

A Global Risk Network Briefing



This work was prepared by the Global Risk Network of the World Economic Forum.

The views expressed in this publication do not necessarily reflect the views of the World Economic Forum.

World Economic Forum

91-93 route de la Capite CH-1223 Cologny/Geneva Switzerland Tel.: +41 (0)22 869 1212

Tel.: +41 (0)22 869 1212 Fax: +41 (0)22 786 2744 E-mail: contact@weforum.org www.weforum.org

© 2008 World Economic Forum All rights reserved. No part of this publication may be reproduced or transmitted in any form or by any means, including photocopying and recording, or by any information storage and retrieval system.

REF: 200508

Contents

Foreword	4
Introduction: The Global Risk Outlook for Africa	5
Executive Summary: Food and Freshwater Security	8
Executive Summary: Geopolitical Instability	10
Executive Summary: Economic Shocks	12
Executive Summary: Climate Change, the Environment and Challenges to Africa's Development	14
Acknowledgements	16
Resources	17

Foreword

This report has been prepared by the Global Risk Team for the World Economic Forum on Africa (Cape Town, South Africa, 4-6 June 2008). The latest insights into trends, potential impacts and mitigation relevant to four key risks facing Africa were identified and explored:

- 1. Food and Freshwater Security How best can Africa cope with increasing food and freshwater insecurity? What are the risks and opportunities for the region?
- Geopolitical Instability Can Africa sustain and consolidate progress on transparent and democratically accountable governance? Can it increase its institutional capacity to prevent, manage and resolve both intrastate and interstate conflict?
- 3. **Economic Shocks** Can African resource rich countries reduce their commodity dependency by diversifying their economies? How can wealth be better distributed? How can African countries increase their trade benefits?
- 4. Climate Change, the Environment and Challenges to Africa's Development - How will global warming affect Africa? How best can the region, countries, businesses and communities adapt to mitigate its effects?

In preparing this report, more than 20 experts from business, academia, non-governmental organizations and civil society were asked to consider the drivers of the recent period of unprecedented growth in Africa and the opportunities that exist, as well as the threats to Africa's continuing progress.

It is clear that Africa is at an inflection point – the prospect of sustaining 5% growth is achievable, but a number of basic challenges are acting as a hand-brake on development and thus need to be addressed.

Reform is always difficult, but it is of the utmost importance for Africa. Much of Africa's recent growth is due to the global commodity boom. Some economic fundamentals are in place but further structural reforms are needed, constructive political dynamics must be developed and better institutional capacity created, if Africa is to build on today's opportunity.

About the Global Risk Network

This report builds on the existing work of the Global Risk Network of the World Economic Forum: primarily, the annual *Global Risks* report produced in collaboration with Citi, MMC, Swiss Re, Zurich Financial Services and the Wharton Risk Center.

The Global Risk Network is composed of an unparalleled network of industry, risk and country experts who work with business leaders and policy-makers to:

- Create a framework for assessing and prioritizing existing and emerging risks to global business over the short and long term
- Alert key decision-makers to the impact these risks might have on their environments
- Assist leaders in their reflection on how risks may be mitigated at the global, regional, industry and company levels
- Identify the opportunities in these global risks

What are Global Risks?

Our definition: non-business risks that affect business (i.e., not financial, operational or project risks, or strategic risks within a firm's span of control) that

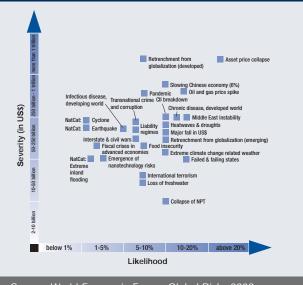
- are strategic, exogenous to the firm and often systemic in character
- are highly interdependent (i.e., do not manifest in isolation)
- are characterized by uncertainty, sharp discontinuities and non-linearity (evidencing power law distributions)
- cannot be managed or mitigated by one firm or country on its own

Risks classified as global risks have global scope and crossindustry impact and are characterized by *uncertainty* as to how the risk will manifest itself (with regard to the likelihood of occurrence and severity of impact).

Over the last three years, the Global Risk Network has engaged a wide range of experts in the economic, geopolitical, environmental and societal fields to explore the nature of the risk landscape facing governments, societies and businesses. In conjunction with its partners, the Global Risk Network has identified 26 **core global risks** to the international community over the next ten years. These core global risks have been assessed in terms of likelihood and severity (see figure below).

A more detailed description of the core global risks can be found in the Global Risks 2008 report, published for the World Economic Forum Annual Meeting in Davos (and available at http://www.weforum.org/en/initiatives/globalrisk).

26 core global risks over a ten-year time frame



Source: World Economic Forum Global Risks 2008

Introduction: The Global Risk Outlook for Africa

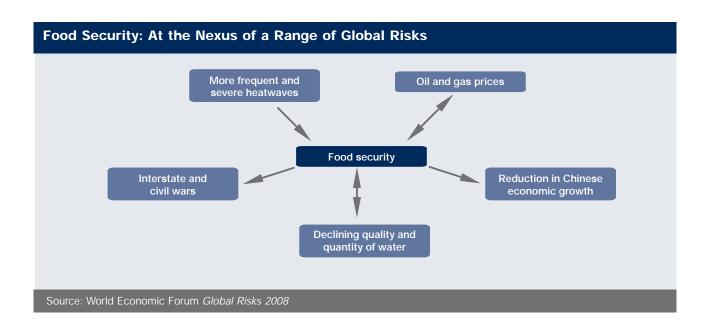
It is a central principle of work conducted by the Global Risk Network that global risks do not manifest themselves in isolation. More recently, the connections between major issues for public policy and private enterprise – food inflation, biofuels subventions, rising demand from Asian countries and climate change – illustrate how many global risks are interdependent, closely related and may engender both predictable and unexpected causal relationships.

Within the 26 interconnected global risks tracked by the Global Risk Network, four risks have been identified by experts as being critical for Africa's future. This is not to suggest that other issues facing Africa are unimportant, but the study is intended to analyse some of the risks facing Africa and distil expert insight in order to focus attention on areas that require collective efforts for mitigation.

As with all global risks, these four threats to Africa's future are not isolated risks; their drivers, triggers and potential consequences are highly interconnected. For example, food and water security will be affected by

how climate change impacts the region as well as global and regional economic conditions. As food is a major proportion of poor people's consumption basket, higher food prices may threaten political stability in Africa, leading to a regressive economic crisis, and placing Africa's growth at risk. Likewise, acute water shortages might exacerbate intercommunity and interstate tensions and blight prospects for development.

To mitigate the risk of contagion due to this interdependency, collective action is required to address each of the four key risk areas. This includes raising agricultural productivity, strengthening local adaptation to climate change, improving governance and enhancing economic resilience through diversification. To reduce the vulnerability to external shocks and strengthen the prospect of sustainable growth, governments, the private sector and civil society must collaborate on governance reforms, reducing corruption and ensuring equity in the provision of basic services.



Africa@Risk Matrix

Risk	Description	Trends to watch	The Impact on Africa
Oil Price Shock / Energy Supply Interruptions	A hydrocarbon price spike above US\$ 100/barrel caused by rapidly rising demand, the slow, high-cost development of new supply, geopolitical tensions and a fear of extreme weather events or terrorist incidents threatening the disruption of secure energy supplies In the longer term, a plateau of high hydrocarbon prices as supply fails to keep up with demand, particularly from emerging markets, and the unsustainability of a secure energy supply	A rapidly expanding demand – 80% driven by fast growing emerging markets – and the high development cost of new ultradeep offshore fields, oil shale and tarsands creating fears that underinvestment in capacity will mean a production shortfall The limited availability of hydrocarbon resources driving attempts to "lock in" future supplies China's and India's future energy strategies, specifically the balance selected between hydrocarbon, nuclear and coal-fired generation, planned energy efficiency in new cities and decisions to mandate improvement in vehicle emission standards Developments towards effective hydrocarbon substitutes for generation, transportation and use in urban environments	7% of world oil reserves are in Africa, Nigeria being the largest producer. While the US has been looking to diversify supply from outside the Middle East, Africa has increased its strategic position in oil markets. US, European and Chinese entities have targeted oil fields with uncommitted future production capacity. Exceptional rates of economic growth have resulted in countries like Angola and Equatorial Guinea, which, however, remain rentier economies. African gas production represents around 5% of world supply. Algeria and Nigeria are the main producers. Most African countries have no hydrocarbon resources or domestic refining capacity and are entirely dependent on imports of refined fuels. Imported inflation cascades along production and transportation chains, driving up costs and sharpening socio-political tensions. See section on Economic Shocks
Chinese Economic Hard Landing	Sharp slowdown of China's economic growth – either because job losses and falling real wages in the US and Europe prompt protectionist measures, or because internal political and economic difficulties in China, including rising inflationary pressures, force consolidation	Rising levels of domestic inflation into double digits despite efforts at containment by the central bank Impact of the US economic slowdown on China's exports and current account surplus Decisions about the revaluation of the renminbi Impact of infrastructure constraints, very high and rising levels of environmental pollution and income gaps within China on the government's economic strategy	China's trade in Africa reached US\$ 50 billion in 2006, boosting the growth rates of the continent's resource-rich countries and spurring much-needed infrastructure improvements. China is mainly investing in energy and raw materials and using Africa as a market for cheap, manufactured goods. African countries, whose recent growth has been significantly due to rising exports of primary products to China at sharply higher prices, would be strongly impacted if there is an important slowdown in the Chinese economy, especially in the context of an earlier US recession. See section on Economic Shocks
Climate Change	Increasing frequency of extreme weather events exacerbated by greenhouse gas emissions and ecological destruction, with severe impacts on critical infrastructure, agricultural yields and human lives	Consensus around climate change moving to a more focused debate on impacts and mitigation or adaptation measures Better understanding of the behaviour of the complex adaptive systems involved and of the relationship between demographic growth, urbanization, economic development, higher consumption and a finite stock of natural capital Evolution of a post-Kyoto agreement on the emissions pathway, especially incorporating major future emitters Focus and level of investment in new lowemission technologies, and related regulatory and fiscal measures Leading effects of the impacts of climate change in most affected regions causing population movements, tension within countries and between countries	Current models of climate change impacts suggest that Africa may be most at risk, with both drought – and related desertification – and heightened flood risks potentially disastrously impacting vulnerable, under-resourced societies. Poor people, especially those living in low agricultural productivity areas, depend directly on genetic, species and ecosystem diversity to support their way of life. Due to this dependency, any impact that climate change has on natural systems will threaten the livelihoods, food intake and health of the population. Africa contains about 20% of all known species of plants, mammals and birds, and 15% of amphibians and reptiles. Biodiversity in Africa is under threat from climate change and other stresses. See section on Climate Change, the Environment and Challenges to Africa's Development
Loss of Freshwater Services	Sharp reduction in the availability of freshwater as a result of rapidly rising consumption demand, wastage and pollution, exacerbated by the effects of climate change agricultural yields and human lives.	Pace and patterns of urbanization and transborder migration due to conflict or natural disasters Pattern of droughts and floods emerging due to impacts of climate change and ecological degradation Development of effective water resource management strategies focused on conservation, effective use and reallocation to points of need, both domestically within water-poor countries and in respect of shared water and river basins	In eight countries (Ethiopia, Somalia, Chad, Mozambique, Equatorial Guinea, Niger, DR of Congo and Nigeria), less than 50% of the population have access to safe water. Poor Africans do not have access to clean potable water in most countries on the continent. Current water management infrastructure and systems are inadequate to meet foreseeable threats. Both floods and droughts have long devastated communities in vulnerable areas. Rising populations and higher concentrations in urban areas increase the threat. There is a risk of conflict over water along shared riverine systems and in international basins and an urgent need for better regional coordination of water management. See section on Food and Freshwater Security

Risk	Description	Trends to watch	The Impact on Africa
Retrenchment from globalization	Protectionist impulses in developed countries due to job losses and slowing growth, and rising nationalism in developing and less-developed countries in the face of inequities in the global system, blocking further systemic reforms and reversing the thirty-year trend towards the liberalization of global markets in goods, services, capital and skills	Failure to conclude the WTO Doha Development Round on schedule; growth of bilateral and regional trade agreements Rise of populist discourse in both the developed and the developing world In the developed world: increasing use of anti-dumping measures; prohibition of imports based on complaints of poor environmental and labour practices; refusal to permit investment in a wider range of "strategic" sectors; reconfiguration of programmes for agricultural protectionism to mitigate the impact of climate change In the developing world: expansion and deepening of south-south trade, investment and technology exchange alliances; closer examination of industrial policy and economic development models based on China's, India's, South-East Asia's and Brazil's experiences	African countries are encouraged to open their economies to global trade and capital flows, but many lack the ability to compete effectively in the global economy. Agricultural protectionism in the US, Europe and Japan has prevented African producers from competing effectively, and further protectionism would be highly damaging. China's rise and its need for commodity imports have expanded Africa's options, as has India's faster growth path. African governments are no longer focused exclusively on Western prescriptions, or reliant to the same degree on Western markets. Poverty, poor education and health systems, unemployment, domestic nationalism and weak institutional capacity, however, constrain Africa's effective economic integration. Even the economies that have recorded high rates of growth, such as South Africa, Uganda, Botswana and Mozambique, grapple with serious unemployment problems. See section on Economic Shocks
Food Security	Rising and volatile prices creating significant shortages for poor consumers in the region – especially those whose consumption basket in more than 50% of personal income	Supply chain disruptions and food price evolution The interplay between the use of crops to manufacture biofuels and shifts between food production and biofuel production	Sharply rising agricultural commodity prices are the latest symptom of a growing crisis, and whether global food production can continue to meet rising demand is a burning question. At the core of the problem are competing demands on supplies of water, land and energy. In 2007 alone, 25 million people in Sub-Saharan Africa faced a food crisis. The average number of food emergencies per year in Africa has almost tripled since the mid 1980s. See section on Food and Freshwater Security
Geopolitical Risk	The collapse of fragile regimes and the descent of several states into conflict, spreading political and economic uncertainty	Gaps between "geographies of order and disorder", with a number of failed and failing states showing little prospect of short-term recovery Raising ethnic tensions and violence, increasing national political weaknesses	Political instability and weak governance undermine economic development. The lack of institutional capacity to implement policies is detrimental for the region and discourages foreign investment. See section on Geopolitical Instability
Asset Price Collapse	A collapse in property prices (e.g., in the US and parts of Europe) and possibly other asset prices, leading to recession, with contagious effects globally	Uncertainty in the medium-term effects and wider global consequences from a major correction in house prices that is under way in the US and in some European markets, with US GDP growth slowing sharply and rising unemployment Financial market volatility and a lower appetite for risk in the context of uncertainty about the liquidity and solvency of financial institutions in the US and Europe	African economies are growing fast and there has been a relatively low correlation between the performance of emerging financial markets and those in the developed economies. This has led some investors to diversify into portfolio investment in emerging market index funds. The extent of global decoupling is still unclear, as is the duration of this trend. Emerging Market funds have increased considerably during the last decade, but Africa has not yet experienced a significant augment. Deeper and broader markets and a well-functioning financial system are needed to attract portfolio investment outside of South Africa. The absence of exposure to sub-prime instruments, however, limits the risk of financial contagion. See section on Economic Shocks
Infectious Disease	Increasing prevalence of infectious disease in the developing world	Worsening of HIV/TB and malaria epidemics in some parts of Africa	More than 90% of the deaths from infectious diseases worldwide are caused by lower respiratory infections, HIV/AIDS, diarrheal diseases, tuberculosis, malaria and measles. Despite recent reductions in prevalence, these diseases still cause more than 50-60% of all deaths in Africa.



Executive Summary:

Food and Freshwater Security

How best can Africa cope with increasing food and freshwater insecurity? What are the risks and opportunities for the region?

Risk

- Food insecurity has emerged as a major risk for Africa in light of high and rising food prices which impact disproportionately on poorer communities, and high dependence on food imports and food aid (which may be constrained by higher prices) - leading potentially to social unrest. Of the 86 countries defined as low-income and food-deficient, 43 are in Africa.
- The solution to water is more complex than the solution to climate change.

Peter Brabeck-Letmathe, Chairman of the Board, Nestlé, Switzerland; Member of

- the Foundation Board of the World Africa also faces the challenge of poor water security; the Economic Forum availability of fresh water is highly variable and unevenly distributed across the continent, threatening human survival, agricultural production and economic growth. By 2025, it is expected that 25 African countries will be subject to water stress, affecting an additional 75 to 250 million people.
- There is, however, a growing opportunity for African agriculture: the potential to significantly boost both agricultural yields and farmed land, thus becoming self-sufficient in food and enhancing export volumes.

- Important Trends Food price rises: With the price of many staple foods reaching record levels in 2007/08, food and nutrition security are among Africa's greatest challenges. Global food reserves are at their lowest in 25 years and, as a result, food supply is especially vulnerable to crises or natural disasters. In the longer term, the United Nations has predicted the global population will rise to about 9 billion by 2050, placing additional pressure on the global food supply.
 - Social unrest: In recent months social unrest sparked by food prices has triggered riots in Niger, Senegal, Cameroon and Burkina Faso.
 - Poverty: Food security on the continent has worsened since 1970; the number of Africans who are undernourished has been rising for decades and now stands at about 200 million people. While conditions vary greatly across Sub-Saharan Africa, 33% of people are undernourished, compared with 17% in all developing countries. The proportion rises to 55% in Central Africa. The average number of African food emergencies per year has almost tripled since the mid 1980s.
 - Water supplies: With the exception of Southern Africa and the Sahel, where there is physical water scarcity, much of Sub-Saharan Africa suffers from severe economic water scarcity caused by a lack of human and infrastructure capacity to satisfy water demand. About 340 million Africans lack access to safe drinking water and almost 500 million lack access to adequate sanitation. Only 4% of Africa's annual renewable water resources have been developed for irrigation, water supply and hydropower use, compared to 70-90% in developed countries.
 - Population growth: Agricultural production has not kept pace with population growth, with over-reliance on rain-fed agriculture and the attendant risks of droughts and floods. A 3.3% increase in annual agricultural output is needed to achieve the continent's food security objectives.
 - Agricultural production: Africa's agriculture has recorded significant improvements in production in the last decade from the food deficit situation of the 1980s. However, per capita production has not kept pace with
 - population growth and today there are self-sufficiency issues in the production of staples. Africa's agricultural productivity is still very low, averaging 300-500 kg/ha, as compared to 2,500 kg/ha in the United States. Moreover, much of Africa's food is wasted: African farmers lose 15-25% of their crop in the field and another 15-20% after harvest to pests.

II Investment in agriculture, more than other sectors, provides four times the returns.

> Kanayo Nwanze, Vice-President, International Fund for Agricultural Development (IFAD), Rome

Now it is clear to everyone that we are not facing just a short-term problem but a structural change in the price of food; there is no such thing as normal prices anymore.

Josette Sheeran, Executive Director, United Nations World Food Programme (WFP), Rome

Rising Food Prices, Unequal Impacts



Note: Poor people tend to spend relatively more of their income on food, and therefore suffer more when food prices go up. Source: International Monetary Fund

Impacts

- Direct impacts: The economic consequences of the escalation of food prices depend on how long food prices remain high. What is clear is that water scarcity and food insecurity are realities today, amplifying poverty and inhibiting business, and they are likely to worsen in the future. There is no food security without agriculture and no agriculture without water. Policy-makers may have to return to thinking about food and water resources as strategic assets, and businesses should brace themselves for more expensive and more highly regulated water.
- Indirect impacts: With food and water security at the nexus of a range of interconnected risks, the potential for risk conflation is high. In particular, social and political tensions over access to food and water resources can lead to political instability, putting humanitarian efforts at risk and damaging the business and investment climate.

Mitigation

- Green revolution: In response to the dual threats of water scarcity and food insecurity, former UN Secretary-General Kofi Annan has called for an African "Green Revolution". However, it will take a revolution in capacity building and policy-making, not merely technical breakthroughs, to unlock the potential of rural Africa. Sustained growth rates of 7% are needed to make substantial inroads into poverty, and current policies and investment levels will not suffice.
- More bankable projects: With infrastructure and investment funds mushrooming, there is much interest from investors. The focus should shift to providing opportunities, in particular using funds to boost private sector participation in sustainable agriculture as well as critical infrastructure for food, water and transportation. For example, the average water storage capacity in Africa is about 200 m3/person/year while, in North America, it is 5,961 m3/person/year. Africa has approximately 9% of global freshwater resources. Innovative market mechanisms such as water trading (cap-and-trade) could provide incentives for change.
- Foster economic growth and stability: This requires a more cohesive African voice in the World Trade Organization ("free trade but fair trade"), better investments in the assets of the poor, the more effective management of vulnerability to shocks, including through household, national, and sub-regional food storage, and investments in infrastructure to reduce transportation and communication costs and strengthen rural-urban and intraregional linkages. Asia (e.g., Vietnam) provides many examples of effective policies that boosted agricultural growth and promoted land reform and trade and price liberalization. Good governance, political stability and public accountability are prerequisites.
- Invest in raising agricultural productivity: The focus should fall on small farms, thereby addressing the challenges of food availability and income poverty within the larger context of agricultural and rural development. Each additional dollar of rural income could yield a further increment of 50 cents to US\$ 1.70 (or about 50-170%) in total income through expenditure and consumption linkages between agriculture and other sectors of a national economy. The sustainability of agricultural productivity requires not only high-yielding crops and biotechnological improvements in drought resistance and micronutrient density, but also better irrigation and soil and water conservation ("more crop per drop"). Sub-Saharan governments currently spend about 5% of GDP on agriculture, compared with 14% in Asia.
- Invest in pro-poor public health policies and actions: Invest in particular in the prevention, control and management of HIV/AIDS, malaria and tuberculosis, and to foster food and nutrition security and raise labour productivity.
- Build institutional and human capacity: This can be done by addressing the education needs of women, girls and boys, upgrading the professional skills of farmers and other rural producers, and providing higher education to produce better-educated and more-informed stakeholders who can effect nutritional improvement.

Examples

- The African Development Bank has placed water at the core of its priorities with the Rural and Water Supply and Sanitation Initiative, and supported it with complementary pivotal initiatives: the African Water Facility, the Multi Donor Water Partnership, the NEPAD Water & Sanitation Programme, and the African Ministers' Council on Water (AMCOW).
- Several institutions are undertaking research to increase the micronutrient density of staple crops.



Executive Summary:

Geopolitical Instability

Can Africa sustain and consolidate progress on transparent and democratically accountable governance? Can it increase its institutional capacity to prevent, manage and resolve both intrastate and interstate conflict?

Risk

- Positive signs indicate that Africa is on a path of greater peace and political stability. Still, Sudan is ranked at the top of the "Failed States Index" published by Foreign Policy magazine for a second year in a row. Eight out of the 10 most vulnerable and weak states are in Sub-Saharan Africa.
- Political instability, institutional incapacity and social unrest inhibit foreign capital inflows and lower investment appetites, negatively affecting economic opportunities.

- mportant Trends Conflict and social unrest: Despite the headlines, armed conflicts and political instability have become less frequent in the past decade, attracting more investors to the best endowed and more stable African countries. But fragile countries still lag behind and war refugees and displaced persons are a destabilizing factor for neighbouring states and the whole region. Sudan, Somalia, Liberia, Sierra Leone, the DRC and Angola have generated the largest refugee populations.
- Africans are setting benchmarks not only for their own continent, but for the world.
 - Mo Ibrahim, Chairman, Celtel International, United Kingdom
- United States: Over 18% of the oil consumed in the US is imported from Africa, almost half of it from Nigeria. The National Intelligence Council predicts that the US will import 25% of its oil from Africa by 2015. However, US concerns about the role of terrorist groups in Africa have significantly increased military activity since 2002. The medium-term impact of the US agenda in Africa is unclear.
- China: China's engagement with Africa has deepened dramatically. China's loans to and direct investment in African states have outstripped aggregate global official development assistance (ODA) flows.. China's direct investment to Africa had already reached US\$ 1.6 billion by 2005, with Chinese companies present in 48 African countries, and it has grown significantly since then.
- **Debt**: The external debt of low income countries to official creditors has been reduced from 68% in 2000 to 18% in 2008, due chiefly to debt write-offs under the Highly Indebted Poor Countries (HIPC) Initiative and the recommendations of the Commission on Africa. Better infrastructure and investment to increase productive capacity are, however, needed to encourage investment and this requires prudent assumption of debt. Debtor and creditor institutions share the responsibility to minimize the risks associated with the creation of such debt.

Impacts

- Political risk: Perceptions of political risk arising from particular events such as those related to the recent elections in Kenya – generate market volatility and discourage investment. Africa is seen as a region of high political risk, and significant risk premia are demanded by equity investors, lenders and insurers.
- Governance and institutional capacity: The African Governance Index reflects the improvement of governance in Sub-Saharan countries over the past decade. Institutional capacity to implement government programmes in development, trade and investment must be strengthened, and representative and transparent governance must be promoted. Stronger capacity and broader trust in public institutions will promote political stability.
- Physical infrastructure: Inadequate infrastructure in many African countries imposes barriers to trade and investment, and supply side bottlenecks. Quality roads, railroads, ports, air transport and communications infrastructure, and reliable electricity supplies are prerequisites for the efficient functioning of domestic markets and for export growth. Developing physical infrastructure capacity requires disciplined resource management.
- [China will] establish and develop a new type of strategic partnership with Africa, featuring political equality and mutual trust, economic win-win cooperation and cultural exchange.

Hu Jintao, President of the People's Republic of China

Note: Democracy index scores range from 0 to 10 (highest) indicating conditions in five areas: electoral process and pluralism; civil liberties; the functioning of government; political participation; and political culture. Labels indicate range of scores and are not intended to be descriptive.

- Resource management: Despite significant and rising financial flows from Asian and Western purchasers of African resources, some African countries are mismanaging public receipts, creating unsustainable budgetary situations and failing to transfer the benefits to the society at large through the provision of public goods and social services.
- Corruption: Corruption clearly remains a severe challenge in many African states. Out of the 52 African countries included in the Transparency International Corruption Perception Index, corruption is assessed as *rampant* in 36 countries, while it is seen as a *serious challenge* in 14 more. Conflicts, poverty, high levels of unemployment and inflation all contribute to corrupt practices, while corruption in the public and private sectors undermines efforts to overcome poverty and underdevelopment.

Mitigation

- Strengthen capacity: Structural changes are needed to strengthen institutional capacity to implement the policy agendas of African governments. Clear laws and regulations addressing employment conditions, environmental protection, taxation and repatriation of profits are needed to enable investors to assess risk and opportunity. Cost-effective implementation of public sector capital projects and affordable delivery of social services require appropriate knowledge, skills and an ethic of public service.
- Fight against corruption: Better regulatory and law enforcement systems, backed by free media, are emerging in some countries. Corporate initiatives to fight corruption and bribery are becoming more widespread.
- Improve national financial management: The sound management of national finances and transparency in budgetary allocations and expenditure, backed by effective audits, are fundamental to good governance.
- Leadership: Effective government leadership is needed to improve the delivery of government services, promote economic development, strengthen financial and labour markets, and foster political stability. Superior company leadership that focuses on human resource development and appropriate corporate social investment in African countries will help build human and institutional capacity and strengthen the investment environment. Foreign governments should eliminate protectionist trade policies and allow the import of competitive goods and services from Africa.
- Conflict resolution: The capacity of sub-regional institutions to prevent, manage and resolve conflicts should be strengthened, but national reconstruction in the aftermath of conflict prompted by state weakness, corruption, severe social inequity and deep ethnic or religious divisions demands political will and substantial resources to translate damage control into long-term solutions.

National security and the extractive industries have become the last refuge of grand corruption in Africa.

John Githongo, Senior Associate Member, St Antony's College, United Kingdom

Examples

- The African Union (AU) has promoted the active engagement of African states in conflict prevention and resolution. Conflicts in Burundi, Chad, the DRC and the Ivory Coast have been managed by African state groupings under mandates from the AU. The conflict in Darfur continues, despite the deployment of an AU peacekeeping force, illustrating the limits of exclusive reliance on African resources and the need for broader international cooperation.
- In 2004, Rwanda started a four-year Capacity Building Programme, with the objective of developing its strategic human resources and improving policy formulation and implementation.



Executive Summary:

Economic Shocks

Can African resource rich countries reduce their commodity dependency by diversifying their economies? How can wealth be better distributed? How can African countries increase their trade benefits?

Risk

- The consequences of the global credit crisis for the real economy are yet to be determined. What is clear is that any pronounced slowdown in world growth would affect African exports of agricultural products, minerals and hydrocarbons. Africa's dependence on natural resource exports has made many countries vulnerable to commodity price shocks that are outside their control. Sudden increases in export revenues or import costs can cause currency instability and budget uncertainty.
- In the medium term, growing income inequalities might generate social unrest and violent conflicts. The wealthiest decile of the population across the continent still controls between 30-60% of total income. Many African countries appear in the lowest positions of the United Nations' Human Poverty Index.

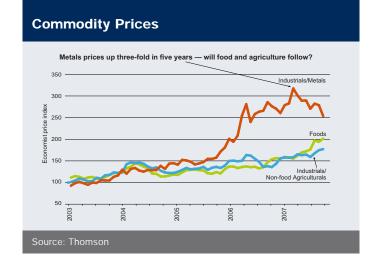
- Important Trends Uneven growth: Since 2000, 45 of 48 countries in Sub-Saharan Africa have achieved real growth averaging 4.7%, albeit off very low bases in almost all cases. The economic expansion has been concentrated in South Africa and mostly in oil exporters (e.g., Angola, Equatorial Guinea, Gabon, Nigeria and Sudan). Some of this growth, in some countries, is due to better governance and economic management; booming commodity prices account for a high proportion, however, and continued growth is not assured in different global market conditions.
 - Global slowdown: It is still too early to assess the impact of the credit crunch on the real economies in Africa, like those elsewhere in the world. The economies with more integrated financial markets especially South Africa - have experienced an increase in currency and stock market volatility. The key effects on Africa's economic performance will flow from the impact on commodity prices - oil, minerals and agricultural products - at whatever degree the global slowdown occurs.
 - Trade with developed economies: As developed economies are Africa's major trade partner (taking more than 60% of the continent's total exports), a severe economic slowdown in the US and Europe will impact growth. However, weakening US domestic demand started well before the financial turmoil without major consequences in emerging markets; in addition, African exports to developed economies are mainly primary products (agricultural products, fuels and mineral products represent almost 80% of Africa's exports), and the demand for these is less elastic. Therefore, the impact of a global slowdown is limited and is expected to slow growth rates only moderately.
 - Trade with emerging economies: Economic activity between Africa and Asia, especially China and India, is reaching record levels and is a key driver of African growth. China has strong interests in Africa's natural resources and has offered preferential trade access, and has committed to financing large infrastructure projects in order to secure access to mineral and hydrocarbon supplies. Africa's exports to China increased at an annual rate of 48% between 2000 and 2005.
 - Commodity dependency: Dependency for export earnings on one or a few commodities results in negative terms of trade and increases an economy's vulnerability to shocks from changes in commodity demand and prices. Economic diversification towards higher value-added exports is necessary for poverty alleviation and sustainable growth and development.
 - Competitiveness: The economic resurgence of Sub-Saharan economies has not yet translated into an improvement in their competitiveness. South Africa, Mauritius, Botswana and Namibia are the most competitive economies of the region, according to the World Economic Forum's Global Competitiveness Report 2007-2008. High and sustained international demand for commodities reduces incentives to diversify and, in some cases, their extraction has not been a driver of development but has led to environmental degradation, poor governance, corruption, underdevelopment and conflict.

Impacts

■ Oil: For oil importers in the region, high oil prices worsen the current account and reduce domestic demand. Due to the fragile balance of payments of non-oil producers, price fluctuations have devastating effects on these economies. Unstable energy distribution due to insufficient pipeline infrastructure increases the final price of fuels and generates even more inflationary pressure.

In the name of competitiveness, the tax burden on the top 1% of earners has declined precipitously. In a world of rising inequality, this cannot be correct. Again, only joint action by partners in a global village can deal with such inequities. More generally, it must be of concern to policy-makers and tax administrators that changes to tax policies have been a significant factor driving rising inequality in the world today.

Trevor Manuel. Minister of Finance of South Africa



- Inflation: Inflationary pressures are, in many cases, caused by global factors; prices for food, energy, construction materials, and industrial and agricultural inputs are reaching record levels due to the rise in global demand. Increased demand for biofuels promoted by subsidies is also a cause of food price inflation. Unsustainable food price inflation in African countries has a destructive effect, as food costs represent a bigger proportion up to 60% of the income of the poor.
- Foreign trade relations: The economic partnership between Africa, China and India is slowly extending beyond the supply of natural resources. China and India have emerging middle classes with rising incomes, whose members are increasingly buying Africa's manufactured products, household consumer goods and processed foods. African economies can exploit these potential opportunities.
- Economic disparities: The benefits of the high growth rates and rising national incomes in African countries in the past decade have not been distributed equitably and have generated extraordinary levels of inequality. Although there is an emerging middle class in many African countries, some 500 million Africans still subsist on less than two dollars a day while elements of the political class and their business associates have become extremely wealthy. Extreme inequality leads to insecurity and political instability.
- Globalization backlash: A backlash against globalization generating an increase in protectionism in the developed economies and triggering a reduction in trade flows and a global slowdown would slow African development. Recent trends towards more trade and investment between economies in the "south", notably China, India, Brazil, South Africa and other African, Latin American and Asian economies, might mitigate the effects.

Mitigation

- Wealth distribution: A sense of democratic accountability, backed by disciplined budget planning, would allow governments to use increased revenues and the benefits of lower debt service obligations to alleviate poverty and reduce income gaps. The allocation of budgetary resources to productive investments in health, education, physical infrastructure and appropriate technology, supported by private-public partnerships in these areas, would generate employment and create a basis for sustainable growth.
- Sound macroeconomic policy: The consolidation of monetary policy to control inflation and reduce inflationary expectations as well as the better management of public finances would improve the effectiveness of public budgets. A temporary reduction in VAT might be indicated to mitigate the current unsustainable level of food price inflation. For African oil producers, national savings provide a source of resources for productive investment, reducing the risk of inflow dependency.
- **Trade expansion**: Deeper economic partnerships with emerging economies offer the possibility of trade diversification. Economic openness combined with incentives aimed at strengthening competitive sectors could represent an unprecedented opportunity for diversified growth and better integration into the global economy.
- Attract investment: A dynamic private sector committed to investment is needed to develop a sustainable economy. Reduction of the regulatory burden is necessary to attract international investors, but Sub-Saharan Africa has the most onerous regulatory burden in the world.
- Increase economic diversification: Economic diversification is a priority for African countries in order to reduce commodity dependency and their vulnerability to external shocks. Identifying potentially competitive sectors and industries able to create employment is key to maintaining sustainable growth.
- Resilience of financial system: Exposure to the volatility of prices of single export commodities and to the cost of external finance makes economies especially vulnerable to external shocks. Strengthening the regulatory and institutional framework of the financial system would help in making it more resilient.
- To enjoy the full benefits of trade, least developed countries need to diversify their exports.

Ban Ki-moon, Secretary-General, United Nations, New York

Examples

■ Of the eight oil-exporting African countries, the Ivory Coast's oil revenues accounted for less than 5% of real GDP, but Cameroon had 10%, Chad 40%, Gabon 50%, Nigeria 52%, Angola 55%, the Democratic Republic of Congo 60% and Equatorial Guinea 90%.

Namibia, Lesotho, Sierra Leone, Central African Republic and Botswana are the countries with the highest Gini coefficient values (indices of income disparities) according to the UNDP's Human Development Report 2007/2008.



Executive Summary:

Climate Change, the Environment and Challenges to Africa's Development

How will global warming affect Africa? How best can the region, countries, businesses and communities adapt to mitigate its effects?

Risk

- Africa contributes least to global climate change, with only 5% of greenhouse gas emissions, but it is the most vulnerable region to the expected negative effects. In other regions there is still a sense that the consequences of climate change lie in the future; in Africa it's being felt now.
- The impacts on the continent include greater frequency and severity of extreme weather events, raising the threat of further food and water insecurity and more poverty, disease and population displacement. These impacts are idiosyncratic: there will be local winners and losers (some alpine zones and highland areas may benefit). At the same time, opportunities will be created by the need for new investments.

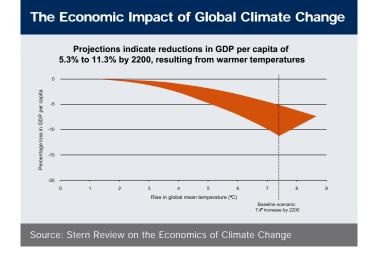
- Important Trends
 Africa is warming: While Africa's climate has always been erratic, Africa is steadily warming, the climate is changing and models predict further warming and changes in rainfall patterns. The continent as a whole is warmer by 0.5°C than it was 100 years ago, putting extra strain on water resources. The six warmest years recorded in Africa have all occurred since 1987 and, globally, 2005 was the hottest year on record.
 - Tendency towards greater extremes: Arid or semi-arid areas in northern, western, eastern and parts of southern Africa are steadily becoming drier. Equatorial Africa, the Horn and other parts of southern Africa are becoming wetter. Although drought and floods are often seen as a problem for African agriculture, violent and unpredictable changes in weather patterns are just as pernicious for farmers. While the long-term trend remains unclear, the risk is that global warming will exacerbate El Niño and La Niña effects.
 - Vulnerability is rising: The Stern review on the Economics of Climate Change estimated that the income effects of climate change are approximately 1.9-2.7% of GDP in Africa. Entrenched poverty, conflict, disease, governance problems and the burden of debt hinder the ability of communities and states to handle shocks. Moreover, in recent decades, many natural freshwater and rain-capture services have been damaged, destroyed or cleared. In short, the region's resilience to the impacts of climate change is low.
 - Uncertainty remains: The precise effects of climate change on Africa (and on global demand and investment patterns) will only become clear over the next 15-50 years. In particular, the impacts are not well understood at the country level as very few countries have their own climate change scenarios and risk assessments.

Impact

- Increased water stress: This poses a threat especially in international, shared water basins where there is a potential for conflict and a need for coordination in water management. Lake Chad, for example, has shrunk to less than 10% of its size 35 years ago. The IPCC predicts that continued increase in greenhouse gases will put 75 to 250 million more Africans at risk of water stress by 2025. This loss of freshwater also threatens biodiversity and exacerbates desertification: arid and semi-arid lands are likely to increase by up to 8%. Tourism, much of which is based on nature, is also likely to be hard hit with 25-40% of animal species in the national parks of Sub-Saharan Africa set to become endangered.
- Food insecurity: Changing rainfall patterns mean that in just over a decade, the rain-dependent areas of Africa could be producing half their current agricultural yield: parts of the Sahara are expected to suffer most with agricultural losses of up to 7% of GDP, while central and western African countries are expected to suffer losses of up to 4% of GDP. Such effects will be disproportionately borne by the poor, so while growth may slow, the largest consequences will be humanitarian in nature and the impact will be on wealth distribution, potentially leading to social backlash and greater political instability. In Africa, 70% of the working population relies on agriculture, which contributes 30% of the continent's aggregate GDP.
- Threats to health: Vector- and water-borne diseases, especially in areas with inadequate health infrastructure, will become more threatening because of increased malnutrition and migration. There is growing scientific confidence in the climate models, and estimates suggest that an additional 80 million people will be at risk from malaria.
- Sea level rises: Coastal zones vulnerable to a rise in the sea level, especially on the east African coast, will face an increase in floods, with the adaptation bill rising to up to 10% of GDP. Agriculture, roads, bridges, buildings and other infrastructure are particularly at risk.

Climate change does not act in isolation in Africa but, instead, is just one additional stressor, because we are already contending with a lot of problems, including poverty, food insecurity, civil wars and conflicts.

> **Anthony Nyong**, Professor of Environmental Science, University of Jos, Nigeria



Mitigation

- Adaptation: Africa faces the great challenge of adaptation to build climate resilience and to secure livelihoods at the local level. African countries can play a stronger role in developing local strategies for adaptation, and in shaping the global policy debate on mitigation. This must be freed from a one-size-fits-all approach, as effective responses to climate change need to occur simultaneously on several levels, including, using agriculture as an example, crop and farm-level adaptations, national-level agriculture-related policies and investments, and regional and global policies and investments:
 - Local Promote sustainable agriculture: Mitigation strategies need to focus on adaptation. Crops: National grain reserves, grain futures markets; adjustment of planting and harvesting schedules; alternative crops; development of new drought and heat-resistant varieties. Water: Decreased dependence on rain-fed agriculture, primarily through rainwater harvesting and storage; soil moisture conservation; better flood forecasting; improved water metering and pricing. Education: land use management; infrastructure monitoring and protection.
 - National Support local adaptation and disaster risk reduction: Many donors prioritize "technological fixes" or "stop-start" emergency aid. But promoting disaster reduction at the local level by supporting community-coping strategies is more effective and yields immediate benefits that stretch beyond tackling climate-driven disasters. Disaster response and management programmes can be strengthened to address growing weather variability and provide longer-term support of people's livelihoods to address the underlying causes of food insecurity. Climate change should be factored directly into development: "good adaptation" makes for "good development".
 - Regional Map regional vulnerabilities and act accordingly: All policies and programmes should face the test of whether they will leave people in Africa more or less vulnerable to the effects of global warming. Corporate involvement in Africa in such sectors as energy, mining, water and the construction of infrastructure, such as pipelines and transport links, should adopt rigorous sustainable development principles. The private sector should assess climate change vulnerabilities within operations and throughout the entire supply chain.
 - Global Fund adaptation and cut greenhouse gas emissions: Developed countries need to continue the progress on the Adaptation Fund, and narrow the gap between pledged funds (US\$ 300 million) and required funding (over US\$ 50 billion). In addition, progress must be made in reducing greenhouse gas emissions, with milestones to ensure that industrialized countries reach cuts of up to

80% by 2050. Wealthy countries can also finance sustainable agriculture projects in Africa, open up their markets, and adopt pro-poor carbon-trading and carbon-offset policies. The World Economic Forum and the World Business Council for Sustainable Development are spearheading efforts by a unique group of global companies to contribute a business voice to the dialogue on climate change, clean energy and sustainable development.

There are three choices: mitigation, adaptation and suffering. We will do some of each. But we can still choose the mix.

John P. Holdren, Director, Woods Hole Research Center, USA

Examples

- The Evangelical Fellowship of Zambia (EFZ) a Tearfund partner, is training people to use a technique known as "conservation farming", which has helped communities in the Monze East area deal with changing rainfall patterns and boost self-sufficiency in the face of drought.
- In Sudan, women are responsible for selecting sorghum seeds for planting. They select a variety of seeds with different characteristics that ensure resistance to a variety of conditions they may encounter in the next growing season. This shows that adaptation to and coping with climate change will require the application of indigenous knowledge and traditional coping strategies.

Acknowledgements

This report was prepared by **Irene Casanova** and **Gareth Shepherd** of the World Economic Forum's Global Risk Team, in collaboration with:

Global Risk Team, World Economic Forum

Irene Casanova, Economic Risks Johanna Lanitis, Research Analyst Sylvia Lee, Environmental and Societal Risks Sheana Tambourgi, Director, Head of the Global Risks Network

Regional Agenda Team, World Economic Forum

Adeyemi Babington-Ashaye, Associate Director, Africa Stéphane Oertel, Community Manager, Africa

We also benefited from the contributions of the following experts who participated in a series of interviews in Nairobi, Cape Town and Johannesburg and to whom we wish to extend our sincere gratitude.

Sean Cleary, Chairman, Strategic Concepts, South Africa

Peter Francombe, General Manager, Seminis East Africa, Kenya

Paul Kamau, Research Fellow, Institute for Development Studies, University of Nairobi, Kenya

Jonathan Ledgard, Correspondent, Africa, The Economist, Kenya

Abduba Mollu Ido, Consultant, Management and Instutional Development & Coordinator, CFLI -SOMALIA, CIDA Kenya.

Bob Munro, Policy Adviser, Sustainable Development, and Managing Director XXCEL Africa; Chairman, MYSA Board of Trustees; Chairman Mathare United FC, Kenya

David Mureithi, Managing Director, Unilever Kenya, Kenya

Nancy W. Mwangola, Project Manager, Business Alliance Against Chronic Hunger, Kenya

Tom Mwanza, Factory Manager, Foods, Unilever, Kenya

Kumi Naidoo, Secretary-General and Chief Executive Officer, Civicus-World Alliance for Citizen Participation, South Africa; Young Global Leader

Dorcas Odondo, Manager, National Oil Corporation of Kenya (NOCK), Kenya

Michael Power, Strategist, Investec Asset Management, South Africa

Christine Ramon, Executive Director and Chief Financial Officer, Sasol, South Africa; Young Global Leader

Cornelia Roettger, Head, Business Alliance Against Chronic Hunger, Kenya

Zafar Siddiqi, Chairman, CNBC Arabiya, United Arab Emirates

Michael Spicer, Chief Executive Officer, Business Leadership South Africa, South Africa

Rakesh Wahi, Vice-Chairman, CNBC Africa, South Africa

Resources

Executive Summary: Food and Freshwater Security

- The African Water Page (www.africanwater.org/)
- World Bank (www.worldbank.org/africa)

Executive Summary: Geopolitical Instability

- Foreign Policy magazine (http://www.foreignpolicy.com/)
- Ibrahim Index of African Governance (http://www.moibrahimfoundation.org)
- The African Capacity Building Foundation (http://www.acbf-pact.org)
- World Bank (http://www.worldbank.org)
- International Monetary Fund (http://www.imf.org)

Executive Summary: Economic Shocks

- World Economic Forum *The Global Competitiveness Report* 2007-2008 (http://www.gcr.weforum.org)
- World Trade Organization International Trade Statistics 2007 (www.wto.org)
- International Monetary Fund (http://www.imf.org)
- World Bank (http://www.worldbank.org)
- African Development Bank (http://www.afdb.org/)
- International Labour Organization (www.ilo.org)

Executive Summary: Climate Change, the Environment and Challenges to Africa's Development

- United Nations Environment Programme (http://www.unep.org)
- United Nations Human Development Report (http://www.hrd.undp.org)
- International Institute for Environment and Development (http://www.iied.org)
- Intergovernmental Panel on Climate Change (http://www.ipcc.ch/)
- National Center for Atmospheric Research, USA (http://www.ncar.ucar.edu)
- Pew Climate Center (http://www.pewclimate.org)
- The Carbon Trust (http://www.thecarbontrust.co.uk)



The World Economic Forum is an independent international organization committed to improving the state of the world by engaging leaders in partnerships to shape global, regional and industry agendas.

Incorporated as a foundation in 1971, and based in Geneva, Switzerland, the World Economic Forum is impartial and not-for-profit; it is tied to no political, partisan or national interests. (www.weforum.org)