

GENERAL BACKGROUND

| | |
|-------------------|---|
| geography | area : 652,100 sq km land use : arable land : 12%; permanent crops : 0%; permanent pastures : 46%; forest and woodlands : 3% annual deforestation (%change) : NA |
| demography | population : 25.9 million (1999); density : 33.6 hab/km ² ; urban population : 21.5% population growth rate : 3.2% (1999) |
| economy | economic-aid recipient : NA GNP : \$9.88 billion (1998) GNP-per capita : \$250 (1998) value-added (% of GDP) agriculture : 45.5% (est.) services : 15 % (est.) industry : 15 % (est.) |
| | labour force by sector agriculture : 68% services : 16% industry : 16% |

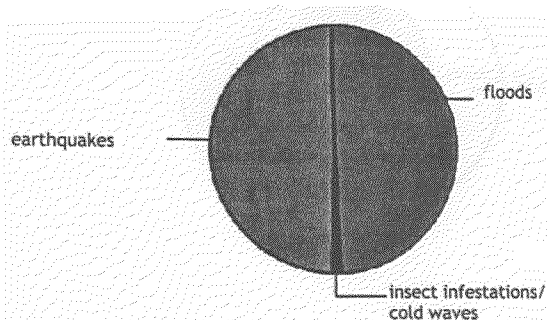
LARGE-SCALE DISASTERS

risk and vulnerability Afghanistan is an extremely poor, landlocked country, highly dependent on farming and livestock. Economic considerations have been of secondary importance to humanitarian requirements as a result of political and military upheavals during two decades of war. Damaging earthquakes, flooding, dust storms as well as drought and food shortage, linked to complex emergencies and warfare, are common threats. Many disasters which occurred in remote areas have either not been recorded or, if so, the data available are not reliable. The increased vulnerability of the population due to the consequences of extended conflict magnifies the impact of disasters on the already weakened population. Investment in disaster prevention, mitigation and capacity building, especially at the local level and in remote areas can contribute to sustainable development in Afghanistan. The current crisis situation due to the droughts and food shortage is one of the priority actions for emergency relief agencies.

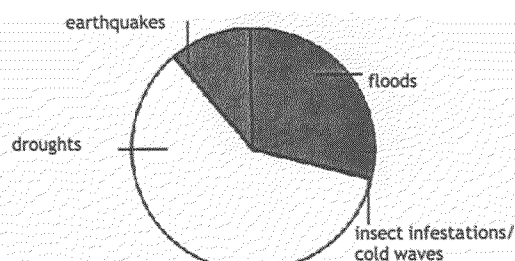
| | | |
|--|-------------------------------|-----------|
| large-scale disasters 1970-1998 | total events : | 57 |
| | total killed : | 19,630 |
| | total affected : | 3,361,178 |
| | annual frequency since 1970 : | 1.79 |
| | since 1985 : | 2.85 |

| disaster type | no. of events | killed | affected |
|------------------------------------|---------------|--------|-----------|
| tropical cyclone/hurricane/typhoon | 2 | 26 | — |
| floods | 19 | 9,151 | 982,165 |
| droughts/famines/food shortages | 5 | — | 2,003,174 |
| insect infestations/cold waves | 3 | 224 | 200 |
| epidemics | 2 | 23 | 4,481 |
| earthquakes | 19 | 9,312 | 370,984 |
| avalanches/landslides | 7 | 894 | 174 |

people killed by disasters



people affected by disasters



Human Development Indicator : 0.405

Rank : 160

Annual Frequency of Large-scale Disasters : 0.36

Angola

GENERAL BACKGROUND

geography

area : 1.2467 million sq km
land use : arable land : 2%; permanent crops : 0%; permanent pastures : 23%; forest and woodlands : 43%
annual deforestation (%change) : 1.0

demography

population : 12.4 million (1999); density : 8.8 hab/km2; urban population : 33.6%
population growth rate : 2.9% (1999)

economy

economic-aid recipient : \$493.1 million (1995)
GNP : \$2.7 billion (1999)
GNP-per capita : \$220 (1999)
value-added (% of GDP)
 agriculture : 9.4% labour force by sector
 services : 28.8% agriculture : 73%
 industry : 62%

LARGE-SCALE DISASTERS

risk and vulnerability

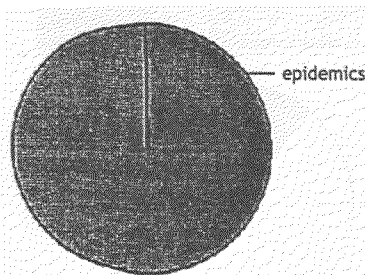
Locally heavy rainfall causes periodic flooding on the plateau. Chronic food shortage and epidemics occur as a consequence of three decades of civil war which has devastated the economy and the health and sanitation infrastructure.

large-scale disasters : 1970-1998

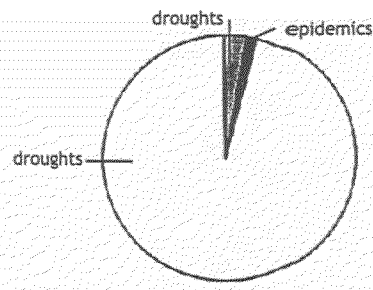
total events : 10
total killed : 3,108
total affected : 3,333,311
annual frequency since 1970 : 0.36
 since 1985 : 0.69

| type of event | no. of events | killed | affected |
|---------------------------------|---------------|--------|-----------|
| floods | 1 | — | 100,000 |
| droughts/famines/food shortages | 5 | — | 3,186,000 |
| epidemics | 4 | 3,108 | 47,311 |

people killed by disasters



people affected by disasters



GENERAL BACKGROUND

| | |
|-------------------|--|
| geography | area : 147,570 sq km land use : arable land : 17%; permanent crops : 0%; permanent pastures : 15%; forest and woodlands : 42% annual deforestation (%change) : 0.8 |
| demography | population : 127.7 million (1999); density : 865 hab/km ² (1999); urban population : 24% (1999) population growth rate : 2.17% (2000) |
| economy | economic-aid recipient : \$1.475 billion (1997) GNP : \$47.0 billion (1999) GNP-per capita : \$370 (1999) value-added (% of GDP) agriculture : 21.1% services : 52.1% industry : 26.8% |
| | labour force by sector agriculture : 63% services : 26% industry : 11% |

LARGE-SCALE DISASTERS

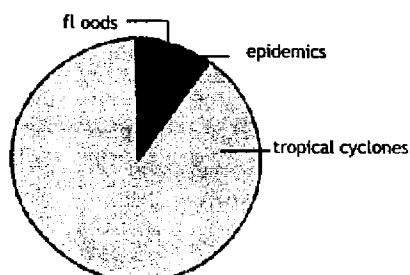
| | |
|----------------|---|
| hazards | Cyclones, storm-surges, droughts, floods (much of the country routinely gets flooded during the summer monsoon season), tornadoes, earthquakes. |
|----------------|---|

large-scale disasters : 1970-1998

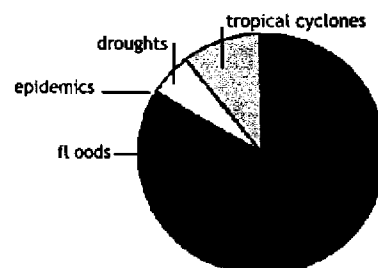
| | |
|-------------------------------|-------------|
| total events : | 171 |
| total killed : | 516,239 |
| total affected : | 428,659,374 |
| annual frequency since 1970 : | 6.11 |
| since 1985 : | 8.07 |

| type of event | number of events | killed | affected |
|------------------------------------|------------------|---------|-------------|
| tropical cyclone/hurricane/typhoon | 83 | 463,818 | 44,733,948 |
| floods | 49 | 41,383 | 356,234,473 |
| droughts/famines/food shortages | 4 | 18 | 25,002,000 |
| avalanches/landslides | 1 | 200 | — |
| epidemics | 21 | 9,943 | 2,654,653 |
| cold waves | 10 | 854 | 34,000 |
| earthquakes | 3 | 23 | 300 |

people killed by disasters



people affected by disasters



VULNERABILITY

agriculture

The economy is largely agricultural, with the cultivation of rice the single most important activity in the economy. Major impediments to growth include frequent cyclones and floods, the inefficiency of state-owned enterprises, a rapidly growing labour force that cannot be absorbed by agriculture, delays in exploiting energy resources (natural gas), inadequate power supplies, markets and infrastructures, and slow implementation of economic reforms. Thanks to important investments into the development and improvement of the irrigation system, one third of the cultivated land is now protected from the effects of droughts. However, flood remains a high concern. In 1998, floods have caused a drop of 5% in the annual agriculture production. Food had to be imported following the floods, even though there has been a remarkable increase in food grain production subsequently with four successive bumper crops and a fifth crop waiting to be harvested.

population

Bangladesh has the highest density of population among all countries of the world, except some small and city-states. Bangladesh's population density is already fifty times higher than that of the US. It is six times higher than that of even China. Because of this extremely high density, any environmental disaster in Bangladesh is sure to spread very fast and affect millions of people. High density implies that Bangladesh has very little open physical space and empty terrain to cushion the country against environmental shocks. The high and increasing density itself is a likely cause of environmental deterioration. The general situation of poverty and illiteracy of the masses make Bangladesh very vulnerable to environmental damage. The general populace of Bangladesh is too busy trying to meet their basic material needs. They therefore have little scope to be concerned about environmental amenities. The illiteracy only aggravates this problem, because it acts as a barrier for them even to understand the damaging impact on their own health and of the environmental degradation that is occurring right around them.

situation and damage (recent floods)

Every year, 21% of the landmass is regularly flooded. In 1998, this rose to 68% and so much groundwater has been used by tube wells, that most of the country's water is seriously contaminated with naturally occurring arsenic. Increased use of groundwater aquifers and their non-adequate replenishment has caused the ground water level to go down. This and other factors have now caused a very serious problem of arsenic contamination of ground water in most of the districts of Bangladesh. People in the rural areas are getting seriously affected each day because of arsenic poisoning. Dhaka is now among the most polluted cities in the world: a deadly metallic fog hangs over the city, choking the lungs of its impoverished slum-dwellers. The shrimp industry is displacing thousands of small farmers and contaminating the coastal zones.

RISKS

The combination of increasing levels of natural hazards and vulnerability coupled with the apprehended climate change with the concomitant increase in temperature and sea level rise will have likely chances of inundating about 10% of the landmass along the coast within the first half of this century. This would indicate that Bangladesh is currently at high risk to small, medium and large-scale disasters. A review of the history of Bangladesh over the past 30 years would indicate the observed frequency of large-scale disasters as being about 5.87 per year, which is extremely high.

Therefore, sustainable development in Bangladesh will not be achieved without serious investment in disaster prevention, optimisation of resource use and protection of basic resource endowments, mitigation and capacity building, especially to cope with recurrent floods, cyclones and epidemics.

Human Development Indicator : 0.411
 Rank : 157/174
 Annual Frequency of Large-scale Disasters : 0.96

Benin

GENERAL BACKGROUND

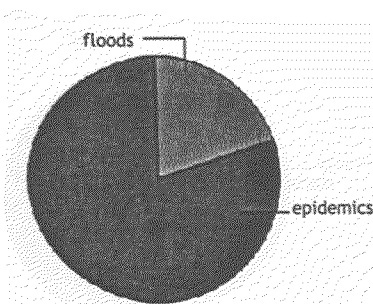
| | | |
|-------------------|--|------------------------------|
| geography | area : 114,763 sq km land use : arable land : 62% (cultivated 13%); permanent crops : 4%; permanent pastures: 4%; forest and woodlands : 30% annual deforestation (%change) : 1.2 | |
| demography | population : 6.1 million (1999); density : 49.5 hab/km ² ; urban population : 41.5% population growth rate : 2.8% (1999) | |
| economy | economic-aid recipient : \$216.1 million (1999) GNP : \$2.29 billion (2000) GNP-per capita : \$374 (2000) value-added (% of GDP) agriculture : 40% services : 45% industry : 15% | labour force by sector NA |

LARGE-SCALE DISASTERS

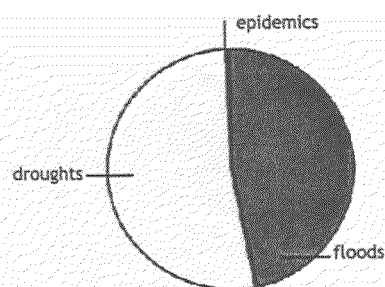
| | | |
|--|--|-----------|
| risk and vulnerability | Benin's economy is overwhelmingly agricultural, with most workers engaged in subsistence farming. Most of its few manufactured goods are either processed agricultural or basic consumer items. Natural disasters such as large scale floods and droughts have serious impact on people's assets as they reduce agricultural productivity. Investment in disaster prevention, mitigation and capacity building, especially to cope with recurrent floods, droughts and epidemics can contribute to sustainable development in Benin. | |
| large-scale disasters 1970-1998 | total events : | 27 |
| | total killed : | 646 |
| | total affected : | 4,005,046 |
| | annual frequency since 1970 : | 0.96 |
| | since 1985 : | 1.07 |

| type of event | no. of events | killed | affected |
|---------------------------------|---------------|--------|-----------|
| floods | 10 | 130 | 1,868,727 |
| droughts/famines/food shortages | 7 | — | 2,125,000 |
| forest/scrub fire | 2 | 2 | 7,200 |
| epidemics | 8 | 514 | 4,119 |

people killed by disasters



people affected by disasters



Human Development Indicator : 0.483
 Rank : 142/174
 Annual Frequency of Large-scale Disasters : 0.07

Bhutan

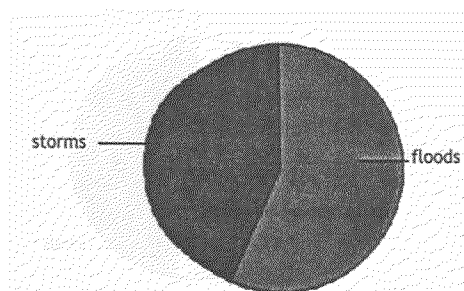
GENERAL BACKGROUND

| | | | | | | | | | |
|---------------------|---|---------------------|------------------------|-------------------|-------------------|-------------------|---------------|--|---------------|
| geography | area : 47,000 sq km land use : arable land : 7.7%; permanent pastures : 3.9%; forest and woodlands : 72.5%; other: 15.9% annual deforestation (%change) : NA | | | | | | | | |
| demography | population : 658,000 (2000); density :14.8 hab/km2; urban population :15% (2000 estimate) population growth rate : 2.9% (1999) | | | | | | | | |
| economy | economic-aid recipient : \$84.81 million (1999) GNP : \$399.2 million (1999) GNP-per capita : \$510 (1999) value-added (% of GDP) <table border="0" style="display: inline-table; vertical-align: top; margin-left: 20px;"> <tr> <td>agriculture : 34.8%</td> <td>labour force by sector</td> </tr> <tr> <td>services : 29.6 %</td> <td>agriculture : 85%</td> </tr> <tr> <td>industry : 34.7 %</td> <td>services : NA</td> </tr> <tr> <td></td> <td>industry : NA</td> </tr> </table> | agriculture : 34.8% | labour force by sector | services : 29.6 % | agriculture : 85% | industry : 34.7 % | services : NA | | industry : NA |
| agriculture : 34.8% | labour force by sector | | | | | | | | |
| services : 29.6 % | agriculture : 85% | | | | | | | | |
| industry : 34.7 % | services : NA | | | | | | | | |
| | industry : NA | | | | | | | | |

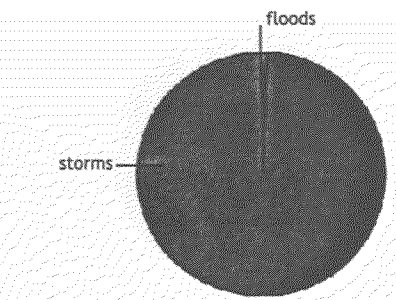
LARGE-SCALE DISASTERS

| | | | |
|--|--|----------------------|---------------|
| risk and vulnerability | <p>Storms from the Himalayas are the source of the country's name, the 'Land of the Thunder Dragon'. Severe landslides disrupting the flow of goods and services on the nation's main highway are frequent during the monsoon season. More than 70% of the country is covered by forest, the area suitable for agriculture is limited by the very steep terrain which confines fertile land to river valleys and flatland in the southern foothills. An estimated 7.7% of land is used for agriculture where small-scale subsistence farming employs 85% of the population. Natural disasters, therefore, can have a serious impact on people's assets, especially in poor and remote communities. The worst ever monsoon floods in 2000 affected factories, hydropower projects, businesses in the industrial hub, infrastructure in the second largest city and blocked key roads for weeks with landslides. The UN system was the only partner entrusted by the Royal Government to assist.</p> | | |
| large-scale disasters 1970-1998 | total events : | 2 | |
| | total killed : | 39 | |
| | total affected : | 65,570 | |
| | annual frequency since 1970 : | 0.07 | |
| | since 1985 : | 0.15 | |
| | type of event | no. of events | deaths |
| | tropical cyclone/hurricane/typhoon | 1 | 22 |
| | floods | 1 | 17 |
| | | | 600 |
| | | | 64,970 |

people killed by disasters



people affected by disasters



Human Development Indicator : 0.303
 Rank : 157/174
 Annual Frequency of Large-scale Disasters : 1.25

Burkina Faso

GENERAL BACKGROUND

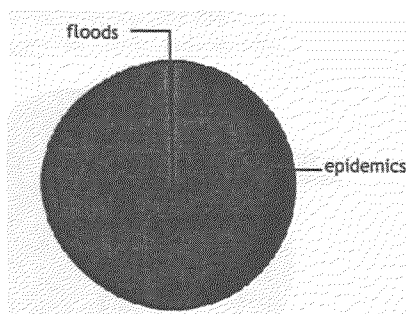
| | |
|-------------------|---|
| geography | area : 274,000 sq km land use : arable land : 13%; permanent crops : 0%; permanent pastures : 22%; forest and woodlands : 30% annual deforestation (%change) : 0.7 |
| demography | population : 11 million (1999); density : 38.5 hab/km ² ; urban population : 16.1% population growth rate : 2.4% (1999) |
| economy | economic-aid recipient : \$409 million (1998) GNP : \$2.6 billion (1999) GNP-per capita : \$220 (2000) value-added (% of GDP) agriculture : 37% services : 44.5% industry : 18.5% |

LARGE-SCALE DISASTERS

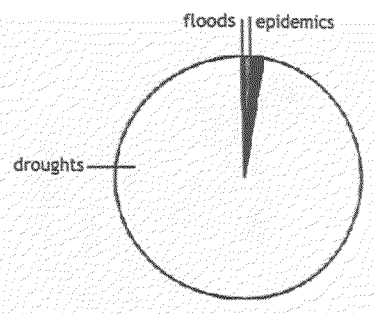
| | | | |
|--|---|--|--|
| risk and vulnerability | Recurring droughts, floods and epidemics are among the main threats in the country. Burkino Faso is one of the poorest nations in the world, with the majority of its workforce engaged in subsistence farming. Several dams intended for irrigation and hydroelectricity have been constructed or are under construction. However, still less than 10% of the country's land area is cultivable without irrigation. Droughts have further limited agricultural production with serious impact on the predominantly rural population and the national economy. Investment particularly in drought mitigation can contribute to sustainable development in Burkino Faso. | | |
| large-scale disasters 1970-1998 | total events : 38 total killed : 7,231,729 total affected : 9,731 | | |
| | annual frequency since 1970 : 1.25 since 1985 : 1.15 | | |

| type of event | no. of events | kills | affected |
|---------------------------------|---------------|-------|-----------|
| epidemics | 14 | 9,693 | 90,643 |
| floods | 5 | 38 | 102,796 |
| droughts/famines/food shortages | 17 | — | 7,038,290 |
| insect infestation | 2 | — | — |

people killed by disasters



people affected by disasters



Human Development Indicator : 0.321

Rank : 170/174

Annual Frequency of Large-scale Disasters : 0.17

Burundi

GENERAL BACKGROUND

| | |
|-------------------|---|
| geography | area : 27,834 sq km land use : arable land : 44%; permanent crops : 9%; permanent pastures : 36%; forest and woodlands : 5%; other: 6% annual deforestation (%change) : 0.4 |
| demography | population : 6.7 million (2000); density : 239.7 hab/km2; urban population : 8.0% population growth rate : 2.9% (1999) |
| economy | economic-aid recipient : \$95 million (2000) GNP : \$805 million (2000) GNP-per capita : \$120 (2000) value-added (% of GDP) agriculture : 44.4% labour force by sector services : 20.0% agriculture : 93% industry : 35.6% |

LARGE-SCALE DISASTERS

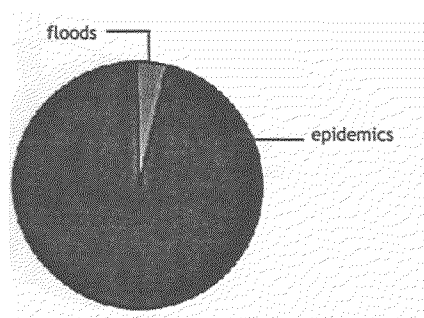
hazards flooding and epidemics

large-scale disasters : 1970-1998

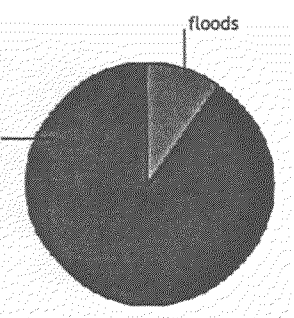
| | |
|-------------------------------|--------|
| total events : | 5 |
| total killed : | 286 |
| total affected : | 34,198 |
| annual frequency since 1970 : | 0.17 |
| since 1985 : | 0.23 |

| type of event | no. of events | killed | affected |
|---------------------------------|---------------|--------|----------|
| floods | 1 | 12 | 3,600 |
| droughts/famines/food shortages | 1 | — | — |
| epidemics | 3 | 274 | 30,598 |

people killed by disasters



people affected by disasters



Human Development Indicator : 0.512

Rank : 136/174

Annual Frequency of Large-scale Disasters : 0.39

Cambodia

GENERAL BACKGROUND

geography

area : 181,000 sq km
 land use : arable land : 37%; permanent crops : 0%; permanent pastures : 11%; forest and woodlands : 52%
 annual deforestation (%change) : 1.6

demography

population : 11.8 million (1999); density : 65.2 hab/km²; urban population : 15.6%
 population growth rate : 2.2% (1999)

economy

economic-aid recipient : \$480 million (2000)
 GNP : \$3 billion (1999)
 GNP-per capita : \$260 (1999)
 value-added (% of GDP)
 agriculture : 43%
 services : 36.9 %
 industry : 20.1 %

LARGE-SCALE DISASTERS

risk and vulnerability

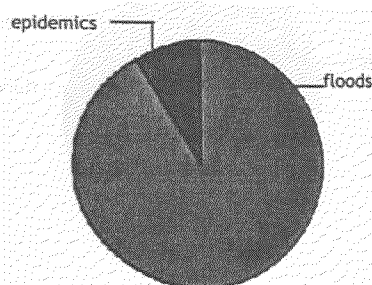
Natural hazards include monsoon rains that occur June to November, flooding and occasional droughts and epidemics. Uncontrolled deforestation and illegal trafficking of wood are beginning to have an impact on forest ecosystems and soil erosion. Food production is not sufficient to ensure the population with food security, especially when a disaster occurs. More than 60% lives on subsistence agriculture. Many people cultivate flood prone land. In rural areas, a majority of the population does not have access to potable water. Because of limited sanitation and a lack of health infrastructure, the population is very vulnerable to water-born diseases and epidemics which are worsened by recurrent floods. Disasters occur more and more frequently in Cambodia. Therefore, measures have to be taken to strengthen the capacity of the local population to develop innovative ways and means to mitigate the consequences of severe floods. In addition, Government capacity to mitigate disaster risks and to be better prepared to respond to the needs of flood victims could be enhanced. This will reduce the human and financial costs to the country and enable sustainable development.

large-scale disasters 1970-1998

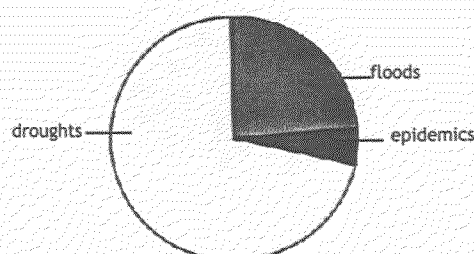
| | |
|-------------------------------|-----------|
| total events : | 11 |
| total killed : | 730 |
| total affected : | 8,274,564 |
| annual frequency since 1970 : | 0.39 |
| since 1985 : | 0.84 |

| type of event | no. of events | killed | affected |
|---------------------------------|---------------|--------|-----------|
| epidemics | 4 | 65 | 395,464 |
| floods | 3 | 665 | 1,979,100 |
| droughts/famines/food shortages | 4 | — | 5,900,000 |

people killed by disasters



people affected by disasters



Human Development Indicator : 0.688

Rank : 105/174

Annual Frequency of Large-scale Disasters : 0.61

Cape Verde

GENERAL BACKGROUND

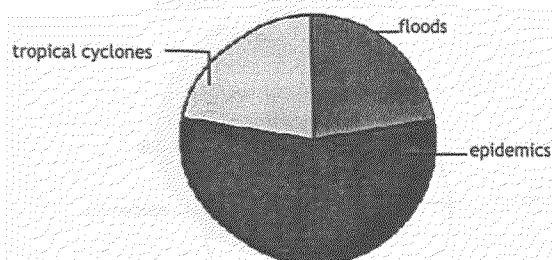
| | |
|-------------------|---|
| geography | <p>area : 4,030 sq km</p> <p>land use : arable land : 11%; permanent crops : 0%; permanent pastures : 6%; forest and woodlands : 0%</p> <p>annual deforestation (%change) : NA</p> |
| demography | <p>population : 417,000 (1999); density : 94.8 hab/km²; urban population : 60.6%</p> <p>population growth rate : 2.6% (1999)</p> |
| economy | <p>economic-aid recipient : \$111.3 million (1995)</p> <p>GNP : \$569.5 million (1999)</p> <p>GNP-per capita : \$1,042 (1999)</p> <p>value-added (% of GDP)</p> <ul style="list-style-type: none"> agriculture : 12% services : 71.6% industry : 16.4% |

LARGE-SCALE DISASTERS

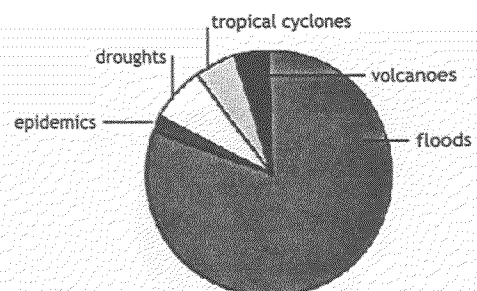
| | | |
|--|---|--|
| risk and vulnerability | <p>Main disasters in Cape Verde occur due to prolonged droughts, harmattan wind and floods, limited volcanic and seismic activity. Deforestation has led to erosion and landslides, which are not recorded in the international data available. The level of disaster risk is not high and is decreasing with a reduction in the country's social-economic vulnerability. However, Cape Verde is composed of small islands and therefore does not always have the capacity to cope with disasters without external assistance. Cape Verde is highly dependent on foreign aid for the implementation of environmental programmes such as reforestation to remedy landslides.</p> | |
| large-scale disasters 1970-1998 | <p>total events : 17</p> <p>total killed : 141</p> <p>total affected : 139,024</p> <p>annual frequency since 1970 : 0.61</p> <p>since 1985 : 0.46</p> | |

| type of disaster | no. of events | killed | affected |
|------------------------------------|---------------|--------|----------|
| tropical cyclone/hurricane/typhoon | 2 | 32 | 7,722 |
| floods | 1 | 32 | 112,000 |
| droughts/famines/food shortages | 12 | — | 10,000 |
| volcanoes | 1 | — | 6,306 |
| epidemics | 1 | 77 | 2,996 |

people killed by disasters



people affected by disasters



Human Development Indicator : 0.371

Rank : 166/174

Annual Frequency of Large-scale Disasters : 0.32

Central African Republic

GENERAL BACKGROUND

geography

area : 623,000 sq km
 land use : cultivated land : 0.7%; permanent crops : less than 0.1%; permanent pastures : 68%; forest and woodlands : 6%; other: 25%
 annual deforestation (%change) : 0.4

demography

population : 3.5 million (1999); density : 5.3 hab/km²; urban population : 40.8%
 population growth rate : 2.5% (1999)

economy

economic-aid recipient : \$172.2 million (1995)
 GNP : \$1.0 billion (1999)
 GNP-per capita : \$290 (1999)
 value-added (% of GDP)
 agriculture : 55.1%
 services : 25.3%
 industry : 19.6%

labour force by sector
 agriculture : NA

LARGE-SCALE DISASTERS

hazards

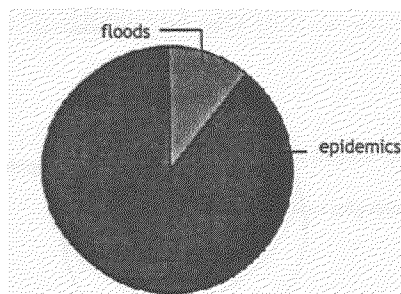
hot, dry, dusty harmattan winds affect northern areas; floods are common.

large-scale disasters : 1970-1998

| | |
|-------------------------------|--------|
| total events : | 9 |
| total killed : | 63 |
| total affected : | 45,882 |
| annual frequency since 1970 : | 0.32 |
| since 1985 : | 0.30 |

| type of event | no. of events | killed | affected |
|------------------------------------|---------------|--------|----------|
| tropical cyclone/hurricane/typhoon | 1 | — | 1,850 |
| floods | 4 | 7 | 43,614 |
| droughts/famines/food shortages | 3 | — | — |
| epidemics | 1 | 56 | 418 |

people killed by disasters



people affected by disasters

