

Addressing Environmental Problems in Africa

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Environmental problems constitute one of the key challenges on the African continent in the 21st century. Focus is gradually shifting from politics, wars, and poverty to environmental issues. This is mainly the result of the development of new technologies, which has generated an increase in solid mineral mining, oil exploration, an increase in the number of plants and factories, and the overall upsurge in the application of manufacturing tools. The quality and richness of terrestrial, freshwater, and marine environments have been polluted and subsequently declined. It is therefore safe to say that new developments in industry and manufacturing are the root causes of environmental degradation over the past three decades. This has been exacerbated by rapid population growth, urbanization, energy consumption, overgrazing, over-cultivation of lands, and industrial advancements engendered by globalization.

Environmental problems in Africa are therefore partly anthropogenic or human-induced (though not necessarily by Africans), which is the result of the effect of chemical and human waste on all forms of ecological and human life. But natural causes cannot be overlooked and consist of:

- Earthquakes (the Great Rift Valley is geologically active and particularly susceptible to this phenomenon)
- Hot springs and active volcanoes are also found to the extreme east of the Rift Valley
- Erosion
- Deforestation
- Desertification
- Drought
- Water shortages resulting from the dry season.

The socioeconomic impact of environmental deterioration on Africa continues to pose a major problem to development, stability, and daily lifestyles. Africa has contributed less than any other region to greenhouse gas emissions that are widely held responsible for global warming. But the continent is also the most vulnerable to the consequences. Other dire consequences of environmental degradation include:

- Depletion of farming lands
- Depletion of natural habitat for aquatic and land animals
- Decline in biological diversity (the variety of all life on earth, the complex relationships among living things, and the relationships between living things and their environment)
- Aquatic pollution, adversely affecting the livelihood of fishing communities and destroying fish and other water creatures (at the 2002 World Summit on sustainable Development (WSSD) which was held in South Africa, the causes of water pollution were cited as: oil transmission through shipping ports, poor water resources management, absence of effective regional and basin development plans, and underestimation of the groundwater potential to supplement irrigation and drinking water supplies.)
- Land pollution, adversely affecting the livelihood of farming communities

- General health problems caused by aquatic and atmospheric pollution (the latter is partly the result of the reduction of the size of the rain forest, which stabilizes soils, recycles nutrients, and regulates the quality and flow of water.)
- Famine
- Desertification
- Endangering animals like Ethiopian Wolves, Ethiopian lions, and Gelada Baboons.

Environmental challenges are aggravated by population growth in Africa. At approximately 2.2 percent annually, sub-Saharan Africa has one of the world's fastest growing populations. By the year 2025 the population of Africa is estimated to be over a billion. This means that environmental problems could double or triple.

Like increased populations, poverty, another major problem on the African continent, also leads to a greater exploitation of natural resources for survival, and this worsens the environmental problems with the degradation of agriculture and arable lands, and mismanagement of available water resources.

Energy consumption in sub-Saharan Africa varies dramatically and dominates fuel consumption. The use of wood for fuel is predominant in both rural and urban locations and accounts for approximately 70 percent of total energy use, which ultimately causes another problem—deforestation.

To put the African environmental problem in proper perspective, two unique situations will be addressed in two different locales: Nigeria in the West and Ethiopia in the East.

Nigeria: Dumping Ground for Electronic Products

As a vast arena for the repair and sale of imported secondhand electronics—computers, fax machines, cellular phones, Palm Pilots, televisions, and a number of other gadgets—the Ikeja Computer village in Lagos, Nigeria serves as a hub for the advancement of Information Technology. But according to the Computer and Allied Product Dealers Association of Nigeria, most of these electronics, about 75 percent in fact, are irreparable and, therefore, stylish junk. They subsequently end up in landfills and makeshift dumps, but the truth is they are not properly disposed of since Nigeria lacks the capacity to effectively handle electronic waste (*e-waste*). Even more disturbing is that a lot of this waste material is loaded with toxic metals and substances like lead, mercury, cadmium, arsenic, antimony trioxide, polybrominated flame retardants, selenium, chromium, and cobalt. When burned, especially those encased in plastic, they emit harmful gases like carcinogenic dioxins and polyaromatic hydrocarbons, and leach chemicals such as barium into the soil.

The Ikeja e-waste problem is not limited to Nigeria alone, as several African countries have become a dumping ground for outdated electronic equipment, in spite of the good intentions of donors and the fact that a good percentage of the items are relatively functional. The problem often arises from fraudulent shipping brokers who load containers with electronic rubbish, largely in a bid to avoid paying tariffs. The Basel Action Network (BAN), a Seattle-based environmental group, has paid close attention to the e-waste exports to Nigeria and, in an October 2005 report, cited the manner in which such waste is used to fill up swamps. As the piles rise, they are periodically burned, spewing toxic fumes. This is in addition to the fact that people, mostly children, scavenge through the waste, sometimes in their bare feet, while goats and chickens that later end up in meals also roam through the heaps.

Even though up to 500 shipping containers carrying used electronics pass through Lagos each month, without any authentic data it is difficult to assess the extent of e-waste damage that Nigeria and other African countries currently face. This means that approximately 100,000 computers are entering Lagos each month, minus other electronic products. But BAN estimates that 25-75 percent of the shipped electronics are worthless. Just as there is yet to be an effective method of checking the importation of electronic junk to Africa, there is no trusted data on who is responsible for selling e-waste to Africa. In effect, exporters and importers are taking full advantage, reaping huge profits at the expense of environmental sanitation. Sadly, there are recycling companies and buyers that negotiate with exporters to deliberately accept rundown electronic items for profit. In other instances the buyers are simply inexperienced and ignorant of the junk that they purchase.

While countries like Nigeria are in dire need of an electronic recovery industry and effective waste disposal systems, BAN continues to mount pressure on the US to ratify the 1989 Basel Convention, an international treaty designed to regulate waste in all its forms and prevent hazardous waste from being dumped in the developing world.

Deforestation in Ethiopia

Generally, deforestation in Ethiopia occurs when the indigenes clear forests for fuel (firewood), hunting, agriculture, housing development, and even religious purposes. Deforestation is destructive as it entails removing the forest ecosystem by cutting the trees and changing the structure of the land to suit individual usage. With the second largest population in Africa, Ethiopia has been the victim of famine due to rain shortage and a depletion of its natural resources. Its low rainfall has been lowered even further by deforestation, which continues to worsen with population growth.

Ethiopian Highlands

In general, forests play a key role in preventing erosion, since the roots of trees protect the soil against washouts. Trees also retain soil water and, through the absorption of carbon monoxide, reduce global warming. Because Ethiopia lacks sufficient trees, the Blue Nile carries its soil and nutrients by water to the neighboring countries of Sudan and Egypt, where the land is very fertile.

At the beginning of the 20th century, around 420,000 square kilometers (35 percent of Ethiopia's land) was covered by trees but recent research indicates that forest cover is now less than 14.2 percent due to population growth. Despite the growing need for forested lands, lack of education among the natives continues to result in a decline of forested areas. The horrific famines that occurred in Ethiopia in the 1970s and 1980s were exacerbated by deforestation, leading to thousands of deaths. This is because with deforestation rains are less likely to soak into the soil and replenish ground water. On the whole, Ethiopia loses about 1,410 kilometers of natural forests each year. If the number continues to grow, the future of the country will be bleak. About 11.9 percent of the country's total land area (130, 000 kilometers) is currently covered by forest. Between 1990 and 2005 the country actually lost 14 percent (or 21,000 kilometers) of its forest, which means that deforestation increased by 10.4 percent from 1990-2005.

The Ethiopian Government must be credited for creating programs that teach the people about the benefits of afforesting and that encourage them to plant more trees and protect what they have. Part of the process involves providing the people with alternative home and agricultural materials like kerosene and machinery, and prohibiting the cutting of trees. But such prohibition, especially in rural areas, makes it difficult for the

people to meet their daily needs. To further prevent deforestation, government is also making efforts to provide flat land without pre-existing forests for farming.

United States Input

One of the goals of the National Summit on Africa is to address the endemic environmental problem plaguing the African continent. While the US Government has been at the forefront of realizing this goal, non-governmental organizations (NGOs) and a series of programs are also dealing with this problem in a number of ways. One such program is the Program on the Lakes of East Africa (PLEA).

Program on the Lakes of East Africa (PLEA)

The role of PLEA is best summarized in the following statement cited on the website of the initiative:

(PLEA) is a research, training, and service program of the African Studies Center of Michigan State University in collaboration with the fisheries research institutes of Kenya, Malawi, Tanzania, and Uganda. PLEA does research on Lakes Victoria and Malawi on the Anthropology and Sociology of fisheries management and development, women and gender, environmental policy, the socioeconomic impacts of species introductions, and relations of production. PLEA trains African and international scholars in fisheries socioeconomics and provides bibliographic databases, conferences, and consultancies. (<http://africa.msu.edu/PLEA>)

For further information on the Program, visit the PLEA website.

African Global Competitiveness Initiative (AGCI)

US Government assistance and trade policies offer opportunities for African countries to build free markets and increase foreign investments that promote economic growth, create jobs, and raise living standards. At the Fourth Annual African Growth and Opportunity Act (AGOA) Ministerial Forum in Dakar in July 2005, President Bush announced the African Global Competitiveness Initiative (AGCI) to build sub-Saharan Africa's capacity for trade and competitiveness. AGCI will provide \$200 million of additional resources over five years to expand African trade with the US under AGOA, with other international trading partners, and regionally within Africa. This contribution is also expected to promote the export competitiveness of African countries.

Building on the successes of the recently completed Trade for African Development and Enterprise (TRADE) Initiative, the AGCI has four strategic objectives:

- Improve the policy, regulatory, and enforcement environment for private sector-led trade and investment
- Improve the market knowledge, skills, and abilities of private sector enterprises
- Increase access to financial services for trade and investment
- Facilitate investments in infrastructure.

Through AGCI, the US Government collaborates with host-country governments, regional organizations, and private sector partners. The United States provides technical assistance to fund a range of activities focused on generating the conditions for economic growth and trade. The AGCI coordinates the resources of the US Government to build capacity and stimulate investment in Africa. Areas of emphasis include

private sector development; information and communication technologies dissemination; export diversification; financial sector strengthening; infrastructure investment facilitation; and international quality standards and inspection requirements compliance. (Source and for more information: http://www.usaid.gov/locations/sub-saharan_africa/initiatives/agci.html)

The US Agency for International Development (USAID): Hubs for Global Competitiveness

Implementation of AGCI goals will be partly achieved through assistance from USAID's Regional Hubs for Global Competitiveness located in Gaborone, Botswana; Accra, Ghana; Nairobi, Kenya; and Dakar, Senegal (the newest Hub), as well as through USAID bilateral missions. Additional assistance will be available from other US Government agencies.

Competitiveness Hubs respond to region-specific needs and serve as a central point for information and technical assistance on trade, investment, and business activities in the region, including training opportunities. USAID's country missions also play a major role in working with the Hubs to design and implement AGCI activities.

A wide range of current activities underway in each of the Hubs include promoting exports of agricultural commodities to the US, establishing business contacts and generating business opportunities for the export of textiles and apparel, and removing policy and infrastructure constraints that hamper trade. The Hubs have established AGOA resource centers to provide information and technical assistance on AGOA legislation and to build relationships with US businesses.

All four Hubs are staffed by teams of experts in various trade-related fields. Advisors from the US Department of Agriculture/Animal and Plant Health Inspection Service work on coordinating pest risk assessments and facilitating the export of agricultural commodities. In addition, the Hubs focus on products eligible for duty-free treatment under AGOA in sectors specific to their region, such as the Dakar Hub's work with fish and other seafood producers.

Guinea: Improving Livelihoods and Natural Resource Management

In Guinea, West Africa, the US is making significant input in the area of environmental protection. Although the country is endowed with abundant agricultural, forestry, and fishing potential, estimated 2003 real Gross Domestic Product (GDP) growth was only 1.2 percent. This is down from 4.2 percent in 2002. One of the objectives of USAID is to help rural communities sustainably manage their own natural resources, improve agricultural production technologies, and expand trade opportunities. For this reason, in Guinea 115,000 hectares of forests and tree plantations have been placed under sustainable management, and the Government of Guinea has turned over the management of seven classified forests to local communities. Such co-management plans empower local communities to share management responsibility and benefits with the Government. As part of the devolution process, a USAID natural resource management program has provided a dozen forestry service agents with professional forest management training that allows them to transform themselves from policemen to development partners. At the village level, the men and women in democratically run management committees are empowered with the authority to make and enforce management laws. Some committees have exercised these rights by successfully challenging traditionally powerful logging and mining interests who transgressed the laws. USAID has assisted more than 37,000 farmers to improve agricultural production through sustainable management practices, and has helped establish over 2,800 new businesses.

Kenya and Uganda: Promoting Sustainable Use of Natural Resources

Limited job opportunities have contributed to the majority of Kenyans becoming exceedingly dependent on natural resources. In response, USAID helps communities manage their resources more sustainably. The program focuses on improving community-based wildlife management, strengthening forestry and environmental management, and enhancing integrated coastal zone management. Strengthening the skills of community-based organizations has led to 770,000 hectares being put under improved management, \$652,000 in revenues from nature-based enterprises, and creation of 1,200 new jobs. In addition, Parliament is acting on a land policy review process and a forestry and wildlife bill, and has already enacted an environmental bill.

USAID works to identify threats to the biodiversity in Uganda's section of the Albertine Rift by working with local communities. USAID promotes income-generating activities involving the sustainable use of natural resources, including tourism, agriculture, and forestry related enterprises. The program also seeks to reduce conflicts between communities and protected areas by promoting access rights, revenue sharing, and control of problem animals.

Central Africa: Protecting Forest Resources

Millions of people depend on the Central African rainforest for their livelihoods, but this is under threat from conflict and illegal logging. Through the Congo Basin Forest Partnership, the US and its partners are helping the people of the world's second largest rainforest to manage their natural resources sustainably. USAID will contribute approximately \$48 million to the partnership through its successful Central African Regional Program for the Environment (CARPE) for projects supporting a network of effectively managed protected areas. The goal is to improve forest governance, develop sustainable means of livelihood for the 60 million people who live in the Basin, reduce the rate of forest degradation and loss of biodiversity through protected area management, improve logging policies, and achieve sustainable forest use by local inhabitants. Following collaboration with USAID, several major logging companies have committed to improving management practices through activities such as halting the bush meat trade.

Tanzania: Conserving Biodiversity

Most of Tanzania's rural poor depend almost entirely on natural resources and subsistence agriculture. By addressing the links between environment and rural poverty alleviation, USAID is helping to improve rural livelihoods while conserving biodiversity. USAID's environment and natural resources programs enhance the capacity of local communities to participate in sustainable management of wildlife protected areas and to share income derived from tourism. USAID supports local actions in the Pangani, Bagamoyo, and Mkuranga districts that promote sustainable coastal and marine resources management through co-management for near-shore fishery areas, small-scale enterprise development, marine culture, and coastal tourism. USAID has also supported the placement of an additional 620,000 hectares of land under conservation management, demonstrating local communities' commitment to participate fully in community-based conservation.

Namibia: Protecting the Environment While Helping Communities

More than 70 percent of Namibians, many living in poverty, reside in rural areas and depend upon natural resources for their livelihoods. USAID's Living in a Finite Environment program has helped form 15 protected areas known as conservancies, involving nearly 40,000 community members. An additional 33 conservancies are at various stages of development. Four of the conservancies have achieved financial

sustainability. The conservancies manage approximately 7.87 million hectares and financial benefits to participants have increased to approximately \$2.25 million. The conservancies have also led to the creation of an additional 3,500 full and part-time jobs. During the same period, wildlife numbers have increased, reversing a disturbing trend. Through the conservancies, USAID thus works with residents to develop business plans that generate income while conserving wildlife and resources. USAID also works at the national level to support the coordination and integration of national policies and laws governing natural resources. (Source and for further information: http://www.usaid.gov/about_usaid)

FEWS

USAID Famine Early Warning Systems Network (FEWS NET) is an information system designed to identify problems in the food supply system that potentially lead to famine or other food-insecure conditions in sub-Saharan Africa, Afghanistan, Central America, and Haiti. FEWS NET is a multi-disciplinary project that collects, analyzes, and distributes regional, national, and sub-national information to decision makers about potential or current famine or other climate hazards, or socioeconomic-related situations, allowing them to authorize timely measures to prevent food-insecure conditions in these nations. Regions and countries with FEWS NET representatives include sub-Saharan Africa (Angola, Burkina Faso, Chad, Djibouti, Ethiopia, Kenya, Malawi, Mali, Mauritania, Mozambique, Niger, Nigeria, Rwanda, Somalia, (southern) Sudan, Tanzania, Uganda, Zambia, and Zimbabwe), Central America (Guatemala, Honduras, and Nicaragua), Afghanistan, and Haiti. (Source and for further information: <http://www.fews.net>)

Recap

USAID environment programs across Africa are demonstrating the sector's ability to be a robust vehicle for rural economic growth, stronger local governance, more effective conflict mitigation, as well as reduced degradation. Sub-Saharan Africa has abundant natural resources that can be a major contributor to sustained economic growth. Several countries in the region have implemented highly innovative community-based approaches to improve the management of their natural resource base and to extend the economic benefits to lower income households. Major challenges remain, however. The region contains 45 percent of global biodiversity, yet has the highest rate of deforestation in the world. Rapid urbanization and industrialization also create new environmental challenges. The top-down approach to natural resource management in many countries has resulted in inefficient exploitation and contributed to degradation, while inequitable access to natural resources is often a root cause of social instability. There is therefore no gainsaying the need for the US, the global community, and African countries to redouble all efforts aimed at overcoming severe ecological challenges in order to ensure that the environment serves as a gateway to economic growth and a source of security.