PEGASYS INSTITUTE

Integrating Water, Energy and Food Planning for Climate Resilience in Kenyan Counties

LOCAL PEOPLE COLLECT WATER, Andes Mtito, Kenya, July 2013.

Internationally there is move towards an integrated approach for managing natural resources, particularly in relation to water, energy and food (WEF), to improve the sustainable use of resources, to meet growing demands, and to improve resilience in the face of climate change. This policy brief sets out what can be done to support integrated WEF planning in Kenya, in the face of climate change, with a particular focus on county level actions.

Recommendations

To enable integrated WEF planning to take place, contradictions in legislation need to be removed.

Existing approaches to integrated climate-resilient WEF planning should be enhanced and up-scaled across all counties

The County Integrated Development Plans provide an excellent platform for driving integrated WEF planning

Increased budgets and capacity for integrated planning and climate change adaptation are needed in counties

Background

Water, energy and food

Kenya is a water scarce country where long cycles of drought and short but frequent floods cause widespread damage to the country's economic infrastructure and devastation of agricultural livelihoods and livestock, which are the mainstay for over 80% of the population.

The complex nexus between the country's water, energy and food security challenges adds to the challenges. Water shortages cause crop failures and power outages. Inadequate energy curtails water distribution and agricultural production, while destruction of forests for wood fuel and charcoal degrades both water quality and agricultural lands. Dry periods mean there

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Providing viable solutions

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is less water for irrigation and hydropower generation. Heavy rainfall leads to soil erosion and sedimentation in dams. Furthermore, energy and irrigation development both require significant water allocations, compelling trade-offs in allocations between these competing uses.

These challenges will increase with climate change, placing increased demands on already stressed water, energy and food resources. In this context, integrated water, energy and food planning and management, the so-called WEF nexus, offers options for protecting the population from climate shocks while opening further opportunities for climate resilient development.

Decentralisation

Perceived disparities in economic development throughout the country and a demand for more local level decision-making led to the formulation of a new Constitution in Kenya, adopted in 2010. This transferred significant state functions to 47 newly established county governments.

Devolution of this magnitude takes time for successful implementation, and six years down the line, tensions persist between the two levels of government. The new Constitution requires the transfer of responsibility for many functions from national to county governments. Powerful national state agencies, backed by legislation not yet amended in alignment with the decentralisation, and with significant technical capacity for implementation, continue to draw funds from the Exchequer for activities that county governments believe fall under their jurisdiction.

The Research Project

It is within this context that the CDKN-funded project: "Enhancing Institutional Arrangements for Integrated Water, Energy and Food Security through Improved Planning and Implementation in Kenya" was implemented by the Pegasys Institute, Losai Management and the Institute for Development Studies. This was an action research project focused on the county governments of Laikipia, Narok, and Machakos aiming to identify opportunities to improve integrated water, energy and food planning (the WEF-nexus), and to strengthen institutional arrangements between county government, civil society, national state agencies and community organs to improve climate-resilient development.

The study concentrated on analysing constraints to and opportunities for improved integrated planning and engagement in the three pilot counties.

CHARCOAL SELLER, KIBERA, Nairobi, 2013:

This Policy Brief is drawn from a more comprehensive report, "Integrated WEF Planning in Kenya in the context of devolution: lessons from three counties" prepared by Summaya Goga, Barbara Schreiner and Kate Laing, available online from www.pegasysinstitute.org and from ELDIS

Climate change and the Water-Energy-Food (WEF) Nexus in Kenya

Kenya has a tropical climate: hot and humid on the coast, temperate inland, and very dry in the northern and eastern parts of the country. About 80% of the country is arid to semi-arid and northern Kenya in particular has very low rainfall. Surface water covers only 2% of Kenya, the average annual rainfall of 630 mm is below the world average and this is compounded by uneven distribution across the country.

There is intense competition for water between different sectors of the economy. The greatest demand is from agriculture, which contributes a quarter of the GDP and employs over 75% of the national labour force.

TEA HARVESTING, Kericho, Kenya:

Kenya has approximately 9.4 million hectares of potentially arable land. Of this, 2.8 million hectares are used for rain-fed agriculture. Cultivation on these lands is vulnerable to variability in rainfall and productivity in these areas has critical implications for the economy, viable livelihoods, poverty levels and food security. The development of irrigated agriculture is low. It is, however, increasing as the government attempts to reduce climate and price-related threats to food security.

The second greatest demand for water is for domestic consumption. In rural areas, many people depend on open water sources, and a third of Kenyans use groundwater for domestic water supply.

Demand for water also emanates from fisheries, forestry, hydro-electric power, and manufacturing. Increasing population growth, poor management of water supply, forest degradation and contamination of water all place great pressure on Kenya's limited water resources, and these limitations are likely to be exacerbated by climate change.

80% of Kenya's population depend on wood fuel for domestic energy consumption. The largest use of harvested wood is for charcoal production, and the sector is a major source of employment with around 200,000 people directly employed in the charcoal industry (Bailis, 2011). Wood fuel and biomass account for 68% of primary energy consumption, followed by

petroleum (22%), electricity (9%), and other sources (1%). Deforestation in Kenya is largely driven by demand for fuel wood, and this is having a major impact on water availability. Between 2000 and 2010, deforestation in the water towers amounted to an estimated 50,000 hectares, leading to reduced water availability of approximately 62 million m3 per year ((UNEP, 2012). Both Narok and Laikipia counties face challenges with regard to charcoal production to supply local communities and to meet demand in Nairobi. Narok is currently the source of around 44% of the charcoal for Nairobi, with Laikipia contributing 10% (Bailis, 2011).

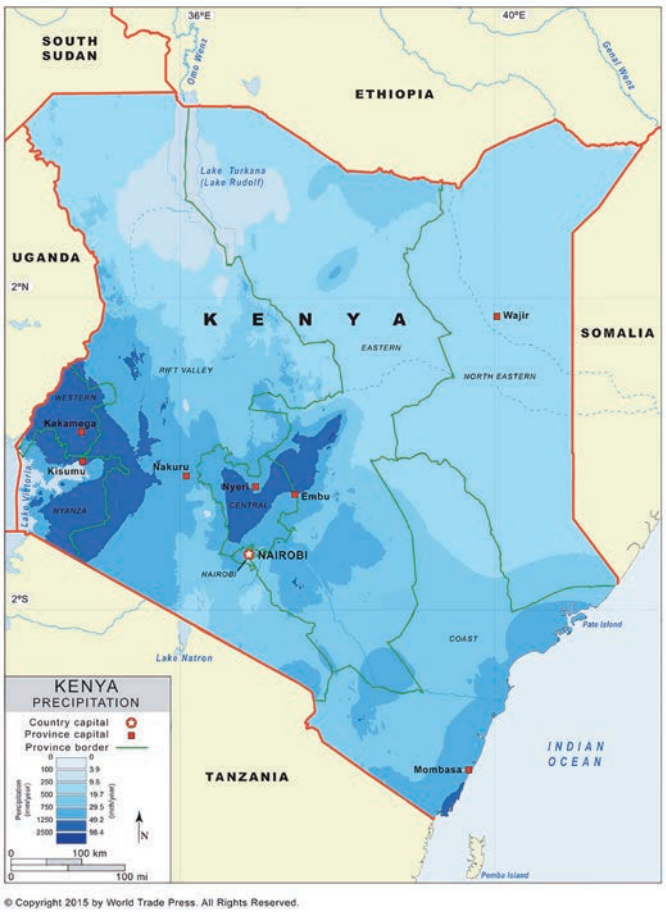

Figure 1: Average annual rainfall in Kenya (http://www.bestcountryreports.com/media/D_Images/Kenya_Precip.jpg)

Commercial and industrial establishments, on the other hand, use hydro and petroleum generated electricity as their major source of energy, both of which are dependent on surface water flows, thus constantly menaced by drought conditions. It is for this reason Kenya decided to invest in geothermal power to reduce its exposure to climate variability.

Production of charcoal has negative environmental impacts on both land and water resources. One of the main sources of degradation of the Nyakweri forest (located in Transmara, a critical catchment of the Mara River and a breeding ground for elephants) has been charcoal production. At present, the inter-sectoral County Environmental Committee in Narok has placed a ban on charcoal production, sale and transport, with various departments collaborating in implementing the ban, thus showing the potential for collaboration around regulatory activities at the county level.

Climate Change

A 2011 UK Met Office report observed widespread warming since 1960, with some evidence of decreasing rainfall between 1960 and 2003. According to climate change projections, Kenya is likely to see an increase in the intensity and frequency of droughts and floods in the future. By 2100, temperature is expected to rise by an average of 3°C, and rainfall intensity rise by more than 20% above the 1960-1990 levels. This will be accompanied by longer drought periods.

The Kenya Government's Inter-sectoral Planning Team´s assessment report entitled Kenya Threshold 21 Climate Change Impact Sectoral Briefs indicates that climate change impacts could cause net economic losses of around 3% of GDP annually by 2030.

Devolution and Integrated WEF Planning

Devolution of power to county governments, intended to increase local participation and enhance transparency and accountability, began in earnest following the 2013 national elections. However, lack of technical capacity in the county governments has undermined their ability to take over the devolved functions. This is changing as they increase their workforce and obtain more funding from the Exchequer.

Well established state agencies, such as the National Water Construction and Pipeline Corporation, the Regional Development Authorities (Tana and Athi River, Ewaso Ngiro, Lake Basin, Kerio Valley and Coast),

MARA RIVER, Kenya:

KenGen, Agricultural Development Corporation, the Water Resources Management Authority, the eight Water Service Boards and the National Cereals Board continue implementing activities in water resources management, energy, agriculture and food security, mandated by laws and regulations that have not yet been updated to conform to the new Constitution.

While many of the state corporations are trying to negotiate and synchronise their projects with county development priorities, county governments are adamant that national agencies should not continue to implement devolved functions.

A wide variety of non-governmental and community-based organisations are also involved in WEF-nexus related issues and projects in the counties.

Research Findings

The project focused on three key aspects related to the understanding of integrated planning for the WEF-nexus:

* The legislative environment which determines where functions and accountability lie between national and county government institutions.
* The platforms or mechanisms through which integrated planning can occur at the county level; including the formal governance entities, networks of non-state actors like NGOs, community and faith based organisations, and research institutions.
* The capacity and budgets within public institutions and NGOs, including county budgets for implementing the County Integrated Development Plans; the Constituency

Development Fund, and donor projects for implementing integrated planning approaches.

Figure 2: The three counties in the study: Laikipia, Narok and Machakos

Legislative Environment and Functions of Institutions

To enable integrated WEF planning to take place, contradictions in legislation need to be removed.

While the 2010 Constitution of Kenya has given effect to devolution, sectoral legislation has yet to be aligned with the devolved functions, creating challenges for vertical and horizontal integration and allowing contestation over the division of functions. For example, a new Water Bill has been drafted[1], but there is contention over the allocation of water management functions – the Council of Governors feels the Water Ministry has ignored their proposals regarding the devolution of power and is retaining responsibilities at national government level, despite the water services function being devolved in the Constitution[2]. As a result, the Bill has not been finalised, and there is confusion as well as disagreement over the roles of various institutions involved in water planning.

Mechanisms for Integrated Planning

The County Integrated Development Plans provide an excellent platform for driving integrated WEF planning

The history of lack of coordination between different departments that results in fragmented implementation and duplication across projects has unfortunately been transmitted to the counties. Secondly, the inward looking tendency of technical departments, that seek to implement only their budgeted activities, prevents the kind of impact that synergy and coordination with other public institutions and non-state actors can create.

Two key mechanisms for horizontal integrated planning exist: the County Integrated Development Plan (CIDP) process which brings together sectors at the county level, and the county Technical Working Groups (TWG) which consist of institutions collaborating on environmental issues in the county (WEF Interviews, 2015). The CIDP process is relatively new, and there are clearly some challenges with the process. In Laikipia and Narok, interviewees raised concerns that the development of the CIDPs for 2014-2015 was hurried and that there was insufficient cross-sectoral engagement. In addition, despite the fact that the CIDP process and the TWGs foster some integrated planning, interviews in Laikipia and Machakos confirmed the view that county departments work largely in silos.

While each county is expected to develop a Climate Change Response Strategy that aligns with the National Climate Change Response Strategy, there is little synergy between the National Climate Change Secretariat and county government institutions. As a result, the national agenda for climate change is not filtering down to the county level, which tends to be an emergency response rather than having long term, planned measures in place. Without a legal framework mandating an integrated approach, the extent and nature of collaboration is largely dependent on the willingness of the individual actors involved. For example, in Narok, given the overwhelming demand for food security, the National Irrigation Board, the Water Resources Management Authority are working closely with the County Government departments to enhance joint planning and avoid duplication, but this is the exception rather than the rule.

[1] The draft Water Bill has been passed by the National Assembly and is awaiting approval by the senate.
[2] More than one of the respondents at the Policy Dialogue (Laikipia) noted that "national government is still reluctant to devolve activities to the county government".

The study found that many donors and leading NGOs are not comfortable working with county governments and their financial support remains linked to national agencies through formal agreement with the Ministry of Finance. There is also a perceived lack of accountability at county levels. As a result they prefer to work with national institutions like the Water Services Trust Fund (WSTF)[3]. This has led to counties accusing donor agencies of undermining devolution by working with national government institutions rather than county governments. For instance, at the 2015 Council of Governors conference held in Kisumu, Kenya, the World Bank representative, when accused of spearheading resistance by donor organisations to engage directly with counties, responded that the challenge is that they can only work within established laws, and that will only change when the legal framework enables direct financial commitments to counties.

On a positive note, there are signs that county governments are beginning to engage across sectors regarding competing water needs. For instance, the Water Ministry in Laikipia supports a county working group (technical team in the water sector) which involves other stakeholders such as the county Ministry of Agriculture, National Environmental Management Authority (NEMA), Water Resources Management Authority (WRMA), CETRAD, LWF and water companies in order to map out water sector issues, provide oversight and provide policy advice to the county government.

Non-state actors provide additional platforms for integrated planning. For example, Laikipia County Natural Resource Network (LAICONAR) is a multi-stakeholder platform consisting of a range of institutions involved in natural resources in Laikipia[4], whose members have been quite effective in improving the understanding of the county departments on WEF. Forums like LAICONAR can be extremely valuable for integrated engagement and planning. Other institutions involved in these types of collaborations include the East African Wildlife Society (EAWLS), Laikipia Wildlife Forum (LWF), Utooni, Centre for Training and Integrated Research in ASAL Development (CETRAD), Inades, CARITAS, World Vision and the Kenya Red Cross.

HERD OF GOATS IN AMBOSELI IN KENYA:

[3] *More than one of the respondents at the Policy Dialogue (Laikipia) noted that "national government is still reluctant to devolve activities to the county government".*

Improved collaboration on integrated planning

Existing approaches to integrated climate-resilient WEF planning should be enhanced and up-scaled across all counties

Contestation over water resources is fierce in Kenya, and is exacerbated during droughts. However, with the new Constitution and the old Water Act working in parallel there remains a lack of clarity regarding roles at the county level. The WRMA and its regional offices are responsible for water use licensing, catchment and sub-catchment plans, and water quality testing, and are generally the custodian of water resources. The county government is responsible for planning water projects, including water supply and storage (pans, dams, boreholes), but is also responsible for the conservation of water. In Narok, WRMA and the Ewaso Ngiro South Development Authority have been left out of important water initiatives spearheaded by the county government as a result of the poor relationships between national and county institutions.

Nonetheless, improvements in horizontal and vertical relations are taking place. In Laikipia, for instance, WRMA and the County Department for Agriculture are working together on rainwater harvesting and drip irrigation. They are also partnering on the promotion of drought-escaping crops which are being adopted by farmers across the catchment. In Narok, the county was initially hostile to WRMA but with the onset of drought, the county was forced to rely on WRMA to impose a ban on irrigation since WRMA works within the whole catchment and thus can control activities outside of its jurisdiction.

However, to achieve optimal use of scarce natural resources, and to build effective community-level resilience to climate change, greatly enhanced engagement between national and county players responsible for water, energy and food planning and implementation will be needed. Only an integrated approach with strong vertical and horizontal relations will solve the complex challenges in the three counties, and in Kenya more generally.

Budgets and Capacity

Increased budgets and capacity for integrated planning and climate change adaptation are needed in counties

County representatives in all three counties noted that county budgets are insufficient for implementing their Constitutional mandates, and that there is no dedicated climate change budget at county level. As a result, counties are often driven by the development agendas of national or donor-funded institutions, rather than being able to drive an integrated development agenda for themselves.

In addition, technical capacity at county level remains a challenge. In Laikipia, for example, the Minister for Water, Environment and Natural Resources stated that most county government officials involved in the water, energy and food areas have insufficient technical capacity to carry out their duties effectively.

Since county departments have yet to develop a reputation for adequate planning, accountability and capacity, both development agencies and national institutions prefer working with other national institutions in the counties rather than county departments.

Further reading:

The Water-Energy-Food Nexus A new approach in support of food security and sustainable agriculture. FAO, http://www.fao.org/nr/water/docs/FAO_nexus_concept.pdf

The Water–Energy–Food Security Nexus: Towards a practical planning and decision-support framework for landscape investment and risk management. IISD 2013 http://www.iisd.org/pdf/2013/wef_nexus_2013.pdf

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[4] *LAICONAR is composed of civil society organisations (local and national), community-based organisations, the private sector, national and county government organisations, and academia. Human-wildlife conflict mitigation is LAICONAR's flagship programme, while the Laikipia Landscape Resilience Dialogue helps promote water and climate-related dialogue with communities in Laikipia.*