	roads	(1) information from WR & UNDRO to AFRO; WHO provided tetracycline, ORS, laboratory equipment/ see also UNDRO telex 88/2631 and OFDA 89015 WR:2345m cfa

SAO TOME AND PRINCIPE

	DISASTER	DATE	DEAD	INJURED	AFFECTED	HOME- LESS	DAMAGE	NOTES/ APPEALS
Countrywide	drought	83/00/00			93000		-	(1) food shortage
-	epidemic/ malaria	86/01/00	150				-	(2) affected children in particular; numbers dead as of 86/02/28
Agua Grande, Mezochi, Lobata, Cantaggio, Cave	epidemic/ cholera	89/06/00	24		261		-	(3) WR informed AFRO; WHO provided 3K ORS, chloramphenicol iv sets, micropur tablets and \$10K; WHO report available

Source
(1) OFDA 84018
(2) OFDA 86131
(3) AFRO '89

Table 16 continued

Table 16 ends

ZAIRE

	DISASTER	DATE	DEAD	INJURED	AFFECTED	HOME- LESS	DAMAGE	NOTES/ APPEALS
Haut Zaire, Kivu province	drought	84/00/00			300000		-	(1) CRED document
Along Zaire river	epidemic/ cholera	87/09/00	450				-	(2) cholera deaths over a four week period
Uvira in south Kivu	flood	88/04/00	16				-	(3) Kalima Bengue river flood
Sud-Kivu	landslide	89/03/28			148	148	roads damaged	(4) primary source : the press
Kinshasa & provincial cities in most of coutry	food shortage	91/09/29						(5) Primary source: Le Monde, Sep 29-30, Oct 20 - following food shortages & steep price rises.

Source

(1) OFDA 84192

(2) OFDA 87196

(3) UNEP Dec 88 (supp.)

(4) AFRO '89

(5) Guardian Weekly Oct 6, 20th

Table 16 continued

Tableau 16 suite

SAHEL

BURKINA FASO

	DISASTER	DATE	DEAD	INJURED	AFFECTED	HOME- LESS	DAMAGE	NOTES/ APPEALS
-	epidemic/ meningitis	81/01/00	441	-	3801	-	-	(1) -
-	epidemic/ meningitis	81/12/00	650	-	6212	-	-	(2) -
Northeastern Sahel Area	drought	83/00/00	-	-	-	-	-	(3) food shortage
-	epidemic/ yellow fever	83/00/00	-	-	356	-	-	(4) cases reported for the year
East, north, northwest Ouagadougou	drought	83/00/00	-	-	2500000	-	-	(5) estimate of displaced people: 222000
Ouagadougou area	epidemic/ meningitis	84/00/00	-	-	1000	-	-	(6) -
Gorom-Gorom city	flood/ outbreak cholera	84/10/01	-	-	-	1500	-	(7) subsequent outbreak of cholera resulted in 70 detected cases
Banfora	flood	85/06/11	-	-	-	572	railways and bridges	(7) -
Tougou, Manhi, Dago	epidemic/ cholera	85/06/21	56	-	384	-	-	(7) -
Doum, Namentenga, Sewu, Gwanga								
Northern & eastern	infestation	86/00/00	-	-	-	-	-	(8) grasshopper infestation
-	infestation	87/00/00	-	-	-	-	-	(9) grasshopper infestation
Northern Burkina	drought	88/00/00	11	-	200000	-	-	(10) successive years of crop failure/government estimates of destitute population.

Source: UNDRO, WHO, LRCS, AFRO questionnaire '88:
region affected is West Sahel.

Table 16 continued
BURKINA FASO continued ...

Tableau 16 suite

	DISASTER	DATE	DEAD	INJURED	AFFECTED	HOME- LESS	DAMAGE	NOTES/ APPEALS
14 out of 30 provinces West Sahel	flood	88/00/00	14	-	15000	10000	cattle, homes	(11) flooding after heavier than normal rains isolated more than 100 villages. Primary sources: UNDRO, WHO & LRCS. OAU information from AFRO questionnaire '88. 11 dead.
<u>Source</u>								
			(1) OFDA 81031	(7) UNDRO in Africa 84/85				
			(2) OFDA 82012	(8) OFDA 86025				
			(3) OFDA 84017	(9) OFDA 87018				
			(4) WHO/AFRO	(10) OFDA 88147				
			(5) OFDA 85011	(11) OFDA 88055				
			(6) OFDA 84027					

CAPE VERDE

	DISASTER	DATE	DEAD	INJURED	AFFECTED	HOME- LESS	DAMAGE	NOTES/ APPEALS
Brava island	hurricane	82/09/29	3	122	2100	2100	\$3m	(1) hurricane Beryl
Santo Anteo, Santiago	storm	84/09/16	29	-	5500	5500	crops/ infrastructure	(2) tropical storm Fran; estimated 1100 families homeless/ WMO figure for dead is 31/UNDRO in Africa 84/85 estimates damage amounting to \$3m.
	infestation	88/03/22	-	-	-	-	-	(3) desert locusts throughout islands; damage to fruit trees, irrigated crops and maize
<u>Source</u>								
			(1) OFDA 82035					
			(2) OFDA 85003 and WMO '85					
			(3) OFDA 89008/CRED					

Table 16 continued
CHAD

Table 16 continues

	DISASTER	DATE	DEAD	INJURED	AFFECTED	HOME- LESS	DAMAGE	NOTES/ APPEALS
Countrywide	drought	80/00/00	-	-	600000	-	-	(1) food shortage
Sahelian and Sudan zones	drought	84/00/00	3000	-	1500000	-	-	(2) estimated 500K displaced people
Sahelian zone, Lake Chad area	infestation	86/00/00	-	-	-	-	-	(3) grasshopper infestation; also African migratory and desert locust outbreaks
-	infestation	87/00/00	-	-	-	-	-	(4) grasshopper infestation
All regions	infestation	87/01/01	-	-	-	-	-	(5) rat infestation
N'Djamena and several Southern areas	epidemic/ meningitis	88/01/00	133	-	8704	-	-	(6) primary source cited is OFDA/ OFDA 88148 states 443 dead in N'djamena and 6794 affected
Kanem, Batha, Ouaddai, Biltine	drought	88/01/01	-	-	-	33000	-	(8) primary source cited is LRCS LRCS: 1,650K sw fr
N'Djamena	epidemic/ meningitis	88/03/00	362	-	4000	-	-	(9) WR informed AFRO/WHO provided 100K doses vaccine/ UNEP source: Reuter report 411 dead; cerebrospinal meningitis WR: 450K doses vaccine
-	infestation	88/05/00	-	-	-	-	-	(7) locust infestations in western, central, eastern, and northeastern prefectures; grasshoppers in east central
Biltine prefecture	storm	88/06/25	11	-	1200	1200	\$157k	(10) hailstorm; nearly 5000 animals perished
N'Djamena, Kanem, Ouaddai, Logone	flood	88/08/24	43	48	47450	-	13K houses/12K ha land/3500 cattle	(11) AFRO sources: UNDRO & LRCS/ above normal rainfall (12) caused flooding & damage to typical mud brick houses
Chari Baguirmi (including N'Djamena) and Lac provinces	epidemic/ cholera	91/05/31	68	-	1002	-	-	(12) Cases up 30 May. Outbreak started 11 May. Numerous cases in Kousseri on Cameroon/Chad border. Cooperation with health officers in northern Cameroon.

Table 16 continued
CHAD continued ...

Table 16 suite

DISASTER	DATE	DEAD	INJURED	AFFECTED	HOME- LESS	DAMAGE	NOTES/ APPEALS
Sahelian and Sahelo- Sudanian zones	drought/ infestation	1991		167000			(13) 1990 crop yield adversely affected by poor rain and grasshopper infestation. Food shortage exacerbated by a massive influx of people from Sudan because of drought. WFP: 18kt food at \$4778k.

Source

- | | | |
|-----|--------------------|----------------------------------|
| (1) | OFDA 82031 & 83142 | (7) OFDA 88037 |
| (2) | OFDA 85006 | (8) AFRO '88 |
| (3) | OFDA 86028 | (9) AFRO '88 & UNEP Dec '88(Sup) |
| (4) | OFDA 87013 | (10) OFDA 88197 |
| (5) | OFDA 87039 | (11) OFDA 88224 & AFRO '88 |
| (6) | CRED | (12) WHO/CDS Geneva |
| | | (13) WFP Food Aid Review 1992 |

GAMBIA

DISASTER	DATE	DEAD	INJURED	AFFECTED	HOME- LESS	DAMAGE	NOTES/ APPEALS
Countrywide	drought	80/00/00	-	-	500000	-	(1) -
Albert market	fire	84/00/00	-	1000	-	-	(2) external assistance required
Countrywide	infestation	86/00/00	-	-	-	-	(3) -
Different villages	fire	87/00/00	-	600	-	400	(4) several fires; external assistance needed
-	infestation	87/00/00	-	-	-	-	(3) grasshopper infestation
-	infestation	88/04/01	-	-	-	-	(5) locusts/WR informed AFRO
Countrywide	infestation	88/10/00	-	-	-	-	(6) desert locusts endangered crop and rangeland
Lower River & Upper River regions	drought	1991	-	-	87500	-	(7) 1990 crop yield adversely affected recurring dry spells. Total WFP cost \$1.45m for 4.2kt food aid.

Source

- | | | |
|-----|-----------------------|------------------------------|
| (1) | OFDA 80030 | (4) OFDA 87015 |
| (2) | AFRO questionnaire 88 | (5) AFRO '88 |
| (3) | OFDA 87002 | (6) OFDA 89002 |
| | | (7) WFP Food Aid Review 1992 |

Table 16 continued
GUINEA BISSAU

Tableau 16 suite

	DISASTER	DATE	DEAD	INJURED	AFFECTED	HOME- LESS	DAMAGE	NOTES/ APPEALS
-	infestation	86/06/00	-	-	-	-	-	(1) grasshopper infestation in two districts
-	infestation	87/00/00	-	-	-	-	-	(2) grasshopper infestation
Tombali	hurricane	87/07/01	1	3	-	3700	buildings and food	(3) destruction of homes, schools, seeds & 100 t of food stock in Catio & 30 villages
City of Bissau and environs	epidemic/ cholera	87/09/25	68	-	660	-	-	(4) killed & affected as of 87/10/14.
Bijagos Islands	fire	89/03/23			2625		homes, crops, stored food and seeds	(5)

Source

(1)	OFDA 86168	(4) OFDA 88001
(2)	OFDA 87037	(5) OFDA 89039
(3)	OFDA 87050	

MALI

	DISASTER	DATE	DEAD	INJURED	AFFECTED	HOME- LESS	DAMAGE	NOTES/ APPEALS
-	epidemic/ meningitis	81/02/00	412	-	4153	-	-	(1) -
Sahelian and Sudan zones	drought	82/00/00	-	-	1500000	-	-	(2) 4th successive year of drought; directly affected entire farming and herding population
Gao, Segou, Timbuktu, Mopti regions	epidemic/ cholera	84/06/00	1022	-	4502	-	-	(3) -
Koulikoro	epidemic/ cholera	84/10/05	-	-	800	-	-	(4) -
Kayes, Yelimane, Nara	infestation	85/00/00	-	-	0	-	-	(5) grasshopper and quelea bird infestations
North central region & Niger inland delta	infestation	85/00/00	-	-	0	-	-	(6) severe grasshopper infestation
-	epidemic/ cholera	85/08/08	547	-	2500	-	-	(4) -
-	infestation	87/00/00	-	-	0	-	-	(7) grasshopper infestation
Bamako and rural areas	epidemic/ yellow fever	87/09/00	137	-	153	-	-	(8) -

Table 16 continued

Tableau 16 suite

MALI continued ...

	DISASTER	DATE	DEAD	INJURED	AFFECTED	HOME- LESS	DAMAGE	NOTES/ APPEALS
Western Mali	epidemic/ cholera	87/10/00	57	-	0	-	-	(9) cholera outbreak killed over 57 in a 2-month period
Kita and Kati regions	epidemic/ yellow fever	87/10/00	37	-	0	-	-	(10) 4.75 million people at risk/primary source cited is UNDR0
Bamako	epidemic/ meningitis	88/01/06	47	-	159	-	-	(11) primary source : UNICEF
Eastern and western	infestation	88/04/00	-	-	-	-	-	(12) locusts in Eastern Mali; locusts and grasshoppers in western parts; 871k ha, cropland affected
North-west regions	infestation	88/05/01	-	-	-	-	-	(11) locusts; WR informed AFRO
Bamako, Segou, Koulikorou	flood	88/08/01	17	-	-	10000	-	(11) primary source : LRCS LRCS: 111k sw frs

Source

(1)	OFDA #1011	(7) OFDA #7014
(2)	OFDA #4038	(8) OFDA #8002
(3)	OFDA #5005	(9) OFDA #8102
(4)	UNDR0 in Africa 84/85	(10) OAU
(5)	OFDA #6001	(11) AFRO '88
(6)	OFDA #6029	

MAURITANIA

	DISASTER	DATE	DEAD	INJURED	AFFECTED	HOME- LESS	DAMAGE	NOTES/ APPEALS
Guidamaka, eastern & western Hodh	epidemic/ rabies/ meningitis	82/02/00	5	-	12	-	-	(1) -
Nationwide	drought	83/00/00	-	-	1700000	-	-	(2) cereal production down by 75%; 30% livestock and 50% camels died; estimated 200000 displaced persons
Adrar region: Atar village	flood	84/09/21	2	-	3000	1983	-	(3) Source: AFRO questionnaire 88:Atar region affected; 2 dead and 1983 homeless
Southeastern parts	infestation	85/00/00	-	-	-	-	-	(4) grasshopper infestation and desert locusts
Tintane	flood	86/00/00	4	-	-	765	-	(5) -
-	infestation	87/01/00	-	-	-	-	-	(6) grasshopper and locust infestation
Seven regions threatened	epidemic/ yellow fever	87/10/00	35	-	178	-	-	(7) -
South-west, east, and south	infestation	87/11/00	-	-	240000	-	-	(8) locusts in all affected areas; grasshoppers in south west; pockets of drought and pest damage in east led to food shortages
-	flood and infestation	88/00/00	-	-	-	-	property and crops	(9) floods claimed lives and damaged property; conditions favoured hatching of desert locusts; damage to thousands of hectares of crops

Table 16 continued
MAURITANIA continued...

Tableau 16 suite

	DISASTER	DATE	DEAD	INJURED	AFFECTED	HOME- LESS	DAMAGE	NOTES/ APPEALS
S. Regions: Gorgol, Brakna,	epidemic/ cholera	88/08/01	38	-	575	-	-	(10) WHO gave 3000 ringer lactate solution/ WR informed AFRO WR: 3000 ringer lactate solution
Cities: M'bout, Nouadhibou, Nouakchott	epidemic/ meningitis	90/10/19	5		20			(11) Vaccination treatment programme planned. MOH requests 50000 doses vaccine A&C.
-	drought/ infestation	91/00/00			433000			(12) 20 kt food, cost \$6.9m

Source

- | | | | |
|-----|-----------------------|------|--------------------------|
| (1) | OFDA 82052 and 82015 | (7) | OFDA 88004 |
| (2) | OFDA 84002 and 85013 | (8) | OFDA 89007 |
| (3) | OFDA 84041 | (9) | WMO '89/OFDA 88048 |
| (4) | OFDA 86040 | (10) | AFRO '88 |
| (5) | AFRO questionnaire 88 | (11) | WHO/CDS Geneva |
| (6) | OFDA 87025 | (12) | WFP Food Aid Review 1992 |

NIGER

	DISASTER	DATE	DEAD	INJURED	AFFECTED	HOME- LESS	DAMAGE	NOTES/ APPEALS
Niamey - Grande Marche	fire	82/03/30	1	-	3000	-	\$16K	(1) trade centre fire
Countrywide	drought	83/11/00	-	-	3500000	-	-	(2) 50% reduction in crop output & livestock population.
Niamey, Dosso, Diffa	infestation	86/08/00	-	-	-	-	-	(3) localized grasshopper outbreaks
-	infestation	87/00/00	-	-	-	-	-	(4) grasshopper infestation
Northern parts of Niamey, Maradi, Zinder and Diffa	drought	88/00/00	-	-	1000000	-	-	(5)
-	infestation	88/05/00	-	-	-	-	-	(6) locust infestation covered 1.9m ha; grasshoppers in central Niger
Nationwide especially Tillabere & southern Zinder	flood	88/08/00	20	-	80000	80000	\$10,200k	(7)
Diffa, Tohoua	infestation	88/08/01	-	-	-	-	5K ha land	(8) locusts; primary source : UNICEF
Zinder, Mirrea, Magaris	flood	88/09/01	-	-	8000	-	840 houses	(8) primary source : LRCS LRCS: 125K sw frs
Maradi, Niamey	epidemic/ cholera	89/08/00	19	-	131	-	-	(9) WR informed AFRO; WHO provided 6k ors, 24K tetracycline, 100kg calcium hypochlorate; outbreak lasted till Sept '89; WHO report available.

Table 16 continued

Tableau 16 suite

NIGER continued...

	DISASTER	DATE	DEAD	INJURED	AFFECTED	HOME- LESS	DAMAGE	NOTES/ APPEALS
	epidemic/ meningitis	89/05/00			> 6000			(10)
Throughout, especially Niamey	epidemic/ measles	91/04/26	1066		48874			(10) Influx of people to Niamey due to food shortages in rural areas. Began October. 38% deaths were infant. Lack of cold-chain facilities. Cases 1 Oct-10 March. Peak in mid-March. OFDA donated \$32000. Drugs for 35000 cases received.
Zinder, Diffa & Maradi departments	epidemic/ cholera	91/06/07	54		446			(10) Outbreaks in Tanont, Miffia & Diffa over by May but continuing in Maradi. Four new areas affected in Madarounfa. Rare for outbreaks to occur so early, before onset of rains. Annual incidence rarely over 150. UNICEF requests \$50K.
Zinder, Maradi, Dosso & Tahoua	epidemic/ meningitis	91/04/30	69		6058			(10) Cases up 10 March reported by MOH. Almost all cases confined to children under 15. WR reported 3674 cases & 466 deaths by 15 March. Epidemic may be linked to very dry conditions. Donations: 400000 doses vaccines & 11000 doses chloramphenicol received. Donors: French cooperation, USAID, Médecins sans frontières, USOPDA.
	drought/ infestation	91/00/00			800000			(11) 14.4 kt of food aid, cost \$6.2m

Source

- | | | | |
|-----|------------|------|---------------------------|
| (1) | OFDA 82014 | (6) | OFDA 88038 |
| (2) | OFDA 84040 | (7) | OFDA 88032 |
| (3) | OFDA 86179 | (8) | AFRO '88 |
| (4) | OFDA 87023 | (9) | AFRO '89 |
| (5) | OFDA 88024 | (10) | WHO/CDS Geneva 30/04/91 |
| | | (11) | WFP, Food Aid Review 1992 |

Table 16 continued
SENEGAL

Tableau 16 suite

	DISASTER	DATE	DEAD	INJURED	AFFECTED	HOME- LESS	DAMAGE	NOTES/ APPEALS
-	drought	83/00/00	-	-	1200000	-	-	(1) severe reductions in staple crops
Matam-Bakel	flood	83/06/18	-	-	5000	-	\$1406K	(2) heavy rains and high winds
-	epidemic/ cholera	85/07/27	-	-	3100	-	-	(3) 3100 cases reported since 84/10/00
Lac de Guiers	flood	85/11/00	-	-	3000	-	-	(4) land inundated by collapse of earthen retention dam
-	infestation	87/00/00	-	-	-	-	-	(5) grasshopper infestation
Dakar, Diourbel, Thiès, Tambacounda	flood	88/08/01	-	-	-	10000	crops, houses	(6) primary source : LRCS LRCS:129K sw fra

Source

(1) OFDA 84001

(2) OFDA 83035

(3) UNDRO in Africa 84/85

(4) OFDA 86114

(5) OFDA 87017

(6) AFRO '88

Table 16 continued

Tableau 16 suite

**NON-SAHÉL WEST AFRICA/ AFRIQUE
DE L'OUEST NON SAHÉLIENNE**

BENIN

	DISASTER	DATE	DEAD	INJURED	AFFECTED	HOME- LESS	DAMAGE	NOTES/ APPEALS
3 coastal provinces	flood	82/06/03	-	-	500000	80000	-	(1) homeless figure from UNDRO record
-	fire	84/00/00	-	-	-	-	-	(2) bush fires caused by continuing drought burned 80% of northern areas
Mono, Atlantique, Oueme, Zou provinces	flood	85/10/00	61	-	375000	200000	\$4.8m	(3), 4)
Atacora, Borgou, and Zou provinces; Coby, and Materi districts	epidemic/ meningitis	87/01/00	24	-	56	-	-	(5) bacterial meningitis
Atacora province especially Tanguieta district	epidemic/ meningitis	87/12/22	41	-	347	-	-	(6) CRED figure for affected is 306
-	epidemic/ meningitis	88/02/01	58	-	372	-	-	(7) WR informed AFRO
Atlantique, Mono, Zou, Borgou, Oueme (10 districts)	flood	88/09/01	23	-	260000	80000	OK ha land/ 3K cattle/ infrastructure	WR: 50K doses of vaccine (7) WR informed AFRO/WHO responded with 20 basic kits/WHO report available
Atacora	epidemic/ meningitis	89/01/00	228	-	2411	-	-	(8) WH informed AFRO; WHO provided 100K doses of vaccine and \$10k; outbreak ended April 1989; WHO report available

Source

(1)	OFDA 82153	(5) OFDA 87024
(2)	OFDA 84132	(6) OFDA 88019
(3)	OFDA 86105	(7) AFRO '88
(4)	UNEP 1991	(8) AFRO '89

Table 16 continued
CÔTE D'IVOIRE

Tableau 16 suite

	DISASTER	DATE	DEAD	INJURED	AFFECTED	HOME- LESS	DAMAGE	NOTES/ APPEALS
Tortya	epidemic	83/00/00	35	-	300	-	-	(1) external assistance not required
Dagbonville	flood	89/11/00	-	-	7000	-	-	(2) WR informed AFRO/WHO gave \$10k

Source

(1) AFRO questionnaire 88

(2) AFRO '89

GHANA

	DISASTER	DATE	DEAD	INJURED	AFFECTED	HOME- LESS	DAMAGE	NOTES/ APPEALS
Countrywide	food shortage	82/00/00	-	-	12500000	-	-	(1) major crop losses due to drought and fire
-	epidemic/ yellow fever	83/00/00	-	-	372	-	-	(2) cases reported for the year
-	expelled	83/01/00	-	-	700000	-	-	(3) ECA: about 1 million Ghanaian workers deported from Nigeria
Upper east region	epidemic/ meningitis	84/02/20	103	-	1500	-	-	(4)
Central Ghana	fire	85/02/25	4	-	1500	1500	homes, crops, livestock	(5) bush fires
Volta, upper east, upper west	epidemic/ anthrax	88/05/01	15	-	138	-	-	(6) BBC & WR information to AFRO
North	outbreak/	89/01/00	-	-	19	-	-	(7) WR informed AFRO

Source

(1) OFDA 84004

(2) WHO/AFRO

(3) OFDA 83015 & ECA, Stats Div.

(4) OFDA 84131 & UNDRO in Africa

(5) OFDA 85146

(6) AFRO '88

(7) AFRO '89

Table 16 continued
GUINEA

Tableau 16 suite

	DISASTER	DATE	DEAD	INJURED	AFFECTED	HOME- LESS	DAMAGE	NOTES/ APPEALS
Northwest, near Gaoual	earthquake	83/12/22	275	1436	20000	20000	-	(1) two tremors/16 villages destroyed
Salambande	epidemic	87/02/01	18	-	30	-	-	(2) primary source cited is UNDRO
	fire	88/04/00	-	-	-	-	houses and plantation	(3) bush fires in April and May caused extensive damage

Source

- (1) OFDA 84016
- (2) OAU
- (3) WMO '89

LIBERIA

	DISASTER	DATE	DEAD	INJURED	AFFECTED	HOME- LESS	DAMAGE	NOTES/ APPEALS
-	epidemic/ cholera	80/01/00	466	-	1887	-	-	(2) -
Near Mano River	landslide	82/10/06	46	-	200	-	-	(3) talus/mudslide
Bassa, Monrovia	fire	87/00/00	2	-	600	600	-	(4) -
Nimba, Cape Mountain	flood	87/00/00	5	-	300	300	-	(4) -
Monrovia Bassa	fire	88/00/00	3	-	400	400	-	(4) -

Source

- (1) OFDA 80031
- (2) OFDA 83001
- (3) AFRO questionnaire '88

Table 16 continued
NIGERIA

Tableau 16 suite

DISASTER	DATE	DEAD	INJURED	AFFECTED	HOME- LESS	DAMAGE	NOTES/ APPEALS
Eastern state of Cross River	flood	85/10/09	5	-	-	> 200 crops, houses	(1) primary source: Reuters 85/10/09; hundreds homeless and crops destroyed
Bauchi and Kano states	epidemic/ meningitis	86/03/00	73	-	200	-	(2) cerebro-spinal meningitis
Near Gusau in Sokoto state, north western areas	accident	86/03/00	25	-	-	-	(3) primary source: Sunday Standard, Kenya 86/03/30; persons died after drinking contaminated (poisoned) pond water
Northern regions	infestation	86/09/00	-	-	-	-	(4) grasshopper infestations
Southeastern and western regions	epidemic/ yellow fever	86/11/00	> 1000	-	> 1200	-	(5) figures are those reported but actual numbers are much higher; WHO/AFRO information reported 3291 cases for the year
Central and southern areas	flood	87/00/00	75	-	-	15000	(6) floods in first and third quarters of 1987
North and northeastern	drought/ infestation	87/00/00	-	-	-	\$1300 million	(6) grain harvest lost/deaths due to malnutrition reported/very hot weather in early months of '87 resulted in loss of 240k t of yam tubers (\$7.2m)
-	epidemic/ measles	87/05/01	89	-	-	-	(7) primary source: UNDR0
Western State of Oyo, Lagos, Ibadan & surroundings	epidemic/ yellow fever	87/06/01	10000	-	-	-	(7) primary source: UNDR0
Koko port, Bendel state	accident	87/08/00	-	-	1000	-	(8) toxic waste dump posed health hazard
Cross River state	epidemic/ measles	87/11/00	100	-	120	-	(7) primary source: UNDR0/ also OFDA 88103
North, Rivers & Lagos states	flood	88/05/00	60	-	-	220000 15K houses	(9) Baguada dam collapse; region includes northern states; Kano, Bauchi, Borno, Niger, Sokoto/ LRCS information to AFRO
	flood	88/08/00	130	-	300000	-	(10) primary source: OFDA/not recorded in OFDA '88. document
Anambra state	landslide	88/12/01	-	-	-	1500	(9) press informed AFRO
Lagos	fire	89/01/12	-	-	5000	5000	(11) primary source: the press
Off Port Harcourt	accident	89/02/00	22	-	-	-	(12) Nigerian merchant ship MV Gurera ran into a storm, hit a rock and sank; 49 crew and passengers on board
Southeast	epidemic/ lassa fever	89/03/00	-	-	-	-	(13)

LRCS: 128K sw frs

Table 16 continued
NIGERIA continued ...

Table 16 ends

	DISASTER	DATE	DEAD	INJURED	AFFECTED	HOME- LESS	DAMAGE	NOTES/ APPEALS
Oyo state	outbreak/ guinea worm	89/07/28			16576		-	(14) villages affected
	outbreak/ typhoid fever	89/08/20	25				-	(12)
Niger state	outbreak/ guinea worm	89/10/03			50		-	(12) 50 persons affected were paralyzed
Kano state	outbreak/ guinea worm	89/10/26			16000		-	(12) 356 villages affected
Gongola state	outbreak/ jaundice	89/11/01	30				-	(12)
Katsina state	outbreak/ guinea worm	89/11/22			12018		-	(12) 182 villages affected
Imo state	outbreak/ yellow fever	89/11/25	100				-	(12)
Kwara state	outbreak/ guinea worm				300		-	(12)
Kano State	epidemic/ meningitis	91/06/12	60		2778			(14) Cases refer to 1 Jan-4 Apr. Request to WHO for 20000 doses vaccine.
Kano State	epidemic/ cholera- gastroenteritis	91/04/14	430		4276			(14) Cases refer to 14 Feb-14 Apr. Cholera confirmed in 10 cases. Assistance requested from MSF for 100000 doses ORS & tetracycline & from WHO/AFRO for 20000 doses ORS & 5000 Ringer lactate. 5000 doses ORS already sent.

Source

- | | | | |
|-----|-------------------------|------|--------------------|
| (1) | UNEP Jan/Feb 86 (supp) | (8) | OFDA 88132 |
| (2) | OFDA 86142 | (9) | AFRO '88 |
| (3) | UNEP July/Aug 86 (supp) | (10) | CBED |
| (4) | OFDA 86194 | (11) | AFRO '89 |
| (5) | OFDA 87033 | (12) | WR Nigeria to AFRO |
| (6) | WHO '88 | (13) | OFDA 89030 |
| (7) | OAU | (14) | WHO/CDS Geneva |

Table 16 continued
SIERRA LEONE

Table 16 continues

DISASTER	DATE	DEAD	INJURED	AFFECTED	HOME- LESS	DAMAGE	NOTES/ APPEALS
Off southern coast Kambia, Port Loko, Tonkolili and 4 other districts	accident 84/07/21 epidemic/ 85/12/00 cholera	60 352	- -	- 3000	- -	- -	(1) storm caused sinking of ship Panbali Kamara (2) -

Source

- (1) UNDP in Africa 84/85
- (2) OFDA 86007

TOGO

DISASTER	DATE	DEAD	INJURED	AFFECTED	HOME- LESS	DAMAGE	NOTES/ APPEALS
Tone and Oti prefectures North	drought 88/12/00 epidemic/ 89/03/00 meningitis	- 147	- -	0 1617	- -	- -	(1) flooding and drought created food shortage (2) WR informed AFRO; WHO provided 100k doses of vaccine and cfa 2285k; see also OFDA 89021

Source

- (1) OFDA 89020
- (2) AFRO '89

Table 16 continued

Tableau 16 suite

NORTH AFRICA/AFRIQUE DU NORD

ALGERIA

	DISASTER	DATE	DEAD	INJURED	AFFECTED	HOME- LESS	DAMAGE	NOTES/ APPEALS
El Asnam	earthquake	80/10/10	2633	8369	478948	443000	\$5.2m	(1) Source: UNEP 1991 gives 5000 dead, magnitude 7.4 (2)
El Elma	flood	81/09/04	43	50			-	(3)
Northern Algeria, Annaba	flood	82/11/10	37	14	8500	-	-	(4) torrential rains
Tisemsilt area	earthquake	82/11/15	3	14	-	-	10 houses collapsed	(5) latitude 35.6N longitude 1.4E
Temouchent province	flood	84/11/10	30	-	-	1470	-	(6) prolonged rains; 24 persons missing; 3 villages isolated
-	earthquake	85/00/00	30	-	-	-	-	(1) magnitude 5.9, damage moderate.
Eastern Algeria	storm	85/01/00	26	-	15000	15000	-	(7) 6 day storm led to severe flooding
-	earthquake	87/00/00	1	-	-	-	-	(2) magnitude 4.9, damage moderate.
Tindouf, Adrar	infestation	87/10/00	-	-	-	-	-	(8) locust invasion
West and south regions	infestation	88/02/28	-	-	-	-	450K ha lost	(9) 2nd locust invasion reached Saharan Atlas mountains from AFRO source - LRCS: 2.5m sw frs
Guezzam, Tin Zawaten, Badji Moktar	storm	88/09/01	-	-	10107	-	-	(10) primary source for CRED is OAU and for AFRO it is UNDRO/winds, rains in refugee camps UNDRO: 2K tents & 2K blankets
Northern provinces especially Tipaza region	earthquake	89/10/29	30	300	> 20000	20000	buildings, roads, etc.	(12) 6.0 on Richter scale & several smaller aftershocks, many families housed in tents, \$20K from Japan and 80t of relief from Italy; 800t food aid, cost \$328K, from WFP UNDRO: \$500K. Algerian Civil Defence & LRCS 500 tents, 500 blankets, drugs.

Source

(1)	UNEP 1991	(7)	OFDA 85136
(2)	OFDA 81001	(8)	OFDA 88008
(3)	UNDRO/84/1	(9)	OFDA 88022
(4)	OFDA 83107	(10)	CRED & AFRO '88
(5)	A.A. Geophysical Observatory	(11)	WFP Food Aid Review 1990, 1991
(6)	OFDA 85114 & UNDRO in Afr	(12)	UNDRO 89/2262 (3) and AFRO '89

Table 16 continued
EGYPT

Tableau 16 suite

	DISASTER	DATE	DEAD	INJURED	AFFECTED	HOME- LESS	DAMAGE	NOTES/ APPEALS
Al Dahreya	fire	84/11/04	52	-	-	-	property	(1) fire destroyed 500 mud houses
Southern Sinai desert	flood	87/10/01	11	11	-	-	-	(2) also landslide; primary source: UNDR0
Cairo	accident	87/12/24	23	36	-	-	-	(3) transport accident due to rainstorm. Primary source OFDA
Al Qusia	fire	88/06/21	47					(4) fire ignited by sparks from food stall burned hundreds of tents in makeshift tent-city
Cairo	epidemic/ meningitis	90/00/00			2314			(5) Throughout 1990 with 300 per month March to May, decreasing to 64 in Sept and increasing to 90 in December.
Norther Egypt including Cairo	earthquake	92/10/12	>500					(6) 5.6 on the Richter scale. Many of the dead were school children, trampled to death while fleeing their crumbling schools. Many buildings collapsed and hundreds were rendered unsafe.
<i>Source</i>								
(1)		OFDA 85118		(4) OFDA 88195				
(2)		OAU		(5) WHO/CDS Geneva, 27/02/91				
(3)		OAU		(6) BBC Focus on Africa, Vol. 4, No. 1				

MOROCCO

	DISASTER	DATE	DEAD	INJURED	AFFECTED	HOME- LESS	DAMAGE	NOTES/ APPEALS
Fez	accident	82/04/00	1		10000	2216	-	(1) cliff collapse
Southern region	drought	84/02/24	-	-	-	-	-	(2) crops and livestock badly affected; water reservoirs reduced by 25%
Guelimine, Errachidia, South eastern part	infestation	87/03/00	-	-	-	-	-	(3) second locust invasion
	infestation	87/10/00	-	-	-	-	-	(4) locusts
Fez	landslide	88/02/29	52	6	-	-	destroyed	(5) cliff collapsed on a shanty town after prolonged rains/OFDA 88161:31 dead
	infestation	88/03/15						(6) locusts. Primary source: OAU
<i>Source</i>								
(1)		UNDR0/84/1 and OFD		(4) OFDA 88005				
(2)		UNDR0 in Africa 84/8		(5) UNEP Aug 88 (supp.)				
(3)		OFDA 88017		(6) CRED				

Table 16 continued

Table 16 ends

SUDAN

	DISASTER	DATE	DEAD	INJURED	AFFECTED	HOME- LESS	DAMAGE	NOTES/ APPEALS
Northern regions	drought	83/00/00	-	-	1000000	-	-	(1)
Countrywide mainly western provinces	drought	83/00/00	-	-	8400000	-	-	(2) large influx of refugees from Ethiopia and other countries
Maban	drought	83/04/00	-	-	40000	-	-	(3)
Kassala	flood	83/08/15	-	-	100000	30000	-	(4) heavy rains/homeless figure from UNHCR
Mundri district	flood	83/10/00	-	-	2000	2000	-	(5) flash floods
Taxaboon in Eastern Sudan	outbreak/ gastritis	85/09/10	17	-	85	-	-	(7) primary source: Reuters 85/09/10; source of outbreak was contaminated water; drinking wells in village were closed and water was provided by tankers
Three areas of the Nile	infestation	86/00/00	-	-	-	-	-	(6) desert and migratory locust infestation
Southern Sudan	food shortage	86/00/00	-	-	2000000	-	-	(8) large population at risk from starvation.
-	infestation	87/00/00	-	-	-	-	-	(9) rat infestation
Central Northern Kordofan, north Darfur provinces	infestation	87/00/00	-	-	-	-	-	(10) locust and grasshopper infestations
Khartoum	flood	87/08/00	-	-	-	50000	-	(11)
-	epidemic	87/08/01	60	-	-	-	-	(12) malnutrition problem; primary source: UNHCR
-	drought	87/10/00	-	-	3450000	-	-	(13) OPDA information: drought in Kordofan and Darfur affected 1750000; those affected by civil strife in south & displaced persons in north not included
Southern Sudan, Khartoum & some northern provinces	famine	88/00/00	-	-	1506500	-	-	(14)
Eastern especially Red Sea province	infestation	88/00/00	-	-	-	-	-	(15) 3.4m ha infested in Sudan since 88/01/07
Malakal in Southern Sudan	food shortage	88/02/03	37	-	120000	-	-	(16) on 88/02/07 Sudanese Government announced that 23m persons would need food aid in 1988
Khartoum and central region	epidemic/ meningitis	88/03/00	1608	-	23267	-	-	(17) figures as of 89/05/05
Darfur Province and Khartoum area	infestation	88/07/00	-	-	-	-	-	(18) desert locusts

Table 16 continued
SUDAN continued ...

Tables 16 sub

	DISASTER	DATE	DEAD	INJURED	AFFECTED	HOME- LESS	DAMAGE	NOTES/ APPEALS
East-Central, including Khartoum and environs	flood	88/08/04	96	-	1500000	1000000	homes, hydro-electric turbines	(19) infrastructural damage/ WMO: dead-98; injured-215; infrastructural damage/ WMO affected-420000; 25k ha cotton & groundnut crops destroyed; damage estimated at \$66m
Eastern	epidemic/ malaria	88/11/00	-	-	-	-	-	(20) severe outbreak following August floods
Southern	food shortage	89/04/00	-	-	-	-	-	(21) beginning of operation lifeline Sudan (OW)
West	drought	90/03/13	-	-	998000	-	-	(22) 1989/90 millet & sorghum yields were 36% less than previous year in west. 11045t food aid, cost \$2357K, from WFP in rural works project, and 15000t subsidised sorghum from govt. More sorghum needed.
East (northern Korfodan & northern Darfur) and Red Sea hills	drought	90/10/22	-	-	795000	-	-	(22) Serious crop failure. 25000t wheat, to be exchanged for dura if possible, cost \$10960K, from WFP. Bilateral donors supplying further aid.

Source

- | | | |
|------|-------------------------|-------------------------------|
| (1) | OFDA #4102 | (12) OAU |
| (2) | OFDA #5012 | (13) CRED & OFDA #8016 |
| (3) | OFDA #3029 | (14) OFDA #9014 |
| (4) | OFDA #3040 | (15) OFDA #9019 |
| (5) | OFDA #4107 | (16) UNEP Aug 88 (supp.) |
| (6) | OFDA #6024 | (17) OFDA #8026 |
| (7) | UNEP Jan/Feb 86 (supp.) | (18) OFDA #8040 |
| (8) | OFDA #8035 | (19) OFDA #8042 and WMO '88 |
| (9) | OFDA #7040 | (20) OFDA #9112 |
| (10) | OFDA #7016 | (21) U.N. |
| (11) | UNEP Nov/Dec 87 (supp.) | (22) WFP Food Aid Review 1991 |

Table 16 continued

Tableau 16 suite

TUNISIA

	DISASTER	DATE	DEAD	INJURED	AFFECTED	HOME- LESS	DAMAGE	NOTES/ APPEALS
Sfax, coastal areas	flood	82/10/28	117	-	30000	-	\$90m	(1) heavy rains
Tunis, Beja and other regions	flood	86/09/30	23	-	-	2500	-	(2) torrential rains/ WMO:report of flash floods in July '86; 18 dead
-	drought/ infestation	88/00/00	-	-	-	-	-	(3) drought and locusts reduced cereal production to about 27% of average year; severe impact on rural poor
Gafsa, Sfax Axis and north central	infestation	88/03/15	-	-	-	-	-	(4) locust invasion
-	infestation	88/07/00	-	-	-	-	-	(5) locust control programme
Coutrywide (Kairouan region-hailstorms)	drought	89/10/16	-	-	184000	-	-	(6) 1988 cereal harvest only 300K tons compared with average 1300K tons. Assistance needed to prevent abandonment of farms. Violent hailstorms in mid-1989 damaged fruit & olive trees. 4800 t food aid, cost \$729600 from WFP for 11000 in food-for-work programmes to rehabilitate devastated areas & improve agricultural production system.
Southern and central	flood	90/01/26	24	-	32	-	4000 homes and infrastructures	(7) numbers affected are persons missing as of 90/01/29; primary source: Reuters/Herald Tribune, 90/1/28-29 and Ethiopian Herald of 90/01/26. USA obligation as of 90/01/31 = \$340K
Central & southern regions	floods	90/04/03			> 19500		infrastructure including 86km irrigation & drainage canals & crops	(8) Three days heavy rain in late January caused severe flooding & widespread destruction. 6136t emergency food aid, cost 1053K, from WFP to worst affected families.

Source

- | | | | |
|-----|------------------------|-----|----------------------------------|
| (1) | OFDA 83003 | (5) | OFDA 88039 |
| (2) | OFDA 86202 and WMO '87 | (6) | WFP Food Aid Review 1990 |
| (3) | OFDA 83144 | (7) | Herald Tribune/ Ethiopian Herald |
| (4) | OFDA 88018 | (8) | WFP Food Aid Review 1991 |