



DON'T DESERT DRYLANDS!

FACTS ABOUT DESERTS AND DESERTIFICATION

Deserts are harsh dry environments, where few people live. Nevertheless many species of flora and fauna have adapted to live in deserts, and they support a wide diversity of life. Desert toads burrow into the sand and lie dormant for months until the rains come, when they emerge to feed, breed and lay eggs. Some desert mammals have evolved long ears or other appendages to dissipate body heat. Others get their entire moisture needs from the food they eat. In Namibia, the *Welwitschia mirabilis* plant persists by drawing moisture from the daily fogs that sweep over the Namib Desert.

Because of their highly specialized nature, desert species are particularly vulnerable to habitat disturbance. Surprisingly little is known and documented about deserts in terms of biological, ecological and cultural characteristics. The different deserts of the world are unique in terms of origin, evolutionary history and climatic patterns. They need tailored management and policies to protect them.

Drylands are characterized by low rainfall and high rates of evaporation. They occupy 41 per cent of Earth's land area and are home to more than 2 billion people. Half of all people living in poverty live in drylands. They depend heavily on environmental services for their basic needs.

People living in drylands, 90 per cent of whom live in developing countries, lag far behind the rest of the world in human well-being and development indicators. In developing countries, infant mortality in drylands averages about 54 children per 1,000 live births, twice as high as in non-dryland areas, and 10 times the infant mortality rate in developed countries.

Desertification is defined by the UN Convention to Combat Desertification as "land degradation in arid, semi-arid and dry sub-humid areas resulting from various factors, including climatic variations and human activities." Land degradation in drylands is defined as the reduction or loss of the biological or economic productivity of drylands. It affects one third of the Earth's surface and more than 1 billion people.

The consequences of desertification and drought include food insecurity, famine and poverty. The ensuing social, economic and political tensions can create conflicts, cause more impoverishment and further increase land degradation. Growing desertification worldwide threatens to increase by millions the number of poor forced to seek new homes and livelihoods.

Between 10 and 20 per cent of drylands are already degraded. The problem is worst in the developing world. The total land area affected by desertification is estimated as between 6 and 12 million square kilometers (for comparison the countries of Brazil, Canada and China are all between 8 and 10 million square kilometers).

Drylands contain 43 per cent of the world's cultivated lands. Land degradation causes an estimated loss of US \$42 billion a year from agricultural production. Nearly one-third of the world's cropland has been abandoned in the past 40 years because erosion has made it unproductive. Each year an additional 20 million hectares of agricultural land either becomes too degraded for crop production, or becomes lost to urban sprawl.

Over the last three decades the need for higher agricultural yields to feed the growing world population has exerted increasing pressure on land and water resources. Compared to the 1970s, 2.2 billion more people need to be fed today. So far, food production has kept pace with population growth, but continued expansion means we may need 60 per cent more food in the next 30 years. The growing need for agricultural land accounts for 60-80 per cent of the world's deforestation.

Desertification is found to some degree on 30 per cent of irrigated lands, 47 per cent of rain-fed agricultural lands, and 73 per cent of rangelands. Annually, an estimated 1.5 to 2.5 million hectares of irrigated land, 3.5 to 4 million hectares of rain-fed agricultural land, and about 35 million hectares of rangeland lose all or part of their productivity due to land degradation.

Restoring soil lost by erosion is a slow process. It can take 500 years for 2.5 cm of soil to form. Dust storms are a growing problem in many areas, affecting the health of people and ecosystems both locally and at a great distance. Thick storms rising out of the Gobi Desert affect much of China, Korea and Japan, cause increased incidences of fever, coughing and sore eyes during the dry season. Dust emanating from the Sahara has been implicated in respiratory problems as far away as North America and has affected coral reefs in the Caribbean.

The UN General Assembly declared 2006 as the International Year of Deserts and Desertification. 2006 also marks the 10th anniversary of the UN Convention to Combat Desertification in Those Countries Experiencing Serious Drought and/or Desertification, Particularly in Africa. The Convention has a full complement of 191 Parties, representing all UN Member States.

The consequences of desertification include:

- diminished food production, reduced soil productivity and a decrease in the land's natural resilience;
- increased downstream flooding, reduced water quality, sedimentation in rivers and lakes, and the siltation of reservoirs and navigation channels;
- aggravated health problems due to wind-blown dust, including eye infections, respiratory illnesses, allergies, and mental stress;
- loss of livelihoods forcing affected people to migrate.

Drylands remain impoverished because:

- poor people living in drylands, especially women, seldom have a strong political voice and often lack essential services, such as health care, agricultural extension and education; women are also regularly discriminated against under land ownership regulations;
- dryland dwellers often lack agricultural necessities, such as tools, fertilizers, water, pesticides and seeds, they have inadequate access to markets and their products seldom fetch reasonable prices due to low quality;
- local communities often fail to benefit from other local resources, such as mined minerals, or wildlife and other tourist attractions;
- access to water and rights over this resource are often inadequate, and water resources are often poorly managed, leading to overuse and salinization;
- land is often overcultivated and overgrazed, leading to declining productivity;
- dryland communities are especially vulnerable to drought; they often depend on livestock or subsistence crops and lack reserves of food, money, insurance or other forms of social safety nets to cope with difficult years.

Fighting poverty in drylands requires that all these problems are addressed simultaneously.

The UN Millennium Ecosystem Assessment notes that it is easier to prevent desertification than to reverse it. Population pressure and bad land management practices are the cause of degradation. Better management of crops, more careful irrigation and strategies to provide non-farming jobs for people living in drylands could help to address the problem.