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Summary for Africa

On the Eve of Rio+20

Growing Urbanization, Globalization and Weak Governance Major Threats to Environment

Land and Water Face Growing Stress, But Inspiring Policies and Partnerships Show Progress Possible

A fast-growing urban population, globalization and climate change, alongside a need to boost governance, are among the challenges facing Africa if the continent is to put itself firmly on the path to a sustainable future.

The region is still lagging with respect to meeting internationally agreed goals, while increasing pressure on its natural resources can lead and has led to tensions and resource degradation as Africa's population grows at the fastest rate in the world.

Yet many countries are adopting collaborative cross-border policies and projects that contain the seeds for a more sustainable future, from a renewed understanding of the value of forests to ecosystems in Kenya that has seen a change in government policy to the network of marine protected areas emerging along parts of the West African coast.

If scaled-up and accelerated, such measures could assist in a transition to a Green Economy as nations across the globe prepare for the Rio+20 Summit later this month.

The above are among the main findings for Africa from the Global Environment Outlook 5 (GEO 5), which analyzes the worldwide state of the environment and tracks progress towards agreed goals and targets.

International goals to reverse deforestation are off track in Africa, with over three million hectares lost each year due to an expansion of agricultural lands to meet food needs and, to an extent, the international demand for biofuels.

Globally, although the Millennium Development Goal (MDG) target on water supply was met in 2010, more than 600 million people will still lack access to safe drinking water in 2015. In Africa's cities – characterized by extremes of prosperous centres and poor, informal settlements – many governments struggle to provide social services including access to safe drinking water and sanitation. Achieving food and energy security and managing environmental risks is also a challenge.

Exacerbating the issues is climate change, which can accelerate urbanization and place further stress on natural resources such as freshwater and land through extreme weather events.

Weak governance means that the complex web of interwoven issues are not being dealt with, although Africa's track record of collaborative projects between governments, communities and stakeholders shows progress is possible.





On a regional level, GEO 5 pays particular attention to policy approaches, highlighting successful national and regional policies that can be scaled-up and replicated elsewhere. Emerging trends and regional priorities for action are also explored.

Drivers

Central to the GEO 5 methodology is the concept that environmental pressures can only be effectively tackled if underlying drivers are addressed. Policies are most effective, argues the report, when they proactively address the causes of environmental degradation, rather than reacting to the effects.

Population, Urbanization and Energy

Africa has the youngest and fastest-growing population, increasing at an annual 2.15 per cent from one billion in 2009, with urbanization closely linked. While in 2010, 395 million people lived in urban areas, UN projections say this will reach 1.23 billion people – 60 per cent of the total population – by 2050. Climate change may accelerate urbanization.

Given that urban areas, which house half the world's population, utilize two-thirds of global energy and produce 70 per cent of global carbon emissions, urbanization will only increase Africa's energy demands and emissions.

Economic Development

Recent growth in many African nations has been driven by resource extraction and infrastructure expansion: the International Monetary Fund (IMF) predicts sub-Saharan Africa's economy will expand by 5.4 per cent in 2012 on the back of these factors.

Growing food consumption – in 2007, Africa had seen an increase in daily food intake of 7 per cent since 1998 – is also an important driver, and is tied in with urbanization, as urban areas' food needs are disproportionately large in terms of world land use.

Patterns of Globalization

Globalization is a key driver of environmental change. For example, mobile telephone demand has impacted on producing countries. Eastern Democratic Republic of Congo provides 8-9 per cent of global supplies of coltan, from which tantalum – a key component of mobile phones – is extracted. This has led to illegal mining, with suspected severe environmental impacts, such as land clearances, soil erosion and harm to wildlife. However, monitoring of this phenomenon is weak.

An urgent search for renewable energy sources has resulted in policies promoting biofuels. External investments in land deals have surged as a result of this and increasing food demand. According to 2009 figures, 45 million hectares of such investments, 70 per cent of the global total, were in Africa.

The international movement of these commodities, as well as oil, has driven an increase in transport in Africa, which the International Energy Agency in 2011 said globally consumes 26 per cent of all energy – most of which comes from fossil fuels.

State of the Environment - Priority Issues

During regional preparatory consultations for GEO 5, five priority environmental issues were identified for Africa: Climate Change, Land, Freshwater, Oceans and Seas and Biodiversity.

Climate Change

Climate change, by exerting extreme pressure on ecological systems, is likely to increase the stress of vulnerable populations in urban and rural areas in Africa.





The United Nations Framework Convention on Climate Change (UNFCCC 1992) Article 3 Paragraphs 1–3, which calls on parties to prevent and prepare for climate change, was selected as the key goal for this theme. The number of drought disasters rose by 38 per cent between the 1980s and the 2000s, with Africa badly hit – evidenced by the East Africa famine and the crisis in the Sahel region, a large semi-arid region that runs east-west across Africa. Rainfall in the Sahel is driven by patterns in global sea surface temperature and large-scale changes in land cover that impact land-atmosphere interactions, thus serving as a point of interest from an Earth System perspective. By 2020, some 75–250 million Africans are expected to live in water-stressed areas, bringing the potential of more water resource conflicts

CASE STUDY: Rainwater Harvesting

The lack of water for human consumption, livestock and crop farming has been a major constraint in the arid and semi-arid areas of Ethiopia. Nearly 80 per cent of the population lack access to a domestic water supply and an estimated 46 per cent suffer hunger, but Ethiopia has a potential rainwater harvest equivalent to the needs of more than 520 million people. In Minjar Shenkora district of central Ethiopia,farmers who used harvested water for supplemental irrigation of onions and onion seedlings obtained average net income of US\$155 per 100m² plot.

Equally, Africa's risk of flooding has more than doubled since 1980, and its coastal region is at greatest risk from projected sea-level rises, given the high population in potentially hazardous areas. More intense rainfall events, driven by climate change, contribute to more run-off and floods, threatening food security and settlements.

Restoration and maintenance of ecosystems and measures to improve drought resilience can provide valuable resources for climate adaptation and disaster-risk reduction and mitigation.

Land

Global demands for food, livestock feed and biofuels are rising due to population growth, urbanization and changing diets, leading to expansion of agricultural land: between 1999 and 2008, the amount of Africa's land area being used for agricultural purposes rose by 30.7 per cent, while the amount used for pasture rose by 8.5 per cent.

The Johannesburg Plan of Implementation (JPOI) (WSSD 2002) Paragraph 40b, which calls for the development of integrated land management and water-use plans, was selected as a key goal for this issue.

While Africa has relatively low yields, creating potential to minimize cropland expansion, climate change is likely to work against these efforts: in sub-Saharan Africa, wheat yields are predicted to drop by over 20 per and maize by almost 5 per cent by 2050. Globally over the last 40 years around 78 per cent of the global increase in agricultural supply has come through increases in yield and greater efficiency in the supply chain. In sub-Saharan Africa, however, 66 per cent of yield increases came from area expansion.

While other regions have met the goal to reverse deforestation, over the last ten years Africa has lost more than three million hectares of forest annually. There are examples of governments taking action, however. Multisectoral ecosystem restoration, implemented with the support of local communities who benefit through access to food, fuel and wood, has proven successful in rangeland restoration in Sudan and the planting of 10,000 mangrove seedlings in Mauritius.

CASE STUDY: Mau Forest Complex, Kenya

The Mau Forest complex in Kenya provides goods and services worth US\$1.5 billion a year through water for hydroelectricity, agriculture, tourism and urban and industrial use, as well as erosion control and carbon sequestration. Alternative accounting has helped spur the government of Kenya to invest in rehabilitating the area and its vital ecological services, though challenges remain in addressing the interests of people living there.





Freshwater

Africa is facing major challenges in providing enough water to its population, a process driven by the growing population placing extra demand on resources that are growing scarcer due to increasing droughts.

The Johannesburg Plan of Implementation (JPOI) (WSSD 2002) Paragraph 26c, which calls for the efficient use of water resources and sensible allocation among competing sectors, was selected as a key goal for this issue.

Africa continues to lag on MDG 7c, which calls for halving the population without basic sanitation by 2015. Between 1990 and 2008, the proportion of Africans without access to improved sanitation fell from 65 to just below 60 per cent, and those without access to improved drinking water from 46 to 35 per cent. The result is a high prevalence of water-borne diseases. Africa sees most diarrhoea-related childhood deaths, accounting for 70 per cent of the 1.3 million under-five deaths in 2008.

The report calls for an emphasis on governance and securing rights to resource access, which help meet MDGs by ensuring that local people's rights are taken into account, provide a benchmark for making choices and in the long term encourage political stability and promote good social relations.

CASE STUDY: Free Basic Water Policy, South Africa

In South Africa, the Free Basic Water Policy, adopted in 2001, has demonstrated that policies can support the achievement of MDGs. Many poor households now have access to at least 25 litres of water per person per day - equivalent to the World Health Organization's (WHO's) recommendation for minimum consumption – thus reducing exposure to unsafe water sources.

Oceans and Seas

Coastal urban growth contributes to residential effluent, industrial discharges, storm-water run-off, agricultural and mining leaching, contaminated groundwater seepage, and industrial and vehicle exhaust fumes that enter the marine environment.

The Jakarta Mandate on Marine and Coastal Biodiversity of the CBD, which calls for the conservation and sustainable use of coastal and marine ecosystems as well as their natural resources, was selected as the key goal for this issue.

The coastal cities of Accra in Ghana, Douala in Cameroon, Lagos and Port Harcourt in Nigeria and Luanda in Angola, for example, are all adversely affected by industrial pollutants. Oil spillage and discharge from marine transport present major management and regulatory challenges, especially for oil-producing countries such as Libya and Nigeria, where problems are severe. Offshore exploration, especially for oil, contributes to pollution from dumping at sea, accidental and intentional oil spills, engine leaks and noise.

Marine Managed Areas across borders complete a broad range of national development and economic goals - improved food security, effective governance, and economic growth – as well as biodiversity conservation. They are complementary to fisheries and water quality management.

CASE STUDY: The Network of Marine Protected Areas in West Africa

Regional Marine Managed Areas (MMAs) that integrate protected no-take zones and other protected areas have also helped biodiversity conservation. The Network of Marine Protected Areas in West Africa, which stretches over 23 sites in six countries, has had success in ensuring fisheries, tourism, and oil and gas development do not adversely affect the marine ecosystem and its biological resources.





Biodiversity

Deforestation is a major threat to the habitat of many species, with Africa second only to Latin America and the Caribbean in deforestation rates.

In the context of the new Aichi Targets under the Convention on Biological Diversity (CBD), CBD Article 10 was selected as the internationally agreed biodiversity goal related to this priority issue.

In addition to forest habitats, the world has lost 20 per cent of its seagrass and mangrove habitats, since 1970 and 1980 respectively. Africa has 17 different species of mangrove. Monitoring of biodiversity is weak in Africa, but one example is that almost 50 per cent of medicinal plants surveyed in 2009 – used by 80 per cent of the population - faced extinction.

In particular, transboundary natural resource policies have been shown to strengthen integrated management of shared land and marine ecosystems, minimize biodiversity loss, support integrated land and water management and improve climate mitigation and adaptation

CASE STUDY: Sangha Tri-National Landscape

Transboundary agreements such as the Sangha Tri-National Landscape (TNS) have helped reduce the pressure. The TNS consists of three national parks in Cameroon, Congo and the Central African Republic, and includes logging concessions, community use zones and hunting areas. Indigenous communities benefit from sustainable access to timber, bushmeat, palm wine and fish. Biological surveys show healthy populations of endangered wild species, notably elephants and great apes.

State of the Environment - Other Issues

Air quality

Particulate matter, the air pollutant with greatest impact on human health, is of great concern in Africa. In poor rural areas, little access to cleaner stoves and fuels causes significant health impacts.

The WHO in 2004 estimated that particulate matter caused the deaths of over three million people globally; other estimates in 2009 attributed 40 million disability-adjusted life years to solid fuel use - 44 per cent of these deaths came in sub-Saharan Africa. Projections indicate that by 2030 nearly three billion people, mostly in rural sub-Saharan Africa and Asia, will still rely on traditional biomass for cooking and heating.

Environmental Governance

Strong governance is a key overarching issue that affects all other priority areas. In Africa, weak leadership on environmental issues is a serious concern:

- Most existing policies lack the framework to address the complex challenges of human vulnerability to climate change
- The absence of strategic environmental assessment and accountability and transparency systems has led to unsustainable resource extraction and land conversion
- Conflicting laws, values and interests degrade the ability to develop collaborative institutional systems essential for managing ecosystems and responding to common challenges such as drought
- Planning that treats the environment as a set of separate resources rather than as a composite system further undermines environmental management.





The Way Forward

To meet the challenges of increasingly urbanized population growth, globalization and climate change, the report finds that existing successes should be replicated, although policies should be modified in line with local, national and regional conditions.

Policy synergies, harmonized approaches between local, national, regional and global levels, and transboundary management of natural resources have all proven successful – although insufficient monitoring, special-interest decision making, weak governance, and a lack of capacity have undermined success.

The report selected a raft of policies and measures that should be adopted, the vast majority of which provide benefits in all of the priority issues:

- Transboundary natural resource management
- Marine managed areas
- Regional approaches for marine pollution management
- Payment for ecosystem services and biodiversity offsets
- Reducing Emissions from Deforestation and Forest Degradation (REDD+)
- Integrated coastal zone management
- Sustainable land management
- A rights-based approach to securing resource access
- Local, inclusive and participatory approaches
- Water harvesting
- Natural solutions for adaptation to and mitigation of climate change
- Stakeholder pollution management.

For more information, please contact:

Nick Nuttall, Spokesperson and Acting Director, UNEP Division of Communication and Public Information, Tel. +41 795 965 737 or +254 733 632 755 or e-mail: nick.nuttall@unep.org

Shereen Zorba, Head, UNEP Newsdesk, Tel. +254 788 526 000 or +254 20 762 5022 or e-mail: shereen.zorba@unep.org

Angele Luh, Information Officer, UNEP Regional Office for Africa, Tel. +254 20 762 4292 or +254 731 666 140 or e-mail: angele.luh@unep.org



