What are the major environmental problems affecting the development of Africa today?

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Introduction

What environmental problems are affecting the development of Africa today? Africa suffers from many environmental problems including deforestation, degradation and fragmentation, desertification, the loss of soil fertility, a dramatic decline and loss of biodiversity, air pollution, and water pollution. These problems hinder Africa from making progress with regard to economic development. Due to the fact that these issues are not fully understood, many Africans have been delayed in solving the problems.

Deforestation

Deforestation is "the clearing and destruction of forests to harvest wood for consumption, clear land for agricultural uses, and make way for expanding settlement frontiers" (DeBlij, Murphy, & Fouberg, 2007). According to the United Nations Food and Agriculture Organization (FAO), forested land was transformed into agricultural land at increasing rates from 1981 to 1990. These changes made up twenty-five percent of the changes in forest cover during this time (Mabogunje, 1995).

Given the extensive loss of forest in recent years, African governments are trying to address the problem. The Nigerian government is planting trees and preserving vegetation that is natural to the area. Three million hectares have already been restored from land that was severely degraded in previous years. In Niger, surveyors found between ten and twenty percent more trees in 2005 than were seen thirty years earlier in the same area (Niamey, 2006).

Degradation and Fragmentation

Degradation is "the temporary or permanent deterioration in the density or structure of vegetation cover or species composition, resulting from the removal of plants and trees important in the life cycle of other species, from erosion, and from other adverse changes in the local environment" (Mabogunje, 1995, p7). Degradation is caused by selective logging and by not replanting artificial or regenerating natural forests. Between 1979 and 1991, the rate of logging in African rose over thirty-four percent, compared with only nineteen percent globally (Mabogunje, 1995).

Wetlands are used for wood, hunting, fishing, land for crops and pasture, and help with aquifer recharging and flood control. Wetlands also provide habitats for migratory birds and other organisms. Degradation of these wetlands is not due to population growth of poverty, but to modern development, like the building of major dams and rivers (Mabogunje, 1995).

Degradation occurs only where actions lead to damaging alterations to the soil system and to plant cover. The damage to the soil system comes from erosion or from physical and chemical changes in the soil itself. In dry-land areas, erosion by wind or water is a severe problem because the soil is naturally thin. The soil's slow rate of development makes mending the soil complicated. This type of erosion makes up eighty-six percent of the total degradation of dry-land areas in Sub-Saharan Africa; the other part comes from the loss of nutrients arising from too much farming and not enough fertilization (Mabogunje, 1995).

Whereas fragmentation "arises from road construction and similar human intrusions in forest areas; it leaves forest edges vulnerable to increased degradation through changes in micro-climates, loss of native species and the invasion of alien species, and further disturbances by human beings" (Mabogunje, 1995, p7). Degradation and fragmentation makes up much larger area than does deforestation. They also have a greater impact on the diversity of animals and plant life.

Desertification

Desertification is "the encroachment of desert conditions on moister zones along the desert margins, where plant cover and soils are threatened by desiccation- through overuse, in part by humans and their domestic animals, and, possibly, in part because of inexorable shifts in the central government" (DeBlij, Murphy, & Fouberg, 2007, pA-20). The main causes of desertification are human activities and changes in climate. Dry-land ecosystems, covering over one-third of the world's land area, are susceptible to over and inappropriate use, which causes desertification (Niamey, 2006).

Desertification has hit Africa harder than any other continent in the world (DeBlij, Murphy, and Fouberg, 2007). Two-thirds of Africa is arid or semi-arid, so many people farm the dry, marginal lands in Africa. Given the lack of good farm land in Africa, marginal, semi-arid lands are often converted into farm and ranch lands. These farms are typically used to meet local consumption needs as well as to generate exports. While uneven land use has resulted in power differences among groups of people (DeBlij, Murphy, & Fouberg, 2007), the real problems are now coming from the desertification of the converted farms. In Sub-Saharan Africa over the past fifty years, over 270,000 miles of farming and grazing lands have been turned into desert. Most of this desertification has been caused by climatic fluctuations; although some of it has likely been as a result of overgrazing, woodcutting, soil exhaustion, and misuse of the land (DeBlij, Murphy, & Fouberg, 2007).

Loss of Soil Fertility

According to the Forest Development Institute (IDF), the non-stop burning of forests, mostly by people trying to clear land for hunting, is hurting the fertility of soils in some parts of Africa (Luanda, 2006). Many people in rural areas purposefully burn the dry grasses in fields used for planting, but some of these fires are also set by people not thinking while tossing burning cigarettes into the dry grass. These areas of Africa are also having problems with deforestation because of the manufacturing of wood and coal (Luanda, 2006).

Dramatic Decline and Loss of Biodiversity

Biodiversity is "the total variety of plant and animal species in a particular place; also known as biological diversity" (DeBlij, Murphy, & Fouberg, 2007). In 1957, Ghana had about 8.3 million hectares of forestland, but only 1.2 million are left today (Boateng, 2006). African forest reserves contain over seven-hundred different types of tropical trees as well as many endangered species including thirty-four plants, thirteen mammals, twenty-three butterflies, and eight birds which are all endangered (Boateng, 2006). During mining, tons of the earth's land is scooped up in order to get to the ore. This process causes the land to lose its biodiversity. The loss of forestland has reduced the level of biodiversity in Ghana. The problems also can be found in water sources. Because of the use of toxic chemicals by several mining companies, the bodies of water that provide millions of Africans with drinking water are being destroyed. Insufficient actions to guard against deforestation, land devastation, and the release of toxic materials into water bodies and the environment from mining are leading to the extermination of some species of plants and animals. Plant life is destroyed, streams are polluted with hazardous chemicals or are destroyed, and animals have to leave their natural habitat to safe areas (Boateng, 2006).

Even with agreements like the Convention on International Trade in Endangered Species of Flora and Fauna (CITES), the hunting of elephants, rhinoceroses, and alligators is still a key dilemma in some African countries (Mabogunje, 1995). The most serious of all is the loss of bird biodiversity because pollution is destroying their habitats.

Food sources in Africa including protein, carbohydrates, and vitamins result from biodiversity. Communities that are located near water bodies, rely on the diversity of these waters for fishing as well as using the water for recreational activities. There is a strong need to protect Africa's biodiversity from extinction as various economic activities continue to be a threat.

Air Pollution

Sub-Saharan Africa is one of the least urbanized regions in the world, but the urban population in Africa is growing very rapidly (Mabogunje, 1995). With this growth comes pollution. Poverty stricken citizens in Africa, particularly in the urban population, are most negatively impacted by poor air, water, and land quality. The causes of air pollution are multiple. Because many households are using charcoal or wood for energy, the amount of carbon dioxide produced by African cities has been on the rise. The 1991 global greenhouse emissions of South Africa, Zaire, and Nigeria ranked them among the top fifty countries in terms of their contribution (Mabogunje, 1995). The people that live in Africa are exposed to indoor and outdoor air pollution that can cause many different health problems. The indoor pollution partly comes from the increased use of wood and charcoal in cooking.

Water Pollution

A big cause of the pollution of the water in Africa is that they accept the solid waste from the United States, the European Union, and Japan. Africa is paid for accepting the waste, but they are not able to treat it properly to make it non-harmful to the environment and to the people of Africa (DeBlij, Murphy, & Fouberg, 2007).

Access to water that is clean is a problem throughout Africa. Water is polluted mostly by human waste. Diseases like typhoid, cholera, and diarrhea come from contaminated water. Water pollution is the reason for many infant mortality rates and health problems of people of all ages (Mabogunje, 1995).

Conclusion

In my research, I have found that the environmental problems in Africa are tougher than I would have ever imagined. The problems are extending from so many diverse reasons and origins. The main problems Africa is facing today are deforestation, degradation and fragmentation, desertification, the loss of soil fertility, a dramatic decline and loss of biodiversity, air pollution, and water pollution. These problems hinder Africa from making progress with regard to economic development. Due to the fact that these issues are not fully understood, many Africans have been delayed in solving the problems.

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