

The Untold Story of EbA: Investing in EbA for a Sustainable Kenya.

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Ecosystem-based Adaptation (EbA), defined by the [Convention on Biological Diversity](#), is the use of biodiversity and ecosystem services as part of an overall adaptation strategy to help people adapt to the adverse effects of climate change. [UNEP](#) supports countries globally in developing National Adaptation Plans (NAPs), which are comprehensive and strategic frameworks to reduce climate change vulnerability. rooted in the Cancun Adaptation Framework¹ and Paris Agreement², NAPs identify climate risks, develop adaptation strategies, and integrate them into national development plans. Kenya's NAP prioritizes Ecosystem-Based Adaptation (EbA) to enhance resilience in sectors like agriculture, water, and forestry, emphasizing the protection and restoration of ecosystems for essential services and climate mitigation³.

[Speaking at COP26](#), Dr. Bruno Oberle, Director General of the International Union for Conservation of Nature (IUCN), recognized the urgent need for nature to be at the heart of climate action. He emphasized that Nature-based Solutions (NbS) offer immediate, cost-effective ways to buffer the impacts of climate change for vulnerable communities. Dr. Oberle called on all Parties to prioritize NbS in climate adaptation and mitigation efforts, ensuring their integration with robust policies to unlock their full potential and enhance global resilience. By integrating EbA (a subset of NbS) into wider adaptation and development strategies, we can harness the power of nature to build resilient and equitable communities. [IUCN](#) plays a crucial role in promoting integrated adaptation. By working with the [UNFCCC Nairobi Work Programme](#), IUCN fosters collaboration between policymakers, scientists, and practitioners to develop and implement effective adaptation strategies.

The [IUCN Discussion document](#) outlines that EbA is guided by several core principles, such as ecological integrity, sustainability, an integrated approach, multi-stakeholder participation, local knowledge, and flexibility and adaptability. It prioritizes the resilience of both ecosystems and communities, promoting a multi-sectoral approach that operates at multiple geographical scales. EbA emphasizes flexible management for adaptive strategies, balancing competing interests and minimizing trade-offs to achieve multiple goals while avoiding negative impacts. It combines the best available science with local knowledge, fostering knowledge exchange. The goal is to create resilient ecosystems using nature-based solutions to benefit vulnerable

¹ Read more on the Cancun Adaptation Framework: <https://unfccc.int/tools/cancun/adaptation/index.html>

² Read more on the Paris Agreement: <https://unfccc.int/process-and-meetings/the-paris-agreement>

³ The vision of this NAP is enhanced climate resilience towards the attainment of Vision 2030. (Government of the Republic of Kenya. (2018). Kenya Climate Resilience Strategy.)

communities. Success requires EbA to be participatory, transparent, accountable, culturally appropriate, and equitable. An example in Kenya is the [Kenya Coastal Development Project](#) (KCDP), which enhances coastal resilience through mangrove restoration in Kilifi and Lamu counties. This project protects against coastal erosion and provides resources like wood and fish, crucial for local livelihoods. It integrates local knowledge and scientific research, engaging communities in sustainable mangrove management.

Amidst the climate crisis, farmers need to modify production and farm management practices, such as adjusting planting time, supplementing irrigation (when possible), intercropping, adopting conservation agriculture, accessing short- and long-term crop and seed storage infrastructure, and changing crops or planting more climate-resilient crop varieties (Acevedo et al., 2020).

Filho et al. (2017) conducted a study in Kajiado County, Kenya, to investigate climate change adaptation strategies among the Maasai community. Kajiado County borders Nairobi County to the North and Tanzania to the South. The Maasai, primarily pastoralists, rely heavily on livestock, particularly cattle, for their livelihoods. A common Maasai saying, "*All cows belong to the Maasai people, and all grass belongs to cows,*" underscores the central role of cattle in their culture and economy.

like other smallholder farmers across sub-Saharan Africa, Maasai agro-pastoralist practices are highly diverse and heterogeneous. Due to spatial variations in climate, soil, and landscape, as well as complex socioeconomic factors, Maasai agro-pastoralists have developed diverse adaptation strategies. These include adopting drought-tolerant and disease-resistant crop varieties, optimizing planting schedules, implementing crop rotation, reducing livestock numbers, improving livestock breeds, and diversifying livelihood subsistence through activities like beekeeping, forestry, artisanal mining, and off-farm employment.

Harvey et al. (2017) state that local [\(EbA\) strategies](#) such as windbreaks, soil moisture conservation and erosion prevention, sustainable land management, water resource conservation, and the integration of Indigenous Knowledge enhance resilience among grassroots farmers.

Take for example Teresa (Anonymized), a local farmer from Kajiado, who exemplifies ecosystem-based adaptation through conservation agriculture in Kajiado County. Through crop diversification, mulching, and utilizing organic waste for manure Teresa builds her adaptive capacities to climate change. She has been practicing crop rotation for *managu, saga, terere, and sukuma wiki* (local vegetables) on her Njiru Lane farm. . Thereby, Teresa adopts two key EbA practices. First, Conservation Farming or [Conservation Agriculture](#) (CA), which she uses to enhance her farm's soil health and productivity while minimizing environmental impact. It is based on three core principles: Firstly, Minimum Soil Disturbance, which reduces tillage to preserve soil structure and health, permanent Soil Cover that maintains plant residues and covering crops to protect the soil; Secondly, Teresa uses Crop Diversification and implements

crop rotations and intercropping to improve biodiversity and resilience against pests and plant diseases. These practices improve soil health which is the foundation of resilient agriculture, optimize water usage, and promote biodiversity which helps to buffer the impacts of climate change, such as extreme weather events and pest outbreaks, ultimately helping to achieve climate-resilient communities.



Female farmer in Kajiado, Kenya, Photo Credit: Dinah Awino

While EbA is viewed holistically, it is crucial to recognize that healthy ecosystems play a significant role in mitigating climate risks. Ecosystem-based adaptation (EbA) in Kenya is bolstered by various initiatives and organizations. IUCN, in partnership with the Kenyan government, leads the [4TWENDE project](#), working alongside local stakeholders to enhance resilience in arid lands, benefiting 400,000 people, and restoring 500,000 hectares of rangelands. Similarly, organizations like Conservation International focus on reducing community vulnerability to climate change, implementing transformative strategies that empower local actors to take charge of their own adaptation and resilience efforts, with support from international stakeholders such as donors and non-profits. The United Nations Environment Programme (UNEP) implements the [Lake Victoria project](#)⁵, integrating climate resilience into water management for local communities. Additionally, the [Stockholm Environment Institute](#)

⁴ Twende Project- The project will contribute to improved adaptation to climate change of Kenya's national policy of "Ending Drought Emergencies", as outlined in "Kenya Vision 2030". The project will strengthen climate change adaptation in Kenya's arid and semi-arid lands (ASALs).

⁵ Lake Victoria Project- Through this project, the resilience of local communities will be greatly improved through on-the-ground solutions for water conservation, climate-smart agricultural techniques and EbA interventions. These practical solutions will also promote new and innovative approaches to climate change adaptation that take advantage of indigenous knowledge.

promotes integrated planning for water, energy, and agriculture to enhance climate resilience across the region.

The application of EbA practices is similarly promoted through various channels such as media campaigns, educational curricula, and faith-based teachings (Teresa's farming passion is rooted in her love for farming and guided by her religious teachings. She says "*Nitaenda na baraka za Mungu kutoka shambani kwangu, nataka kuwa msimamizi mwema na mwaminifu wa kile kilichonipewa kusimamia.*,"⁶ reflecting her commitment to stewardship of God's natural assets.), and robust governance frameworks that support adaptation efforts such as the [National Climate Change Strategy](#) and the [National Climate Change Act \(2016\)](#).

In conclusion, collective efforts like those of the Maasai communities and Teresa in Kajiado, no matter how small, serve as vital building blocks for [Kenya's climate adaptation programs](#) and resilience strategy. These efforts often blend traditional knowledge with contemporary guidance and apply practices once passed down by ancestors, highlighting the enduring relevance of indigenous knowledge in climate resilience. [Kenya's Climate Change Adaptation System](#) should incorporate indigenous practices in weather prediction, environmental conservation, and local response methods, as highlighted in the document *Integrating EbA into National Planning*. Therefore, EbA interventions should align with national, regional, and local plans and policy measures.⁷ By using area-based models to understand ecosystem linkages and engaging with government officials, locals, and experts, we can jointly explore future climate risks and vulnerabilities, including the impact on ecosystems. Integrating ecosystem considerations and EbA into existing climate change vulnerability assessments can further strengthen adaptation strategies. This participatory process of developing the evidence base can raise awareness, foster ownership, and build the capacity of decision-makers to support adaptation, including EbA. With an enhanced understanding of the latest scientific information in combination with a thorough consultation and engagement process of local communities and stakeholders, government officials are well-positioned to provide the necessary political framework for the successful implementation of appropriate adaptation strategies.

Call to Action

To ensure your research results gain the political attention they deserve, communicate your findings clearly, engage with local communities, policymakers and practitioners, leverage social media, participate in community and policy dialogues, and most importantly, advocate for evidence-based policy. By taking these steps, you can influence decision-making and contribute to positive change.

⁶ I will go with God's blessings from my farm, I want to be a good faithful steward of what I have been given to manage

⁷ Read more on Integrating EbA into National Planning from this Briefing-
<https://wedocs.unep.org/bitstream/handle/20.500.11822/28179/Eba6.pdf?sequence=1&isAllowed=y>

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