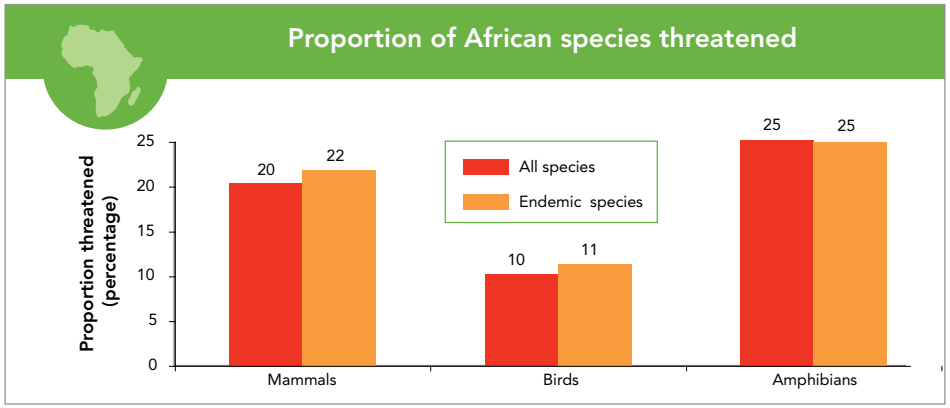


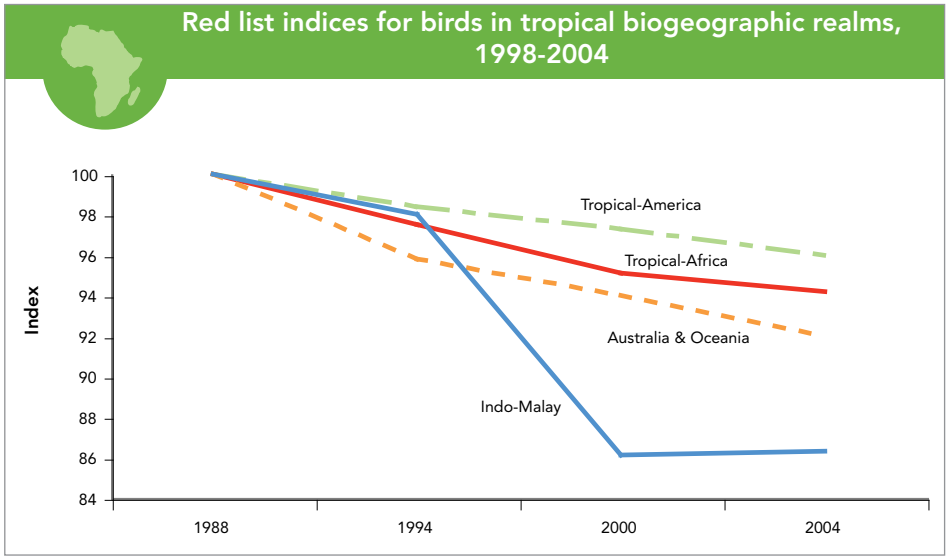
Source: IUCN, 2004.

Africa's large and diverse biological heritage is at risk in all subregions.

About 20 per cent of mammal species, 10 per cent of bird species and 25 per cent of amphibian species are classified as threatened by the World Conservation Union. Available trends show that biodiversity loss is continuing, although not faster than in other regions of the world. Among the main causes of biodiversity loss are land-use change, overexploitation of natural resources, pollution of ecosystems and the introduction of exotic species. Climate change is now considered as a main threat for biodiversity and natural ecosystems in the future. Changes in temperature and rainfall could cause high rates of species loss in specific biomes such as high mountain ecosystems and boreal ecosystems such as the succulent Karoo in South Africa.[44]

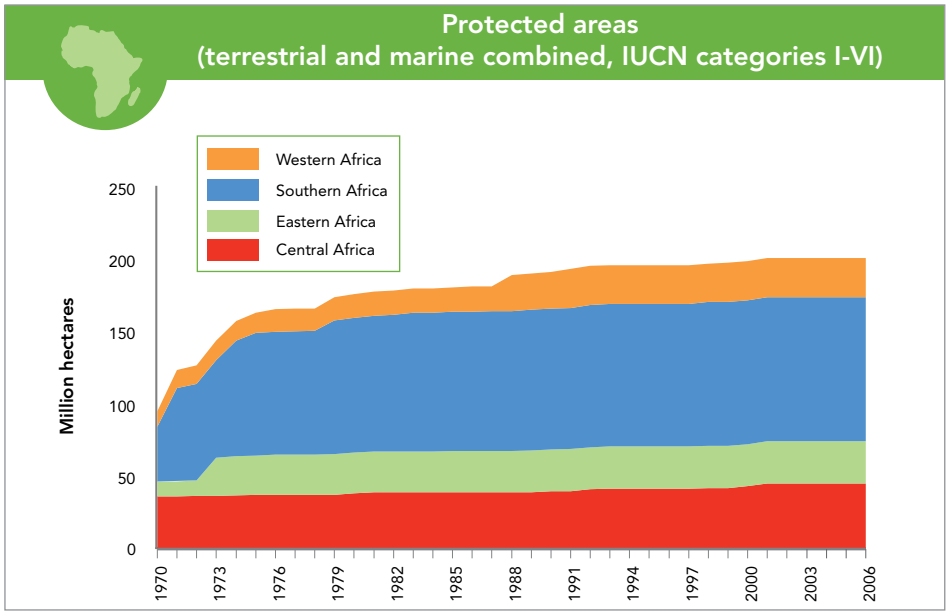
Sub-Saharan Africa has more than 2 million square kilometres of protected areas (terrestrial and marine).

From less than 500,000 km2 in 1950, protected areas have increased rapidly until the late 1970s, and at a slower pace since. Whereas at the global level terrestrial protected areas now cover 12 per cent of the land area, thus meeting the physical target of the Parties to the United Nations Convention on Biodiversity, in many officially protected areas effective protection of the ecosystems and biodiversity remains a concern, due to inadequate protection funding. Only about 0.6 per cent of marine areas are protected.[45]



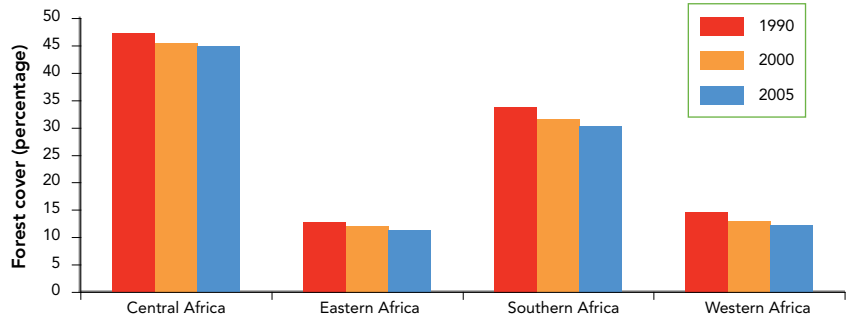
Source: Millennium Ecosystem Assessment, 2005.

Note: Red List Indices are based on the number of species in each Red List category, and on the number changing categories between assessments as a result of genuine improvement or deterioration in status. Decreasing values over time indicate loss of species richness.



Source: UNEP-WCMC, GeoData portal, 2007.

Change in forest cover, 1990-2005



Source: FAO, 2006.

Between 1990 and 2005, sub-Saharan Africa lost an estimated 47 million hectares of forest.[46]

The forests of Africa are largely concentrated in the tropical zones of Western and Central, Eastern and Southern Africa. With more than 133 million hectares of forests, the Democratic Republic of the Congo alone has more than 25 per cent of the region's forest cover.[47]

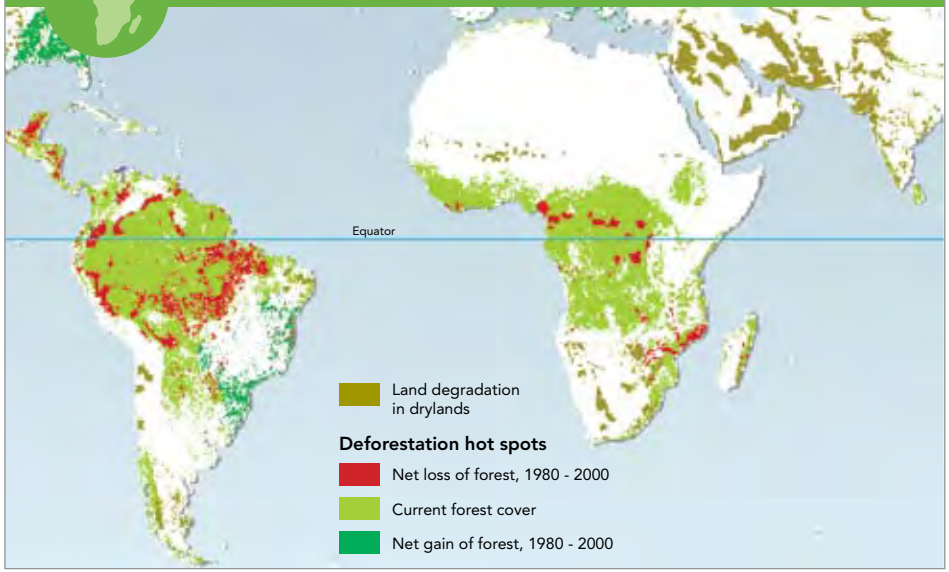
Forests play an important economic role in many countries, by providing ecosystem services for resident populations as well as being a source of food and other non-timber products.

Between 1990 and 2005, the annual rate of deforestation in the region was about 0.7 per cent, with broad differences between countries. According to FAO statistics, Burundi, Togo and Nigeria lost more than 30 per cent of their forested areas during that period.

Logging roads are rapidly expanding in the Congo rainforest.

In large tracks of unexploited forest, deforestation tends to progress along transport routes. Road density in the Central African rainforest has increased dramatically since the 1970s, as evidenced by satellite imagery. The highest logging road densities are in Cameroon and Equatorial Guinea, while the most rapidly changing area is in northern Congo, where the rate of road construction more than quadrupled between 1976 and 2003. Out of about 10 million square kilometres of Central African rainforest, more than 600,000 square kilometres of forest are presently under logging concessions, while 12 per cent of the area is protected.[48]

Map of deforestation hot spots, tropical forests



Source: Millennium Ecosystem Assessment, 2005.

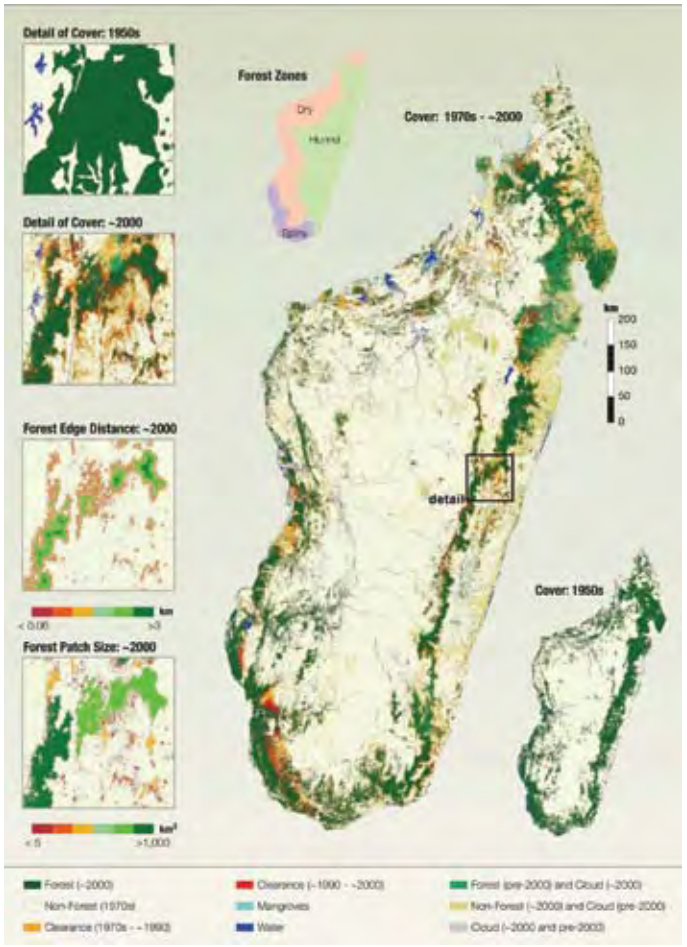
Deforestation is cause for concern in parts of the continent.

Although at the continent scale deforestation has been less intense than in Latin America, some areas in Africa are among the global hotspots for deforestation. This is the case of the Congo forest, but also of forest on the eastern coast of Southern Africa, as well as in Madagascar. Industrial logging in Central Africa is the most extensive land use, and the clearing of these forests could significantly increase carbon emissions.

Central African rainforest road. Photo by Nadine Laporte.

Road constructed through swamp forest to reach the Loudougou concession in northern Congo. Photo by Nadine Laporte.

Forest cover of Madagascar, 1950s - 2000

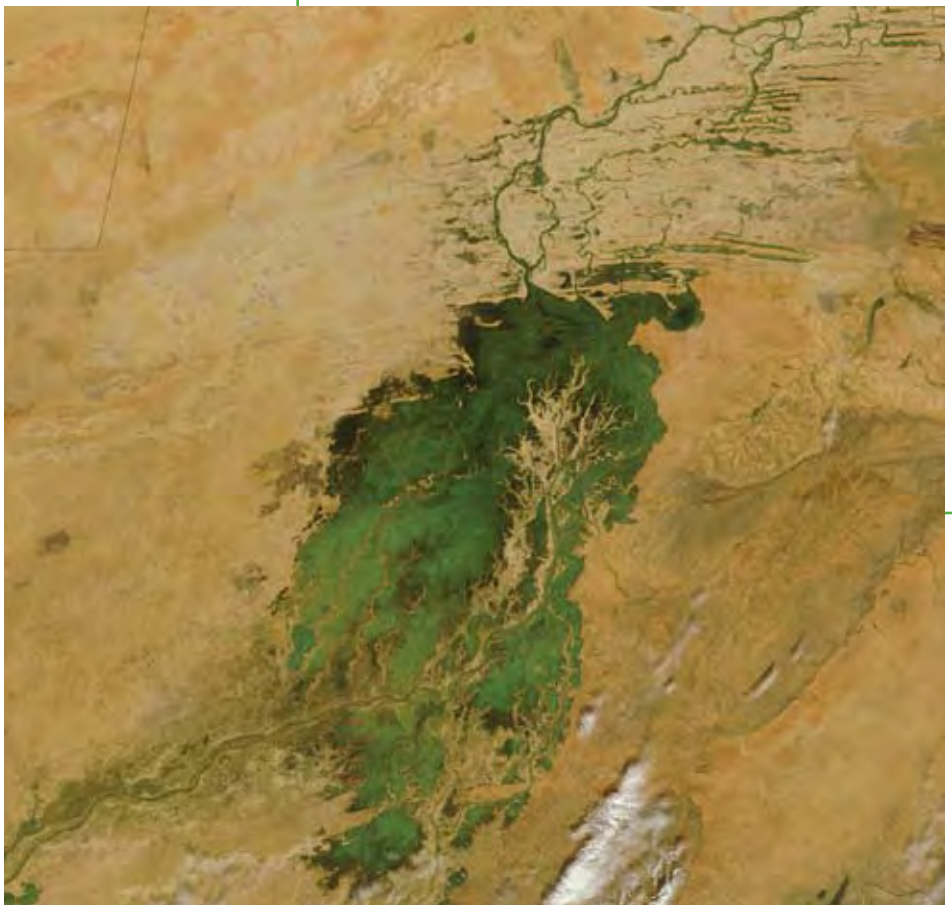


Source: United States Government, 2007.

Note: Forest cover changes from the 1970s to circa 2000 are shown in the main figure. Forest cover in the 1950s is shown in the lower right inset. Boxes on the left show forest cover as well as forest near edges and in isolated patches. The bioclimatic zones used for reporting cover and rates of change are provided in the Forest Zones inset.

Madagascar is a biodiversity hot spot, with a high proportion of endemic species.

However, much of the island's biodiversity is under threat from human pressure, in particular deforestation. Madagascar's forest cover decreased substantially over the last 50 years, from 27 per cent of the island in the 1950s to only 16 per cent circa 2000. Taking the fragmentation of forests into consideration, the decrease was even more drastic. From the 1950s to 2000, the area of interior forest more than 1 km from a non-forest edge decreased from 90,000 km^2 to less than 20,000 km^2, and the area in patches of greater than 100 km^2 decreased by more than half.[49]



Source: NASA, 2008

The Inner Niger Delta, Mali, seen from space.

Water scarcity will increase in many countries.

Although some African countries have high annual averages of available water per capita, many others already or soon will face water stress (1,700 m3 or less per person annually) or scarcity conditions (1,000 m^3 or less per person annually). Currently, 14 countries in Africa are subject to water stress or water scarcity. A further 11 countries will join them in the next 25 years.[50]

The Great Lakes region, seen from space.

Source: NASA, 2008

Increased water scarcity in the future in many countries of the region implies a need for efficient management of shared water resources.

Africa's main rivers, the Nile, the Congo and the Niger, or their tributaries, as well as Africa's main lakes (Lake Chad, Lake Victoria and Lake Tanganyika), are shared by many countries. Regional cooperation on river basin management has gained momentum recently. The Nile Basin Initiative (NBI), originally designed in 1999 as a way to share scientific information, today brings together ministers from the basin countries "to achieve sustainable socio-economic development through equitable utilization of, and benefit from, the common Nile basin water resources".[51] In the Niger basin, the Niger River Basin Authority, based in Niamey, provides riparian countries with scientific and technical information aimed to inform decision-making, in particular as regards the selection of locations for new dams.[52]