THE FUTURE OF BIODIVERSITY IN AFRICA: *A Report From The Africa Biodiversity Collaborative Group*

WASHINGTON CONSULTATION

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The Future of Biodiversity in Africa:
Report from the ABCG Washington Consultation, May 2008

Introduction

The Africa Biodiversity Collaborative Group (ABCG)[1], a network of international non-governmental organizations (NGOs) working on biodiversity conservation, with field operations or policy analysis in Africa, was commissioned by the U.S. Agency for International Development (USAID) through the Biodiversity Analysis and Technical Support (BATS) Program for Africa to key off the study produced for USAID entitled *Protecting Hard-Won Ground: USAID Experience and Prospects for Biodiversity Conservation in Africa*, and to consider the future of biodiversity within a ten to thirty year time horizon.

This work is taking place in three parts with an expert consultation and scenario exercise meeting in Washington, DC, with the conservation NGOs and U.S. government agency partners (May 2008); an expert consultation and scenario exercise workshop in Dar es Salaam, Tanzania, with leading conservationists from throughout Sub-Saharan Africa (September 2008), and summary discussions at the IVth World Conservation Congress in Barcelona (October 2008) and the (US) National Council of Science and the Environment conference on biodiversity in Washington, DC (December 2008).

This document is a summary of the first Washington meeting.

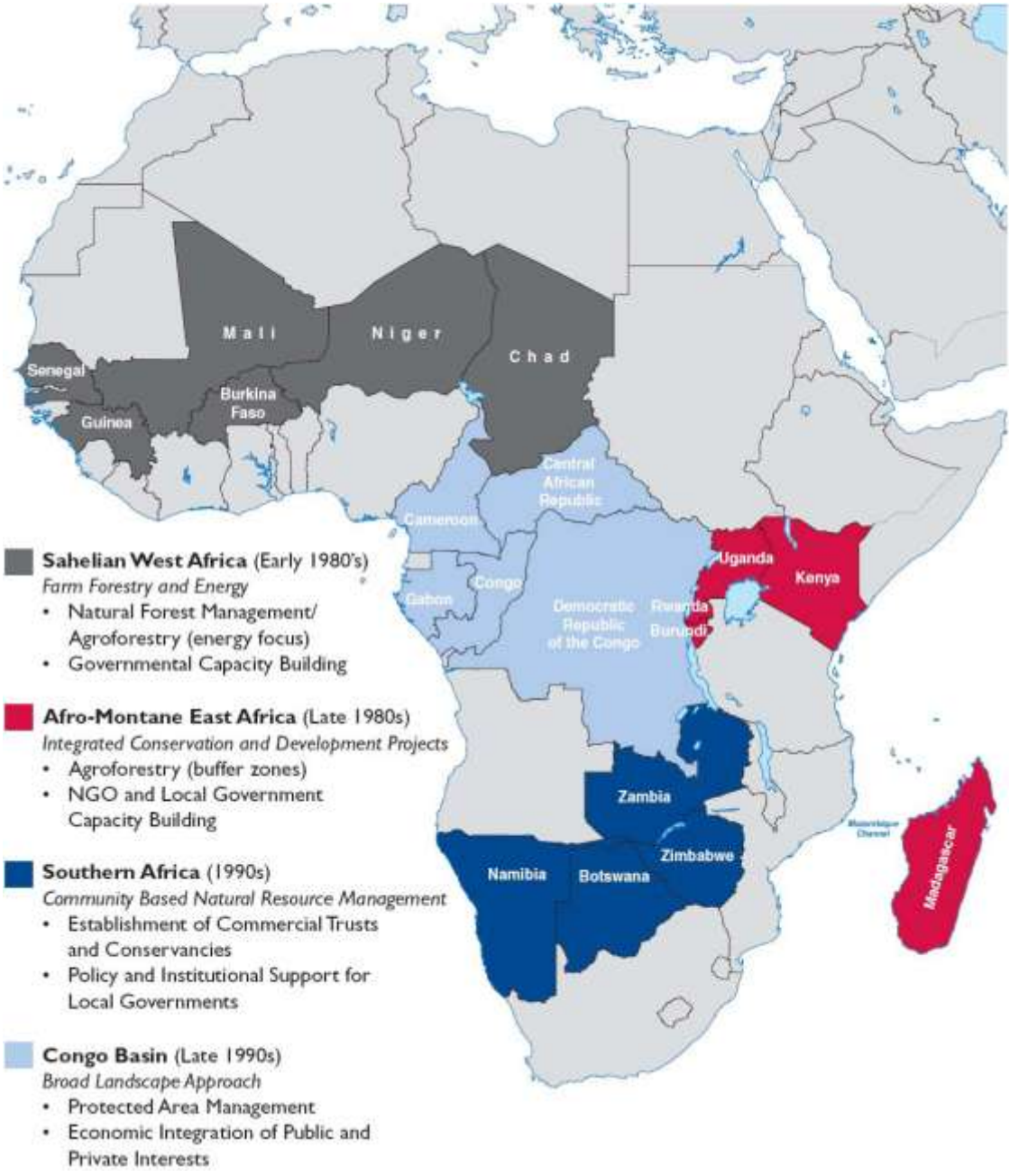
Reflections on 30 years

USAID commissioned Chemonics International, under a task order of the Environmental Policy Indefinite Quantities Contract (EPIQ II) to produce a review of 30 years of USAID experience in biodiversity conservation in Africa. *Protecting Hard-Won Ground* reviews conservation and natural resource management efforts in Africa over the past 30 years. It considered the evolution of USAID's approach to conservation, identifying major programming epochs:

1. Agroforestry and energy (primarily in Sahelian West Africa in the early 1980s)
2. Integrated Conservation and Development Projects (primarily in Afro-Montane East Africa in late 1980s)
3. Community-Based Natural Resource Management (primarily in Southern Africa in the 1990s)
4. Landscape Approaches (primarily in the Congo Basin of Central Africa in the late 1990s)
5. Multisectoral conservation approaches (community needs and interests broader than conservation) (see Figure 1: USAID/Africa Natural Resource Management Epochs, Early 1980s to Late 1990s from *Protecting Hard-Won Ground*).

[1] ABCG includes African Wildlife Foundation, Conservation International, IUCN-The World Conservation Union, the Jane Goodall Institute, The Nature Conservancy, Wildlife Conservation Society, World Resources Institute, and World Wildlife Fund.

Figure 1: USAID/Africa Natural Resource Management Epochs, Early 1980s to Late 1990s



(Hecht,etal, 2008)

The past 30 years have seen an evolution of approaches to conservation within USAID and in the variety of partners with which the agency works, in particular non-governmental organizations. During the same 30 years the *brands* of non-profit conservation organizations grew in worth to 10 billion dollars, 1/3 of which is estimated to be from African conservation initiatives. African conservation organizations have emerged and are beginning to prosper too, but not at the level of the US and European based organizations. There has been a tremendous growth in civil society participation and environmental action in Africa.

In fiscal year 2008, Congress earmarked $195 million dollars for biodiversity conservation in USAID's budget (out of $250 million recommended by conservation organizations). With these resources, USAID is a leader in biodiversity conservation within the official development assistance community. Current work focuses on cross cutting issues – marine/freshwater, policy, and partnerships.

Key needs and opportunities for biodiversity conservation identified in *Protecting Hard-Won Ground* include globalization, climate change, conflict, population growth, and linkages between health and conservation.

Ongoing needs include the identification of appropriate scales for interventions, the interrelated and self-reinforcing nature of issues such as climate change and globalization, and the continued need to demonstrate the value of biodiversity and the means of integrating biodiversity considerations into decision-making.

This report of the first ABCG expert consultation and scenario exercise meeting in Washington is a reflection and contribution to the dialogue on the future of biodiversity in Africa, and the role of USAID and all stakeholders in staunching the extinction crisis.

Drivers of Change

Introduction to drivers of change

The history of conservation in Africa is often tied to colonial domination. In some quarters, conservation was seen as a form of economic and cultural domination especially when conservation was based on the intrinsic value of nature. The existence value of wildlife is not unique to western, and specifically Anglo-Saxon culture, but the romance of nature that led to the modern conservation movement and the establishment of national parks and modern wildlife protection is arguably alien to the African experience. This doesn't make the intrinsic value of wildlife and of biodiversity irrelevant, but it does frame some of the difficulties that persist in conserving biodiversity in Africa.

And yet, no credible alternatives to the exclusion of human use from specific fixed areas for the protection of biodiversity seem to have caught on. Fifty years ago, 90

percent of wildlife was outside of protected areas in Africa; today that figure is estimated to be 20 percent. The concept of protected areas has evolved from a romantic impulse to preserve relicts of an antediluvian and uncorrupted world to a vastly more complex initiative to create landscape linkages for biological resources and the protection of critical ecosystem services.

Our challenge today is to communicate this astonishing enterprise, in all its complexity to a world preoccupied with economic purposes. One lesson from thirty years of biodiversity conservation in Africa is that the dichotomy between conservation and development is a false one. Tourism in national parks and protected areas in some countries of East and Southern Africa, for example, has become a huge source of income for some countries.

In a recent informal survey of African views of security, four concerns were prominent:

1. Public security sector (the police and military apparatus of government) itself and the need for reform

2. Health and the freedom from disease

3. Poverty and the freedom from want, and

4. The environment.

Security, the freedom from arbitrary and uncontrollable forces that bring chaos into human lives, is a core driver of governance, in areas of economy, community, health, and the environment. Nature, raw in tooth and claw, can be threatening and even lethal, but the environment, understood in the context of ecosystem services, can be repositioned as a force for stability and security. It is essential that the value of conservation is communicated and discussed widely with the public and promoted to other sectors.

True security requires unconventional partnerships to get to the drivers of entropy and chaos. Today's challenges call for a systems approach; a concatenated chain in which all links must be mutually reinforcing. When a link breaks it becomes a security issue. Many partners working together are required to keep the chain long.

But large mammal populations and vast tracts of forest and savannahs don't have the time that the conservation community is taking. Time is running out and urgent action is required on a number of fronts. This section discusses some of the drivers of change; subsequent sections will discuss prospects for the future and the leverage points for intervention.

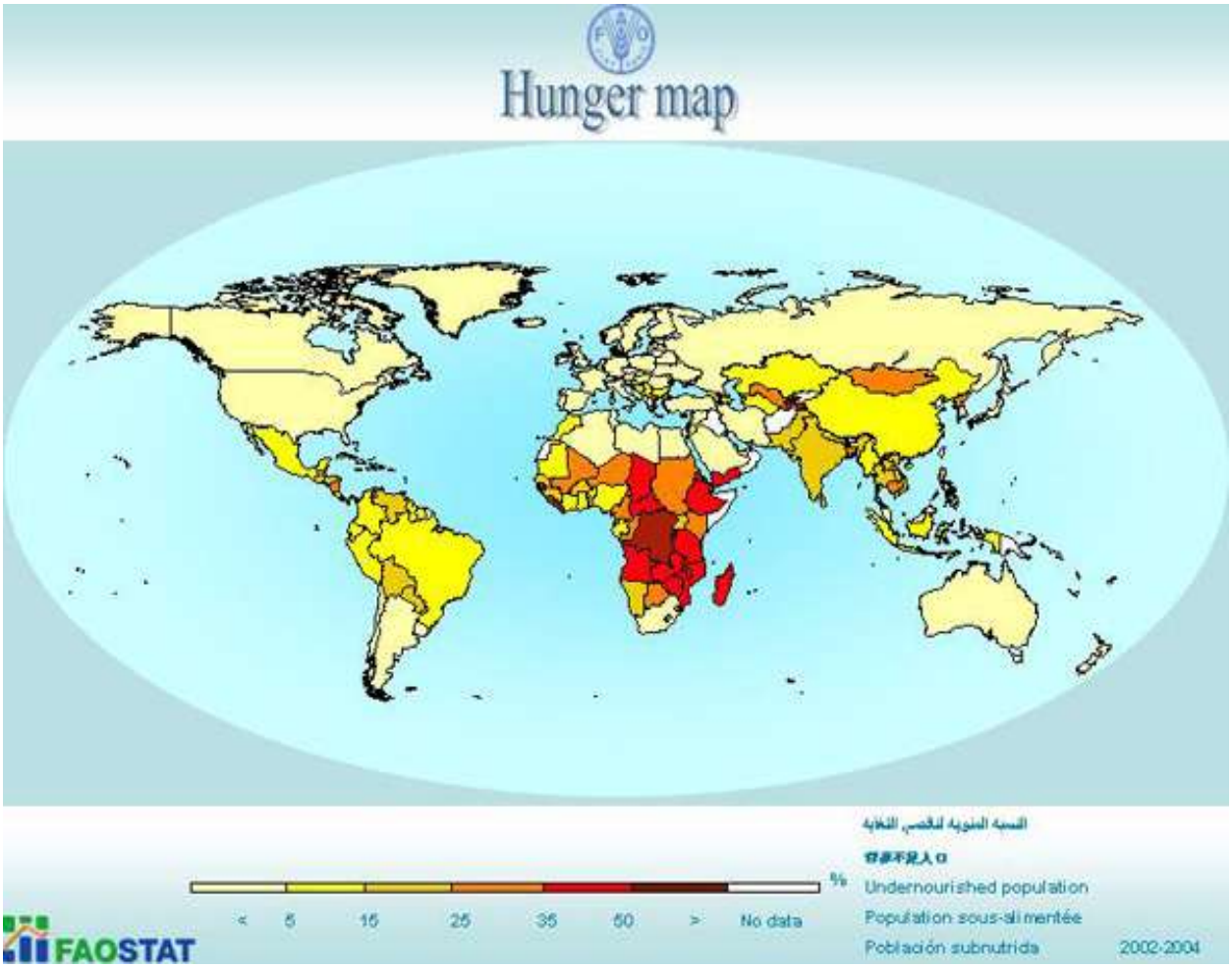
Hunger, poverty and globalization

There are 300 million fewer Africans living in poverty today than there were ten years ago. Africa is experiencing higher economic growth than much of the world. However, there are recently documented increases in malnutrition, and stagnation in the rate of poverty reduction. The situation is precarious; rising energy prices and increased costs for basic commodities can quickly reverse the gains made in the past decade. Food insecurity is a major concern. At the same time, higher commodity prices may return farming to an economically viable occupation, a condition that the globalized economy has made very difficult. In our Internet-mediated economy, farmers in Africa compete with producers in every corner of the globe. After a decade of sinking food costs, the weak dollar and high energy costs have driven up the cost of basic commodities.

There is an overlap between poverty and biodiversity. Inhabitants of remote rural areas have less access to markets and services, so their direct dependence upon ecosystem services, including biodiversity, has conservation implications. Most rural poor near highly biodiverse areas are small-scale farms, dependent upon charcoal and wood for energy, and wildlife and wild plants to supplement the food that they grow. They are also consumers of land - and competitors for conservation land.

Private investment in Africa dwarfs multilateral and bilateral aid, but Africans need opportunities to benefit from their resources. They have limited opportunities to participate in economic value creation, which resides in value chains, rather than in raw commodities. Instead value is captured by external actors who ship, process, brand and sell the products of Africa. Ownership of value chains would help Africans to capture more value and step out of the poverty trap. By 2050 commodity demand is estimated to double as population and economy grow. Increased demand for internal and externally produced commodities creates important opportunities.

As the discussion on the agriculture sector below will show, food security is compounded by risks of invasive species, including plant diseases, across boundaries, and the need to develop the infrastructure for protection of important food crops from disease.


Hunger map
Undernourished population
Population sous-alimentée
Población subnutrida
2002-2004
%
< 5
15
25
35
50
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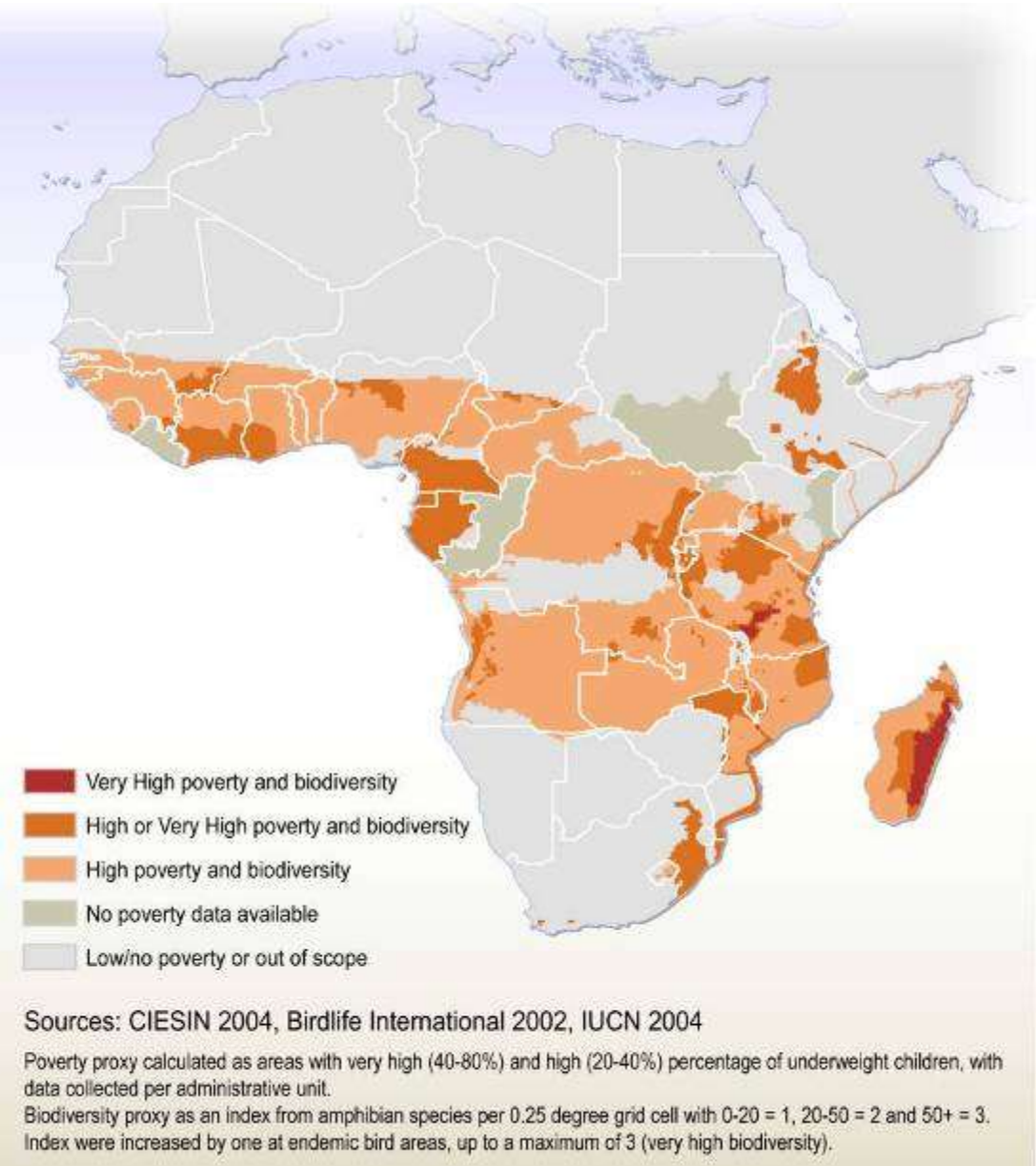
Relationship between Biodiversity and Poverty in Africa

Source: Hugo Ahlenius, UNEP/GRID



Health

Human health has profound implications for biodiversity. AIDS is responsible for three million deaths per annum in Africa. Communities in Africa ravaged by HIV have lost much of the working adult population, leaving food production to the very young and very old, which may lack the strength or the indigenous knowledge to carry out complex farming tasks, leading to environmentally damaging shortcuts, such as inappropriate uses of fire. The epidemic places heavy stress on medicinal plants, and additional timber for coffins. The full economic impacts of HIV have not yet arrived. Diseases such as HIV undermine Africa's economy, which, as we have seen, is correlated to biodiversity loss. There are widely reported increases in natural resource use by AIDS impacted communities who turn to these resources as their ultimate safety net. This increase might not be sustainable and can have long term impacts on community livelihoods and biodiversity. AIDS also results in changes of land use and agricultural practices change due to loss of labor and tenure issues and land grabbing can ensue. Conservation organizations and the local communities who they partner with on community-based natural resource management have been seriously affected by AIDS as people succumb to the disease. This impacts their abilities to perform conservation activities (WWF 2007).

Environmental degradation is implicated in disease as well. The connections between environmentally destructive development and waterborne disease such as helminthes and schistosomiasis are well established. Environmental harm is increasingly implicated in emerging infectious diseases, as well as infectious diseases that are increasing their range. The precise mechanisms often remain unknown, but improved disease surveillance and reporting, when combined with environmental monitoring, is expected to yield correlations between new avenues of access into remote areas and emerging infectious disease due presumably to human, wildlife, and livestock interactions. Humans are increasingly exposed to the wildlife hosts of zoonotic diseases, some of which then infect humans. Bushmeat slaughtering and consumption are particular risks. Other risks include storage of grain in places accessible to rodents carrying hemorrhagic fevers like Lassa.

It is also assumed that climate affects disease vectors, and that climate-induced environmental change will translate into different, and possibly increased, risks of exposure for human populations.

The transmission of diseases is also assumed to be two-way, as indicated by the occurrence of the human disease tuberculosis in mountain gorilla populations. Human, wildlife populations, and livestock could be at risk as a result of increased interactions as human populations encroach upon natural areas.

The complex factors governing disease transmission make eradication difficult. Poor planning and risky behavior may result in long-term challenges, especially in Africa, where public health infrastructure is particularly weak and where

human/wildlife/livestock interactions are still common. Disease resulting from environmental change constitutes a hidden cost of economic development.

The search for solutions calls for a multi-disciplinary, multinational approach, unifying the diseases of humans, livestock, and wildlife on the "One Health" approach pioneered by the Wildlife Conservation Society and Envirovets, and increasingly embraced by the medical and veterinary establishment worldwide.

Demography

Current population growth rate in Sub-Saharan Africa is 2.39% and it is projected to decrease to 1.98% by 2025 and to 1.27% by 2050. Although population growth rate will slowly decline in the next 40 years, there is still considerable population growth because of the population momentum[2] from the large cohort of people moving into reproductive age in the next 10-15 years. Sub-Saharan Africa's population is projected to total somewhere between 1.5 – 2 billion people by 2050 (with 1.5 being the low variant and 2 billion the high variant projection), after which it is expected to plateau (UN, 2008). Growth in population is holding steady at 1.2% per annum, representing the natural rate of increase from the large cohort of people now entering into reproductive age, which means that the growth will continue to increase for at least the next 20 years. One of the reasons for continued high population growth rates in sub-Saharan Africa, is the great unmet need for family planning in the region (Sedgh *et al*, 2007). 24% of married women in sub-Saharan Africa do not want to have a child in the next two years or wants to stop childbearing; and is not using any method of contraception. Despite this great need much of sub-Saharan Africa is experiencing a fertility stall, that is, a leveling off of the use of modern contraceptives (Bongaarts, 2008). It is thought that higher population growth occurs in remote areas, including areas near protected areas (e.g., 3-4%). Remote rural communities have the least access to family planning and reproductive health services. Sites around protected areas are generally hard to reach.

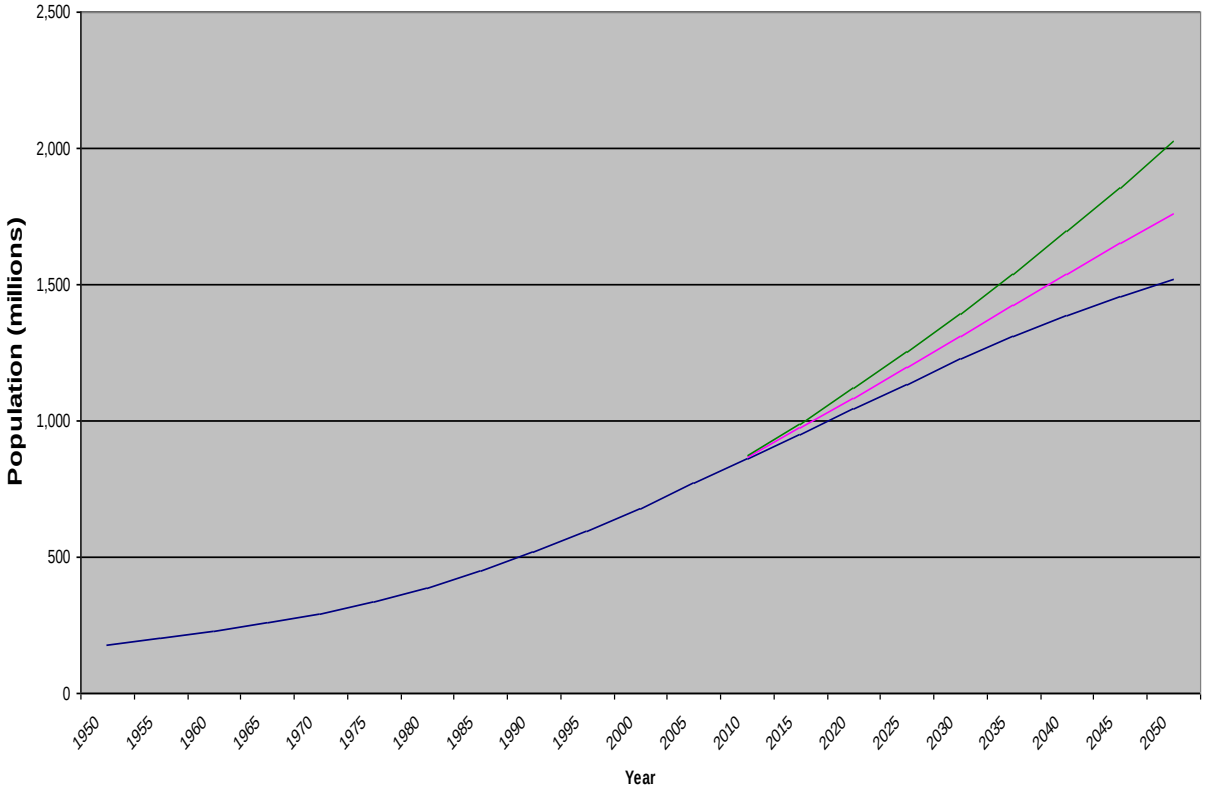
In 2007, urban dwellers became the majority of the world population. Rapid population growth is expected to continue in urban populations in Africa, resulting in a doubling of number of people living in cities by 2050, due to natural increase, rather than migration.

Although growing rural populations have the largest direct impact on the environment, cities also have impacts, e.g., in the demand for ecosystem services such as water and fuel. The biggest biodiversity impacts are rural to rural migration and urban to rural migration (such as may occur during economic downturns – for example when the mines played out in Zambia many migrated to the miombo woodlands).

[2] Population momentum is the tendency for population to continue to grow even after the birth rate is in equilibrium with the replacement rate, in cases where there a significant cohort of youth has yet to move into reproductive age. A young population age structure creates a lag before equilibrium can be reached.

Migration into rural areas has the potential to produce conflict, and increased pressure on wildlife populations for bushmeat.

Africa: Population Growth under 3 Scenarios

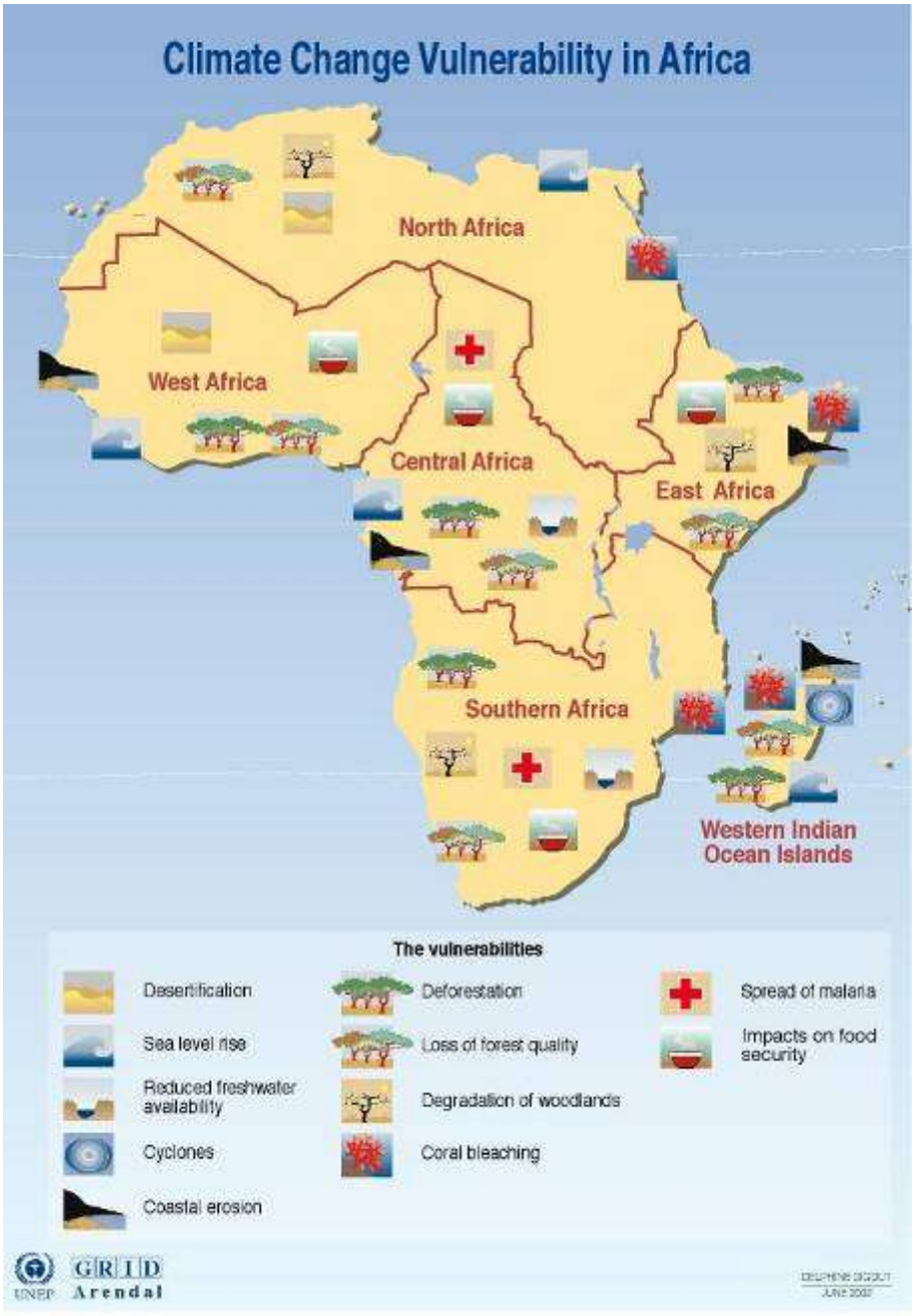


Climate

The expected impacts of climate change in Africa include shifting rainfall patterns, rising temperatures, shifts in seasons, and sea level rise. The sectors that are most vulnerable to climate change in Africa include agriculture, water, and health; coastal areas and islands are expected to be heavily impacted. The Intergovernmental Panel on Climate Change projects an economic loss of approximately 10% due to climate change. Biodiversity impacts of climate change include shifts in species distribution and range, the impacts of mitigation activities, and

Climate is tied to land use, which of all the variables, is the one humans have some control over. Win/win outcomes may still be possible; payments for ecosystem services through mitigation efforts combined with careful land use planning and environmentally sensitive agricultural development may produce effective adaptation strategies.

There is concern that existing protected area networks may not be adequate for biodiversity conservation in a time of changing climate, and a stronger emphasis on landscape level approaches is required.



Sources: Anna Ballance, 2002.

Sectors and sectoral issues

Bushmeat

The use of wildlife for meat is customary practice throughout Africa. Growing populations, colonization of remote rural areas, and increased access to these areas through infrastructure created for extractive industries such as logging, oil, and mining have raised serious concerns that this epoch marks the "end of the wild". The easy access to automatic small arms in zones of conflict has made commercial, or bushmeat hunting more efficient. Industrial settlements for extractive industries often create markets for bushmeat; even when employers provide adequate food supplies at the site, bushmeat is often a preferred alternative in the African diet.

Although wild meat is customary and preferred, it is not without risks. The handling and consumption of bushmeat is implicated in the transmission of zoonotic diseases such as Ebola from wildlife populations to humans.

Wildlife both inside and outside protected areas in Africa has declined significantly in the last thirty years. In the late 1980's Kenya Wildlife Service reported that the majority of wildlife was found outside protected areas (KWS 1990). Recent studies indicate that dramatic declines both inside and outside protected areas have taken place (e.g. 58% decline in non-migratory species between 1977 and 1997 in Masai Mara Ecosystem (Ottichilo et al. 2000), most species showed declines in over 50% of the areas where they were surveyed in Tanzania from late 1980's to early 2000's (Stoner et al. 2007)). Reasons for these declines are interconnected and include expansion of commercial agriculture, human population growth and land-use, cycles of drought, and increased commercialization of bushmeat (MENTOR Fellows Reports 2008). Under current rates of off take for the table, large animals are unlikely to survive outside of protected areas, and only with extreme effort within protected areas. If climate change shifts wildlife populations away from established protected areas, the prospects for conservation are bleak.

The commercialization of bushmeat through large-scale market hunting has impacts on the food security of local populations of subsistence farmers who depend upon wild meat to supplement their diet.

Because of the unsustainability of large scale bushmeat production, the concerns over food security in rural areas, the added risks from extractive industries and armed parties, and health risks, bushmeat is an issue that requires a multidisciplinary approach involving the cooperation of conservation, development and education sectors. This will entail a global commitment and large-scale investments over extended periods to conserve wildlife.

Text Box: Illegal Bushmeat Trade and Extractive Industries

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Bushmeat applies to all species of wildlife that are hunted and sold for meat. The concern for extractive industries is about bushmeat that is illegally, commercially and/or unsustainably derived from wildlife. This may involve illegal methods of hunting such as wire snares and unregistered guns; the illegal killing of endangered, threatened, or protected species; wildlife being illegally poached from protected areas; and the unsustainable offtake for commercial trade or non-commercial uses (see: Bushmeat Crisis Task Force (BCTF) website, www.bushmeat.org, 2008).

In the densely forested countries of West and Central Africa, road construction associated with extractive industries such as logging, oil development and mining, dramatically increases hunters access to isolated areas and can decrease the cost of transporting bushmeat to urban markets thus increasing the supply and profitability of the illegal commercial trade. According to BCTF, per capita bushmeat consumption is highest in logging concessions due to the large numbers of company workers and their families desiring meat, having guns and ammunition, and motorized access to the forest to hunt. Logging concessions hold the most of the remaining blocks of intact forests outside of national parks and protected areas. Thus logging companies can play an important role in wildlife conservation. They can ensure that their practices do not directly or indirectly promote the unsustainable consumption of bushmeat. Through the adoption and enforcement of appropriate forest and wildlife management policies and practices, extractive industries can effectively control the commercial bushmeat trade (BCTF, 2000). (See: http://bushmeat.org/portal/server.pt/gateway/PTARGS_0_2_95539_0_0_18/FSlogging.PDF)

Similarly, in Eastern Africa there is a large commercial bushmeat trade that has increased in recent decades. Driven by lack of alternatives, ineffective enforcement and increased demands that result from large human population growth and shifts in land-use, wildlife across the region is being impacted by overhunting. Unlike Central Africa, wildlife-based tourism is a major source of income for many areas in Eastern Africa. If current bushmeat trends continue it is likely that there will be negative impacts on the tourism industry, national economies and ecological services throughout the region.

Water

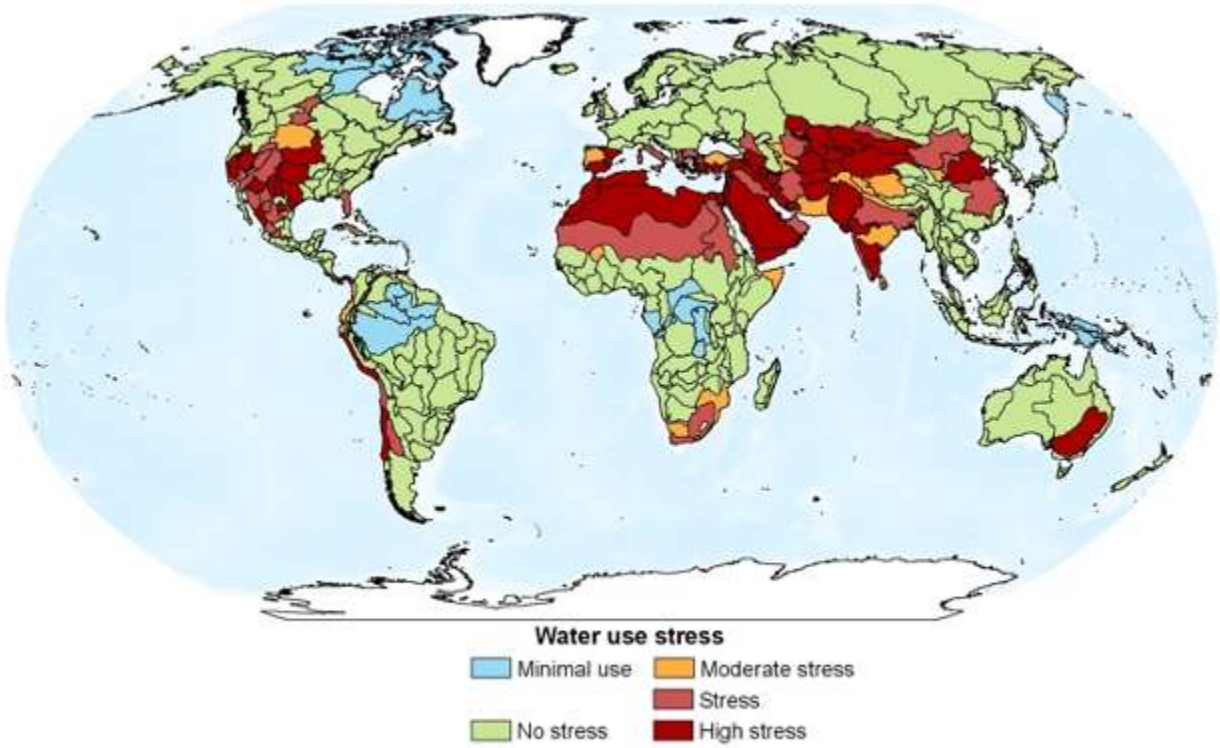
The world water crisis is not a myth; there has been a six-fold increase in water consumption in the past century. We are struggling to monitor and document water resources and the impacts to water resources, but data for analysis is inadequate. What appears to be clear at this time is that, overall, Africa does not have a deficit in water but a deficit in access to water. There is a lack of infrastructure to supply water to people. There are significant localized declines in water supply. Ninety percent of Lake Chad's surface water has disappeared, for example, and twenty million people depend upon Lake Chad for their water supply.

Africa stands to be hard hit by climate change, and, although an inadequate baseline complicates projections it is thought that climate change will account for 20% of future water scarcity.

There is a general lack of capacity to address water scarcity, which is a localized issue without one single solution. The allocation of water resources is a critical process. Much of the discussion under the Millennium Development Goals for water focuses on the need to reserve water in impoundments. For biodiversity, it is essential that environmental flows, the amount of water necessary to maintain ecosystem functions in riparian and aquatic systems, be maintained.

Most major water systems are transboundary, and the issues of allocation, including environmental flows, have the potential to become sources of conflict. Historically, tension has often existed between upstream suppliers and downstream users of water. Climate change is expected to exacerbate these tensions, even as new investments in African water infrastructure by China are bypassing environmental safeguards.

Water requires long-term commitment by donors; many water projects are now experiencing "donor fatigue" The future of investment in water is within the context of landscape level planning taking into account a full range of ecosystem services, including biodiversity.



Source: http://www.feow.org/

Extractive Industries

There has been exponential growth in the demand for natural resources in Africa over the past decade, buoyed by a sharp rise in commodity prices. The rise has been particularly sharp for non-renewable resources such as crude oil (300%, copper (400%) and gold (200%). Timber costs have risen over 25%. This demand has resulted in new infrastructure development, including in areas once considered inaccessible or dangerous. It has also brought in new investors, especially China, which is dependent upon imports for 80% of the raw materials with which it manufactures the vast array of consumer products for global consumption. China has become a key influence in extractive industries.

Nowhere is the tension between the demand for short-term economic gain and for protection of biodiversity manifested as directly and immediately as in resource extraction. The costs and benefits of resource extraction are seldom borne equally. Addressing generational and social equity, including the environmental legacy, is a major challenge facing extractive industries. It generally falls to governments to referee the trade-offs. Transparency, public access to information (in forms useful to the public) and stakeholder participation in decision-making are elements of effective governance. Governments are often ill equipped to arbitrate trade-offs, however.

A particular challenge with extractive industries is the achievement of effective environmental and social safeguards. This is a particular concern for Chinese investments, as Chinese extractive industries generally lack the safeguards considered best practices within the industries (e.g., the Initiative for Responsible Mining and the Energy and Biodiversity Initiative).

The solution to unsustainable extractive industries lies in governance, including respect for the rule of law, monitoring and enforcement of the laws, revenue transparency, and access to independent information. There is an urgent need to build capacity within African governments and civil society to effectively negotiate extraction concessions, monitor resource extraction and ensure equitable sharing of benefits.

The assessment of social and environmental impacts requires that assessments of proposed extractive industry operations go beyond conventional site-focused environmental impact assessments to address cumulative and cascading impacts, including project contributions to overall environmental impacts and mitigations at a landscape level. Undertaking this type of broad assessment may require new multidisciplinary institutional arrangements involving community development, food production, health, conservation, and infrastructure sectors in government and civil society.

Resource extraction should be required to protect biodiversity under a mitigation hierarchy seeking first avoid harm, and that is not possible, to minimize, mitigate, and compensate (in descending order of preference). Where avoidance of harm to biodiversity through careful selection of sites and technologies is not possible, biodiversity offsets - the protection of higher value sites elsewhere - may provide some biodiversity benefit. Offsets are not a panacea, however, as the transaction can still result in a net loss of biodiversity.

Illegal resource extraction is a serious problem in many parts of Africa, including illegal commercial fishing by both local and distant water fleets, illegal logging, poaching of oil, and illegal artisanal mining in protected areas. Ninety percent of logging in Mozambique is illegal. The US President's Initiative on Forest Law Enforcement and Governance is an international process for building capacity to monitor and prevent illegal production and trade in forest products, focusing on effective governance.

Agriculture and Biofuels

Globally, agricultural development is a major threat to biodiversity, due to competition for the most productive lands. A tripling of global demand on food is anticipated. Agricultural investment in Africa has been low but the opportunity for investment has improved with improved governance (q.v.) and is expected to increase. Export markets are maturing in several countries as a result of agricultural investments. Their impact upon biodiversity depends upon whether the investments are well-planned or whether they constitute asset stripping. Effective governance can create a more secure environment for long-term investment, lowering the risk of asset stripping for short-term gains, and provide better oversight of production to ensure sustainability.

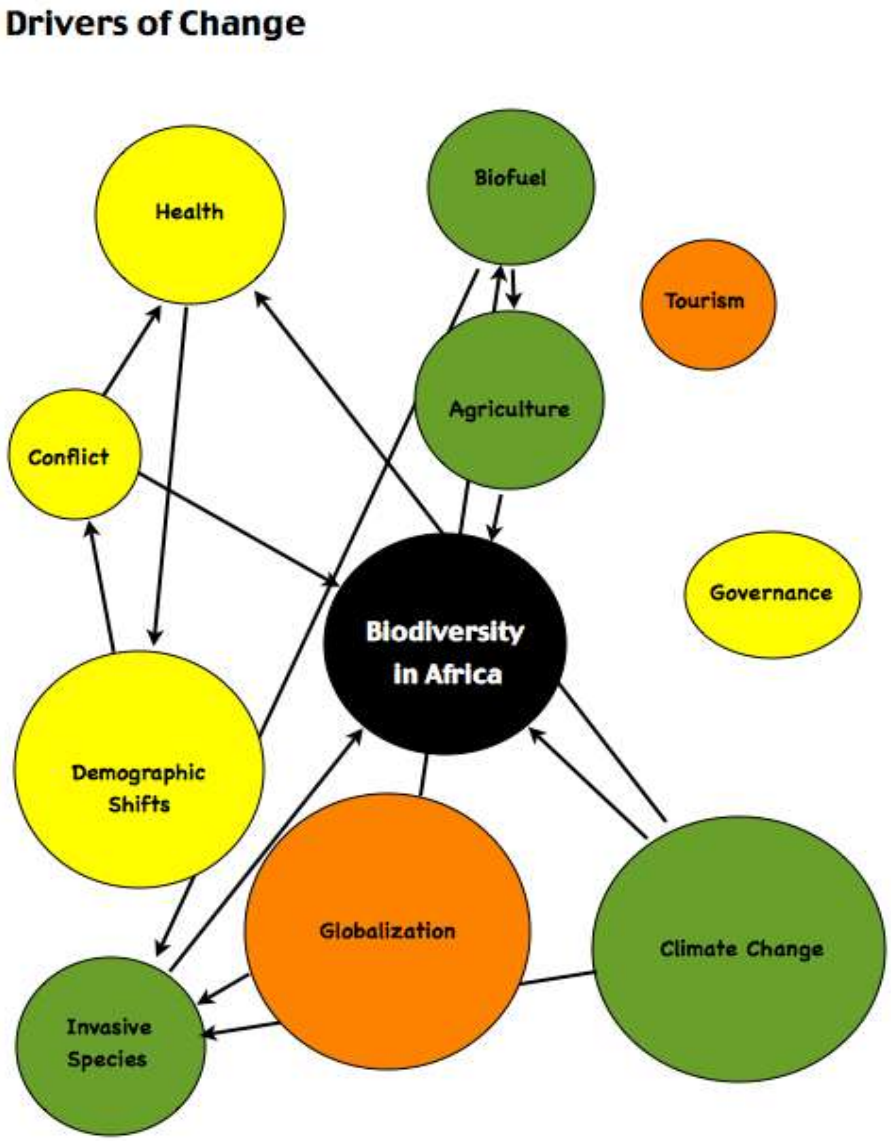
According to the EcoAgriculture Partners, planning for agricultural development at landscape levels can provide necessary ecosystem services for agriculture while protecting biodiversity. Private foundations including the Gates and Rockefeller Foundations are supporting a new 'green revolution' in Africa through plant science research, and the subsidization of external inputs. Some have argued that higher-yielding crop varieties are required to supply demand while reserving land to protect biodiversity and ecosystem services. Improved crop varieties are only one aspect of sustainable agriculture, however, Agriculture and ecosystem services have to coexist across many landscapes. Institutions that bridge span both agricultural development and ecosystem services for development planning are critical. Often, however, institution building is neglected in favor of purely technological approaches.

Veterinary and plant health sciences should not be neglected either. Plant and animal diseases, including invasive species and their vectors, incur a heavy toll on agriculture throughout the region, and may close access to markets. International cooperation on improved sanitary/phytosanitary measures at ports and borders,

including better access to taxonomic resources for the identification of non-native species, is very important. Landscape level approaches should integrate public health and veterinary services, as well as plant health, and careful assessment should be made of crops, organisms for integrated pest management, agroforestry stocks, and biofuel feedstocks to determine risks of biological invasion. Biofuels pose a particular risk of invasive species introduction.

There is considerable debate about the risks and benefits of biofuels production in Africa. Concern has been expressed over increased demand for land and water in biofuel production for export, and the implications for both biodiversity and African food security. Local level biofuel production could address critical energy shortages in rural Africa, but must be planned in the context of food production and ecosystem services needs. The biofuel sector is moving quickly and may outstrip the capacity of the conservation community to respond without immediate action. The question is not one of approval or rejection, but how to identify the best overall solutions. As with other fast moving sectors such as extractive industries, the time required to build multisectoral approaches is insufficient in light of the speed of the investments. Without effective governance processes, development may foreclose biodiversity conservation options.

Policies that will support sustainability in food and biofuel production include an emphasis on multidisciplinary and multistakeholder participation in planning and impact assessment at landscape scales. Conservation organizations should form alliances with the agricultural community, including factoring support for sustainable agriculture within priority conservation landscapes and near conservation areas.


Drivers of Change
Health
Biofuel
Tourism
Agriculture
Conflict
Governance
Biodiversity in Africa
Demographic Shifts
Globalization
Climate Change
Invasive Species

Scenarios

It is important to think ahead about the future of biodiversity in Africa and to consider multiple scenarios to provide African nations, USAID, other donors, partners and stakeholders with recommendations to help to prepare and address emerging issues.

At the May Washington Meeting, participants broke into discussion groups to consider possible scenarios for the future of biodiversity in Africa over the next 10 years in light of three drivers: 1) governance, 2) economy, and 3) climate.

They considered the following eight scenarios presented in Table 1:

Table 1: Scenario Numbering

Scenario Number	Global Environmental Trends	Economic Growth and Resource Demands	Governance and Institutional Issues
1	Strong	Strong	Strong
2	Strong	Strong	Weak
3	Strong	Weak	Weak
4	Strong	Weak	Strong
5	Weak	Weak	Weak
6	Weak	Weak	Strong
7	Weak	Strong	Strong
8	Weak	Strong	Weak

Two states, strong and weak, were examined for each trend with strong denoting the degree of impact on the resource base. For global environmental trends, “strong” denoted a strong signal of change, with high impacts on the biological, geological, and social geography of Africa. For economic growth and resource use, “strong” denoted very high demand, with concomitant impacts on the resource base. With governance and institutions, “strong” denoted strong negative impact on the resource base. For governance and institutions, “strong” did not describe the institutions, but the impact of governance and institutional issues on the resource base – a scenario with “strong” institutional issues could imply weak social cohesion or a high degree of conflict, for example.

The groups gave the scenarios they were considering a name. They identified significant characteristics and features. They highlighted policy implications and underlined critical uncertainties. The groups ranked the features by importance. They noted important regional differences or other qualifiers in the African context. They were described narratives with the conditions and the responses for their scenarios.

A consensus emerged that there is strong covariance between economic output and natural resource use, but that governance was the independent variable that would determine sustainability.

Scenarios with stronger climate impacts were deemed more likely than those with weak impacts. Scenarios with more than one low impact were deemed disaster scenarios, likely only in cases of conflict, pandemic, or natural disaster curtailing economic activity.

In general, economic collapse was viewed as a threat to biodiversity as people tend to disperse to rural areas to practice subsistence farming, fishing and hunting when the formal economy offers no opportunities.

Ten years did not provide adequate time to play out some of the long-range implications of the intersections of three drivers.

The question of governance impacts on biodiversity requires further examination as both strong and weak governance have implications for biodiversity. The example of natural resources in the former Zaire under Mobutu was suggested, where biodiversity may have benefited from a dysfunctional state. Counterexamples included illegal resource extraction in dysfunctional states (e.g., pre-democratic Liberia).

Leverage points

Governance

Improvements in governance offer the greatest opportunity to secure biodiversity and promote environmental management. Over the past twenty years, Africa has experienced huge changes in governance, with the emergence of multiparty states, eleven countries with democratically elected governments, and a proliferation of constitutions. Compared to the rest of the world there is still a long way to go. Despite huge reforms, an authoritarian orientation of governments makes it difficult to reform institutions. However, the trajectory is clear. Uganda, for example, has revised its constitution with presidential term limits and made all minerals the property of the state.

Environmental lenses help to shape reform. There is a positive correlation between trends in governance and biodiversity conservation, resulting in improved environmental governance and environmental performance. Increased accountability, access to information, and public participation has produced increased public support for conservation, and new centers of power are emerging with new rulemaking and oversight roles being taken seriously, resulting in a broader, more accountable set of institutions.

There is some chaos in the transition from authoritarian to democratic regimes. People are reclaiming lands taken illegally for protected estates. A spotlight has been turned not only on the adverse effects of environmental degradation on people, but also on the adverse effects of conservation on people. There is a need to deal with short-term consequences of this dialogue.

Because of the high dependency of people on natural resources, environmental problems are both household security and national security issues. Conflict is inevitable. Creeping vulnerabilities resulting from the drivers discussed here can become threats to governance and hence to biodiversity. Solutions must incorporate all elements of a multisectoral approach at landscape levels employing the principles of good governance:

- Rule of law, in the form of legislation and regulations
- An informed and impartial judiciary
- Enforcement capacity
- Revenue transparency
- Public access to information, including in relevant local languages

- Public access to decision-making processes
- Respect for human rights

Market Transformation

Poor environmental performance by industries is increasingly viewed as a business risk to be avoided. Inequitable sharing of benefits and collateral social and environmental damage can create tremendous resistance to industries, leading to pressure upon governments to ban such activities as resource extraction, resistance on the part of affected communities and stakeholder groups, effectively revoking the "license to operate". There is therefore an incentive for businesses to go beyond compliance with laws to ensure better environmental and social outcomes. A business case for going beyond basic legal requirements helps to articulate benefits to these stakeholders in the business. Since achieving high social and environmental performance may require skills not available within the company, strategic partnerships with other stakeholders may assist companies in improving environmental performance.

Corporate social responsibility is a business response to market pressure for sustainability. An important challenge is to broaden the scope of market transformation in Africa through business partnerships, technical exchange, and education. However, investors from command and control economies may respond to different stimuli and engagement in social and environmental best practices may require a combination of regulation and diplomacy.

Landscape level approaches

Increased capabilities to monitor biological resources and human populations have demonstrated the extent of cumulative and cascading environmental and social impacts at the landscape level. Data collected has permitted the modeling of impacts of global forces such as climate change at the same landscape level. The current epoch of biodiversity conservation is that landscape conservation, with origins in conservation science in Africa and elsewhere, and with the support of donor programs such as USAID. There are emerging sciences of landscape planning and agroecology – state of science on ecoagriculture.

Partnerships

Multisectoral, multistakeholder approaches loom large in discussions of governance and landscape level management. Under certain conditions, innovative

partnerships may combine talents and other assets to achieve more than would be possible through individual institutions.

In governments, ministries may compete with each other for resources and influence to the detriment of the public. Partnerships between government agencies may be facilitated through crosscut budgets that can only be accessed through cooperative mechanisms. Donors can support cooperation and reduce "stovepiping" through incentives built into technical cooperation, grant and loan programs.

Public/private partnerships can be used to mobilize support for conservation and sustainable development through programmatic cooperation to achieve specific objectives. They are potentially effective when they can provide incentives to landowners to cooperate in a joint activity. Public/private partnerships can be an important tool for landscape level conservation. A variation on the theme more common in Africa, where land tenure may be communal rather than private, is in the form of community alliances with businesses and/or government. This often takes the form of community development grants, which can however be problematic when not undertaken according to the principles of good governance, including transparency of transactions. The distribution of benefits and the legitimate authority of the negotiators should be clear. Securing passive support for a development is more a bribe than a partnership.

The same holds true of NGOs and businesses; true partnerships have higher transaction costs and may not be appropriate in all situations; the temptation will be strong for businesses to cultivate support among civil society organizations through grants and other benefits rather than enter into a detailed partnership. This behavior, however, can convey risks to businesses in the form of accusation of "greenwashing" or investing in the appearance of environmental responsibility, and for the NGO in the form of suspicion of policy capture and loss of independence.

Effective partnerships can bring significant assets to bear on an issue, but require a bond of trust between the partners, which may extend to sharing of proprietary information for planning purposes. Partnerships are most effective when deployed at the beginning of a project during the design phase, and well in advance of the impact assessment phase. This implies some prior relationship, which may place partnerships out of access for all but the largest of NGOs in Africa.

Partnerships are not a substitute for effective governance, but may bring added value when there is a significant impetus on the part of all parties to produce a result beyond the minimum standards of compliance with laws and regulations.

Pro-Poor Conservation

Landscape level approaches must take into account the presence of established, generally poor and underprivileged, rural populations. Earlier conservation epochs sought to rationalize land use by resettling remote inhabitants in places where they could gain better access to the benefits of government such as education, health and social services, leaving land for conservation purposes. This approach was culturally naive, often unjust, and generally unsuccessful.

Current approaches recognize the important stewardship roles of communities and community interests in conservation. Pro-poor conservation explicitly addresses the human needs of rural subsistence communities that depend in a direct and immediate way upon ecosystem services and natural products - non-timber forest products, fish, bushmeat, soils for agriculture and water. Pro-poor conservation seeks to create well-functioning habitats specifically to meet human needs, habitats that are threatened and often degraded from overuse or alternative, unsustainable uses such as resource extraction. "…Conservation can and should address broader, more diversified, and more democratically defined goals, and should recognize and address the needs and aspirations of local people: especially the poor and vulnerable. Such efforts might allow people to live happier and more productive lives, and could also strengthen local support for conserving species for their own sake" (Kaimowitz and Shell 2007).

Tools for pro-poor conservation include integrated biodiversity and livelihood assessments, and ecological restoration where appropriate for the improvement of assets.

TEXT BOX

The semi-arid Shinyanga region of Tanzania, over 800 villages and their inhabitants improved their livelihoods by working in partnership with the government to revitalize a traditional practice of natural resource management. To date over 350,000 ha have been restored to provide much needed forest products for local use, including fuel and building material, food and medicine, as well as important products to meet contingency needs. The benefits of wildlife restoration are also shared; in addition to improved local opportunities for subsistence hunting, those districts that share boundaries with protected areas share 25% of the revenue from sport hunting.

END TEXT BOX

Conclusion

Key messages from the consultation in Washington included:

- **A piecemeal approach always leads to loss for Africa.** In the face of global change forces, we need landscape approaches that include strategies for resilience to climate change. This requires participation of multiple sectors and stakeholders. Integrated approaches cannot be allowed to be come another fad, either; we need to move away from fads based upon theory and work with empirically demonstrated successes. And lay out scenarios ahead of time.

- **The environment is economic in Africa.** Pro-poor conservation strategies, including ecological restoration, are essential at the landscape level. Entrepreneurship is on the rise, and opportunities should be created for equitable African participation in the global economy, including in the value chain for the natural resources it produces.

- **Poor public health is a hidden cost of environmental degradation**. HIV/AIDS in particular is really weakening Africa; we need to tackle the problem systematically as part of an integrated approach. Human health in general needs to be better integrated into landscape approaches including wildlife and ecosystem health.

- **People suffer if systems collapse**. We must do a better job of articulating the societal benefits of biodiversity, including the linkages between biodiversity and security.

- **Investment in human resources and capacities remains important.** Professional collaboration including multidisciplinary peer-to-peer networks and partnerships can yield important lessons for meeting current and future challenges. Learning networks to capture these lessons are key to building capacity.

- **Democracy is good for conservation, and conservation is good for democracy**. The environment may serve as a gateway to democratic reform through fair and participatory process for the allocation of resources and benefits.

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Annexes

Annex 1: Participants List

Participants	Organizations
Nancy Gelman	Africa Biodiversity Collaborative Group
David Williams	African Wildlife Foundation
Michael Hurley	Bonobo Conservation International
Natalie Bailey	Bushmeat Crisis Task Force
Heather Eves	Bushmeat Crisis Task Force
Fabiano Godoy	Bushmeat Crisis Task Force

Brian App	Chemonics International
Julius Zelothe	College of African Wildlife Management
Mohamed Bakarr	Conservation International
Nilanga S. Jayasinghe	Defenders
Heidi Ruffler	Defenders
Brian Bean	DevTech Systems
Seth Shames	Ecoagriculture Partners
Susanne Breitkopf	Greenpeace
Sophie Brock	Greenpeace
Paul Weatherly	Independent Consultant
Danielle Tedesco	Independent
John Waugh	IUCN Senior Fellow
Megan Nelson	Jane Goodall Institute
Jules Siedenburg	Oxfam
Julie Appelhagen	Peace Corps
Seana Lammers	Peace Corps
Kristen Patterson	The Nature Conservancy
Karin Krchnak	The Nature Conservancy
Amy B. Clanin	The Wildlife Society
Alice Altstatt	University of Maryland
Shannon Beebe	US Army
Kame Westerman	USDA Forest Service
Shelley Saxen	USDA Forest Service
Dirck Byler	USFWS
Karen Becker	USAID
Heather D'Agnes	USAID
Tim Resch	USAID
Diane Russell	USAID
Kirstin S. Siex	Wildlife Conservation Society
Steve Osofsky	Wildlife Conservation Society
Ingo Winzer	WildlifePlanet
Matthew Steil	World Resources Institute
Peter Veit	World Resources Institute
Reimund Kube	WWF-MPO
Matt Lewis	WWF
Karen Luz	WWF
Marta Miranda	WWF
Andy Murphy	WWF
Judy Oglethorpe	WWF
Gabriella Richardson-Temm	WWF-MPO

BATS Meeting
Africa Scenario Planning

Photo credits: Ephraim Mwangomo, Mike McGahuey, USAID, and Ephraim Mwangomo

Annex 2: Meeting agenda

Meeting on
Scenario Planning for Biodiversity Conservation in Africa:
Mapping Future Trends and Interventions in the Next Ten Years

AGENDA

DATE: 15 May 2008, Thursday

TIME: 9:00am to 5:00pm

LOCATION: World Wildlife Fund (WWF), 1250 24th Street, NW, Washington, DC 20037, phone: 202-293-4800
Conference Rooms 2004 A&B

CHAIR: Mohamed Bakarr, Conservation International

MEETING BACKGROUND AND OBJECTIVES:

This scenario planning meeting is part of the Biodiversity Analysis and Technical Support (BATS)[1] for USAID/Africa program. The basic question to be answered by the scenario planning process is:

"What are the priority interventions for biodiversity conservation in Africa over the next ten years?"

The meeting will:

- review the USAID BATS report by Chemonics International that looked at 30 years of USAID support for biodiversity in Africa;
- identify the drivers of past, present, and future change; and
- map trends.

Through the process, we will identify which trends are predictable, and where the key uncertainties lie.

This DC Meeting will be followed by an African Validation Workshop (summer 2008) where African conservation leaders with review the USAID BATS report and products of this mapping meeting, validate them, and on the basis of these discussions articulate scenarios. Participants will apply their expertise to narrate alternative futures for biodiversity in Africa, including interventions for biodiversity conservation appropriate for USAID and other stakeholders over the next ten years.

AGENDA:

9:00 to 9:15am	Welcome and Introductions ***Mohamed Bakarr, CI,*** *and* ***Tim Resch, USAID***
9:15 to 9:30am	30 year Biodiversity Assessment of USAID Support to Africa ***Brian App, Chemonics International***
9:30 to 10:00am	Responses and Recommendations on 30 year Biodiversity Assessment
10:00 to 12:40pm	Highlighting Trends of Key Drivers Impacting Biodiversity Conservation in Africa: <u>Panel 1: Global Change Trends</u> • Climate Change – ***Jules Siedenburg, Oxfam*** • Population *and Urbanization-* ***Heather D'Agnes, USAID*** • Migration and HIV/AIDS – ***Judy Oglethorpe, WWF*** • Market Impacts on Biodiversity- ***Andy Murphy, WWF*** • Water Scarcity – ***Karin Krchnak, TNC*** • Emerging Infectious Diseases - ***Karen Becker, USAID*** • Food Insecurity – ***Gabriella Richardson-Temm, WWF MPO***

	Panel 2: Economic Growth and Natural Resource Use and Governance and Institutions • Extractive Industries – ***Marta Miranda, WWF*** • Bushmeat – ***Heather Eves, BCTF*** • Agriculture – ***Seth Shames, Ecoagriculture Partners*** • Governance and Human Rights – ***Peter Veit, WRI*** • Entrepreneurship and Sustainable Use – ***Paul Weatherly*** • Conflict and Security – ***Shannon Beebe, U.S. Army***
12:40 to 1:00pm	Working Lunch
1:00 to 1:15pm	Valuing the Drivers of Future Change and Developing Matrixes ***John Waugh, IUCN Senior Fellow***
1:15 to 3:00pm	Small Groups: *"What Conservation Looks Like in Given Scenarios"*
3:00 to 4:00pm	Report Back to Meeting Participants
4:00 to 4:45pm	Feedback from Expert Panel on *"How Scenarios Play Out"* and Group Discussion: *"What USAID and Other Stakeholders Can Do to Maximize African Countries' Efforts to Conserve Biodiversity in the Future under these Proposed Scenarios"* ***Karen Luz, WWF*** ***Tim Resch, USAID*** ***Michael Hurley, Bonobo Conservation International***
4:45 to 5:00pm	Summary, Concluding Thoughts, and Wrap Up: *"What We Heard Today and Next Steps"* ***John Waugh, IUCN Senior Fellow***

[1] ***Biodiversity Analysis and Technical Support (BATS) for USAID/Africa*** *is funded by the U.S. Agency for International Development, Bureau for Africa, Office of Sustainable Development (AFR/SD). Program partners include Chemonics International Inc., U.S. Forest Service/International Programs and the Africa Biodiversity Collaborative Group.*