Prosperous Land, Prosperous People: Scaling finance for Nature-based Solutions in Kenya

November 2022

EXECUTIVE SUMMARY

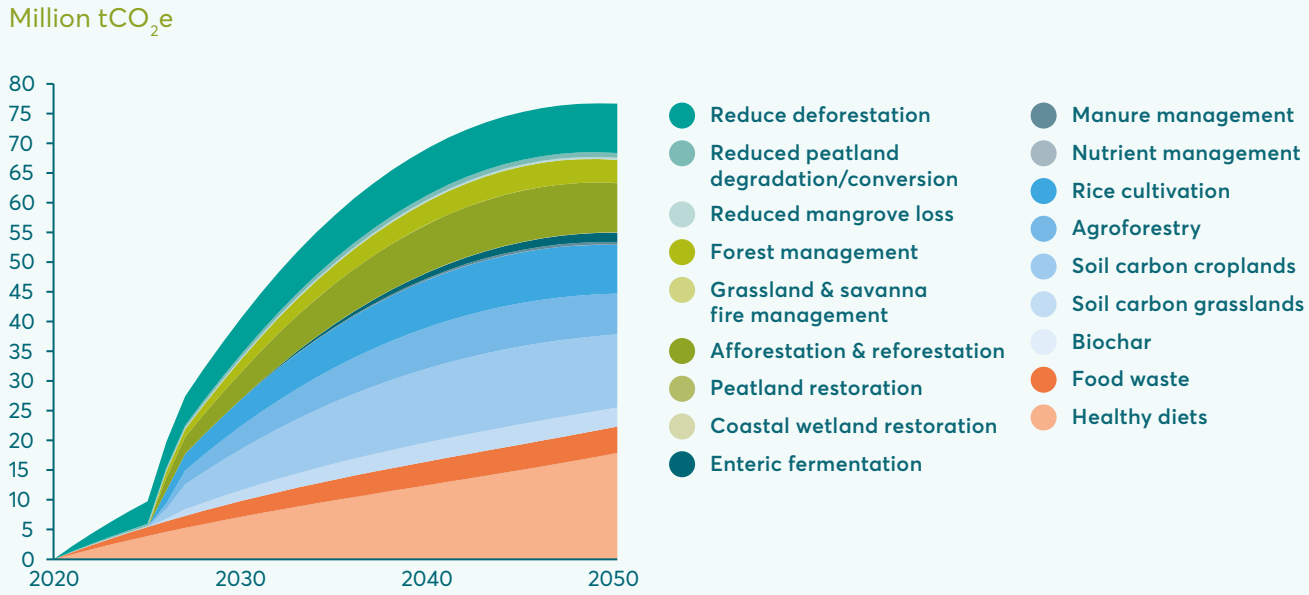
The Food and Land Use Coalition

Nature-based Solutions (NbS) are a critical part of the transformation agenda for food and land use systems to deliver better prosperity for people and planet.[3] NbS are actions in land-based and marine ecosystems to protect, sustainably manage and restore natural or modified ecosystems that address societal challenges effectively and adaptively, simultaneously providing human well-being and biodiversity benefits.[4] There has been increasing attention to the role that land-based NbS play in climate change mitigation. Recent evidence suggests that the implementation of 20 different land-based solutions can provide around 30% of global mitigation needed to deliver the 1.5°C temperature target, whilst also securing the climate regulation function of the existing land sink.[5,6] This report focuses specifically on these NbS measures – all of which restore, protect and manage natural ecosystems and shift how food is produced and consumed.[ii]

Kenya faces a tremendous opportunity to implement NbS as part of its transformation of food and land use systems. Implementation of a suite of land-based NbS in Kenya by 2050 has the potential to deliver significant benefits for climate, biodiversity protection, local livelihoods, food and nutrition security. These measures could provide climate mitigation of approximately 80 million tCO_2e per year by 2050, which is equivalent to the annual emissions of Kenya in 2019.[7] Agricultural measures, such as enhancing soil organic carbon sequestration in grasslands and in croplands as well as agroforestry have the highest mitigation potential, but other demand-side interventions are also needed in Kenya.

[ii] This report specifically focuses on the 20 land-based measures defined in Roe et al. (2021), 19 of which are relevant to Kenya.

Figure 1: Estimated cost-effective mitigation potential per NbS measure from 2020 to 2050 ($MtCO_2e$ per year).[iii]



Building a more resilient and prosperous, as well as food- and nutrition-secure economy in Kenya is more important than ever. Recent trends reinforce this need, as evidenced by the COVID-19 pandemic, the cost of living crisis and global supply chain disruptions as a result of international conflict and climate-related disasters, which are already costing Kenya between 2-3% of GDP.[8] Studies suggest that NbS can help to build a more climate resilient and food secure Kenya. By increasing the biological diversity on farmland, the agricultural solutions can help drive productivity in both crop and livestock-based systems, alongside producing more nutritionally diverse food. Solutions that plant and protect trees can increase water infiltration, promote soil health and reduce local temperatures, increasing resilience to droughts, erratic rainfall and high temperatures. More quantitative studies are needed, however, to ensure these benefits are experienced across all solutions and in all biomes. Ensuring these benefits can be unlocked requires implementing NbS with guardrails to mitigate against potential risks such as harm to local communities and unintended impacts on local biodiversity.

The Government of Kenya is increasingly recognizing the importance of NbS. Kenya was one of the first African nations to implement a National Climate Change Action Plan (NCCAP), which places significant importance on afforestation and reforestation – aiming to restore 300,000 ha of forest per year by 2030.[9] President Ruto and his Government, have developed a 10-year agricultural strategy, of which a key component will be investment into climate-resilient practices and solutions. He has also made a push to boost international investment and collaboration to adapt to the climate crisis.[10] However, the nascent Government is yet to make longer term commitments around the use of improved forestry and agricultural practices to build resilience to extreme weather events.

[iii] Cost-effective mitigation potential is mitigation which can be achieved for less than USD 100 per tonne CO2e (Roe et al., 2021). The total mitigation per year by 2050 was calculated by applying the mitigation potential scale-up between 2020 and 2050 detailed in Roe at al. (2019) to the average cost-effective mitigation potential for Kenya identified in Roe et al. (2021).

Despite their importance, NbS receive limited funding in Kenya, as well as globally. Less than USD 90 million per year is currently spent on land-based NbS in Kenya – or 0.1% of the Kenyan GDP in 2019. There are several reasons why NbS are underfunded in Kenya despite their increasing policy recognition. For example, public and private sector investors often lack the information to enable them to invest in land-based mitigation, including which concrete programme and jurisdictional-level investment opportunities exist and how to structure investments in nature and sustainable landscapes. Moreover, the rules and dynamics of private carbon markets are complicated and not always easy to navigate. Ultimately, all actors lack the information needed to assess the economic opportunities provided by a sustainable, nature- and climate-positive economy.

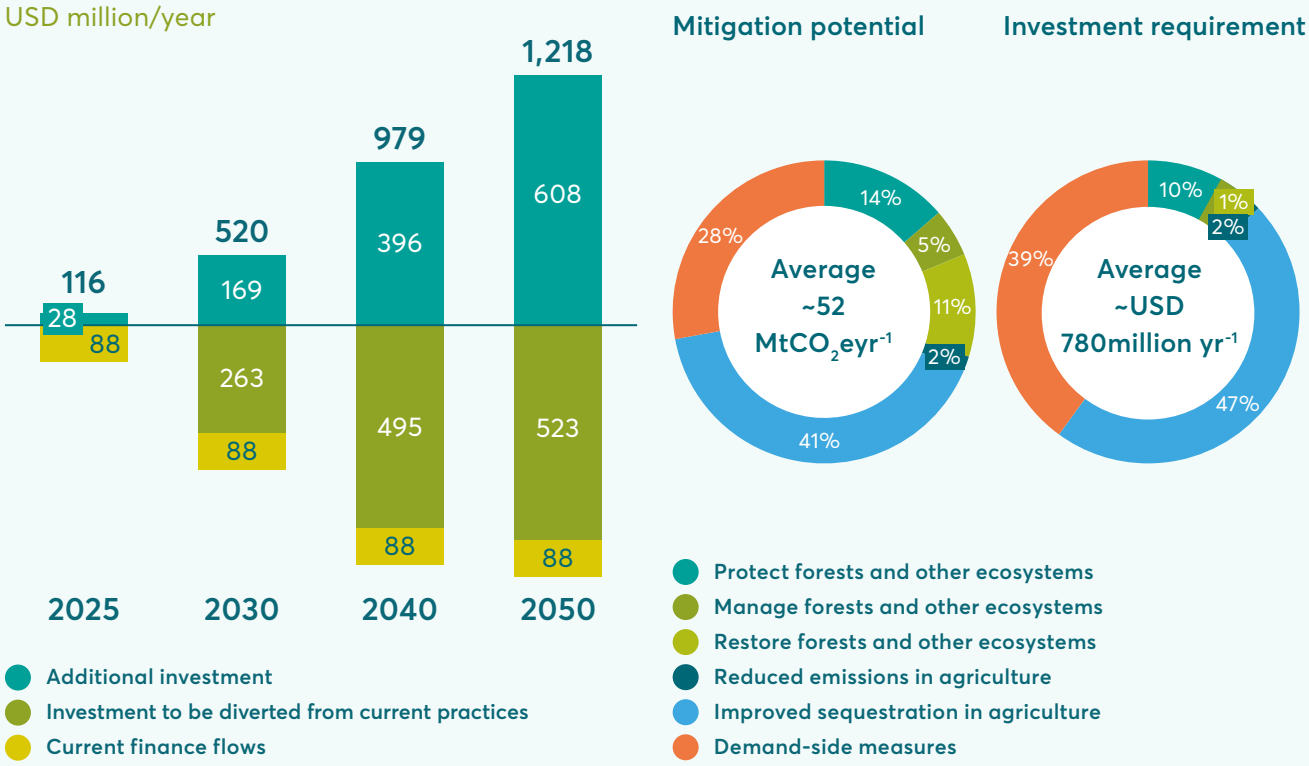
There is increasing evidence that NbS are cost-effective solutions that can be deployed today. Solutions which sequester and reduce emissions from agriculture are relatively more costly per tCO_2e than other NbS in Kenya (USD 34 per tCO_2e on average), with the forest and other ecosystem solutions costing far less (USD 5 per tCO_2e on average). Despite higher costs per tCO_2e, agricultural measures tend to be more profitable as they generate higher and faster returns. Some agricultural solutions, such as improved rice cultivation, can generate economic returns immediately, whereas others require more patient capital to yield returns, such as agroforestry which requires time for fruit trees or coffee bushes to mature.

This study estimates that Kenya would require USD 1.2 billion of investment per year by 2050 to unlock the potential of NbS in Kenya (see Figure 2).[iv] This represents an approximately 13-fold increase in total annual finance for NbS by 2050 compared to 2019 finance flows. Agricultural solutions make up half of the total cost between now and 2050, at an average of USD 200 million per annum, but the majority of this investment does not require "new" investment. Over 90% of the finance needed for these solutions could possibly be delivered by re-directing investment that is already going into Kenya's agricultural sector. This is because most of the agricultural solutions require a change in practice (or set of practices) from an existing agricultural model.

Delivering USD 1.2 billion investment by 2050 requires a number of financial instruments – from grant and direct supply chain-finance to equity and debt-instruments. This study has developed a potential investment pathway for how different financing strategies can be deployed over the next three decades to reach Kenya's total investment requirement. The results suggest that while equity, concessional and market-rate debt are projected to make up less than 1% of investments in 2025, they could account for nearly 50% of instruments by 2050. This scaling results from the assumption that NbS business models and revenue streams become more established over time. These could include more innovative business models which create value from standing forests and forest regrowth, such as ecotourism, production of wild forest products or payment for ecosystem services.[11]

[iv] The total investment was calculated using the USD per tonne of carbon dioxide equivalent (USD/tCO2e) associated with each NbS measure in Kenya as well as the cost-effective mitigation potential summarized in Figure 1 (see methodology document for more information).

Figure 2: *Left:* **investment needed per decade split by existing finance that needs to be augmented or redirected (below the line), and additional finance to be sourced (above the line) in USD million per year.** *Right:* **average percentage split of mitigation potential and investment required by NbS category between 2025-2050.**



Results from the analysis also show that a range of investors have a role to play in financing NbS in Kenya:

- The Government of Kenya, with the support of international development partners, is an important financier (up to USD 240 million per year by 2050, or 1% of GDP), as well as enabler of investment, by crowding in other investors. By investing in a supportive enabling environment, through measures such as policy reform, securing land tenure and engaging with corporates around net zero, the Government could crowd in USD 1 billion of private sector investment (a ratio of roughly 1:4).

- Development finance institutions and philanthropy could provide 10% of the total investment in 2025 and 2050, whilst increasing their investment 10-fold. In the short-term, grant-based investments and concessional financing are projected to be most important whilst the provision of concessional debt becomes increasingly important from 2030 onward. Like the Government of Kenya, these investors could play a key role in creating the pipeline of initiatives necessary to attract interest from private investors.

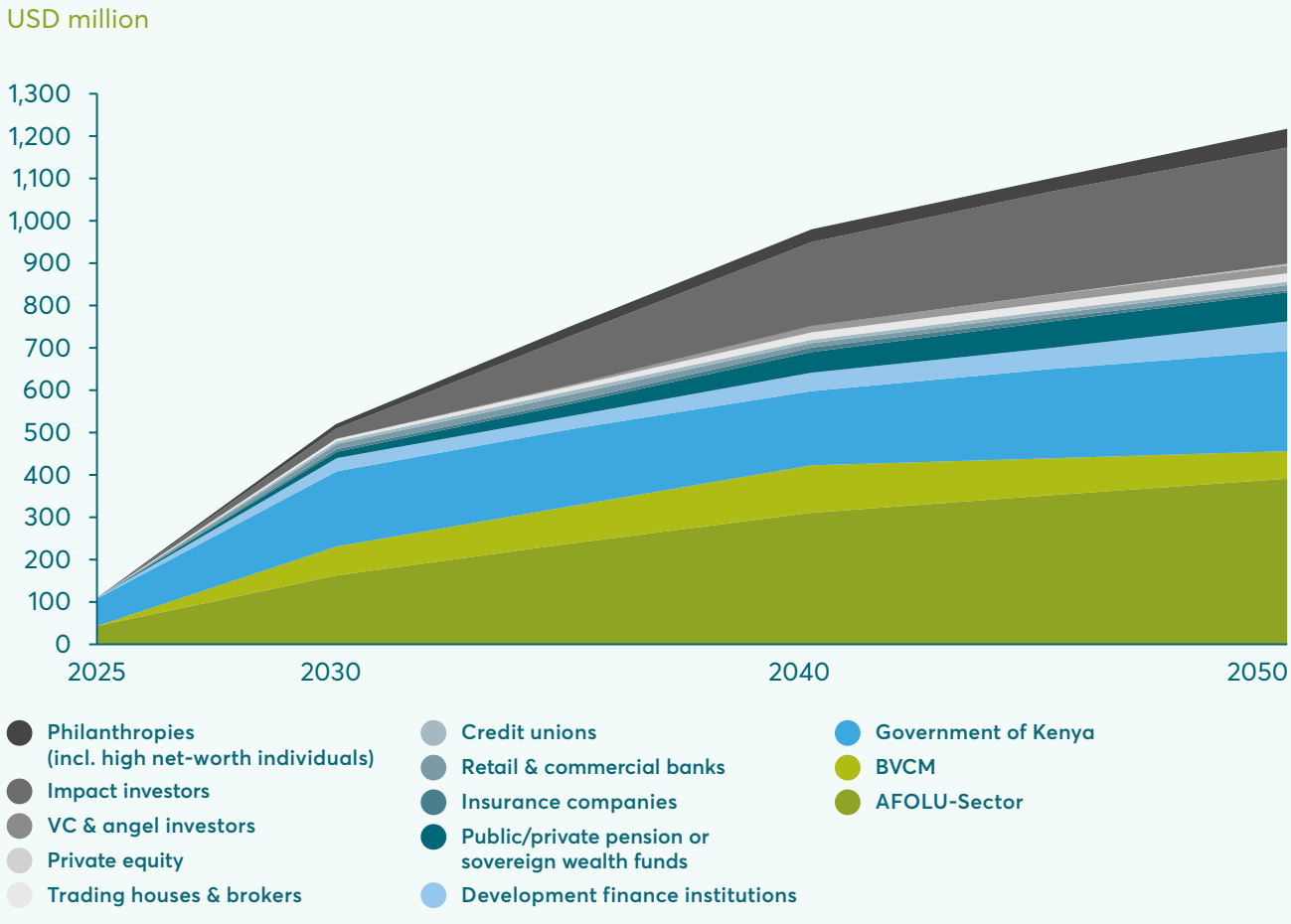
- Domestic and international corporates could make up more than 40% of the investment needed over the course of the transition.

- Global and domestic Agriculture, Forestry and other Land use (AFOLU)[v] sector companies who have operations and supply chains in Kenya, could invest USD 400 million per year by 2050 but this could increase to over USD 420 million if the sector pays the full cost of aligning their land value-chains with a net zero future. This represents 1.2% and 1.3% respectively of the value add of the AFOLU sector in Kenya today.

- Over USD 110 million could be financed by 2040 through corporates investing in "Beyond Value-Chain Mitigation" (BVCM), including through the voluntary carbon market (VCM). The VCM is a useful mechanism to improve the commercial case of NbS investments; however, if demand for carbon credits is tied to the volume of unabated emissions then demand for carbon credits would eventually decline as companies transition to net zero.

- Institutional investors including pension and sovereign wealth funds, insurance companies, retail and commercial banks, credit unions, trading houses and brokers, private equity funds, venture capital funds and angel investors, and impact investors could finance nearly 35% of the total investment needed by 2050, compared to a minor contribution today. This reflects the maturation of the business models and revenue streams, as well as increasing ticket sizes, meaning that they are more attractive to investors who require higher returns.

Figure 3: A feasible investment pathway for investing in NbS in Kenya over the next three decades, by investor.



[v] These companies are referred to as Food, Land use and Agriculture (FLAG) companies in the SBTi guidance for this sector.

Agricultural solutions, such as enhanced soil organic carbon in grasslands and agroforestry are critical investments in Kenya as they make up 43% of the mitigation potential and 50% of the investment requirement to 2050. There is a significant scaling up of these measures post 2025 with the major investors in these solutions being the Government of Kenya and AFOLU sector corporates. The Government invests more in the early stages of the transition helping to overcome higher establishment costs and the AFOLU sector invests in helping to improve agricultural practices within their value chain.

Although this scenario highlights a potential investment pathway, there are still major barriers to investment that would need to be addressed in order to make this pathway a reality. For instance, the large number of smallholder farmers and pastoral communities in Kenya still face challenges of access to markets and capacity to implement NbS. International investors often perceive the food, nature and land sector in emerging markets like Kenya as high risk, because political, regulatory and currency risks can be elevated and compounded by weaker local capital markets in comparison to markets in high income countries. Overcoming these barriers – from access to market, risk assessment methodologies and beyond – will be key to enabling increased private sector investments into NbS.

Through creating an enabling environment to overcome key barriers to investment, the Government of Kenya can increase the flow of finance towards NbS. Actions include those that require policymakers to develop or reform policy, regulation or incentives, and those that require public spending and investment into activities which will promote NbS investment. Policymakers can incentivize more sustainable behaviours though policy reform and can facilitate sustainable private investment by boosting policies around net zero commitments, compliance and land tenure rights. Policymakers can also play a key role in capacity building and aggregation of initiatives and investments in order to increase the ticket size and thus the supply of investable business models. Investment into technology such as spatial planning and low carbon agri-tech would ease the implementation of these solutions.

Kenya faces an unprecedented opportunity to build a thriving and resilient nature-positive economy through investment into NbS. Critically, this report demonstrates how the Government can lower the investment burden of the public sector in the long term, by crowding in private sector finance for NbS. It is a report for consultation which describes a potential, yet ultimately feasible, investment pathway. As such, the ambition is to inform the Government of Kenya's long-term investment and policy strategy for NbS and to inspire the mobilization of wider investors to deploy a range of financial instruments towards NbS in Kenya and globally.

References

1. Climate Policy Initiative. 2021. Preview: Global Landscape of Climate Finance 2021.
https://www.climatepolicyinitiative.org/wp-content/uploads/2021/10/Global-Landscape-of-Climate-Finance-2021.pdf

2. Roe, S. et al. 2021. 'Land-based Measures to Mitigate Climate Change: Potential and Feasibility by Country'.
Global Change Biology, 27 (23). **https://doi.org/10.1111/gcb.15873**

3. Food and Land Use Coalition (FOLU). 2019. Growing Better.

4. International Union for the Conservation of Nature (IUCN(. 2020. 'IUCN Global Standard for NbS'. Press release, 24 July.
https://www.iucn.org/news/europe/202007/iucn-global-standard-nbs

5. Roe, S. et al. 2019. 'Contribution of the land sector to a 1.5 °C world'. Nat. Clim. Chang. 9, 817–828.
https://doi.org/10.1038/s41558-019-0591-9

6. Roe et al. 2021. Op cit.

7. Worldbank. 2022. **https://data.worldbank.org/indicator/EN.ATM.CO2E.KT?locations=KE.** Accessed 2 November 2022.

8. Mazza, F., Balm, A., Van Caenegem, H. 2021. 'The Landscape of Climate Finance in Kenya'. Climate Policy Initiative.
https://www.climatepolicyinitiative.org/publication/the-landscape-of-climate-finance-in-kenya/#:~:text=Kenya%20is%20highly%20vulnerable%20to,product%20(GDP)%20every%20year.

9. Government of Kenya. 2018. National Climate Change Action Plan (Kenya): 2018-2022. Volume 3: Mitigation Technical Analysis

10. Mutura, J. 2022. 'How William Ruto plans to reform agriculture, tackle climate crisis'. The Standard, 22 September.
https://www.standardmedia.co.ke/business/article/2001456357/how-william-ruto-plans-to-reform-agriculture-tackle-climate-crisis

11. FOLU. 2019. Prosperous Forests.
https://www.foodandlandusecoalition.org/wp-content/uploads/2019/11/FOLU-Prosperous-Forests_v6.pdf

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