



Figure 1: The framework for Nature Based Solutions. Source: IUCN

Ecosystem Based Adaptation (EBA) Approach to Climate Change Governance in Turkana County

1. Introduction: Target Audience and Focus of the Policy Brief

This policy brief is directed towards a broad range of stakeholders, including policy makers, researchers, research funders and managers, local authorities, civil society organizations, development & humanitarian organizations, environmental and conservation agencies in Turkana county. It highlights the complex nature of environmental challenges and provides recommendations for the integration of ecosystem-based approaches within policy, legislation and practice. This brief is based on the comprehensive relevant literature reviews, consultations and discussions held with Key Stakeholders in Turkana county during a technical examination exercise organized in the context of Ecosystem Based Adaptation approach to Climate Change Governance in the county.

Key Messages

1. Ecosystem-based Adaptation (EBA) restores, protects and manages ecosystems in order to help human communities cope with the impacts of climate change.
2. The implementation of EBA remains hampered by three key challenges: lack of information, lack of financial resources, and institutional resistance.
3. To successfully implement EBA, all stakeholders including community members, government, private sector, civil society, academia, development partners, etc. have to liaise to address the existing challenges of lack of information, finance and institutional capacity.



Figure 2: Turkana young boy herding cattle. Source: UNESCO, 2017

1.1 The Concept of Ecosystem Based Adaptation

Ecosystem-based Adaptation is defined by the Convention on Biological Diversity (CBD) as “the use of biodiversity and ecosystem services to help people adapt to the adverse effects of climate change”. As further elaborated by Decision X/33 on Climate Change and Biodiversity, this definition also includes the “sustainable management, conservation and restoration of ecosystems, as part of an overall adaptation strategy that takes into account the multiple social, economic and cultural co-benefits for local communities”. EBA embraces ‘the integrated management of land, water and living resources that promotes conservation and sustainable use in an equitable way’, in the context of supporting communities in coping with climate change impacts. It therefore employs familiar tools and measures but conceptualizes and implements them specifically for adaptation to climate change.

2. The Relationship Between Ecosystem Based Adaptation and Climate Change

In Kenya, and in Turkana county like other counties in Northern Kenya, the trend of warming is at a rate that is faster than the global average (IPCC 2001; Nyong 2005). Climate change exerts multiple stresses on the biophysical as well as the social and institutional environments that underpin the livelihoods of local communities and in the case of Turkana county, over 90% of local communities' livelihoods is pegged on Natural Resources use (Orindi and Murray 2005). Unless this situation is addressed, many vulnerable populations in the county could find their livelihoods worsening, and as a county and country by extension we may not make any progress towards achieving the Sustainable Development Goals (SDGs) (Simms and Reid 2005).

The manifestation of climate change is already clear as seen in risen temperatures, droughts, irregular and unpredictable rainfall with extreme and harsh weather patterns that are now appearing as the norm (GOK, 2010; Tiempo 57). The impact of drought among pastoral communities normally manifests itself in the form of livestock losses, which adversely affects the provision of subsistence, income, and other sociocultural goods and services to pastoral households. In addition, as many national climate change adaptation and mitigation priorities have only just recently been identified at national level, the effectiveness of local level implementation remains to be seen. Climate change will result in additional challenges for county governments struggling to address pre-existing sources of vulnerability in rural agricultural livelihoods and challenges to natural resource sustainability. The county's ability to adapt to climate change is compounded by numerous factors including high levels of poverty, weak institutions, poor infrastructure, inadequate information, poor access to financial resources, low management capabilities, conflicts due to a scramble for diminishing environmental resources and high interest rates.

3. Policy Mechanisms

Key climate action areas for strengthening Ecosystem Based Adaptation in the county include public sensitization on climate change adaptation and mitigation, building climate resilience among the community members, mainstreaming community members and other stakeholders' engagement in climate actions such as formulating legal frameworks on climate change, establishing early warning committees with active community engagement and participation.

The Kenya's new Constitution 2010 provides the basis for action on climate change by guaranteeing citizens a clean and healthy environment, which is a fundamental right under the Bill of Rights. Efforts to reduce the vulnerability of the affected communities, must therefore reinforce their risk management and coping capacities by augmenting existing adaptation mechanisms and supplementing them with new policies and legislations that are tailored to the unique local contexts. For that reason, there is need for carefully planned Ecosystem Based Adaptation interventions that are informed by supportive policies and regulations to mitigate the impacts of expected changes in climate while meeting household level requirements for food, fuel and income in Turkana county. There is need therefore to strengthen the adaptive capacity of local farmers and protect the sustainability of this fragile drought-prone ecosystem by formulating and implementing relevant climate change policies and legislations at the county level rooted in Ecosystem Based Adaptation approaches and aligned with the national climate change policies and legislations. At national level, Kenya has developed a Climate Change Response Strategy 2010, Climate Change Act 2016, National Adaptation Plan 2015-2030, Energy Act, Nationally Determined Contributions (NDCs) amongst other. These are commendable efforts; the key challenge remains cascading these national documents to the county and local communities.



Figure 3: Source: Trocaire 2019

EBA can help alleviate major pressures from climate change on ecosystems by managing and restoring ecosystems and the services they produce and in turn enhancing the adaptive capacity of local communities in Turkana county. The implementation of EBA remains hampered by three key challenges: lack of information, lack of financial resources, and institutional resistance.



Figure 4: Mary Ngasike, a high school student in Kataboi, Turkana County promoting SDG #3 on Good health and wellbeing. Source: Trocaire, 2019

4. Policy Recommendations

- i) To develop a “best fit” County climate change policy and supportive legislations that are rooted in Ecosystem Based Adaptation approaches and aligned with the national climate change policies. This is the starting point and Turkana county has already set in place the process of developing the Turkana County Climate Change Policy and Bill/legislation. The County has also launched its Climate Change Adaptation Action Plan (TCCCAAP) 2019-2022.
- ii) Mainstream EBA into county adaptation, biodiversity and sustainable development policies. Because EBA cuts across several sectors its effectiveness depends on being mainstreamed across numerous sectors. Putting in place supportive policies and incentives to help local communities implement and derive benefits from EBA is also necessary.
- iii) Develop innovative funding for EBA. Secure long-term funding for EBA to ensure its integration into strategic planning and sustainable development interventions in Turkana county but also at national and regional levels.
- iv) Support research so that EBA is guided by the best available evidence. More research is needed in order to assess future climate risks and vulnerabilities, better quantify the costs and benefits of EBA and enhance evidence on the role of ecosystem services in reducing vulnerability to climate change in the county of Turkana.
- v) Promote knowledge exchange and the development of practical tools and guidance for implementing EBA as part of broader adaptation planning strategies. Share best practices and experiences derived from implementing EBA across a range of Turkana county ecosystems and geographical diversities.
- vi) Develop education, training and communication capabilities within Turkana county and beyond. Increasing awareness of the role of ecosystems and ecosystem management in climate change adaptation is essential in order to increase the local communities’ adaptive capacity.
- vii) Undertake systematic monitoring and evaluation to assess the strengths and weaknesses of EBA activities in the county of Turkana. Effective EBA benefits from an adaptive monitoring framework that enables learning and change.

5. Conclusion

Ecosystem-based Adaptation (EBA) restores, protects and manages ecosystems in order to help human communities cope with the impacts of climate change. As outlined in this brief’s accompanying Technical Paper, EBA has already proven its worth across numerous sectors and geographies. Evidence is emerging of its success in helping people adapt to climate variability and reduce their vulnerability to climate impacts. With these impacts increasingly being felt across Turkana county, there is an urgent imperative to increase resilience to climate change while fostering sustainable economic development at county as well as national and regional levels. Although it remains underutilized at present, EBA provides a viable strategy for pursuing development goals simultaneously with climate change adaptation and mitigation targets. To successfully implement EBA, stakeholders have opportunities to liaise with a variety of organizations at county and national levels to address the existing challenges of lack of information, finance and institutional capacity. Through partnerships, the county government of Turkana and local communities can harness EBA approaches to benefit from better managed ecosystems, improve livelihoods, and achieve sustainable development.

6. Further Reading

The Rio conventions Action on Adaptation: <https://www.unclearn.org/sites/default/files/inventory/unfccc147.pdf> (Accessed Sept 2020)

IPCC (2001) Climate Change 2001: Impacts, Adaptation and Vulnerability. IPCC Working

Nyong, A. 2005. Drought-Related Conflict, Management and Resolution in the West African Sahel; Human Security and Climate Change an international Workshop Oslo, Norway, 21- 23 June 2005

Orindi and Murray 2005; Orindi, V.A. and Murray, L.A. 2005. Adaptation to Climate Change in East Africa: A strategic Approach. Gatekeeper series 117, International Institute for Environment and Development

Simms and Reid 2005; The third report from the Working Group on Climate Change and Development The threat from climate change to the environment and human development

Tiempo 57. Reference section www.iisd.org/publications/pub.aspx?id=1312 (Accessed Sept 2020).

<http://www.environment.go.ke/wp-content/documents/complete%20nccrs%20executive%20brief.pdf> (Accessed Sept 2020).

http://www.environment.go.ke/wp-content/uploads/2018/08/The_Kenya_Climate_Change_Act_2016.pdf (Accessed Sept 2020).

https://www4.unfccc.int/sites/NAPC/Documents%20NAP/Kenya_NAP_Final.pdf (Accessed Sept 2020).

https://kplc.co.ke/img/full/o8wccHsFPaZ3_ENERGY%20ACT%202019.pdf (Accessed Sept 2020).



Figure 5: James Lokwang provides water for his goats and sheep in Lokichar, Turkana, County. Source: Trocaire, 2019

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