

Human Development Indicator : 0.396
 Rank : 161/174
 Annual Frequency of Large-scale Disasters : 0.07

Kiribati

GENERAL BACKGROUND

geography

area : 730 sq km
 land use : arable land : 0%; permanent crops : 51%; permanent pastures : 0%; forest and woodlands : 3%
 annual deforestation (%change) : NA

demography

population : 88,400 (1999); density : 109.6 hab/km²; urban population : 38.7%
 population growth rate : 2.8% (1999)

economy

economic-aid recipient : \$15.5 million (1995)
 GNP : \$80.6 million (1999)
 GNP-per capita : \$910 (1999)
 value-added (% of GDP)
 agriculture : 20.7%
 services : 73.2%
 industry : 6.1%

LARGE-SCALE DISASTERS

hazards

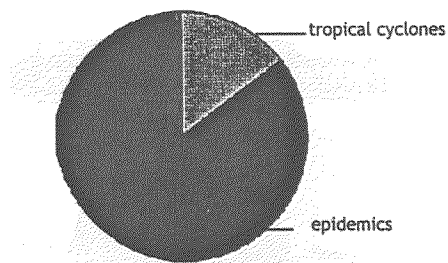
Typhoons can occur any time, but usually November to March; occasional tornadoes; low-level of some of the islands makes them very sensitive to sea-level rise.

large-scale disasters : 1970-1998

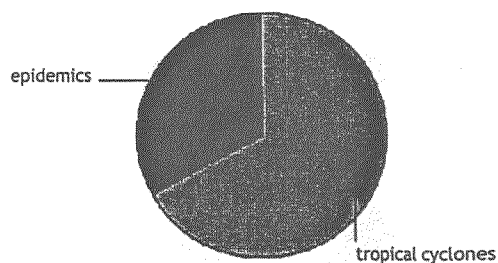
total events : 2
 total killed : 20
 total affected : 1,052
 annual frequency since 1970 : 0.07

| type of event | no. of events | killed | affected |
|------------------------------------|---------------|--------|----------|
| tropical cyclone/hurricane/typhoon | 1 | 3 | 700 |
| epidemics | 1 | 17 | 352 |

people killed by disasters



people affected by disasters



Human Development Indicator : 0.484

Rank : 140/174

Annual Frequency of Large-scale Disasters : 0.75

Lao P.D.R.

GENERAL BACKGROUND

geography

area : 236,800 sq km
 land use : arable land : 3%; permanent crops : 0%; permanent pastures : 3%; forest and woodlands : 54%
 annual deforestation (%change) : NA

demography

population : 5.1 million (1999); density : 20.1 hab/km²; urban population : 22.9%
 population growth rate : 2.4% (1999)

economy

economic-aid recipient : \$345 million (1995)
 GNP : \$1.4 billion (1999)
 GNP-per capita : \$280 (1999)
 value-added (% of GDP)
 agriculture : 52.6%
 services : 25.4%
 industry : 22.0%

LARGE-SCALE DISASTERS

risk and vulnerability

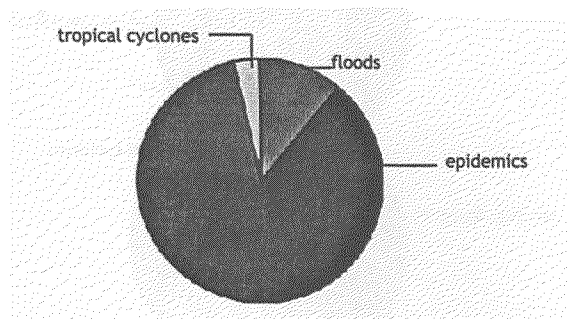
Floods, droughts, and blight are common hazards. The economy is largely agricultural. Subsistence agriculture accounts for half of the GDP and provides 80% of total employment. Deforestation and soil erosion are a serious threat to a sustainable agriculture. The cultivation of rice accounts for 80% of the agricultural production even though small-size rice land patches are vulnerable to floods and/or water shortages. The situation varies a lot from one year to another. For example, after a very good harvest in 1998, the country was exposed to serious floods. Investment in disaster prevention, mitigation and capacity building, especially to cope with floods, droughts, typhoons and epidemics can contribute to sustainable development in Laos.

large-scale disasters 1970-1998

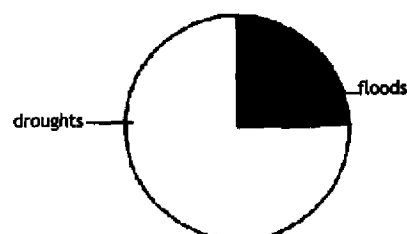
total events : 21
 total killed : 869
 total affected : 5,666,331
 annual frequency since 1970 : 0.75
 since 1985 : 1.37

| disaster type | no. of events | killed | affected |
|------------------------------------|---------------|--------|-----------|
| tropical cyclone/hurricane/typhoon | 3 | 30 | 38,537 |
| floods | 8 | 99 | 1,387,550 |
| droughts/famines/food shortages | 6 | — | 4,230,000 |
| epidemics | 4 | 740 | 10,244 |

people killed by disasters



people affected by disasters



Human Development Indicator : 0.569
 Rank : 127/174
 Annual Frequency of Large-scale Disasters : 0.43

Lesotho

GENERAL BACKGROUND

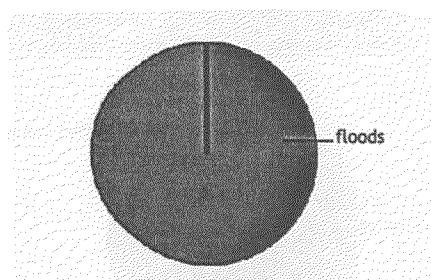
| | | | |
|---|---|---|--|
| geography | area : 30,350 sq km land use : arable land : 9%; permanent crops : 0%; permanent pastures : 66%; forest and woodlands : 0%; annual deforestation (%change) : 0.0 | | |
| demography | population : 2.1 million (1999); density : 69.2 hab/km ² ; urban population : 16% population growth rate : 1.9% (1999) | | |
| economy | economic-aid recipient : \$66 million (1998) GNP : \$1.2 billion (1999) GNP-per capita : \$559 (1999) value-added (% of GDP) <table border="0" style="width: 100%;"> <tr> <td style="width: 50%;"> agriculture : 17.3% services : 41.3% industry : 41.3% </td> <td style="width: 50%;"> labour force by sector agriculture : 58.4% services : 13.2% industry : 28.3% </td> </tr> </table> | agriculture : 17.3% services : 41.3% industry : 41.3% | labour force by sector agriculture : 58.4% services : 13.2% industry : 28.3% |
| agriculture : 17.3% services : 41.3% industry : 41.3% | labour force by sector agriculture : 58.4% services : 13.2% industry : 28.3% | | |

LARGE-SCALE DISASTERS

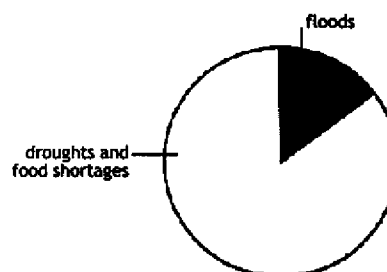
| | | |
|--|---|-----------|
| risk and vulnerability | Agriculture contributes to only 17% of the GDP but is still an occupation for almost 60% of the population. About 40% does not have access to potable water, mainly in rural areas. Droughts threaten food security in the same remote areas. AIDS is also becoming a major concern. The situation, worsened by soil erosion, may improve with an increased management of water supplies but a significant proportion of the population remains poor and vulnerable to droughts and epidemics. Therefore, sustainable development in Lesotho will not be achieved without investment in disaster prevention, mitigation and capacity building, to prevent and cope with floods, epidemics and droughts. | |
| large-scale disasters 1970-1998 | total events : | 12 |
| | total killed : | 40 |
| | total affected : | 1,182,250 |
| | annual frequency since 1970 : | 0.43 |
| | since 1985 : | 0.69 |

| type of event | no. of events | killed | affected |
|---------------------------------|---------------|--------|-----------|
| storms | 3 | — | 250 |
| floods | 3 | 40 | 180,000 |
| droughts/famines/food shortages | 5 | — | 1,001,500 |
| epidemics | 1 | — | 500 |

people killed by disasters



people affected by disasters



Human Development Indicator : NA
 Rank : NA
 Annual Frequency of Large-scale Disasters : 0.28

Liberia

GENERAL BACKGROUND

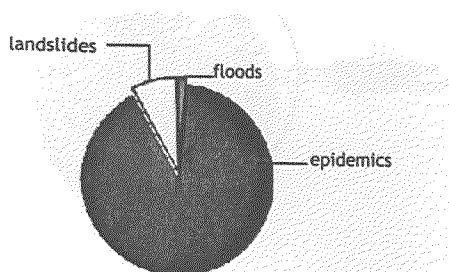
| | | |
|-------------------|--|--|
| geography | area : 97,800 sq km land use : arable land : 1%; permanent crops : 3%; permanent pastures : 59%; forest and woodlands : 18% annual deforestation (%change) : NA | |
| demography | population : 2.666 million (1998); density : 28.4 hab/km ² ; urban population : 44.3% population growth rate : 2.7% (1999) | |
| economy | economic-aid recipient : \$200 million (1998) GNP : \$0.71 billion (1999) GNP-per capita : \$240 (1999) value-added (% of GDP) agriculture : 50% services : 35% industry : 15% | labour force by sector agriculture : 70% services : 22% industry : 8% |

LARGE-SCALE DISASTERS

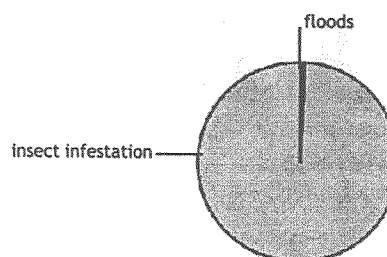
| | | |
|--|---|---------------------------------------|
| risk and vulnerability | Floods, droughts, epidemics, insect infestation and landslides have been occasional threats. Complex emergencies due to warfare, the destruction of health and education infrastructures and environmental degradation have increased the risk of man-made disasters even if natural hazards were originally not a significant threat. Therefore, sustainable development will not be achieved without serious investment in disaster risk reduction, prevention, and without a better management of agricultural production. | |
| large-scale disasters 1970-1998 | total events : total killed : total affected : annual frequency since 1970 : since 1985 : | 8 593 1,009,087 0.28 0.38 |

| type of event | no. of events | killed | affected |
|------------------------------------|---------------|--------|-----------|
| tropical cyclone/hurricane/typhoon | 1 | — | 2,000 |
| floods | 1 | 10 | 5,000 |
| droughts/famines/food shortages | 1 | — | — |
| avalanches/landslides | 1 | 46 | 200 |
| epidemics | 3 | 537 | 1,887 |
| insect infestation | 1 | — | 1,000,000 |

people killed by disasters



people affected by disasters



Human Development Indicator : 0.483
 Rank : 141/174
 Annual Frequency of Large-scale Disasters : 1.04

Madagascar

GENERAL BACKGROUND

| | |
|-------------------|---|
| geography | area : 587,000 sq km land use : arable land : 4%; permanent crops : 1%; permanent pastures : 41%; forest and woodlands : 40% annual deforestation (%change) : 0.8 |
| demography | population : 14.6 million (1999); density : 24.9 hab/km2 (1999); urban population : 22.2% population growth rate : 2.8% (1999) |
| economy | economic-aid recipient : \$373.943 million (1997) GNP : \$3.7 billion (1999) GNP-per capita : \$250 (1999) value-added (% of GDP) agriculture : 30% services : 56.2% industry : 13.8% |

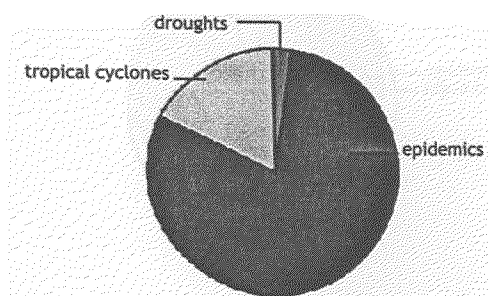
LARGE-SCALE DISASTERS

| | |
|-------------------------------|---|
| risk and vulnerability | Madagascar is frequently exposed to cyclones and severe storms. In early 2000, the island was exposed to 3 cyclones (Gloria, Eline, and Hudah). Severe floods also occur in the south-east and west of the country. In 1997 locusts invaded more than half of the territory, destroying a large proportion of agricultural products. Drought is recurrent in the southern part of the island. An epidemic of cholera in 1999 killed as many as 1825. Madagascar faces severe loss of forest cover, accompanied by erosion. Agriculture, including fishing and forestry, is the mainstay of the economy, accounting for 34% of GDP and contributing more than 70% to export earnings which frequently get affected by disasters. Most of the population suffers from malnutrition, lack of access to health services and sanitation infrastructure which further expose people to health risks caused by floods, cyclones and epidemics. Investment in disaster prevention, mitigation and capacity building will significantly contribute to sustainable development in Madagascar. |
|-------------------------------|---|

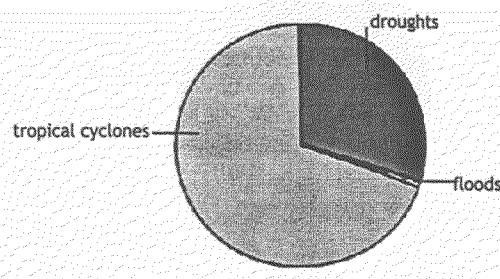
| | | |
|--|--------------------------------------|-----------|
| large-scale disasters 1970-1998 | total events : | 29 |
| | total killed : | 8,063 |
| | total affected : | 7,733,773 |
| | annual frequency since 1970 : | 1.04 |
| | since 1985 : | 1.38 |

| type of event | no. of events | deaths | affected |
|------------------------------------|---------------|--------|-----------|
| tropical cyclone/hurricane/typhoon | 20 | 1,461 | 5,348,830 |
| floods | 2 | 2 | 68,443 |
| droughts/famines/food shortages | 5 | 200 | 2,316,500 |
| insect infestation | 1 | - | - |
| epidemics | 1 | 6,400 | - |

people killed by disasters



people affected by disasters



Human Development Indicator : 0.385

Rank : 163/174

Annual Frequency of Large-scale Disasters : 0.75

Malawi

GENERAL BACKGROUND

geography

area : 118,500 sq km
land use : arable land : 34%; permanent crops : 0%; permanent pastures : 20%; forest and woodlands : 39%
annual deforestation (%change) : 1.6

demography

population : 10.8 million (1999); density : 103.7 hab/km²; urban population : 23.6%
population growth rate : 2.4% (1999)

economy

economic-aid recipient : \$416.5 million (1995)
GNP : \$2 billion (1999)
GNP-per capita : \$190 (1999)
value-added (% of GDP)
agriculture : 37.6%
services : 44.6%
industry : 17.8%

LARGE-SCALE DISASTERS

risk and vulnerability

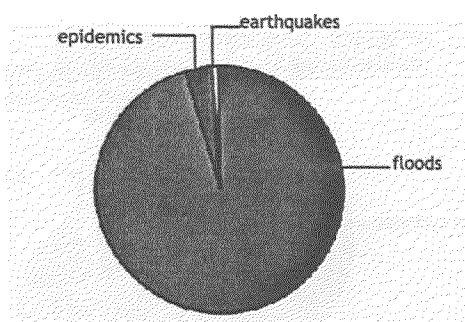
Investment in disaster prevention, mitigation and capacity building to cope with increasing risks of droughts, floods and related risks of epidemics could contribute to sustainable development in Malawi.

large-scale disasters 1970-1998

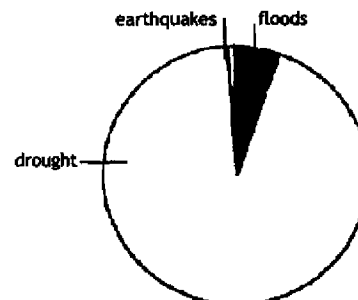
total events : 21
total killed : 1,244
total affected : 17,666,620
annual frequency since 1970 : 0.75
since 1985 : 1.46

| type of disaster | no. of events | killed | affected |
|---------------------------------|---------------|--------|------------|
| earthquakes | 1 | 9 | 145,391 |
| floods | 10 | 1,190 | 1,013,226 |
| droughts/famines/food shortages | 6 | - | 16,507,267 |
| epidemics | 4 | 45 | 736 |

people killed by disasters



people affected by disasters



Human Development Indicator : 0.725

Rank : 89/174

Annual Frequency of Large-scale Disasters : 0.14

Maldives

GENERAL BACKGROUND

geography

area : 300 sq km
 land use : arable land : 10%; permanent crops : 0%; permanent pastures : 3%; forest and woodlands : 3%; other: 84%
 annual deforestation (%change) : NA

demography

population : 277,600 (1999); density : 810 hab/km²; urban population : 26%
 population growth rate : 2.5% (1999)

economy

economic-aid recipient : N.A.
 GNP : \$322.5 million (1999)
 GNP-per capita : \$1,160 (1999)
 value-added (% of GDP)
 agriculture : 20%
 services : 62%
 industry : 18%

labour force by sector

agriculture : 22%
 services : 60%
 industry : 18%

LARGE-SCALE DISASTERS

risk and vulnerability

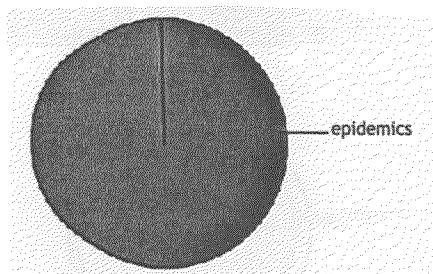
Natural hazards involve the low level of the islands that in turn, makes them susceptible to the rise of sea level. For example, in April 1987, high tides swept over the Maldives, inundating much of Male and nearby islands. That event prompted high-level Maldivian interest in global climatic changes, including the "greenhouse effect." Concerned with the possibility of rising sea levels, the Maldives has constructed, with Japanese aid, a line of concrete breakwaters along the capital's southern coast.

large-scale disasters 1970-1998

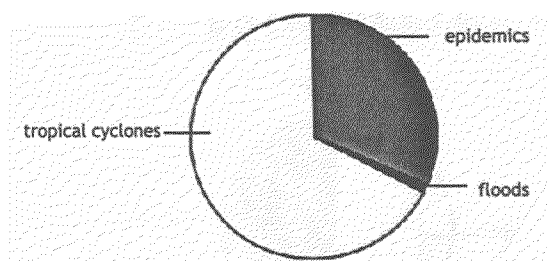
total events : 4
 total killed : 219
 total affected : 35,407
 annual frequency since 1970 : 0.14
 since 1985 : 0.23

| type of event | no. of events | killed | affected |
|------------------------------------|---------------|--------|----------|
| tropical cyclone/hurricane/typhoon | 1 | — | 23,849 |
| floods | 2 | — | 300 |
| epidemics | 1 | 219 | 11,258 |

people killed by disasters



people affected by disasters



Human Development Indicator : 0.380

Rank : 165/174

Annual Frequency of Large-scale Disasters : 1.07

Mali

GENERAL BACKGROUND

geography

area : 1.2 million sq km
 land use : arable land : 2%; permanent crops : 0%; permanent pastures : 25%; forest and woodlands : 5%
 annual deforestation (%change) : 1.0%

demography

population : 10.9 million (1999); density : 8 hab/km²; urban population : 29.4%
 population growth rate : 2.9% (1999)

economy

economic-aid recipient : \$442 million (1999).
 GNP : \$2.6 billion (1999)
 GNP-per capita : \$240 (1999)
 value-added (% of GDP)
 agriculture : 46.5%
 services : 36.6%
 industry : 16.7%

LARGE-SCALE DISASTERS

risk and vulnerability

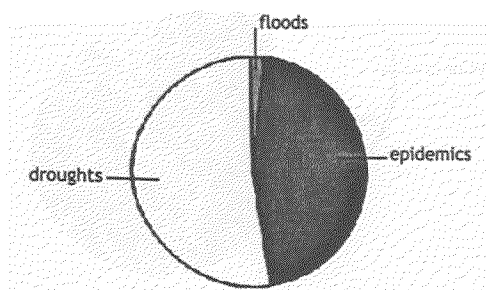
Sixty-five percent of Mali's land area is desert or semidesert. Economic activity is largely confined to the river area irrigated by the Niger. Mali's main source of export income, cotton production, is seriously threatened by the recent development of a parasite, the Heliothis butterfly, that had devastating impacts on cotton cultures during 1997-98 and 1998-99. The country is heavily dependent on climatic conditions for its economic production. Food security is recurrently threatened by droughts. Given that less than 40% of the population has access to clean water there is a significant exposure to water-borne diseases. Investment in disaster prevention, mitigation and capacity building, to prevent and cope with droughts, floods and epidemics can contribute to sustainable development in Mali.

large-scale disasters 1970-1998

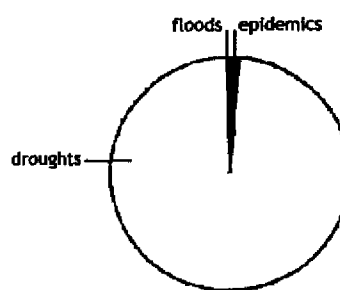
total events : 30
 total killed : 6,866
 total affected : 10,453,195
 annual frequency since 1970 : 1.07
 since 1985 : 1.77

| type of event | no. of events | killed | affected |
|---------------------------------|---------------|--------|-----------|
| epidemics | 8 | 3,120 | 5,202,000 |
| floods | 4 | 131 | 49,195 |
| droughts/famines/food shortages | 13 | 3,615 | 5,202,000 |
| insect infestation | 5 | — | — |

people killed by disasters



people affected by disasters



Human Development Indicator : 0.451-
 Rank : 147/174
 Annual Frequency of Large-scale Disasters : 1.03

Mauritania

GENERAL BACKGROUND

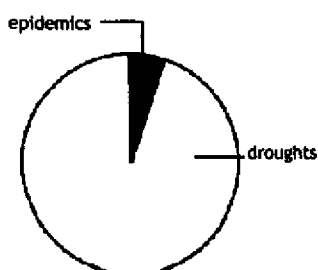
| | |
|-------------------|---|
| geography | area : 1.0 million sq km land use : arable land : 20%; permanent crops : 0.2%; permanent pastures : 38%; forest and woodlands : 4%; annual deforestation (%change) : 0.0 |
| demography | population : 2.6 million (1999); density : 2.3 hab/km ² ; urban population : 56.4% population growth rate : 2.7% (1999) |
| economy | economic-aid recipient : \$218.5 million (1999) GNP : \$1.0 billion (1999) GNP-per capita : \$380 (1999) value-added (% of GDP) agriculture : 24.8% services : 48.3% industry : 26.9% |
| | labour force by sector agriculture : 47% services : 39% industry : 14% |

LARGE-SCALE DISASTERS

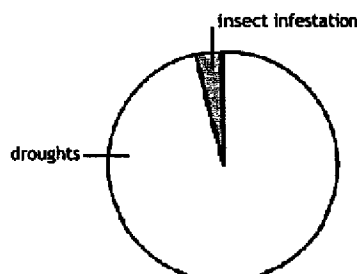
| | | |
|--|--|--|
| risk and vulnerability | Hot, dry, dust/sand-laden sirocco wind blows primarily in March and April; periodic droughts. Ninety percent of the land is in the Sahara desert. Economic activity is largely confined to the coast. A majority of the population still depends on agriculture and live-stock for a livelihood, even though most of the nomads and many subsistence farmers were forced into the cities by recurrent droughts in the 1970s and 1980s. One of the consequences of desertification is an important exodus of the population towards the coastal urban areas (more than one third of the population). Food production is not sufficient to meet the urban population's needs. Food security is recurrently threatened by droughts. Investment in disaster prevention, mitigation and capacity building, to prevent and cope with droughts worsened by desertification can contribute to sustainable development in Mauritania. | |
| large-scale disasters 1970-1998 | total events : 29 total killed : 2,373 total affected : 7,020,721 annual frequency since 1970 : 1.03 since 1985 : 1.23 | |

| type of event | no. of events | killed | affected |
|---------------------------------|---------------|--------|-----------|
| epidemics | 5 | 130 | 1,065 |
| floods | 3 | — | 10,500 |
| droughts/famines/food shortages | 17 | 2,243 | 6,769,156 |
| insect infestation | 4 | — | 240,000 |

people killed by disasters



people affected by disasters



Human Development Indicator : 0.341

Rank : 168/174

Annual Frequency of Large-scale Disasters : 1.57

Mozambique

GENERAL BACKGROUND

geography

area : 799,380 sq km
land use : arable land : 4%; permanent pastures : 56%; forest and woodlands : 18%; About 45% of the landmass have agrarian potential.
annual deforestation (%change) : 0.7

demography

population : 16.9 million (2000); density : 21 hab/km²; urban population : 29%
population growth rate : 2.3% (2000)

economy

economic-aid recipient : \$814.3 million (1999) (About 50% of State budget)
GNP : \$3.4 billion (1999)
GNP-per capita : \$240 (1999)
value-added (% of GDP)
agriculture : 24.9%
services : 44.3%
industry : 24.1%

LARGE-SCALE DISASTERS

risk and vulnerability

The geographical location of the country makes it highly vulnerable to a predictable pattern of droughts, cyclones and floods, particularly in the Central and Southern provinces. Landslides and epidemics are also common. More than 88% of the economically active population is engaged in agriculture and fisheries. While agricultural production may be affected by the cycles of floods and drought, the impact on peasant farm production may be limited. The peace agreement in 1992 and increased Government expenditure in the social sector since 1995 have improved living conditions. However, nearly 70% live below the poverty line, which reduces the people's ability to recover from disasters. The floods of 2000 are estimated to result in direct and indirect losses of US\$600 million to the economy. Medium to long term investment in disaster mitigation and capacity building can contribute significantly to sustainable development in Mozambique.

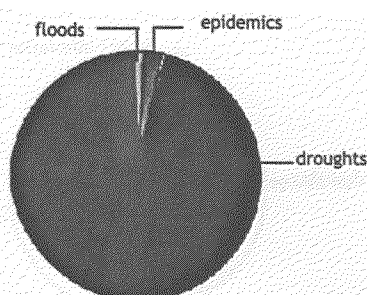
large-scale disasters 1970-1998

| | |
|------------------|------------|
| total events : | 43 |
| total killed : | 115,015 |
| total affected : | 35,054,170 |

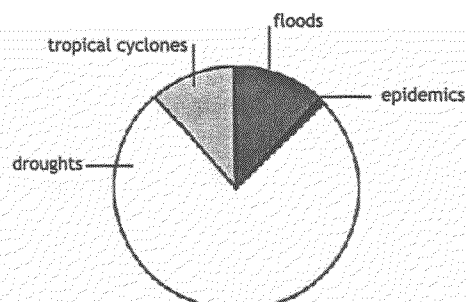
annual frequency since 1970 : 1.57
since 1985 : 1.67

| type of event | no. of events | killings | affected |
|------------------------------------|---------------|----------|------------|
| tropical cyclone/hurricane/typhoon | 6 | 456 | 4,008,251 |
| floods | 11 | 1,585 | 4,281,300 |
| droughts/famines/food shortages | 16 | 110,250 | 26,490,000 |
| avalanches/landslides | 1 | 87 | 2,500 |
| epidemics | 9 | 2,637 | 272,119 |

people killed by disasters



people affected by disasters



GENERAL BACKGROUND

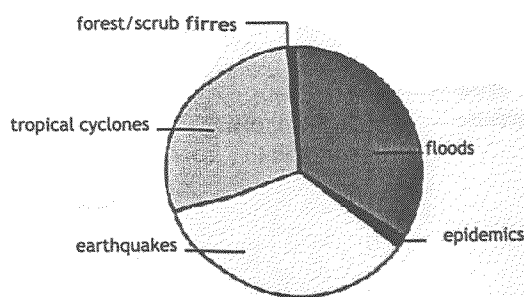
| | |
|-------------------|---|
| geography | area : 676,000 sq km land use : arable land : 15%; permanent crops : 1%; permanent pastures : 1%; forest and woodlands : 49% annual deforestation (%change) : 1.4 |
| demography | population : 49 million (1999/2000); density : 65.2 hab/km ² ; urban population : 27.3% population growth rate : 1.8% (1999) |
| economy | economic-aid recipient : \$76 million (2000) GNP : NA GNP-per capita : NA value-added (% of GDP) agriculture : 53.2% services : 37.8% industry : 9.0% |

LARGE-SCALE DISASTERS

| | | | |
|--|---|------|-----------|
| risk and vulnerability | The major disaster threat to the country are fires of human origin. In particular it refers to urban fires in which whole neighbourhoods burn down. This risk is associated with poorly planned housing programmes after 1945 and the fact that timber continues to be a major construction material. Flooding occurs on an annual basis associated with the monsoon season. This seldom leads to severe disasters since flood control and living with flood risk has been a part of life in the country since ancient times. Still, it is rated as the second most important hazard in the country. Although severe cyclone disasters have not occurred in recent times, the threat definitely exists. The threat posed by earthquakes is unclear. The general level of development and incidence of poverty are major factors that limit the capacity of both the people and the government to respond to and recover from disasters. | | |
| large-scale disasters 1970-1998 | total events : | | 22 |
| | total killed : | | 1,240 |
| | total affected : | | 6,270,085 |
| | annual frequency since 1970 : | 0.79 | |
| | since 1985 : | 0.98 | |

| type of event | no. of events | killed | affected |
|------------------------------------|---------------|--------|-----------|
| tropical cyclone/hurricane/typhoon | 4 | 228 | 232,970 |
| floods | 13 | 264 | 5,957,727 |
| forest/scrub fires | 2 | 8 | 78,588 |
| earthquakes | 2 | 730 | - |
| epidemics | 1 | 10 | 800 |

people killed by disasters



people affected by disasters

