Water as a stress factor in sub-Saharan Africa

by Any Freitas

Sub-Saharan Africa has enjoyed impressive economic growth over the past decade, alongside increased spending on infrastructure, rising foreign direct investment, and the emergence of a fledgling middle class. While analysts continue to debate the nature and prospects of such growth, most agree that the region is still faced with substantial and often shared development challenges.

Where these challenges intersect, more often than not, lays water. Indeed, dealing with water-related issues - irrigation, hydropower, watershed management, inland waterways, fisheries and maritime routes - is crucial to ensure sustainable growth and long-term stability. Despite the progress made by some countries, sub-Saharan Africa as a whole still lags behind most regions in the world when it comes to water access, management and supply. Worldwide, water has also become an increasingly scarce resource, and in sub-Saharan Africa, a potential threat to regional security.

As the UN prepares to celebrate 2013 as the 'International Year of Water Cooperation', questions continue to mount over the potential impact of African waters on the future of the continent. It may therefore be useful to draw up a catalogue (or rather checklist) of questions and challenges – old and new – that still demand convincing policy responses.

Dwindling waters

Despite Africa's rainy equatorial zone, long rivers, great lakes and vast shores, water – just like other natural resources – is unevenly distributed across the region. About 75% of sub-Saharan Africa's water resources are concentrated in eight major river basins. More worryingly, sweeping climatic and environmental changes have considerably reduced fresh water quantity over the past 20 years. As a result, most countries in the region are under severe water stress. According to the World Health Organization (WHO), more than 40% of all people without access to safe drinking water live there, with some 300,000 people deprived of a clean water source.

Although climate change clearly acts as a stress multiplier, it alone does not account for the scarcity of water. As experts have pointed out, 'land grabbing' is set to become another important cause of water shortages over the next years. These property deals between sub-Saharan African countries and foreign companies often entail selling rights to inland water resources. As property acquired in such a manner is mostly used for extensive, water-demanding agricultural activities (that often entail deforestation), 'land grabbing' further jeopardises water supplies and, in countries like Ethiopia or Sudan, worsens the effects of already endemic water scarcity.

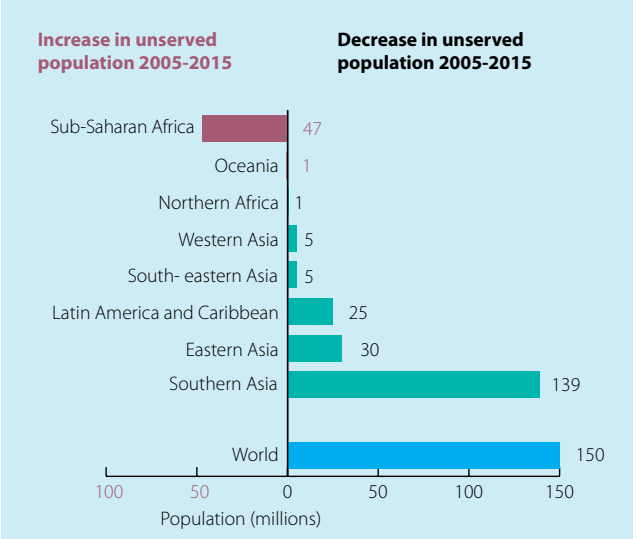
Muddy waters

Water in the region is not only scarce but also of exceptionally poor quality. Due to pollution as well as unreliable supply and sanitation infrastructure, only a small percentage of what little water is available can be used for human consumption. Almost half of all Africans suffer from water-borne diseases, with cholera and infant diarrhoea the most frequently occurring sicknesses. Most of the countries with the lowest levels of sanitation are located in sub-Saharan Africa, where 45% of the population resorts to using shared or dangerously inadequate facilities – with little progress in the area recorded to date. According to a survey conducted by United Nations Environment Programme (UNEP) officials in 40 African countries, lack of funding does not seem to be the main constraint in improving sanitation (it was quoted only by 18); other variables, such as a lack of human capital (quoted by 25 countries), poor infrastructure, and inadequate legislation seem to be greater obstacles.

> '...growing pressure on water resources can lead to domestic unrest, exacerbate existing inter-state tensions and even constitute a source of armed conflict.'

The water stress caused by inadequate sanitation tends to reach critical levels in regions with higher population densities. The rapid urbanisation process currently underway in sub-Saharan Africa is therefore expected to worsen the situation. Currently 1 billion people live in urban areas in sub-Saharan Africa and, according to the United Nations Human Settlements Programme (UN-Habitat), that figure is expected to rise by 50% by 2030. With cities expanding fast and water consumption growing twice as fast as the levels of population growth, tensions may also emerge among city dwellers as they compete for this vital – and increasingly rare - resource.

Projected change in the absolute numbers of people without access to an improved drinking water source 2005–2015, by developing region, if the 1990–2004 coverage trends continue to 2015



Source: World Health Organization

Africa's economic growth, boosted primarily by the exploitation of its natural resources, has also been contributing to water quality - and quantity - shortages. The dumping of industrial sewage and waste, uncontrolled use of agro-chemicals and oil spills are commonplace. This kind of pollution is all the more damaging since its impact on water reserves (and other vital resources) is largely irreversible, compromising the use of inland or marine waters for generations to come. The sedimentation and discharge of municipal, industrial and agricultural effluent in Lake Victoria, the massive oil spills on Nigeria's coasts or lead poisoning cases due to gold mining operations in South Africa all seek to highlight the fact that combating water pollution requires the active engagement of both local authorities and international investors.

According to the WHO, for each dollar invested in safe drinking water, three to four dollars are generated, depending on the region and technology available. For many countries in sub-Saharan Africa, investing in water could be crucial in order to achieve the much strived for 'middle income' status by 2020. According to the Food and Agriculture Organization of the United Nations (FAO), nearly 85% of fresh water resources in sub-Saharan Africa are utilised for agricultural purposes. It is estimated that erratic and extreme weather conditions as well as insufficient irrigation could lead agricultural productivity in several countries to fall by up to 50% over the next 10 years, severely affecting their prospects of greater social and economic development.

Likewise, the energy sector is also directly and negatively affected by water shortages. This is not only the case of hydropower - an important source of energy in sub-Saharan Africa - but also of thermal-based power with nuclear, coal- and gas-fired power stations all being extremely water-intensive structures. It goes without saying that the chances of developing a durable industrial and manufacturing sector are slim without proper access to water resources and sufficient energy production. Water (or rather lack thereof) can in that sense drastically hamper the much needed diversification of African economies.

Contested waters

Though it is not always simple to establish a causal connection between water and conflict, it is widely acknowledged that growing pressure on water resources can lead to domestic unrest, exacerbate existing inter-state tensions and even constitute a source of armed conflict. As water becomes rarer in the region, competition among those who depend on it may rise, potentially (re)igniting longstanding tensions. Crucially, water is largely a shared resource in sub-Saharan Africa, where some 17 major river basins span as many as 35 countries. Establishing effective cooperation over the management of cross-border natural resources is seldom an easy task. It is even less so when such resources are also markers of countries' sovereign borders - as is often the case for rivers and lakes in Africa.

There are many examples of rising (local and regional) tensions linked to water access and management. The conflict that erupted in the Darfur region a few years ago was triggered not only by ethnic and/or religious rivalries but also by the destabilising impact that sudden desertification had on local settlements and livelihoods. In 2005, disputes over water shortages in Kenya's Rift Valley also led to an outburst of deadly violence between two tribes, the Masai and the Kikuyu.

In East Africa's Great Lakes region, Tanzania has been seeking international mediation to help resolve its longstanding border dispute with Malawi over rights to Lake Malawi. Lake Chad's waters, used for farming purposes by Niger, Chad, Cameroon and Nigeria, are shrinking at worrying speed. Despite the existence of a Lake Chad Basin Commission (created in 1964 and the oldest of its kind in Africa), the affected states have been unable to reach an agreement over the use of the lake's water. With no clear and agreed cooperation framework, disputes that have long remained dormant can resurface overnight and unravel previous, sometimes tacit, arrangements.


FARAH ABDI WARSAMEH/AP/SIPA

A Somali pirate stands in front of a ransomed Taiwanese fishing vessel

Recent disputes over the waters of the Nile Basin, currently shared by 11 countries, represent another good example of rising tensions. The original management agreement, dating back to the colonial era (1959) and broadly favourable to downstream countries (Egypt and Sudan), has recently been challenged by upstream states led by Ethiopia. The recent independence of South Sudan has complicated matters further. In response to the demand of downstream countries for a more balanced use of water resources, a new instrument to define principles of cooperation was proposed in 2010 - but not all countries signed up to it (notably Egypt and Sudan). Ethiopia's controversial plans to go ahead with the construction of its 'Grand Renaissance Dam' - which will store a large proportion of the Nile waters, crucial to Egypt and Sudan - is likely to only increase tension in an already fragile political environment.

Risky waters

African coastal waters constitute an additional source of instability. A significant percentage of Africa's goods and resources are transported via the continent's seas. Africa's maritime economy is estimated to be worth around $1 trillion a year, accounting for over 90% of the region's trade. African maritime routes are therefore attractive targets for pirates and criminal organisations, whose actions have been somewhat facilitated by the limited capacities of local navies, poor regional coordination between coastguards, and the lack of information sharing between states.

Acts of piracy off the coasts of East Africa, particularly Somalia, have come to symbolise African maritime insecurity. The number of attacks has dropped sharply over the past two years - from 237 in 2011 to 75 in 2012, according to the International Maritime Bureau (IMB) - notably due to ever-closer cooperation between African partners and the European Union. However, rather than being resolved, the problem seems to have simply shifted geographically. Indeed, since 2012, the Gulf of Guinea has seen a considerable increase in the number of attacks (58 in 2012, compared to 49 in 2011, according to IMB). Worryingly, the capabilities of the groups operating in that region seem to have improved as well.

Piracy, coupled with arms, drugs and people trafficking in the Gulf of Guinea, poses a threat not only to western and central Africa but also

to the EU, as 13% of the Union's oil and 6% of its gas imports come from the region. Helping African partners to improve security across West Africa's maritime routes has thus turned into a major common policy goal. The recent launch of the EU's 'Critical Maritime Routes in the Gulf of Guinea Programme' (CRIMGO) is a clear sign of the importance the region now has at an EU level.

However, recent attacks against oil tankers off Ivory Coast could in fact already be seen as an unintended consequence of increased patrolling in the Gulf of Guinea. In addition to assistance from international bodies, the full engagement of African actors at local, national and regional level is required in order to ensure the long-term security of African seas.

Fishy waters

Another dimension of pirate activity in African waters is so-called 'illegal, unreported and unregulated' (IUU) fishing. As industrial (often foreign) ships venture into African inshore zones - normally reserved for locals in dugout canoes - marine resources are being severely overexploited. The impact of pirate fishing on livelihoods, food security and regional development could be considerable. Fisheries contribute, directly or indirectly, at least $10 billion to African economies every year. Some 200 million Africans rely in part on fish for nutrition, and at least 30-45 million people depend on fisheries for their livelihood. Though official and reliable figures are difficult to obtain, IUU fishing is estimated to cost up to $1.5 billion a year to West African countries alone.

Once again, the lack of adequate material and human resources, combined with poor coordination among regional governments and agencies, has significantly facilitated the lives of pirate fishermen. In addition, most illegal fishing boats are foreign and often licensed to sell their catches in Europe, making controls trickier.

As one of the main fish importers in the world, the EU has an important role to play in the fight against pirate fishing. Around 60% of the fish consumed in Europe is imported, and a noticeable proportion thereof comes from western Africa. Although the 2009 EU IUU regulation – which introduced 'catch certificates' - took a step in the right direction, doubts remain over the legitimacy of such certificates validated in West African waters due to the lack of effective monitoring, control and surveillance by flag states in the region. Better communication and coordination between the EU and African partners is hence needed to ensure pirate fishing can be effectively tackled at its source.

As with maritime piracy, combating pirate fishing will require coordinated action and the bringing together of numerous bodies, institutions and governments across sub-Saharan Africa. As part of a broader water security challenge, the tackling of illegal fishing calls for sweeping strategies that simultaneously improve technological tools, maritime capacities and training programmes of countries in the region. The issue is all the more important since developing coastal security is one crucial step towards protecting continental waters.

On this point, the African Union (AU) may have already made some progress towards the elaboration and future implementation of a consolidated African water security strategy. The AU seems to be in the final stages of drafting an African cabotage regime which unifies - or replaces/creates where absent - national legislations. This new regime is expected to restrict trade within the continent's waters to African-owned vessels only - a policy U-turn that should open up a new phase of regulation in African coastal waters, with important consequences for Africa's trading partners.

Troubled waters

Water resource challenges have long existed in sub-Saharan Africa, but their impact has been amplified by recent trends such as increasing urbanisation, economic growth, maritime trade and, of course, climate change. Old or new, these challenges highlight the fact that the quantity and quality of water available is being reduced at a worrying speed.

Water scarcity intensifies pressure on, between and across states. As experts are warning, water is the only *natural* limit to economic growth and may soon become the main *natural* cause of conflict. Troubled waters need skilful navigation through them and solid bridges over them – and both, in turn, require local/global cooperation and comprehensive approaches.

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