



# ASSESSMENT OF **NATURE-RELATED FINANCING** AND INVESTMENT OPPORTUNITIES IN KENYA



KENYA





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# Executive Summary

Kenya, classified among the world's ten mega-biodiverse nations can be a leading example in promoting nature-positive outcomes through the financial sector.

Home to over 35,000 species of flora and fauna, The country has a large diversity of ecological zones and habitats, including forests, grasslands, wetlands, and marine ecosystems, all of which significantly contribute to the country's economy through agriculture, tourism, fisheries, and energy production. Approximately 42% of Kenya's GDP comes from natural resources, making the country's economy highly dependent on the sustainable use and preservation of a healthy environment. At the same time, millions of people are already exposed to the effects of nature and biodiversity loss. Banks can contribute to reversing the trend with financing for projects and companies that contribute to halting and reversing nature loss.

## **Opportunities for nature-related financing and investments in Kenya include nature-positive finance.**

This report explores the opportunities for nature-related financing and investments and the enabling conditions required to foster a thriving nature-positive economy in Kenya. It offers an assessment of investable nature-related sectors in Kenya, insights into the availability of financial and investment instruments, and examples of nature-related business models. It also includes an assessment of projects and inspiration to build a pipeline of projects that can contribute to nature-positive outcomes, as well as guidance on nature-related risks and their financial impacts. The findings aim to guide stakeholders - particularly financial institutions - in unlocking the

economic potential of nature while contributing to biodiversity conservation and the sustainable management of natural ecosystems.

Nature Positive is a global societal goal defined as

***'Halt and reverse nature loss by 2030 on a 2020 baseline, and achieve full recovery by 2050'***

To put this more simply, it means ensuring more nature in the world in 2030 than in 2020 and continued recovery after that

Though there is no widely agreed-upon definition, for the purposes of this report, finance that contributes to a nature-positive economy is classified as "nature-positive finance" which we define as finance that contributes to halting and reversing nature loss by restoring and enhancing ecosystems with the aim of improving the overall state of nature to full recovery by 2050.

## **Agriculture, forestry, environmental services, and manufacturing are the most promising sectors.**

Four promising sectors and associated nature-related business models have been identified in Kenya: agriculture, forestry, environmental services, and manufacturing. Within these sectors, examples of concrete business models focused on regenerative agriculture, agroforestry, eco-tourism and waste-to-energy are provided to demonstrate the practical application of integrating nature into core business strategies. These models not only enhance environmental outcomes but also offer commercial potential and replicability.

**“Kenyan banks have shown strong commitment to nature by taking early steps through CSR and non-financial initiatives - laying the groundwork for deeper integration into core financing strategies.”**



SCALE LEVEL – SHADES OF 'GREEN'	SECTOR	BUSINESS MODEL EXAMPLE
Nature-Positive – the highest level of commitment, aiming not only to sustain but to restore and enhance nature	Agriculture	Regenerative agriculture
	Forestry	Agroforestry: organic production of certified high value crops while maintaining a polyculture
Nature Conservation – goes beyond just avoiding harm by actively protecting and maintaining natural ecosystems	Environmental services	Ecotourism aimed at wildlife and ecosystem conservation
Do No Harm – baseline level of environmental responsibility	Manufacturing	Waste-to-energy

*“A number of risks and barriers continue to hinder the flow of private sector finance. Credit risk remains a primary concern, particularly due to the sector’s dependence on natural ecosystems and the absence of tangible collateral.”*

**Kenya’s financing opportunity for nature-related investments is estimated to be between USD 100-150 billion over the next decade.**

Based on indicative, rough estimates from limited data available, Kenya’s total financing opportunity for nature-related investments is projected to be between USD 100-150 billion over the next decade (see Annex 3 for an overview of sources used to derive this estimate). Financial institutions have a key role to play in mobilising this capital through a mix of financial instruments, including blended finance mechanisms and loans with terms that align better with the character of the project opportunity, alongside more exotic instruments such as green-, blue- and sustainability-linked bonds and debt-for-nature swaps.

**The sector’s dependence on natural ecosystems and the absence of tangible collateral are among the risks that need to be addressed.**

Despite the significant opportunity, a number of risks and barriers continue to hinder the flow of private sector finance. Credit risk remains a primary concern, particularly due to the sector’s dependence on natural ecosystems and the absence of tangible collateral. Market and liquidity risks are further exacerbated by policy uncertainty, climate-related variability, and a lack of historical performance data for projects contributing to nature-positive outcomes. These challenges, coupled with limited in-house capacity within financial institutions to assess such risks effectively, contribute to a perception of high risk and low bankability. Furthermore, systemic barriers persist, including the absence of harmonised definitions for key concepts such as ‘nature-positive’, and the lack of technical screening criteria for areas like ecosystem conservation, wildlife management, and forestry and land rehabilitation within the Kenyan Green Finance Taxonomy. In addition, insufficient data on nature-related risks and opportunities within banks’ portfolios at the asset level, along with a lack of scalable, mature business models, hamper the development of a robust investment

pipeline. Many projects remain small-scale and fragmented, making it difficult to attract large-scale capital.

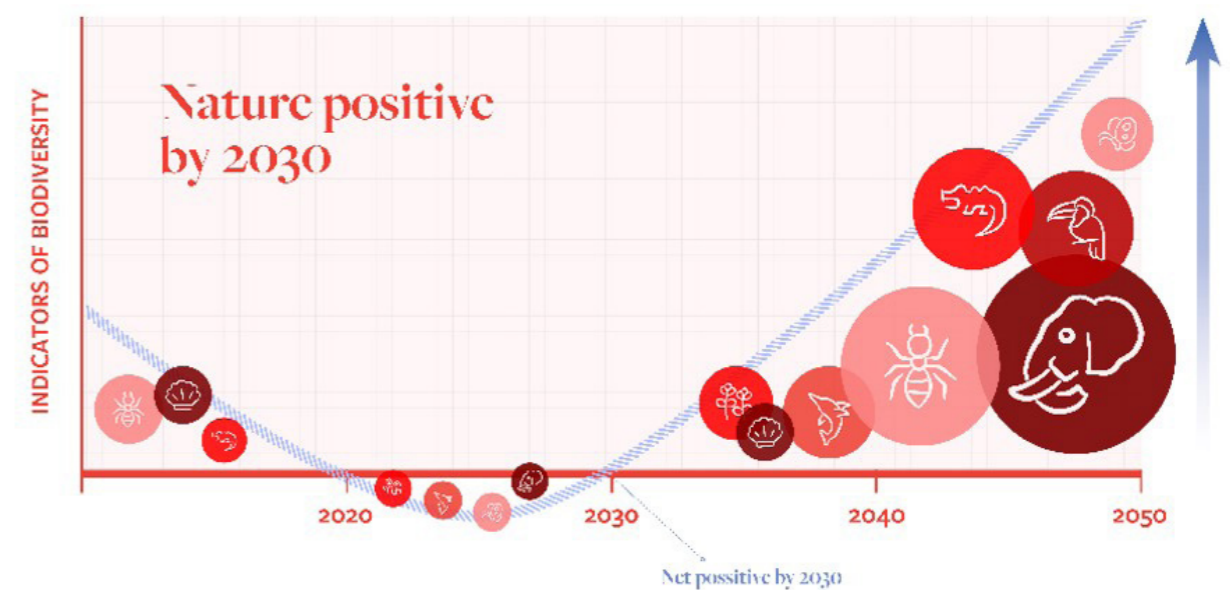
**Strategic interventions are needed, such as the expansion of blended finance facilities and strengthening capacity within banks.**

To address these challenges, the study proposes a series of strategic interventions. It calls for the expansion of blended finance facilities, including the provision of more flexible financing terms to reduce collateral thresholds, partial risk guarantees and first-loss capital which enhance the risk-return profile of projects contributing to nature-positive outcomes. This, combined with structured co-financing using concessional capital from development partners and sources such as multilateral climate funds (e.g. GEF, GCF), can help de-risk early-stage projects and encourage greater private sector participation. To fully unlock the nature-related potential of Kenyan banks, it is essential to build internal capacity through technical assistance on nature-related financing - particularly for credit officers and risk analysts. This will enable more effective assessment and integration of nature-related risks, as well as the identification of opportunities, e.g. in banks’ value chains, to inform mainstream decision-making. To ensure market integrity and prevent greenwashing, the Kenyan Green Finance Taxonomy should be complemented with nature-related technical screening criteria, and nature-related risks should be integrated into existing climate risk management frameworks for banks.

To support banks in identifying eligible nature-related financing opportunities, the study presents an anonymised assessment of 16 projects contributing to nature-positive outcomes across four promising sectors in Kenya. These examples are intended to inspire banks to build a (more robust) pipeline of financially viable nature-related projects.

**Interventions will contribute to nature’s full recovery by 2050.**

This report highlights the vast, yet largely untapped, potential of nature-related financing and investment opportunities in Kenya. With the right enabling environment - spanning supportive policy and regulatory frameworks, financial innovation, and enhanced capacity within financial institutions - Kenya has the opportunity to position itself as a regional leader in mobilising private capital for nature. In doing so, the Kenyan financial sector can generate not only strong economic returns but also meaningful environmental impact by restoring ecosystems, reversing nature loss, and setting nature on a path to full recovery by 2050.





and animal species in Kenya are threatened with extinction, including 30 mammals, 43 birds, 73 fish and 234 plants.<sup>13</sup> The International Institute for Environment and Development (IIED) estimates the Kenyan biodiversity protection financing gap at USD 5.13 billion/yr to limit climate change to 1.5°C and protect 30 per cent of land and sea by 2030 (30x30 target)<sup>14</sup> and reach land degradation neutrality (LDN) by 2030.<sup>15</sup>

*The Kenya Bankers Association (KBA), in line with its Sustainable Finance Initiative (SFI), seeks to identify nature-related financing and investment opportunities for the banking sector in Kenya. This report further explores the investment potential for nature-positive models, presenting a long-term investment case for banks, particularly in sectors that support ecosystem restoration, biodiversity and sustainability.*

## 1.2 The role of financial institutions in advancing nature-related finance

**Financial institutions play a crucial role in bridging this gap: the three largest Kenyan banks collectively manage over KSH 3.5 trillion in assets, which could be leveraged to advance a nature-positive economy.**<sup>16</sup> Channelling finance towards nature-positive outcomes, aimed at halting and reversing nature loss by 2030, with the global societal goal of achieving full recovery by 2050 is in line with the mission of the Kunming-Montreal Global Biodiversity Framework (GBF).<sup>17</sup> Banks, as major players in financing economic activity, are key actors as they can shift financial incentives related to nature loss.<sup>18</sup>

However, banks in Kenya are currently in many cases unfamiliar with the definition of “nature-positive” in the context of financing, including investments. Furthermore, the banks currently lack clear guidance on viable sectors and tangible nature-related financing and investment opportunities (see recommendation 1). This is also crucial for economic reasons as the World Economic Forum (WEF) expects solutions directed towards a nature-positive economy to generate USD 10.1 trillion in business opportunities and create millions of new jobs (see recommendation 7).<sup>19</sup>

<sup>13</sup><https://www.iucnredlist.org/>, last visited 10 February 2025

<sup>14</sup><https://www.cbd.int/gbf/targets>, last visited 10 February 2025.

<sup>15</sup>Nicholson, K, Buso, T, Bann, C, Mutimba, S, Smith, C, Patel, S and Steele, P (2023), Kenya climate and nature financing options analysis: Final report. IIED, London. Available at <https://thedocs.worldbank.org/en/doc/7580561ec99e5e3c7adc68efebfab1dc-0320052023/original/kenya-climate-and-nature-financing-options-analysis.pdf>, last visited 10 February 2025.

<sup>16</sup><https://africa.businessinsider.com/local/markets/39-richest-banks-in-kenya-by-asset-base-cbk-report/81dejv6>, last visited 10 February 2025.

<sup>17</sup>The Definition of Nature Positive (2023), The Nature Positive Initiative, available at <https://www.financeforbiodiversity.org/about-the-pledge/>; <https://www.naturepositive.org/app/uploads/2024/02/The-Definition-of-Nature-Positive.pdf>, last visited 10 February 2025.

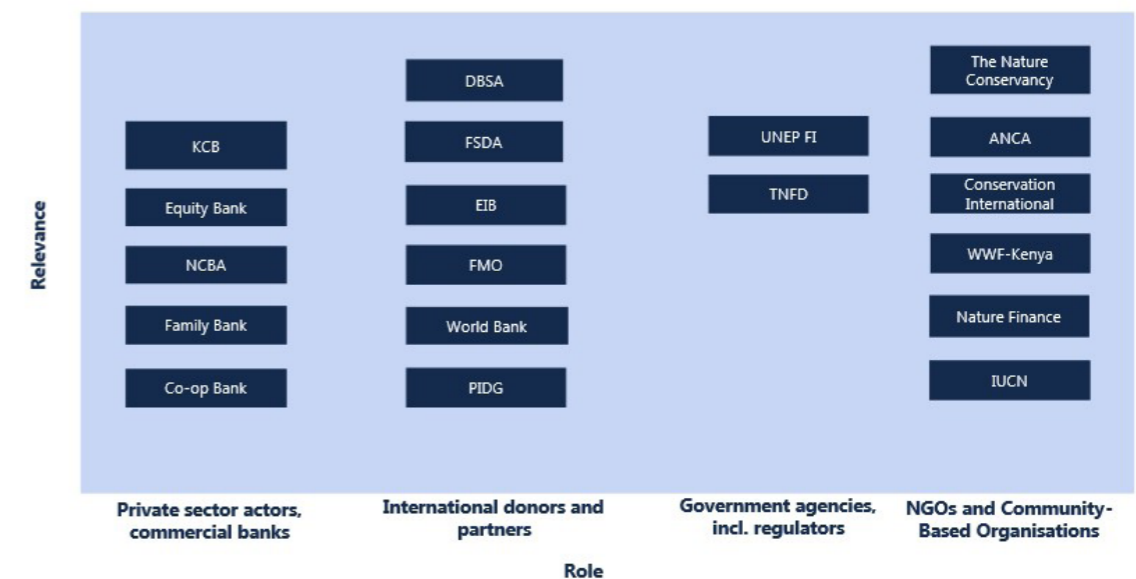
<sup>18</sup>Principles for Responsible Banking: Guidance for Banks. PRB Nature Target Setting (2023), UNEP FI, available at [https://www.unepfi.org/wordpress/wp-content/uploads/2023/11/PRB-Nature-Target-Setting-Guidance\\_2023.pdf](https://www.unepfi.org/wordpress/wp-content/uploads/2023/11/PRB-Nature-Target-Setting-Guidance_2023.pdf), last visited 10 February 2025.

<sup>19</sup>Dasgupta, P. (2021), The Economics of Biodiversity: The Dasgupta Review. Available at [https://assets.publishing.service.gov.uk/media/602e92b2e90e07660f807b47/The\\_Economics\\_of\\_Biodiversity\\_The\\_Dasgupta\\_Review\\_Full\\_Report.pdf](https://assets.publishing.service.gov.uk/media/602e92b2e90e07660f807b47/The_Economics_of_Biodiversity_The_Dasgupta_Review_Full_Report.pdf); [https://www3.weforum.org/docs/WEF\\_New\\_Nature\\_Economy\\_Report\\_2020.pdf](https://www3.weforum.org/docs/WEF_New_Nature_Economy_Report_2020.pdf), last visited 10 February 2025.

## 1.3 Relevant stakeholders

**Nature-related financing is relevant for many stakeholders. Interviews (#25) have been conducted with four categories of stakeholders that will be key in accelerating advancement in nature-related financing. We sincerely thank all stakeholders who made themselves available for interviews; their valuable insights directly informed the findings and helped shape this report.**

- Private sector actors, specifically commercial banks, the report’s target group, were engaged to assess their familiarity with nature-related financing. We examined whether banks currently have nature-positive projects in their portfolios, which challenges they encounter and what they consider the most relevant financing instruments.
- International Donors and Partners play an important role in further developing the Kenyan market for nature-related financing. Some of them have already gained significant experience with nature-related finance and can be considered frontrunners in this market, for example, the Development Bank of South Africa (DBSA) and Financial Sector Deepening Africa (FSD Africa). Based on their experience and considering the state of the market, they are crucial in developing (blended finance) instruments for commercial banks, thereby incentivising them to engage in nature-related financing. In our conversations we thus assessed which instruments are already used by DFIs and development partners and which role they could play in further advancing nature-positive outcomes in the Kenyan market.
- Government Agencies, including regulators, are crucial as they shape the enabling environment for nature-related financing. We assessed to what extent international nature-positive regulatory frameworks, such as the UN Principles for Responsible Banking (UN PRB) and the Taskforce on Nature-related Financial Disclosures (TNFD) recommendations have been taken up in Kenya, which regulatory gaps still exist and what can be done to overcome those (see recommendation 2).
- Non-governmental organisations (NGOs) and Community-Based Organisations have been a driving force in creating awareness around the importance of nature-related financing within the financial sector and beyond. In conversations with some of the most active NGOs and other network organisations we learned more about the relevant sectors for the Kenyan market and assessed the role that commercial banks could play in scaling up existing initiatives that drive nature-positive outcomes.

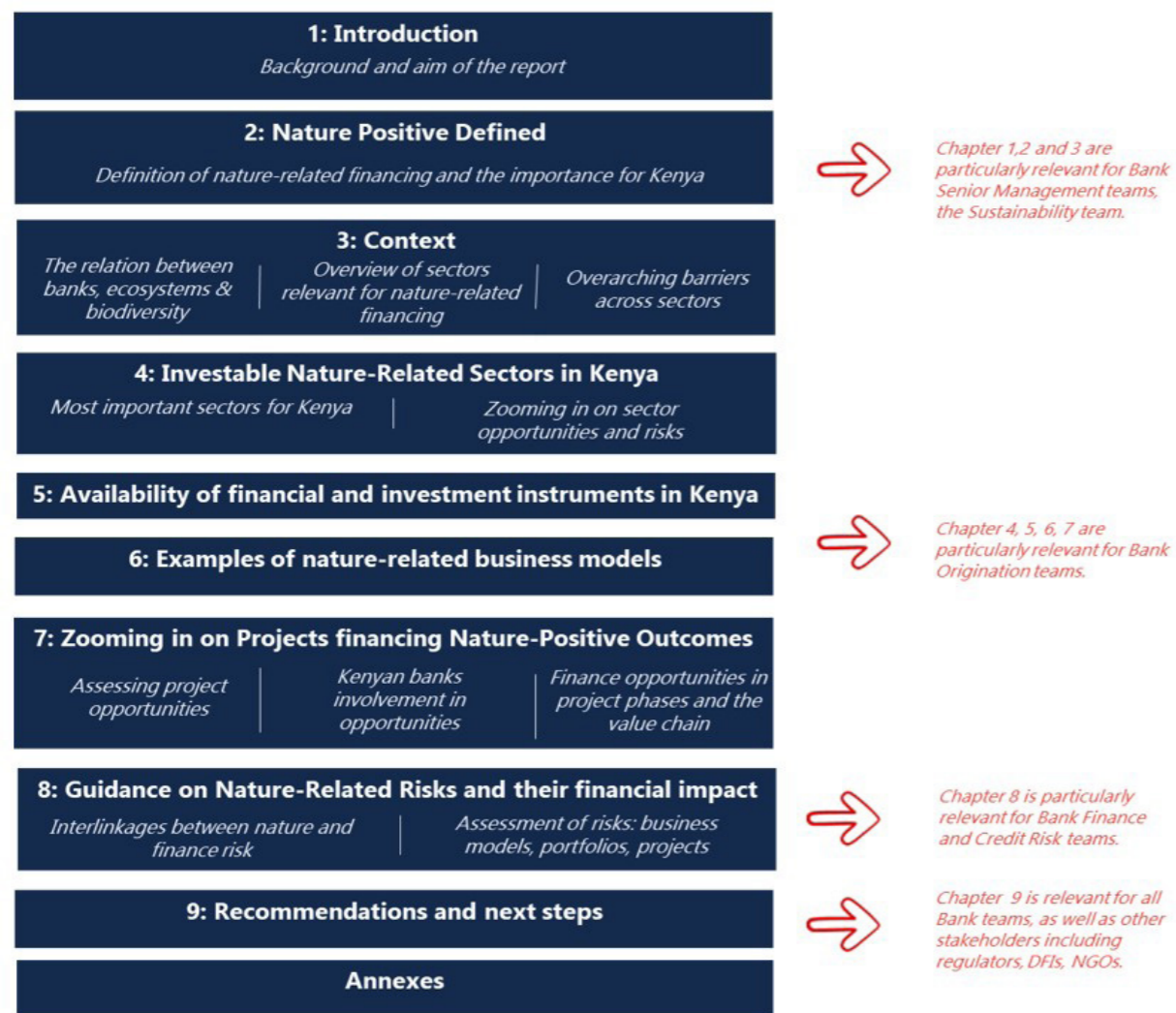


During a workshop that was attended by representatives of Kenyan banks, development partners and non-governmental organisations the initial findings of the interviews were validated. The statements focused on nature as a strategic priority, the definition of nature, the sectors of opportunity in Kenya, financing instruments available and required, an assessment of needs to spearhead nature-related finance. The scope of the study did not include interviews with project developers. It also did not include a detailed analysis of banks portfolios. There may be opportunities which are currently not included but are recommended as follow-up actions. See Annex 1 for a full overview of interviewees and validation workshop participants.

## 1.4 Reader's guide

**The objective of the study and the key answer we aim to address is: what are the viable nature-related finance and investment opportunities for Kenyan banks in the Kenyan market?**

To answer this question, the report delves into the most relevant sectors, business models and projects that were shared, including the opportunities and risks. Throughout the report, barriers to advancing opportunities contributing to a nature-positive Kenyan economy are identified. Recommendations and follow-up actions to overcome these barriers are summarised at the end of the report. Figure 2 explains the structure of the report.



# Nature Positive Defined

## 2.1 Definition and criteria

According to the Nature Positive Initiative, “Nature Positive is a global societal goal defined as ‘Halt and reverse nature loss by 2030 on a 2020 baseline, and achieve full recovery by 2050’. To put this more simply, it means ensuring more nature in the world in 2030 than in 2020 and continued recovery after that.”<sup>20</sup> This definition has been widely recognized by organizations such as UNEP FI, the World Bank, IUCN, WWF, and the Taskforce on Nature-related Financial Disclosures (TNFD). The term is being used by multiple actors including banks “to indicate their aspiration to move beyond concepts of no net loss or net positive impacts, and toward a key outcome where a complete transformation of how societies and global economies operate leads to a future where nature is visibly and measurably improved in absolute terms”.<sup>21</sup>

However, there is still ongoing debate about its precise definition and the parameters that should be used to assess whether finance qualifies as contributing to a nature-positive economy.<sup>22</sup> Some adopt a broad definition which includes lending, investing, or providing insurance/credit de-risking for activities that support conservation, restoration, sustainable use, and/or access and benefit sharing.<sup>23</sup>

Nature positive as a global societal goal is defined in the box which also introduces our definition of nature positive financing. This is important for the clarity of this report and its readers, as well as for the ultimate aim to provide more clear guidance to Banks on what qualifies as nature-positive financing.

### Nature Positive is a global societal goal defined as

**‘Halt and reverse nature loss by 2030 on a 2020 baseline, and achieve full recovery by 2050’.**

To put this more simply, it means ensuring more nature in the world in 2030 than in 2020 and continued recovery after that

Though there is no widely agreed-upon definition, for the purposes of this report, finance that contributes to a nature-positive economy is classified as “nature-positive finance” which we define as finance that contributes to halting and reversing nature loss by restoring and enhancing ecosystems with the aim of improving the overall state of nature to full recovery by 2050.

The following criteria (World Bank) can be used to assess whether finance potentially qualifies as contributing to a nature-positive economy:<sup>24</sup>

1. The finance does not introduce significant adverse risks to or impacts on nature that exacerbate the direct drivers of nature loss, meaning that it should be considered how the project interacts with some of the direct drivers of nature loss, and whether finance may exacerbate these pressures looking at
  - (a) pollution from GHG and non-GHG pollutant, water and soil pollutants, waste,
  - (b) direct exploitation of living and non-living natural resources (e.g. water use), and
  - (c) the introduction or spread of invasive alien species;
2. The finance does not introduce risks of conversion of natural habitat or critical habitat, which also captures the driver of land and sea use change; and
3. The finance does not introduce risks of adverse impacts on Critically Endangered or Endangered species.<sup>25</sup>

<sup>20</sup>The Definition of Nature Positive (2023), The Nature Positive Initiative, available at <https://www.financeforbiodiversity.org/about-the-pledge/>; <https://www.naturepositive.org/app/uploads/2024/02/The-Definition-of-Nature-Positive.pdf>, last visited 10 February 2025.

<sup>21</sup>The Nature Positive Journey for Business: A research agenda to enable private sector contributions to the global biodiversity framework. White et al. (2023), available at [https://osf.io/preprints/osf/nya52\\_v1](https://osf.io/preprints/osf/nya52_v1), last visited 14 March 2025.

<sup>22</sup>Banking on Nature-Positive – How public development banks and commercial banks can collectively contribute towards a Nature-Positive agenda, WWF (2024), available at <https://wwfint.awsassets.panda.org/downloads/wwf-banking-on-nature-positive---october-2024.pdf>, last visited 14 March 2025.

<sup>23</sup>The Definition of Nature Positive (2023), The Nature Positive Initiative, available at <https://www.financeforbiodiversity.org/about-the-pledge/>; <https://www.naturepositive.org/app/uploads/2024/02/The-Definition-of-Nature-Positive.pdf>, last visited 10 February 2025.

<sup>24</sup> MDB Common Principles for tracking nature-positive finance (2024), available at , last visited 10 February 2025.

<sup>25</sup>As listed in the Global IUCN Red List of Threatened Species, available at <https://www.iucnredlist.org/>, last visited 12 February 2025.

### Nature-based solutions

Actions to protect, conserve, restore, sustainably use and manage natural or modified terrestrial, freshwater, coastal and marine ecosystems, which address social, economic and environmental challenges effectively and adaptively, while simultaneously providing human wellbeing, ecosystem services and resilience and biodiversity benefits.

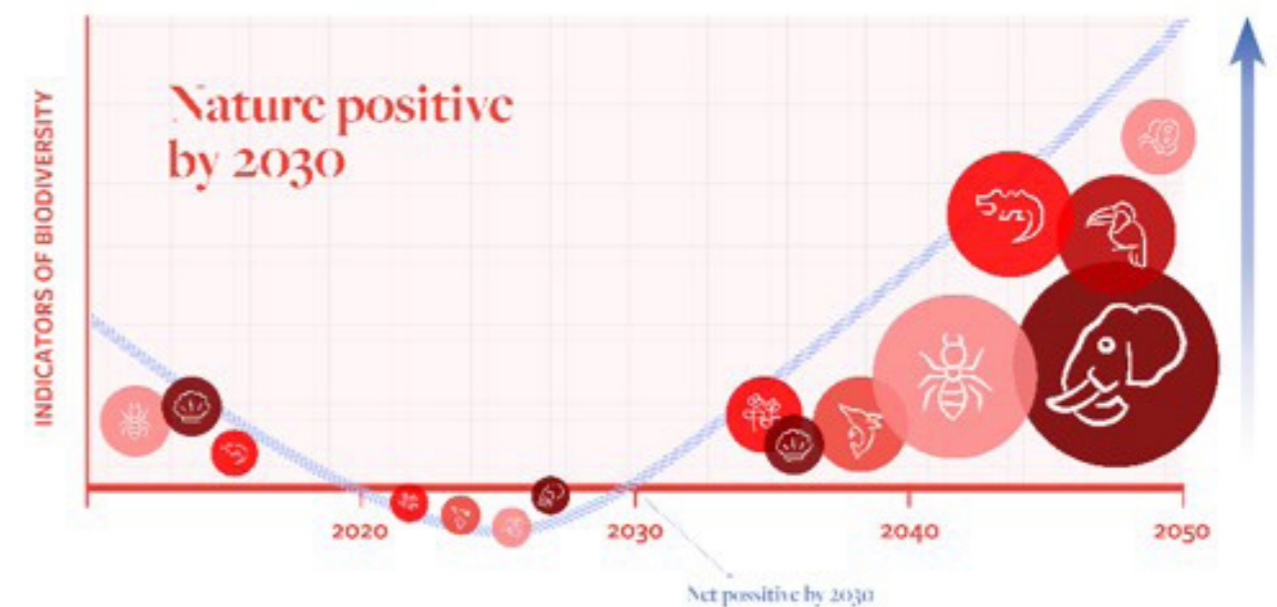
It becomes clear from this definition that nature-based solutions may contribute to a nature-positive economy when for example aimed at restoring ecosystems. However, it is important to note that not all nature-based solutions fall within this category, for example solutions aimed at ecosystem conservation. See further explanation below.

### Nature-positive as a global societal goal

Halt and reverse nature loss by 2030 on a 2020 baseline and achieve full recovery by 2050.

### Nature-positive financing

Though there is no widely agreed-upon definition, for the purposes of this report, finance that contributes to a nature-positive economy is classified as “nature-positive finance” which we define as finance that contributes to halting and reversing nature loss by restoring and enhancing ecosystems with the aim of improving the overall state of nature to full recovery by 2050.



## 2.2 Nature-related financing on three scale levels

Three scale levels are distinguished at which financing can be directed to support the transition to a nature positive economy. This is an acknowledgment of the fact that most Kenyan banks are still in the early stages of their nature journey. The threshold for considering financing as nature-positive represents the highest level of commitment and may be (too) high. The scale levels allow for a pragmatic approach to join the nature journey.

SCALE LEVEL – SHADES OF 'GREEN'	MAIN FOCUS	EXAMPLE
<b>Nature-Positive</b> – the highest level of commitment, aiming not only to sustain but to restore and enhance nature	Restoring and enhancing ecosystems: human activities have historically degraded ecosystems – nature positive initiatives seek to reverse biodiversity loss, regenerate ecosystems, and improve the overall state of nature to full recovery by 2050	A reforestation project that restores degraded land and increases biodiversity, leading to a net gain for nature <sup>26</sup>
<b>Nature Conservation</b> – goes beyond just avoiding harm by actively protecting and maintaining natural ecosystems	Protecting and sustaining existing ecosystems keeping with an aim to keep them in their current state: preserving biodiversity, preventing habitat destruction, etc.	An eco-tourism project that aims to protect a national park by limiting human activity to ensure species and ecosystems remain intact.
<b>Do No Harm</b> – baseline level of Environmental responsibility	Avoiding harm to ecosystems thereby ensuring that activities do not cause environmental degradation, deforestation, pollution, habitat destruction, etc	An infrastructure project designed in harmony with nature, preventing environmental degradation and integrating biodiversity considerations - for example, by incorporating a green roof instead of a conventional one

TABLE 1 THREE SCALE LEVELS AT WHICH NATURE FINANCING CAN TAKE PLACE

During the validation workshop the following descriptions of nature-positive financing most closely match the definitions used within the organisations represented:

16%	16% of the participants indicated that the organisations they represent only take nature-positive activities into consideration.
47%	The majority of the participants (47%) has a broader view on nature, which also takes do-no-harm activities into consideration.
32%	32% of the respondents highlighted that thematic areas such as climate, environment, biodiversity and nature are referred to as green.
5%	5% of the organisations do not refer to nature-positive financing.

<sup>26</sup>Available at <https://www.gov.uk/guidance/understanding-biodiversity-net-gain#what-bng-is>, last visited 14 March 2025.

### Disclaimer: what to take into account when using the term 'Nature Positive'

The term "nature (net-)positive" has been widely used within the financial sector and beyond; however, there is currently no legal definition. Therefore, vigilance is needed to prevent the term "nature positive" from being used in a way that could create the appearance of greenwashing. The term "nature" is not explicitly defined in the CBD convention text, unlike terms such as "ecosystems" and "biodiversity." As a result, "nature" can be interpreted in various ways, sometimes encompassing elements that do not necessarily contribute to biodiversity - such as a monoculture plantation. In Europe, private sector actors have highlighted this lack of clarity as a **potential loophole for harmful greenwashing**.

The term "**positive**" conveys an optimistic approach, but it can also be interpreted as a mathematical equation applied to "nature." Stakeholders who view nature in this way may assume that the destruction of ecosystems and biodiversity is acceptable as long as compensation through offsetting mechanisms outweighs the harm. While offsetting is a common practice for carbon, its application to ecosystems and biodiversity carries fundamental implications. The substitution effect assumes that all ecosystems hold the same value, yet ecosystems vary widely across the world, making it impossible to truly compensate for damage done to one by enhancing another. For example, tropical savannas are vastly different from temperate forests. Damaging an ecosystem in one location and attempting to compensate for it elsewhere - even within the same ecosystem type - fails to account for the specific role and functions of the original ecosystem within a broader ecological system.

An inspiring example is the **Biodiversity Net Gain (BNG) mechanism** developed by the UK government. Under this scheme, developers are required to deliver a biodiversity net gain of at least 10%. The mechanism assesses which ecosystems are affected and mandates compensation within the same ecosystem type. Additionally, the further the offsetting site is from the development location, the higher the cost, with on-site BNG being the preferred option. Moreover, critical ecosystems are assigned a higher value, creating financial incentives to avoid harming them through development.

Another example is the **Dutch frontrunner bank ASN** which contributed to a methodological paper outlining principles for biodiversity foot printing in investments. This framework stipulates that only investments that actively restore nature or enhance biodiversity can be counted towards achieving a net-positive gain - while merely avoiding negative impacts cannot. This is in line with the definition of nature-positive finance adopted in this report.

These reflections do not imply that projects contributing to a nature-positive economy are inherently harmful - on the contrary. Rather, when banks evaluating opportunities, it is good to keep these relevant nuances in mind. Key questions can help assess the true positive impact on biodiversity and ecosystems:

- How does this project restore and enhance biodiversity and ecosystems?
- What type of ecosystem are we looking at?
- Does the project involve compensation? If yes, based on which metrics?

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# Context



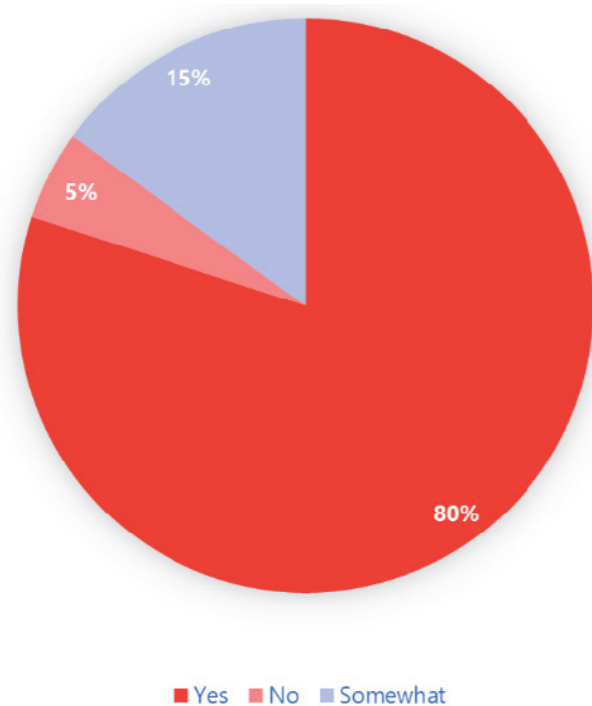
### 3.1 Introduction

**Banks operate within a broader environmental and societal context, and their activities impact nature and biodiversity: there is growing recognition among financial institutions that they have a vital role to play in this ecosystem.** Banks are increasingly committed to integrating environmental, social and governance (ESG) considerations, including nature-related considerations, into their strategy and operations, even though a formally adopted national Kenyan policy framework on nature-related financing is absent (see recommendation 1, 2). Interviews indicate that Kenyan banks recognise the importance of sustainable banking - balancing their impact on people, the planet, and the economy while ensuring long-term business viability. 80% of the participants at the validation workshop confirmed that the organisation they represent has ‘nature’ as a strategic priority and sees that clearly translated in daily operations.

**Many banks have already launched corporate social responsibility (CSR) initiatives aligned with nature-positive principles.** These projects include reforestation projects focused on tree planting and capacity-building programmes that highlight business opportunities in nature-related sectors like agriculture, energy, and the blue economy. These efforts provide a foundation for banks to further embed nature-positive financing into their core strategies, policies, processes, and operations (see recommendation 15).

**This growing interest among Kenyan banks underscores their willingness to better understand and engage in nature-related financing.** However, a clear and formal starting point is still lacking, leaving banks without concrete guidance on how to navigate this transition and align their efforts with the objectives outlined in the Draft National Biodiversity Strategy & Action Plan (NBSAP) (see recommendation 3).

This chapter begins with an overview of the relationship between banks, ecosystems, and biodiversity, followed by an outline of the national and international policy environment. It then explores the key sectors relevant to nature-related financing and discusses the overarching barriers these sectors face.



*“Kenyan banks have shown strong commitment to nature by taking early steps through CSR and non-financial initiatives - laying the groundwork for deeper integration into core financing strategies.”*

### 3.2 Banks, ecosystems and biodiversity

**The global drivers of ecosystems and biodiversity loss link strongly to economic activities that are financed or invested in by banks.**<sup>27</sup> These drivers can therefore be seen as important pointers when setting strategic targets and when screening banks pipelines and portfolios for nature-related risks and opportunities (see recommendation 8, 13). The drivers of biodiversity loss also constitute the basis for the global nature-related compliance mechanism. They have been used by the TNFD to select the core global disclosure metrics for financial institutions.<sup>28</sup> The table below illustrates how each driver of nature and biodiversity loss is linked to banks’ loan portfolios. As shown, some of the adverse impacts on nature result from loans granted to specific sectors and projects. Based on this, banks can adjust their portfolios to minimise harm (do no harm), actively protect and maintain threatened ecosystems (conservation), or take proactive measures to reverse biodiversity loss and restore ecosystems (nature-positive) (see recommendation 9).

**TABLE 2 LINK BETWEEN DRIVERS OF BIODIVERSITY LOSS AND THE LOAN PORTFOLIOS OF BANKS**

DRIVER OF BIODIVERSITY LOSS	LINK WITH LOAN PORTFOLIO OF BANKS
<b>Changes in land and sea use</b>	Finance provided to agriculture, aquaculture, forestry, real estate, infrastructure, mining, textiles, directly and indirectly (e.g. consumer goods companies linked to food, construction companies linked to wood)
<b>Resource extraction of living and non-living materials, including freshwater, organisms and natural ecosystems</b>	Finance provided to fisheries, hardwood harvesting, certain pharmaceuticals, directly and indirectly
<b>Climate change</b>	All financed and facilitated greenhouse gas emissions, directly and indirectly
<b>Pollution</b>	Finance provided to sectors with significant production of effluents and wastes such as mining and metals, agriculture, oil and gas, power, chemicals, manufacturing, textiles, etc. directly and indirectly
<b>Invasive species</b>	Finance provided to transportation and tourism in particular shipping and mining, both directly and indirectly

<sup>27</sup><https://www.ipbes.net/models-drivers-biodiversity-ecosystem-change>, last visited 10 February 2025.

<sup>28</sup> <https://tnfd.global/>, last visited 10 February 2025.

## 3.3 Policy environment

### National Policy: Kenya's National Biodiversity Strategy & Action Plan 2019-2030.

In 2020 Kenya has developed a Draft NBSAP that builds on the GBF, which serves as the cornerstone of the country's nature and biodiversity policy. The plan outlines six strategic goals with national targets, including guidance on nature-positive investments and the role of the financial sector. The NBSAP offers guidance to banks on how government expects them to mainstream nature and biodiversity conservation in the financial sector as well as mobilise financial resources.

Firstly, the NBSAP aims to mainstream biodiversity conservation and sustainable use into decision-making processes across all sectors to address the underlying causes of biodiversity loss (Goal 1). Some of the actions relevant to the financial sector include undertaking a comprehensive economic valuation of biodiversity resources and the ecosystem services, developing a National Biodiversity Finance Plan (NBFP), establishing and implementing mechanisms for the Payments of Ecosystem Services (PES), including carbon stocks, to generate increased revenue for biodiversity conservation and restoration.

Secondly, the NBSAP explicitly mentions the need to mobilise financial resources (Goal 6) in different ways, including developing an environmental tax reform policy which can be used to mobilise funds for conservation (see recommendation 4, 5). Moreover, Payment for Ecosystem Service (PES) schemes and frameworks to facilitate restoration for water catchments, carbon stocks and biodiversity net-gain in the production/development process are mentioned. Lastly, some of the relevant outlined actions include identifying areas/instruments that could be developed to incentivise biodiversity/conservation project funding by the private sector, exploring biodiversity offsets to achieve no net loss of biodiversity and as a source of revenue for biodiversity conservation and restoration. The NBSAP is still in draft, and it is unclear when it will be finalised and rolled out. As highlighted by multiple interviewees, the financial sector was not involved in the drafting process defining its role in advancing a nature-positive economy. It is recommended to include financial sector stakeholders when finalising the NBSAP to ensure commitment and buy-in for implementation (see recommendation 6).

### Other climate-related policies

Other relevant climate-related national policies include the Green Economy Strategy and Implementation Plan 2016-2030.<sup>29</sup> Under Thematic Area 3: Sustainable Natural Resource Management, the plan highlights the promotion of nature-based enterprises - such as eco-tourism and community conservancies – particularly those led by youth, women and people with special needs. While the retention of tax on interest for green bonds is currently in place, it does not apply to nature-related financing, as no green bonds within the nature space have been launched in Kenya to date.

However, once such instruments are introduced, they could potentially fall under this policy.<sup>30</sup> The recently finalised Kenyan Green Finance Taxonomy (KGFT) addresses ecosystem protection and restoration only under the broad "do no significant harm" principle.<sup>31</sup> At present, no technical screening criteria have been developed for key areas such as nature-based solutions, ecosystem conservation, wildlife management, and forestry and land rehabilitation. In parallel the Climate Risk Disclosure Framework launched by the CBK focuses primarily on identifying physical and transition risks related to climate change, rather than nature-specific risks. However,

<sup>29</sup>Green Economy Strategy and Implementation Plan – Kenya 2016-2030, available at [https://www.greenpolicyplatform.org/sites/default/files/downloads/policy-database/KENYA%20Improving%20Efficiency%20in%20Forestry%20Operations%20and%20Forest%20Product%20Processing%20in%20Kenya\\_0.pdf](https://www.greenpolicyplatform.org/sites/default/files/downloads/policy-database/KENYA%20Improving%20Efficiency%20in%20Forestry%20Operations%20and%20Forest%20Product%20Processing%20in%20Kenya_0.pdf), last visited 7 April 2025.

<sup>30</sup> <https://vellum.co.ke/finance-bill-2024-navigating-taxation-and-green-initiatives-for-a-sustainable-kenya/>, last visited 7 April 2025.

<sup>31</sup>Kenya Green Finance Taxonomy, available at <https://www.centralbank.go.ke/kenya-green-finance-taxonomy-climate-risk-disclosure-framework/>, last visited 4 April 2025.

as these areas are often interlinked, climate-related risks under the framework could also partially overlap with nature-specific risks and may apply to nature-related projects within banks' portfolios. Finally, Kenya's National Climate Change Action Plan (NCCAP) makes reference to biodiversity in Climate Change Priorities 3 and 4 which relate to Water, Fisheries and the Blue Economy and Forests, Wildlife and Tourism.<sup>32</sup> Priority areas under these themes include the decline of coastal and aquatic biodiversity due to rising temperatures affecting nesting and feeding grounds, as well as changes in forest growth, composition and regeneration capacity – leading to reduced biodiversity and diminished delivery of forest goods and services.

### International Policy: The Kunming-Montreal Global Biodiversity Framework (GBF)

Kenya has signed and ratified the Kunming-Montreal Global Biodiversity Framework on which the NBSAP is based. It has four long-term goals for 2050<sup>33</sup> related to the 2050 Vision for Biodiversity which are relevant to financial institutions, including banks.<sup>34</sup> It is important to consider these goals and their practical relevance to the financial sector both when finalising the NBSAP and throughout its implementation:

- ✔ **Protect and Restore:** Financial institutions should seek to align their portfolios - both by financing measures to promote conservation and restoration, but also by reducing the financing of activities that harm biodiversity. Reducing harmful financial flows should be based on impact measurement and engagement with investees and clients.
- ✔ **Prosper with Nature:** Financial institutions should embed nature into their decision-making processes, internalizing environmental externalities and seeking opportunities to invest in the maintenance of land- and seascapes that they and their investee companies source from. Again, this provides an overarching goal for financial institutions to align with, so that their financing and investment activities support the sustainable use of nature and its resources.
- ✔ **Share benefits Fairly:** Financial institutions should ensure proper stakeholder engagement is applied throughout the life of financed activities and across supply chains, and that free, prior, and informed consent (FPIC) principles are applied when Indigenous peoples are affected. Financial institutions could promote the role of Indigenous Peoples and Local Communities (IPLCs) in nature-related enterprises and as project proponents, as less than 1% of nature finance currently reaches them.
- ✔ **Invest and Collaborate:** Public and private financial institutions should align their financial flows – including investment and funding activities - with the aim of reducing negative impacts and ensuring that new financial flows do not harm nature, but instead support it across economic sectors. Private financial institutions, including banks, have a role in reducing harmful financial flows they are responsible for, scaling up financing for solutions to biodiversity loss, and contributing to closing the finance gap, including in developing and emerging markets.

<sup>32</sup>Government of Kenya (2023). National Climate Change Action Plan (Kenya) 2023-2027. Ministry of Environment, Climate Change and Forestry, available at <https://emsi.co.ke/wp-content/uploads/2024/08/Kenya-NCCAP-2023-2027-1.pdf>, last visited 7 April 2025.

<sup>33</sup> <https://www.cbd.int/gbf/goals>, last visited 12 February 2025.

<sup>34</sup>Principles for Responsible Banking: Guidance for Banks. PRB Nature Target Setting (2023), UNEP FI, available at [https://www.unepfi.org/wordpress/wp-content/uploads/2023/11/PRB-Nature-Target-Setting-Guidance\\_2023.pdf](https://www.unepfi.org/wordpress/wp-content/uploads/2023/11/PRB-Nature-Target-Setting-Guidance_2023.pdf), last visited 10 February 2025

## Other climate-related policies

**IFRS S1** covers all sustainability-related risks and opportunities that could influence a company's cash flows, access to finance, or cost of capital. As such, companies are required to disclose material nature-related risks where they are financially relevant. The standard also encourages the integration of nature-related dependencies and impacts into financial decision-making.<sup>35</sup>

**IFRS S2**, meanwhile, focuses specifically on climate-related risks and opportunities. However, within the context of disclosing how greenhouse gas emissions are addressed, nature-based carbon removals may be included - for example, as part of a company's climate mitigation strategy.<sup>36</sup> Overview of sectors relevant for nature-related financing.

**The sectors relevant for nature-related financing have been selected based on a combination of the following globally acknowledged resources:**


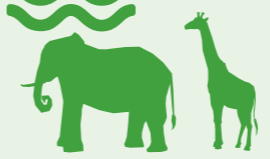




- UNEP FI's sector impact mapping which presents a set of resources which consider the positive and negative impacts of business sectors and activities on social, economic and environmental sustainability.<sup>37</sup>
- The ENCORE tool, a free, online tool that helps organisations explore their exposure to nature-related risk and take the first steps to understand their dependencies and impacts on nature.<sup>38</sup>
- The SBTN sectoral materiality tool which helps organisations carry out a first screening of what types of environmental impact are potentially materially relevant to their sector and their company's activities.<sup>39</sup>
- The TNFD guidance for financial institutions which identifies sectors and industries most likely to face financial impacts due to their dependence on and impact on nature. It also highlights potential opportunities and activities within these sectors that can generate positive outcomes for both businesses and nature by minimising harm or contributing to ecosystem restoration.<sup>40</sup>

**To support financial institutions identify where their interventions can be most effective - whether by avoiding harm to ecosystems, supporting conservation efforts, or advancing nature-positive outcomes through ecosystem enhancement and restoration - a classification can be applied.**

Table 3 provides an overview of the selected sectors and highlights the most relevant scale level for banks when considering nature-related financing in these areas. The definitions used are based on the International Standard Industrial Classification of All Economic Activities, Revision 5 (ISIC rev 5) which is the latest version of a globally recognised system developed by the United Nations to classify economic activities for statistical and analytical purposes.

*“With the right tools, banks can identify where nature and finance intersect - turning risk into opportunity and unlocking investment where it matters most for people and planet.”*

**TABLE 3 OVERVIEW OF SECTORS CATEGORISED BY THE MOST RELEVANT SCALE LEVEL FOR NATURE-RELATED FINANCING**

SECTOR <sup>41</sup>	MOST RELEVANT SCALE AT WHICH NATURE FINANCING CAN TAKE PLACE
 <b>Agriculture (incl. food), Forestry and Fishing</b>	<b>Nature Conservation:</b> actively protecting and maintaining natural ecosystems
 <b>Environmental Services - environmental protection in the form of wildlife conservation</b>	
 <b>Water Resource Management</b>	<b>Do No Harm:</b> baseline level of environmental responsibility – avoiding harm to ecosystems
 <b>Manufacturing</b>	
 <b>Real Estate</b>	
 <b>Energy</b>	

<sup>35</sup><https://www.ifrs.org/issued-standards/ifrs-sustainability-standards-navigator/ifrs-s1-general-requirements.html/content/dam/ifrs/publications/html-standards-issb/english/2023/issued/issbs1/>, last visited 7 April 2025.

<sup>36</sup> <https://www.ifrs.org/issued-standards/ifrs-sustainability-standards-navigator/ifrs-s2-climate-related-disclosures/>, last visited 7 April 2025.

<sup>37</sup> <https://www.unepfi.org/impact/impact-radar-mappings/impactmappings/>, last visited 17 March 2025.

<sup>38</sup> <https://encore.naturalcapital.finance/en>

<sup>39</sup> <https://sciencebasedtargetsnetwork.org/wp-content/uploads/2023/05/SBTN-Materiality-Screening-Tool-v1.xlsx>

<sup>40</sup> [https://tnfd.global/wp-content/uploads/2023/08/Guidance\\_for\\_Financial\\_Institutions\\_v1.pdf?v=1695215983](https://tnfd.global/wp-content/uploads/2023/08/Guidance_for_Financial_Institutions_v1.pdf?v=1695215983)

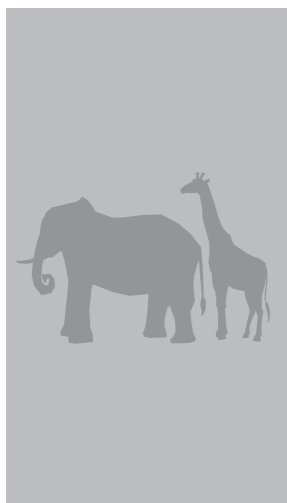
<sup>41</sup> The categorisation of the sectors has been based on the International Standard Industrial Classification of All Economic Activities (ISIC) Rev. 5, available at: <https://unstats.un.org/unsd/classifications/Family/Detail/2095>, last visited 11 February 2025.



### NATURE-POSITIVE

**Agriculture (incl. Food), Forestry and Fishing:** We define this sector as the exploitation of vegetal and animal natural resources, comprising the activities of growing of crops, raising and breeding of animals, harvesting of timber and other plants, production of animal products from a farm or natural habitats (as we adopt a full value chain approach, meaning that food production is considered to be included in the scope of the agricultural sector).

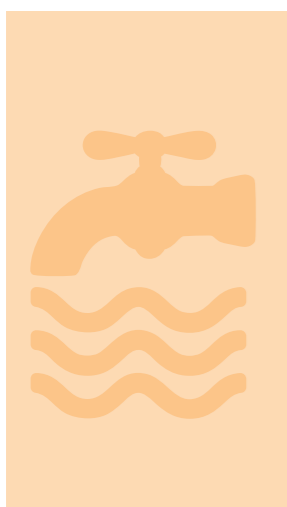
**Examples of nature-positive financing activities in this sector:** climate smart agriculture (e.g. rehabilitation of degraded lands with native and/or naturalized species), regenerative agriculture (e.g. farming and grazing practices that restore degraded soil biodiversity), reforestation with native or naturalized species resulting in e.g. enhanced carbon sequestration and water quality, and biodiversity friendly fishing thereby repopulating native species in rivers and other water bodies.



### NATURE CONSERVATION

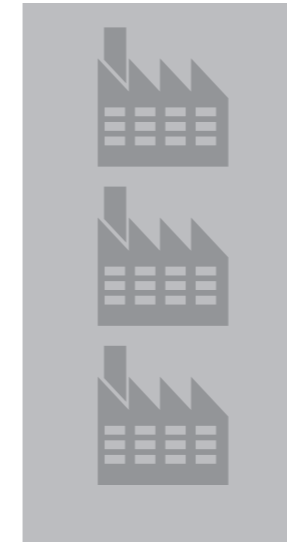
**Environmental Services – in particular, environmental protection in the form of wildlife conservation:** Supervision in the field of social, economic and environmental policy of the Community, e.g. public administration of environmental services programmes, potable water supply programmes, waste collection and disposal operations, and environmental protection programmes.

**Examples of nature conservation financing activities in this sector:** engagement with sovereign departments of water resource, environment, local communities, academia and private sector to identify opportunities to develop projects for rejuvenation of wetlands, ponds, lakes, and rivers, ecotourism projects aimed at wildlife and ecosystem conservation, mangrove plantation and conservation, and improve water quality in wetlands and other freshwater bodies.



**Water Resource Management:** This sector relates inter alia to water resource management, e.g. rainwater harvesting, drip irrigation, wastewater treatment and practices related to integrated water resource management (IWRM).

**Examples of nature conservation financing activities in this sector:** wastewater reuse projects, drip irrigation, rainwater harvesting, upgrading wastewater treatment plants to eliminate all pollutants harmful to biodiversity, investing in constructed wetlands to support removal of organic pollutants from wastewater.



### DO NO HARM

**Manufacturing:** This sector includes the physical, chemical or biological transformation of materials, substances, components into new products. The materials, substances, or components undergoing transformation are either raw materials or products of agriculture, forestry, fishing, mining or quarrying as well as products of other manufacturing activities. Substantial alteration, renovation or reconstruction of goods is generally considered to be manufacturing.

**Examples of do no harm financing activities in this sector:** using certified sustainable raw materials (e.g. FSC-certified wood), switching to non-toxic and biodegradable chemicals in production processes, preventing water pollution by implementing industrial waste water treatment, transitioning to renewable energy sources, e.g. biofuels (waste-to-energy), and using biodegradable, compostable, or recyclable packaging materials.



**Real Estate:** This section includes activities of owning, renting out, buying, selling, developing or refurbishing (re-developing) property. It includes various types of real estate investors, e.g. real estate investment companies, real estate investment trust (REITs), real estate asset management firms, real estate funds, real estate development companies or real estate traders, housing cooperatives. Furthermore, it includes agents and/or brokers in one or more of the following: selling or buying real estate, rental real estate, providing other real estate services such as appraising real estate or acting as real estate escrow agents. Activities in this section may be carried out on own or leased property and may be done on a fee or contract basis.

**Examples of do no harm financing activities in this sector:** natural infrastructure or combination of natural infrastructure and grey infrastructure focused on managing stormwater and integrating conventional coastal and riverine flood protection infrastructure with ecological infrastructure (e.g. mangroves with seawalls), green/blue urban infrastructure to address the effects of droughts, floods, and urban heat (e.g. green roofs, rain gardens), natural or ecological infrastructure that prevents runoff of agrochemicals and sediment into rivers or coastal water basins.



**Energy:** This sector includes generation, storage, control, distribution, trade and brokerage of electric power or of gaseous fuels for energy supply through a permanent network of lines, mains and pipes, energy supply for industrial parks or residential buildings, the operation of electricity and gas utilities, heating and cooling, e.g. steam and air conditioning supply, through a permanent network.

**Examples of do no harm financing activities in this sector:** development of coastal and offshore renewable energy installations that are part of a more systemic understanding of the marine space in which they operate, including through the use of marine spatial planning and with particular sensitivity to the presence and continued health of ecologically valuable, biodiverse and protected areas.

## 3.4 Overarching barriers across sectors

**While promising nature-related financing activities exist across various sectors, overarching barriers continue to limit banks' financing and investment opportunities.**<sup>42</sup> Chapter 7 includes recommended actions per stakeholder group to overcome these barriers. References to specific barriers and recommendations are included in the report. The overarching challenges, identified in the literature and reinforced by interview findings, include:

✔ **Lack of supportive policy:** Governments play a crucial role in driving private sector investment in nature-related projects through policies, regulations, and financial incentives. Examples mentioned during the interviews include the introduction of favouring tax policies for economic activities promoting nature-positive outcomes for sectors like wildlife conservation and agro-forestry.<sup>43</sup> Interviewees highlighted the potential of granting nature conservancies the same status as Special Economic Zones (SEZs). Currently, the absence of clear policies, regulations, and incentives, along with the lack of a global nature taxonomy, creates confusion and uncertainty, hindering private sector investment.<sup>44</sup>

✔ **New asset class:** Investing in a new asset class, such as nature-related projects, inherently involves additional risks due to its novelty and the lack of an established track record.<sup>45</sup> These risks are often compounded by factors such as the absence of a well-defined investment strategy, limited market participants, and a lack of a supportive regulatory framework. As a result, investors face higher transaction costs, including the need for enhanced due diligence, high collateral requirements, more complex structuring, and increased monitoring and evaluation which makes investing less attractive. In this context, interviewees noted that the lack of regulation for new financial instruments - designed to mitigate some of the risks of investing in a new asset class - hinders their successful adoption. Examples mentioned include biodiversity credits and species bonds, such as the lion bond and rhino bond.

✔ **Return on investment:** Return on investment is not yet evident and often does not warrant the high transaction costs and risks associated with nature-related financing.<sup>46</sup> Investments tend to be illiquid, and projects are typically in higher risk sectors and locations with exposure to commodity fluctuations, land tenure issues as well as foreign currency, political and reputation risk. Moreover, the return on investment may take time as nature-related projects often require large upfront investments with payoff profiles in the medium to long-term.<sup>47</sup>

✔ **Monetary value of ecosystem services:** The monetary value of ecosystem services is difficult to determine due to insufficient knowledge and localized data on ecosystems, e.g. to estimate the potential value of land restoration or the likely gains in crop yields resulting from regenerative agriculture projects.<sup>48</sup> This lack of clarity makes it challenging to adequately monetize these services on a larger scale, which in turn reduces their appeal as an investment. Moreover, it is important to distinguish between the valuation of ecosystems and the actual direct and indirect cash flow they generate. Ecosystem valuation assesses their overall worth, while a follow-up assessment is required to determine potential revenue streams, benefiting parties such as commercial banks acting as investors. For example, while establishing the economic value of the East Mau Forest ecosystem and the Elgeyo Watershed may highlight their importance, it does not necessarily translate into revenue streams that are attractive to commercial banks.<sup>49</sup>

✔ **Localized nature and environment:** The localized nature, limited scale, and lack of replicability of nature-based initiatives reduce investor interest. Additionally, nature-related investments often require specialized, higher-priced capital.<sup>50</sup> In Kenya, the widespread fragmentation of land ownership means that projects tend to be small-scale and require customization to suit specific areas and ecosystems (e.g., indigenous plants or animals) which limits scalability.<sup>51</sup>

**In the Kenyan context, the KGFT only addresses ecosystem protection and restoration under the broad "do no significant harm" criteria.**<sup>52</sup> No technical screening criteria have been developed yet for key areas such as nature-based solutions, ecosystem conservation, wildlife management, and forestry and land rehabilitation. It would be desirable if these could be developed by CBK as the KGFT is a living document thereby providing the market with a clear definition and criteria to assess economic activities contributing to nature-positive outcomes.

**Moreover, apart from climate risks, there is currently no specific guidance on the impacts of nature-risks on the Kenyan economy.**<sup>53</sup> Some interviewees emphasised that such guidance on systemic risks arising from nature would be a crucial first step in expanding Kenya's nature-positive financing market as it may lead to more activity of commercial banks in assessing nature risks, like has been observed in the climate risk space. This could also help banks identify opportunities contributing to a nature-positive economy, as nature risk heat mapping simultaneously highlights key opportunities in certain sectors.

<sup>42</sup>Sector-specific barriers within business models will be highlighted in Chapter 3 of this report.

<sup>43</sup> These type of tax incentives for nature conservation have already successfully been introduced in South-Africa in 2015: <https://biodiversityadvisor.sanbi.org/contentmanagement/index?guid=4d399327-4612-4eda-98e0-5281a254310f>, last visited 13 February 2025.

<sup>44</sup> Katie Leach, Annelisa Grigg, Brian O'Connor, Claire Brown, James Vause, Jonathan Gheysens, Lauren Weatherdon, Martin Halle, Neil D. Burgess, Ruth Fletcher, Sebastian Bekker, Steven King, Matt Jones, A common framework of natural capital assets for use in public and private sector decision making, *Ecosystem Services*, Volume 36, 2019, 100899, ISSN 2212-0416, <https://doi.org/10.1016/j.ecoser.2019.100899>.

<sup>45</sup> Diana Denke, Edit Kiss, Anwitha Prasad, Elmedina Krilasevic, Shaalini Ganesalingam, Karin Berardo, James Pilkington, Building a Capital Continuum for Nature-Positive Investments, 2023, available at [https://www.cpicfinance.com/wp-content/uploads/2023/10/CPIC-report\\_Buidling-a-capital-continuum-for-nature-positive-investments.pdf](https://www.cpicfinance.com/wp-content/uploads/2023/10/CPIC-report_Buidling-a-capital-continuum-for-nature-positive-investments.pdf), last visited 11 February 2025

<sup>46</sup> Van Raalte, D. and Ranger, N. (2023). Financing Nature-Based Solutions for Adaptation at Scale: Learning from Specialised Investment Managers and Nature Funds. Global Center on Adaptation and Environmental Change Institute, University of Oxford, available at [https://www.eci.ox.ac.uk/sites/default/files/2023-12/Financing\\_NbS\\_for\\_Adaptation-GCAOxford2023-finalv2.pdf](https://www.eci.ox.ac.uk/sites/default/files/2023-12/Financing_NbS_for_Adaptation-GCAOxford2023-finalv2.pdf), last visited 12 February 2025.

<sup>47</sup>Valeria López Portillo Purata, Sheccid Gómez and Sarai Eunice, 5 Barriers That Hinder Green Financing, available at <https://www.wri.org/update/5-barriers-hinder-green-financing>, last visited 11 February 2025.

<sup>48</sup>Finance for Biodiversity Foundation and United Nations Environment Programme (2024) Finance for Nature Positive: Building a working model. Available at [https://www.financeforbiodiversity.org/wp-content/uploads/Finance-for-Nature-Positive\\_FBF-Foundation-and-UNEP-FI\\_Discussion-Paper.pdf](https://www.financeforbiodiversity.org/wp-content/uploads/Finance-for-Nature-Positive_FBF-Foundation-and-UNEP-FI_Discussion-Paper.pdf), last visited 11 February 2025; Ian Milborrow, James King and Theo Bromfield, Closing the critical nature investment gap, 9 May 2023, available at <https://www.pwc.com/gx/en/issues/esg/nature-and-biodiversity/closing-the-nature-investment-gap.html>, last visited 11 February 2025.

<sup>49</sup> <http://41.89.96.81:4000/items/0120106d-7088-470e-8b72-d4e1a1270701>; <https://onlinelibrary.wiley.com/doi/full/10.1155/2021/5867745>, last visited 7 April 2025.

<sup>50</sup> Diana Denke, Edit Kiss, Anwitha Prasad, Elmedina Krilasevic, Shaalini Ganesalingam, Karin Berardo, James Pilkington, Building a Capital Continuum for Nature-Positive Investments, 2023, available at [https://www.cpicfinance.com/wp-content/uploads/2023/10/CPIC-report\\_Buidling-a-capital-continuum-for-nature-positive-investments.pdf](https://www.cpicfinance.com/wp-content/uploads/2023/10/CPIC-report_Buidling-a-capital-continuum-for-nature-positive-investments.pdf), last visited 11 February 2025.

<sup>51</sup> Nature Based Solutions – a review of current financing barriers and how to overcome these (2022), Terranomics, available at <https://www.wwf.org.uk/sites/default/files/2022-06/WWF-NBS-Public-Report-Final-270622.pdf>, last visited 11 February 2025; Paul Maurice Syagga, Land ownership and Use: Policy Prescriptions from an Inequality Perspective, 2006, available at: <https://land.igad.int/index.php/documents-1/countries/kenya/rural-development-3/801-land-ownership-and-use-in-kenya-policy-prescriptions-froman-inequality-perspective/file>, last visited 11 February 2025.

<sup>52</sup>Kenya Green Finance Taxonomy, available at <https://www.centralbank.go.ke/kenya-green-finance-taxonomy-climate-risk-disclosure-framework/>, last visited 4 April 2025.

<sup>53</sup>Guidance on Climate-Related Risk Management (2021), Central Bank of Kenya, available at <https://www.centralbank.go.ke/wp-content/uploads/2021/10/Guidance-on-Climat-Related-Risk-Management.pdf>, last visited 11 February 2025.



Investable   
nature-related  
sectors in Kenya

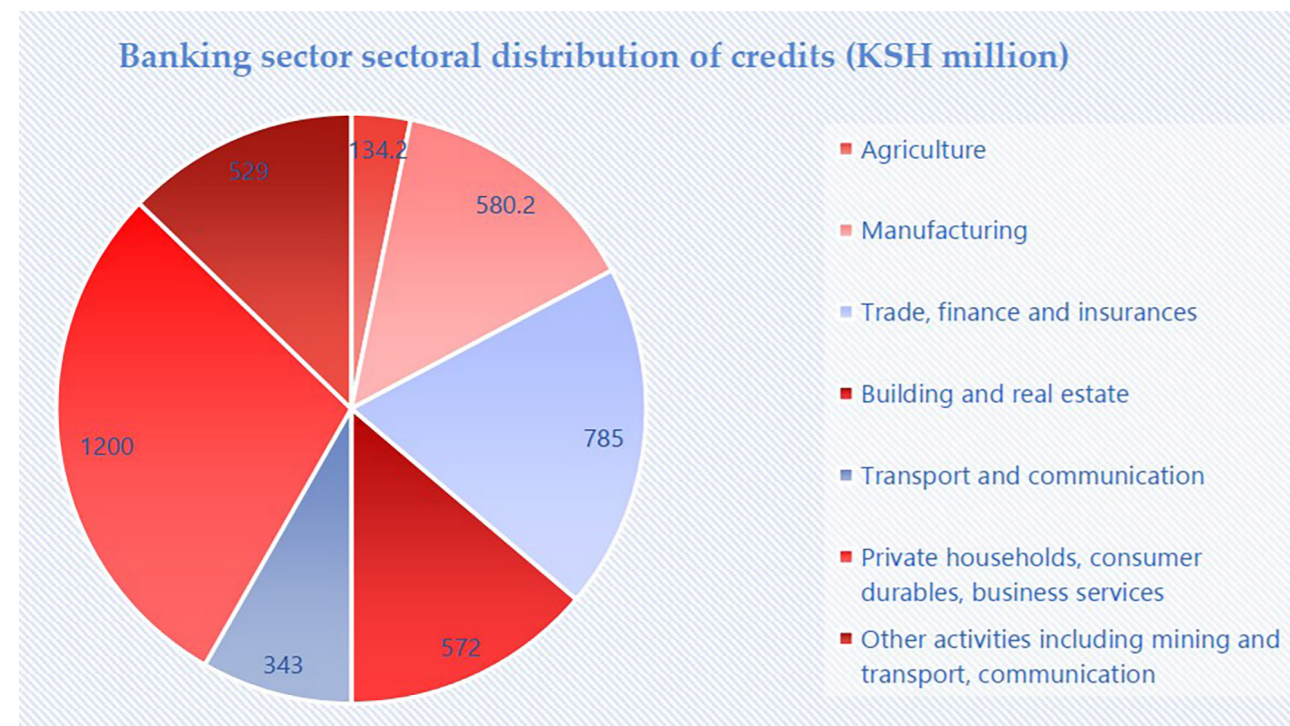
## 4.1 Introduction

Having analysed the relevant sectors for advancing nature-related financing more generally, we now turn our focus to the most critical sectors for Kenya. Additionally, we examine the available financing instruments in the Kenyan market and explore how they can be effectively utilised. These insights will form the basis for developing nature-related business models within each identified sector, aligned with the three scale levels: Nature-Positive, Nature Conservation, and Do No Harm.

## 4.2 Selection of most important sectors for Kenya

In selecting the most relevant sectors for Kenya, the following factors were taken into account:

- **Size of the financing opportunity:** What is the financing opportunity of this sector on the short (next 6 months) - medium (6 months to 2 years) - long term (2 years to 10 years)?
- **Feasibility of developing a viable nature-related business model:** At what scale level of nature-related financing, doing less harm – nature conservation - nature-positive, can the most viable nature-related business models be identified?
- **Risk profile:** What are the key nature and climate risks thereby distinguishing between physical risk, transition risk, systemic risk, financial risks and what are other types of risks related to the credit risk, e.g. information asymmetry, political risk?
- **Priorities for the Kenyan government:** What are the sectors that the Kenyan government prioritizes?
- **Banks' priorities:** What are the most important sectors looking at the sectoral distribution of loan accounts in banks' current portfolio?



## 4.3 An analysis of the opportunities and risks per selected sector

For the purpose of consistency and harmonisation, the sector definitions used are based on the **International Standard Industrial Classification of All Economic Activities, Revision 5 (ISIC rev 5.)**. This is the latest version of a globally recognised system developed by the United Nations to classify economic activities for statistical and analytical purposes. So for example eco-tourism, would be considered a business model within the wildlife conservation sector. And waste-to-energy would be considered a business model within the manufacturing sector. More specific examples of promising nature-positive business models per scale level are provided in chapter 6. A more quantitative assessment of the opportunities and risks for these selected business models is given in chapter 8. Annex 2 includes a list with potential eligible activities contributing to nature-positive outcomes.

**Per selected sector relevant for banks in Kenya an analysis of the opportunities and risks is provided:**

- An estimate of the investment and financing opportunity over the short, medium and long-term.
- An estimate of the type of finance demand (debt, equity, other).
- A high-level overview of the risk profile, including nature and climate risks, finance risk and other risks.

**The sector overview concludes with a high-level statement on the overall finance potential for Kenyan banks, which is based on very rough estimates and limited data available.** The estimates are based on publicly available data from a range of combined sources, including Kenya's FAO Country Profile,<sup>54</sup> Kenya's World Bank Climate Risk Country Profile,<sup>55</sup> Kenya's National Wildlife Strategy 2030,<sup>56</sup> Kenya's Environment Protection, Water and Natural Resources Sector Report for the MTEF Period 2024/25 – 2026/27,<sup>57</sup> an IFC Supply Chain Finance Market Assessment for Kenya,<sup>58</sup> Kenya's Real Estate Survey Report 2023/2024<sup>59</sup> and the State Department for Industry Strategic Plan for the Manufacturing Sector 2023-2027,<sup>60</sup> among others. It is recommended that as a follow-up activity of this overview, an in-depth analysis of the monetary opportunities per sector will be made as part of sector deep-dives (see recommendation 29). Annex 3 provides an overview of the sources used to estimate the finance potential per sector.

<sup>54</sup><https://www.fao.org/kenya/fao-in-kenya/kenya-at-a-glance/en/>, last visited 11 February 2025.

<sup>55</sup>Based on Kenya's Climate Risk Country Profile, available at: [https://climateknowledgeportal.worldbank.org/sites/default/files/2021-05/15724-WB\\_Kenya%20Country%20Profile-WEB.pdf](https://climateknowledgeportal.worldbank.org/sites/default/files/2021-05/15724-WB_Kenya%20Country%20Profile-WEB.pdf), last visited 11 February 2025.

<sup>56</sup>Ministry of Tourism and Wildlife (2018) National Wildlife Strategy 2030. A bridge Version. Blueprint to transform wildlife conservation in Kenya. Nairobi, Kenya. Available at <https://www.tourism.go.ke/wp-content/uploads/2018/06/WILDLIFE-STRATEGY2030-Final-V1-Online.pdf>, last visited 11 February 2025.

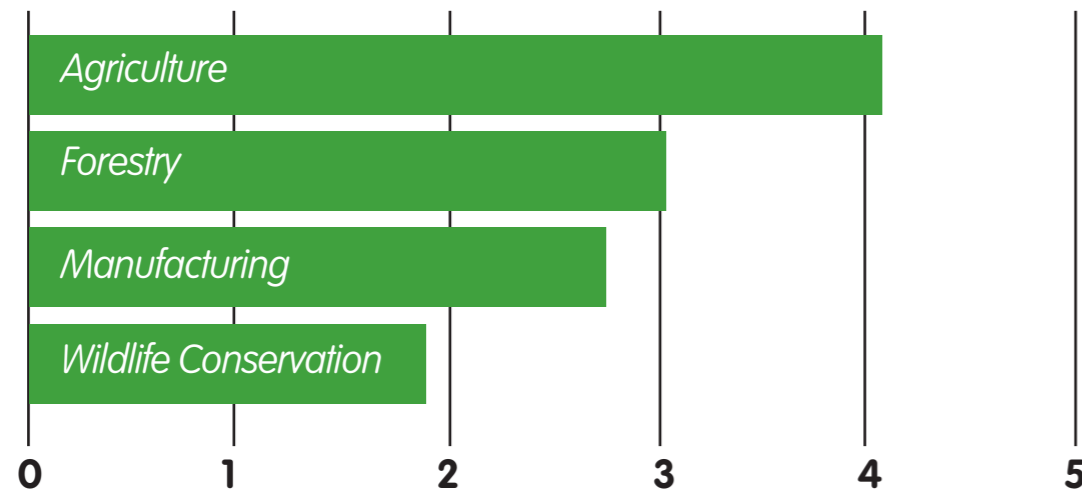
<sup>57</sup>Environment protection, water and natural resources sector report for the MTEF period 2024/25 – 2026/27 (2023) <https://www.treasury.go.ke/wp-content/uploads/2023/12/ENVIRONMENT-PROTECTION-WATER-AND-NATURAL-RESOURCES-SECTOR-REPORT-1.pdf>, last visited 11 February 2025

<sup>58</sup>Supply Chain Finance Market Assessment, IFC (2022), available at: <https://www.ifc.org/content/dam/ifc/doc/mgrt/202210-supply-chain-finance-market-assessment-kenya.pdf>, last visited 19 March 2025.

<sup>59</sup>Real Estate Survey Report 2023/2024, Kenya National Bureau of Statistics (2024) available at: <https://www.knbs.or.ke/wp-content/uploads/2025/01/2023-24-Real-Estate-Survey-Report.pdf>, last visited 19 March 2025.

<sup>60</sup>Strategic Plan 2023-2027, Ministry of Investments, Trade and Industry (2024), available at <https://www.industrialization.go.ke/sites/default/files/2024-09/STARTEGIC%20PLAN%202023-2027.pdf>, last visited 21 March 2025.

During the validation workshop, the participants ranked the nature-related sectors relevant in the Kenyan context in order of viable financing opportunities as follows (4 – highest, 1 - lowest):



“Our analysis, supported by interviews, highlights agriculture (including food) and forestry as the most relevant sectors for nature-positive financing for Kenyan banks. Meanwhile, wildlife conservation emerges as the most critical sector for nature conservation, and the manufacturing sector holds significant potential to contribute to the "do no harm" approach. While real estate is important, manufacturing has been prioritised due to its larger share in the current loan books of banks.”

While the real estate sector is undoubtedly important for nature-related financing, the manufacturing sector has been prioritised for this report due to its larger share in the current loan books of Kenyan banks as detailed in the below overview.

## Agriculture (Including Food), Forestry & Fishing Ag

Size of financing opportunity in Kenya over the short, medium and long term <sup>61</sup>	Scale level of viable nature-related business models <sup>62</sup>	Risk profile <sup>63</sup>
<p>The agriculture, forestry, and fishing sector is a critical part of Kenya’s economy, contributing 21.8% to the national GDP in 2023.<sup>64</sup> The total investment opportunity in Kenya’s agricultural sector amounts to approximately USD 8.5-10 billion over the next decade.<sup>65</sup></p> <p><u>Finance demand:</u> debt, e.g. agricultural loans to farmers, microfinance, some equity, e.g. impact investments through social enterprises like One Acre Fund.</p> <p>The short-, medium- and long-term financing opportunities are based on rough estimates derived from the limited data available as presented in the above</p> <p><u>Short term (next 6 months):</u></p> <ul style="list-style-type: none"> <li>• USD 500 million</li> </ul> <p><u>Medium term (6 months – 2 years):</u></p> <ul style="list-style-type: none"> <li>• USD 1.7 billion – 2 billion</li> </ul> <p><u>Long term (2 years – 10 years):</u></p> <ul style="list-style-type: none"> <li>• USD 8.5-10 billion</li> </ul>	<p><u>Nature-positive business models:</u></p> <ul style="list-style-type: none"> <li>• Regenerative agriculture</li> <li>• Reforestation with native or naturalized species</li> <li>• Biodiversity friendly fishing – repopulating native species</li> </ul>	<p><u>Nature and Climate risks:</u></p> <ul style="list-style-type: none"> <li>• Acute physical risks such as flooding, drought, heatwaves, wildfire.</li> <li>• Chronical physical risks, such as changing rainfall patterns and soil degradation.</li> <li>• Transition risks, such as policy changes regarding land use.</li> <li>• Systemic risks, such as decline in pollinators leading to crop failure.</li> </ul> <p><u>Finance risk:</u></p> <ul style="list-style-type: none"> <li>• Credit risk: water stress leading to operational challenges impacting revenue (if extensive may lead to problems in meeting debt obligations).</li> <li>• Market risk, e.g. regulatory actions leading to stranded assets for agricultural companies relying on landuse change for their revenues.</li> <li>• Liquidity risk, e.g. deposit outflow due to unprecedented withdrawals following physical climate events.</li> </ul> <p><u>Other risks:</u> governance issues, economic and political instability, land use incentives, lack of adequate geospatial and financial data which makes risk pricing difficult, climate variability leading to increased risk and unpredictability.</p>
<b>Assessment of sector relevance for banks in Kenya</b>		

<sup>61</sup>The short-, medium- and long-term financing opportunities are based on rough estimates derived from the limited data available.

<sup>62</sup>Based on action resources overview by UNEP FI (2023) available at: [https://www.google.com/url?sa=t&source=web&rct=j&opi=89978449&url=https://www.unepfi.org/%3Fsdm\\_process\\_download%3D1%26download\\_id%3D72131&ved=2ahUKewjK9Z2tpeJAxWN0AIHHW-YMg8QFnoECA4QAw&usg=AOvWaw2mWenOH-r97VUlc36-bqnE](https://www.google.com/url?sa=t&source=web&rct=j&opi=89978449&url=https://www.unepfi.org/%3Fsdm_process_download%3D1%26download_id%3D72131&ved=2ahUKewjK9Z2tpeJAxWN0AIHHW-YMg8QFnoECA4QAw&usg=AOvWaw2mWenOH-r97VUlc36-bqnE), last visited 11 February 2025.

<sup>63</sup>Based on Kenya’s Climate Risk Country Profile, available at: [https://climateknowledgeportal.worldbank.org/sites/default/files/2021-05/15724-WB\\_Kenya%20Country%20Profile-WEB](https://climateknowledgeportal.worldbank.org/sites/default/files/2021-05/15724-WB_Kenya%20Country%20Profile-WEB)

<sup>64</sup> <https://statskenya.co.ke/at-stats-kenya/about/county-contribution-to-agriculture-forestry-and-fishing-data/41/>, last visited 11 February 2025.

<sup>65</sup> <https://fininsightskenya.com/deep-dive-into-kenyas-agricultural-sector-challenges-opportunities-and-investment-outlook/>, last visited 11 February 2025.



- Government alignment: High priority<sup>66</sup>
- Importance for banks current portfolio: Low – 3.5% of gross loans
- Overall assessment: Although limited current sector portfolio, high potential for viable nature-positive business models, high financing demand as well as high government priority

<sup>66</sup><https://www.fao.org/kenya/fao-in-kenya/kenya-at-a-glance/en/>, last visited 11 February 2025.

TABLE 4 OVERVIEW OF OPPORTUNITIES AND RISKS IN THE AGRICULTURE (INCLUDING FOOD), FISHING & FORESTRY SECTOR

### Environmental Services – In Particular, Environmental Protection In The Form Of Wildlife Conservation

Size of financing opportunity in Kenya over the short, medium and long term <sup>67</sup>	Scale level of viable nature-related business models <sup>68</sup>	Risk profile <sup>69</sup>
<p>This sector, while challenging to quantify precisely in terms of GDP contribution, is central to the national economy through sustainable tourism, which directly generates significant revenue.<sup>70</sup> The Kenya Wildlife Service strategic plan outlines the need for substantial investments, potentially around USD 1 billion over the next decade to restore critical ecosystems, secure wildlife corridors, and implement scientific management programs<sup>71</sup></p> <p><b>Finance demand:</b> debt, e.g. debt-for-nature swaps and conservation bonds, some equity, e.g. impact investments, PPPs</p> <p>The short-, medium- and long-term financing opportunities are based on rough estimates derived from the limited data available as presented in the above.</p> <p><b>Short term (next 6 months):</b></p> <ul style="list-style-type: none"> <li>• USD 50 million</li> </ul> <p><b>Medium term (6 months – 2 years):</b></p> <ul style="list-style-type: none"> <li>• USD 200 million</li> </ul> <p><b>Long term (2 years – 10 years):</b></p> <ul style="list-style-type: none"> <li>• USD 1 billion</li> </ul>	<p><u>Nature Conservation business models:</u></p> <ul style="list-style-type: none"> <li>--Ecotourism aimed at wildlife and ecosystem conservation</li> <li>--Mangrove plantation and restoration</li> </ul>	<p>Nature and Climate risks:</p> <ul style="list-style-type: none"> <li>• <b>Acute physical risks</b> such as wildfire, flooding, drought, heatwaves affecting tourism.</li> <li>• <b>Chronical physical risks</b>, such as changing rainfall patterns and soil degradation leading to disrupted migration patterns.</li> <li>• <b>Transition risks</b>, such as policy changes regarding wildlife conservation, e.g. prioritising large scale tourism over ecosystem and wildlife conservation</li> <li>• <b>Systemic risks</b>, such as livestock encroachment on conservation areas, food scarcity leading to human-wildlife conflict.</li> <li>• <b>Finance risk:</b></li> <li>• <b>Credit risk:</b> e.g. volatility of the carbon market, lack of tangible assets that can serve as collateral</li> <li>• <b>Market risk:</b> e.g. regulatory actions leading to stranded assets for ecotourism companies relying on landuse change for their revenues.</li> <li>• <b>Liquidity risk:</b> e.g. deposit outflow due to unprecedented withdrawals following physical climate events.</li> </ul> <p><b>Other risks:</b> governance risk, economic and political instability, lack of law enforcement regarding illegal poaching, limited policy coherence.</p>
<p><b>Assessment of sector relevance for banks in Kenya</b></p>		

<sup>67</sup>The short-, medium- and long-term financing opportunities are based on rough estimates derived from the limited data available

<sup>68</sup>Based on action resources overview by UNEP FI (2023) available at: [https://www.google.com/url?sa=t&source=web&rct=j&opi=89978449&url=https://www.unepfi.org/%3Fsdm\\_process\\_download%3D1%26download\\_id%3D72131&ved=2ahUKewjK9Z2tpeJAxWN0AIHHW-YMg8QFnoECA4QAw&usg=A0Vvaw2mWenOH-r97VUlc36-bqnE](https://www.google.com/url?sa=t&source=web&rct=j&opi=89978449&url=https://www.unepfi.org/%3Fsdm_process_download%3D1%26download_id%3D72131&ved=2ahUKewjK9Z2tpeJAxWN0AIHHW-YMg8QFnoECA4QAw&usg=A0Vvaw2mWenOH-r97VUlc36-bqnE), last visited 11 February 2025.

<sup>69</sup>Based on Kenya's Climate Risk Country Profile, available at: [https://climateknowledgeportal.worldbank.org/sites/default/files/2021-05/15724-WB\\_Kenya%20Country%20Profile-WEB.pdf](https://climateknowledgeportal.worldbank.org/sites/default/files/2021-05/15724-WB_Kenya%20Country%20Profile-WEB.pdf), last visited 11 February 2025.

<sup>70</sup><https://www.fao.org/kenya/fao-in-kenya/kenya-at-a-glance/en/>, last visited 11 February 2025.

<sup>71</sup><https://news.cgtn.com/news/2024-10-01/Kenya-launches-strategic-plan-to-boost-wildlife-conservation-1xkUJlnXyE/p.html>, last visited 11 February 2025.

<sup>72</sup>Ministry of Tourism and Wildlife (2018) National Wildlife Strategy 2030. A bridge Version. Blueprint to transform wildlife conservation in Kenya. Nairobi, Kenya. Available at <https://www.tourism.go.ke/wp-content/uploads/2018/06/WILDLIFE-STRATEGY2030-Final-V1-Online.pdf>, last visited 11 February 2025

## Water Resource Management

Size of financing opportunity in Kenya over the short, medium and long term <sup>73</sup>	Scale level of viable nature-related business models <sup>74</sup>	Risk profile <sup>75</sup>
<p>As a water-scarce country in combination with rapid population growth and climate change water resource management sector is an essential part of its economy. There's currently a water investment gap of approximately USD 1.1 billion annually.<sup>76</sup></p> <p><u>Finance demand:</u> debt, e.g. commercial loans, PPPs, some equity in water infrastructure and community-based financing.</p> <p>The short-, medium- and long-term financing opportunities are based on rough estimates derived from the limited data available as presented in the above.</p> <p><u>Short term (next 6 months):</u></p> <ul style="list-style-type: none"> <li>• USD 550 million</li> </ul> <p><u>Medium term (6 months – 2 years):</u></p> <ul style="list-style-type: none"> <li>• USD 2.2 billion</li> </ul> <p><u>Long term (2 years – 10 years):</u></p> <ul style="list-style-type: none"> <li>• USD 8-10 billion</li> </ul>	<p><u>Nature Conservation business models:</u></p> <ul style="list-style-type: none"> <li>• Wastewater reuse projects</li> <li>• Upgrading wastewater treatment plants to eliminate all pollutants harmful to biodiversity.</li> <li>• Specific example: Environmental, social and economic assessment of the fencing of the Aberdare Conservation Area. Nairobi accounts for about 60% of Kenya's GDP. The energy, water and some raw materials used to drive economic activities in the City and environs are derived from the Aberdare ecosystem. Water from Aberdares via Ndakaini and Sasumua supplies up to 80% of Nairobi's water. The forests provide water at low cost, mainly through natural filtration and flow regulation. If forest catchments were degraded or lost, Nairobi would need to rely on boreholes and pumping stations.</li> </ul> <p>Estimated Costs (2024/2025 estimates) ItemCost Estimate Borehole drilling &amp; equipping KES 2.5M–6M per borehole (average)Annual maintenance KES 200K–500K per borehole</p> <p>Water treatment (per m<sup>3</sup>) KES 60–120 Energy for pumping is significant (especially in deep aquifers)</p> <p>Source: The Kenya Wildlife Service, Kenya Forest Service, Kenya Forests Working Group, United Nations</p> <p>Environment Programme and Rhino Ark (2011). <a href="http://www.rhinosourcecenter.com/pdf_files/131/1319062918.pdf">http://www.rhinosourcecenter.com/pdf_files/131/1319062918.pdf</a></p>	<p><u>Nature and Climate risks:</u></p> <ul style="list-style-type: none"> <li>• Acute physical risks such as storms, flooding, drought, heatwaves.</li> <li>• Chronical physical risks, such as changing rainfall patterns and soil degradation leading to declining water tables and reduced water availability in lakes and reservoirs.</li> <li>• Transition risks, such as policy changes regarding water conservation and water quality, financial burdens in adopting (water-saving) technologies.</li> <li>• Systemic risks, water-energy food nexus risks, e.g. reduced water availability for agriculture and hydropower generation, changing climate patterns leading to crossborder water conflicts, e.g. Lake Turkana.</li> </ul> <p><u>Finance risk:</u></p> <ul style="list-style-type: none"> <li>• Credit risk: e.g. fluctuating sales of treated water – higher prices through integration of green premium (off-taker risk).</li> <li>• Market risk, e.g. Demand dries up, because farmers shift to rainfed agriculture.</li> <li>• Liquidity risk, e.g. deposit outflow due to unprecedented withdrawals following physical climate events.</li> </ul> <p><u>Other risks:</u> governance risk, economic and political instability, infrastructure cost risks due to required financial investment for water utilities, raised insurance costs due to flooding and drought</p>
Assessment of sector relevance for banks in Kenya		

- **Government alignment:** High priority<sup>77</sup>
- **Importance for banks current portfolio:** 2.9% of gross loans
- **Overall assessment:** Although limited current sector portfolio, high potential for viable nature conservation business models, moderate financing demand, however, high government priority.

<sup>73</sup>The short-, medium- and long-term financing opportunities are based on rough estimates derived from the limited data available.

<sup>74</sup>Based on action resources overview by UNEP FI (2023) available at: [https://www.google.com/url?sa=f&source=web&rct=j&opi=89978449&url=https://www.unepfi.org/%3Fsdm\\_process\\_download%3D1%26download\\_id%3D72131&ved=2ahUKewjK9Z2tpeJAxWN0AIH-HW-YMg8QFnoECA4QAw&usg=AOvWaw2mWenOH-r97VUlc36-bqnE](https://www.google.com/url?sa=f&source=web&rct=j&opi=89978449&url=https://www.unepfi.org/%3Fsdm_process_download%3D1%26download_id%3D72131&ved=2ahUKewjK9Z2tpeJAxWN0AIH-HW-YMg8QFnoECA4QAw&usg=AOvWaw2mWenOH-r97VUlc36-bqnE), last visited 11 February 2025.

<sup>75</sup>Based on Kenya's Climate Risk Country Profile, available at: [https://climateknowledgeportal.worldbank.org/sites/default/files/2021-05/15724-WB\\_Kenya%20Country%20Profile-WEB.pdf](https://climateknowledgeportal.worldbank.org/sites/default/files/2021-05/15724-WB_Kenya%20Country%20Profile-WEB.pdf), last visited 11 February 2025.

<sup>76</sup><https://kiffwa.com/wp-content/uploads/2022/07/KIFFWA-Brochure.pdf>, last visited 11 February 2025.

<sup>77</sup>Environment protection, water and natural resources sector report for the MTEF <https://www.treasury.go.ke/wp-content/uploads/2023/12/ENVIRONMENT-PROTECTION-WATER-AND-NATURAL-RESOURCES-SECTOR-REPORT-1.pdf>, last visited 11 February 2025.

TABLE 6 OVERVIEW OF OPPORTUNITIES AND RISKS IN THE WATER RESOURCE MANAGEMENT SECTOR

## Manufacturing

Size of financing opportunity in Kenya over the short, medium and long term <sup>78</sup>	Scale level of viable nature-related business models <sup>79</sup>	Risk profile <sup>80</sup>
<p>Kenya's manufacturing sector, a pivotal component of its economy, faces a substantial financing gap, particularly among Micro, Small, and Medium Enterprises (MSMEs). This gap is estimated at approximately KSh 2.2 trillion (equivalent to USD 19.3 billion).<sup>81</sup></p> <p><u>Finance demand:</u> debt (long term and short term) covering working capital, inventory financing, etc. through bank loans, syndicated loans and corporate bonds, equity, e.g. retained earnings for financing, private equity, venture capital.</p> <p>The short-, medium- and long term financing opportunities are based on rough estimates derived from the limited data available as presented in the above.</p> <p><u>Short term (next 6 months):</u></p> <ul style="list-style-type: none"> <li>• USD 1 billion</li> </ul> <p><u>Medium term (6 months – 2 years):</u></p> <ul style="list-style-type: none"> <li>• USD 4 billion</li> </ul> <p><u>Long term (2 years – 10 years):</u></p> <ul style="list-style-type: none"> <li>• USD 20-30 billion</li> </ul>	<p><u>Do no harm business models:</u></p> <ul style="list-style-type: none"> <li>• Using certified sustainable raw materials (e.g. FSC-certified wood).</li> <li>• Preventing water pollution by implementing industrial waste water treatment.</li> <li>• Transitioning to renewable energy sources, e.g. biofuels (waste-to-energy)</li> </ul>	<p><u>Nature and Climate risks:</u></p> <ul style="list-style-type: none"> <li>• Acute physical risks such as flooding, heavy rains, droughts, heatwaves.</li> <li>• Chronical physical risks, such as rising temperatures, declining water resources, soil degradation and resource scarcity.</li> <li>• Transition risks, such as policy changes regarding carbon emission regulation, market shift towards eco-friendly and carbon-neutral products, supply chain disruptions.</li> <li>• Systemic risks, climate change vulnerability of energy intensive industry, infrastructure damage and logistics disruptions.</li> </ul> <p><u>Finance risk:</u></p> <ul style="list-style-type: none"> <li>• Credit risk: demand for treated industrial waste water dries up</li> <li>• Market risk, e.g. volatile prices – spiking input costs due to imported raw materials with same output prices weakens loan repayment ability., reduced revenue due to disruption in global market trends.</li> <li>• Liquidity risk, e.g. high fixed costs combined with sales dip due to physical climate-related events.</li> </ul> <p><u>Other risks:</u> governance risk, economic and political instability, raised insurance costs due to flooding and drought.</p>
Assessment of sector relevance for banks in Kenya		

- **Government alignment:** High priority<sup>82</sup>
- **Importance for banks current portfolio:** High – 15.1% of gross loans
- **Overall assessment:** Significant current sector portfolio, only limited do no harm business models, high financing demand and high government priority.

<sup>78</sup>The short-, medium- and long-term financing opportunities are based on rough estimates derived from the limited data available.

<sup>79</sup>Based on action resources overview by UNEP FI (2023) available at: [https://www.google.com/url?sa=f&source=web&rct=j&opi=89978449&url=https://www.unepfi.org/%3Fsdm\\_process\\_download%3D1%26download\\_id%3D72131&ved=2ahUKewjK9Z2tpeJAxWN0AIH-HW-YMg8QFnoECA4QAw&usg=AOvWaw2mWenOH-r97VUlc36-bqnE](https://www.google.com/url?sa=f&source=web&rct=j&opi=89978449&url=https://www.unepfi.org/%3Fsdm_process_download%3D1%26download_id%3D72131&ved=2ahUKewjK9Z2tpeJAxWN0AIH-HW-YMg8QFnoECA4QAw&usg=AOvWaw2mWenOH-r97VUlc36-bqnE), last visited 11 February 2025.

<sup>80</sup>Based on Kenya's Climate Risk Country Profile, available at: [https://climateknowledgeportal.worldbank.org/sites/default/files/2021-05/15724-WB\\_Kenya%20Country%20Profile-WEB.pdf](https://climateknowledgeportal.worldbank.org/sites/default/files/2021-05/15724-WB_Kenya%20Country%20Profile-WEB.pdf), last visited 11 February 2025.

<sup>81</sup>Supply Chain Finance Market Assessment, IFC (2022), available at: <https://www.ifc.org/content/dam/ifc/doc/mgrt/202210-supply-chain-finance-market-assessment-kenya.pdf>, last visited 19 March 2025.

<sup>82</sup>Strategic Plan 2023-2027, Ministry of Investments, Trade and Industry (2024), available at <https://www.industrialization.go.ke/sites/default/files/2024-09/STARTEGIC%20PLAN%202023-2027.pdf>, last visited 21 March 2025.



*“Kenya’s real estate sector presents significant financing opportunities for commercial banks, driven by a growing demand for residential, commercial, and industrial properties. As key players in the financial landscape, commercial banks can leverage various financing instruments to meet this demand and enhance their profitability.”*

**TABLE 7 OVERVIEW OF OPPORTUNITIES AND RISKS IN THE REAL ESTATE SECTOR**  
**REAL ESTATE**

Size of financing opportunity in Kenya over the short, medium and long term <sup>83</sup>	Scale level of viable nature-related business models <sup>84</sup>	Risk profile <sup>85</sup>
<p>Kenya’s real estate sector presents significant financing opportunities for commercial banks, driven by a growing demand for residential, commercial, and industrial properties.<sup>86</sup> As key players in the financial landscape, commercial banks can leverage various financing instruments to meet this demand and enhance their profitability. The sector’s output increased by 33.7 per cent from KSh 946.7 million in 2019 to KSh 1,265.4 million in 2023.<sup>87</sup> The market is expected to reach a value of KES US\$773.02bn by 2025 with an annual growth rate of 5.12% from 2025 to 2029 (CAGR 2025-2029), resulting in a market volume of KES US\$944.09bn by 2029.<sup>89</sup> Kenya faces a significant infrastructure financing deficit estimated at \$2.1 billion annually, which constrains growth and development. Sustained expenditures of almost \$4 billion per year will be required to meet the country’s infrastructure needs.<sup>lxxxix</sup></p> <p><u>Finance demand:</u> equity, e.g. Joint Ventures, private equity, debt, e.g. loans and mortgages, Real Estate Investment Trusts (REITs)</p> <p>The short-, medium- and long-term financing opportunities are based on rough estimates derived from the limited data available as presented in the above.</p> <p><u>Short term (next 6 months):</u></p> <ul style="list-style-type: none"> <li>• USD 1-2 billion</li> </ul> <p><u>Medium term (6 months – 2 years):</u></p> <ul style="list-style-type: none"> <li>• USD 8 billion</li> </ul> <p><u>Long term (2 years – 10 years):</u></p> <ul style="list-style-type: none"> <li>• USD 40 billion</li> </ul>	<p><u>Do no harm business models:</u></p> <p>Green/blue urban infrastructure to address the effects of droughts, floods, and urban heat (e.g. green roofs, rain gardens)</p>	<p><u>Nature and Climate risks:</u></p> <ul style="list-style-type: none"> <li>• Acute physical risks such as storms, flooding, landslides.</li> <li>• Chronical physical risks, such as rising temperatures increasing heat affecting building materials and indoor comfort, sea-level rise in coastal areas.</li> <li>• Transition risks, such as policy changes regarding building standards and property ownership, market shifts towards eco-friendly buildings.</li> <li>• Systemic risks, reduced property access due to damaged public infrastructure.</li> </ul> <p><u>Finance risk:</u></p> <ul style="list-style-type: none"> <li>• Credit risk: e.g. lower rental yields due to lower rents and more vacancies leading to increased credit risk.</li> <li>• Market risk, e.g. decline of property value, right-of-way issues and land tenure conflicts leading to stranded assets.</li> <li>• Liquidity risk, e.g. underperformance following weather variability, e.g. low wind speeds, drought and cloud cover.</li> </ul> <p><u>Other risks:</u> governance risk, economic and political instability, property devaluation, higher insurance costs, climate vulnerability of properties.</p>
Assessment of sector relevance for banks in Kenya		

<sup>83</sup>The short-, medium- and long-term financing opportunities are based on rough estimates derived from the limited data available.

<sup>84</sup> Based on action resources overview by UNEP FI (2023) available at: [https://www.google.com/url?sa=t&source=web&rct=j&opi=89978449&url=https://www.unepfi.org/%3Fsdm\\_process\\_download%3D1%26download\\_id%3D72131&ved=2ahUKEwjK9Z2tpeJAxWN0AIH-HW-YMg8QFnoECA4QAw&usg=AOvVaw2mWenOH-r97VUlc36-bqnE](https://www.google.com/url?sa=t&source=web&rct=j&opi=89978449&url=https://www.unepfi.org/%3Fsdm_process_download%3D1%26download_id%3D72131&ved=2ahUKEwjK9Z2tpeJAxWN0AIH-HW-YMg8QFnoECA4QAw&usg=AOvVaw2mWenOH-r97VUlc36-bqnE), last visited 11 February 2025.

<sup>85</sup>Based on Kenya’s Climate Risk Country Profile, available at: [https://climateknowledgeportal.worldbank.org/sites/default/files/2021-05/15724-WB\\_Kenya%20Country%20Profile-WEB.pdf](https://climateknowledgeportal.worldbank.org/sites/default/files/2021-05/15724-WB_Kenya%20Country%20Profile-WEB.pdf), last visited 11 February 2025.

<sup>86</sup> National Housing Corporation Strategic Plan 2023-2027, available at <https://www.nhkenya.go.ke/down/NHC%20Draft%20Strategic%20Plan%202023-2027%20Nov.%202023.pdf#:~:text=the%20highest%20demand%20with%20the,deficit%20standing%20at%20200%2C000%20units>, last visited 9 April 2025; <https://thesharpdaily.com/kenya-real-estate-sector-2025-challenges-opportunities/>, last visited 9 April 2025.

<sup>87</sup> Real Estate Survey Report 2023/2024, Kenya National Bureau of Statistics (2024) available at: <https://www.knbs.or.ke/wp-content/uploads/2025/01/2023-24-Real-Estate-Survey-Report.pdf>, last visited 19 March 2025.

<sup>88</sup> <https://www.statista.com/outlook/fmo/real-estate/kenya>, last visited 19 March 2025.

<sup>89</sup> <https://documents1.worldbank.org/curated/en/937611523856702598/pdf/125276-BRI-PUBLIC-13-4-2018-14-34-37-MFDBriefKenyaInfrastructure.pdf#:~:text=Kenya%20faces%20a%20significant%20infrastructure,57%20percent%20of%20GDP%2C%20this>, last visited 9 April 2025.

- Government alignment: Moderate priority<sup>90</sup>
- Importance for banks current portfolio: High – 12.1% of gross loans
- Overall assessment: Significant current sector portfolio, only limited do no harm business models, moderate financing demand and moderate government priority.

**TABLE 8 OVERVIEW OF OPPORTUNITIES AND RISKS IN THE ENERGY SECTOR**  
**ENERGY**

Size of financing opportunity in Kenya over the short, medium and long term <sup>91</sup>	Scale level of viable nature-related business models <sup>92</sup>	Risk profile <sup>93</sup>
<p>Kenya's electricity sector has experienced significant growth in recent years, driven largely by renewable energy. The total investment opportunity in Kenya's electricity supply sector amounts to approximately USD 6.2 billion annually, particularly when factoring in geothermal, wind, solar, grid expansion, and rural electrification initiatives over the next decade.<sup>94</sup></p> <p><u>Finance demand:</u> debt, e.g. debt-for-climate swaps, commercial loans and sustainability linked loans, green bonds, equity, e.g. private sector investments in renewable energy infrastructure, e.g. wind, solar, hydro.</p> <p>The short-, medium- and long-term financing opportunities are based on rough estimates derived from the limited data available as presented in the above.</p> <p><u>Short term (next 6 months):</u></p> <ul style="list-style-type: none"> <li>• USD 3 billion</li> </ul> <p><u>Medium term (6 months – 2 years):</u></p> <ul style="list-style-type: none"> <li>• USD 12 billion</li> </ul> <p><u>Long term (2 years – 10 years):</u></p> <ul style="list-style-type: none"> <li>• USD 60 billion</li> </ul>	<p><u>Do no harm business models:</u></p> <ul style="list-style-type: none"> <li>• Development of renewable energy installations thereby taking into account continued health of ecologically valuable, biodiverse and protected areas, e.g. through marine spatial planning</li> </ul>	<p><u>Nature and Climate risks:</u></p> <ul style="list-style-type: none"> <li>• Acute physical risks such as storms, flooding, drought, strong winds.</li> <li>• Chronical physical risks, such as changing rainfall patterns, rising temperatures, desertification and water scarcity.</li> <li>• Transition risks, such as policy changes regarding renewable energy, potential carbon pricing schemes and emission taxes.</li> <li>• Systemic risks, water-energy-food nexus risks, e.g. reduced water availability for hydropower generation, energy price fluctuations / energy trade disruptions.</li> </ul> <p><u>Finance risk:</u></p> <ul style="list-style-type: none"> <li>• Credit risk: e.g. delays in payments caused by off takers.</li> <li>• Market risk, e.g. drop in power demand due to economic downturns, industrial shutdowns, or widespread adoption of distributed solar systems (e.g. rooftop panels).</li> <li>• Liquidity risk, e.g. underperformance following weather variability, e.g. low wind speeds, drought and cloud cover.</li> </ul> <p><u>Other risks:</u> governance risk, economic and political instability, high cost of capital for energy projects, raised insurance costs due to flooding and drought</p>

<sup>90</sup>Strategic Plan (2020-2025), National Construction Authority, available at: <https://www.nca.go.ke:81/media/NCA-Strategic-Plan-2020-2025.pdf>, last visited 11 February 2025.

<sup>91</sup>The short-, medium- and long-term financing opportunities are based on rough estimates derived from the limited data available.

<sup>92</sup>Based on action resources overview by UNEP FI (2023) available at: [https://www.google.com/url?sa=t&source=web&rct=j&opi=89978449&url=https://www.unepfi.org/%3Fsdm\\_process\\_download%3D1%26download\\_id%3D72131&ved=2ahUKewjK9Z21pfeJAxWN0AIH-HW-YMg8QFnoECA4QAw&usg=AOvWaw2mWenOH-r97VUlc36-bqnE](https://www.google.com/url?sa=t&source=web&rct=j&opi=89978449&url=https://www.unepfi.org/%3Fsdm_process_download%3D1%26download_id%3D72131&ved=2ahUKewjK9Z21pfeJAxWN0AIH-HW-YMg8QFnoECA4QAw&usg=AOvWaw2mWenOH-r97VUlc36-bqnE), last visited 11 February 2025.

<sup>93</sup>Based on Kenya's Climate Risk Country Profile, available at: [https://climateknowledgeportal.worldbank.org/sites/default/files/2021-05/15724-WB\\_Kenya%20Country%20Profile-WEB.pdf](https://climateknowledgeportal.worldbank.org/sites/default/files/2021-05/15724-WB_Kenya%20Country%20Profile-WEB.pdf), last visited 11 February 2025.

<sup>94</sup> <https://www.trade.gov/country-commercial-guides/kenya-energy-electrical-power-systems>, last visited 11 February 2025.

#### Assessment of sector relevance for banks in Kenya

- Government alignment: High priority<sup>95</sup>
- Importance for banks current portfolio: Low – 3.7% of gross loans
- Overall assessment: Limited current sector portfolio, only limited do no harm business models, high financing demand and high government priority.

*Based on rough estimates and limited data, the nature-related investment/financing opportunity (for banks) in Kenya ranges between USD 100-150 billion over the coming ten years (2025-2035).*

**Note:** The estimates are based on publicly available data from a range of combined sources, including Kenya's FAO Country Profile, Kenya's World Bank Climate Risk Country Profile, Kenya's National Wildlife Strategy 2030, Kenya's Environment Protection, Water and Natural Resources Sector Report for the MTEF Period 2024/25 – 2026/27, an IFC Supply Chain Finance Market Assessment for Kenya, Kenya's Real Estate Survey Report 2023/2024 and the State Department for Industry Strategic Plan for the Manufacturing Sector 2023-2027, among others. It is recommended that as a follow-up activity of this overview, an in-depth analysis of the monetary opportunities per sector will be made as part of sector deep-dives (see recommendation 29). Annex 3 provides an overview of the sources used to estimate the finance potential per sector.

*Our analysis, supported by interviews, highlights agriculture (including food) and forestry as the most relevant sectors for nature-positive financing for Kenyan banks. Meanwhile, wildlife conservation emerges as the most critical sector for nature conservation, and the manufacturing sector holds significant potential to contribute to the "do no harm" approach.*

*While real estate is important, manufacturing has been prioritised due to its larger share in the current loan books of banks.*

<sup>95</sup>Environment protection, water and natural resources sector report for the MTEF <https://www.treasury.go.ke/wp-content/uploads/2023/12/ENVIRONMENT-PROTECTION-WATER-AND-NATURAL-RESOURCES-SECTOR-REPORT-1.pdf>, last visited 11 February 2025.

# Availability of Financial and Investment Instruments



Now that the key sectors for Kenya have been identified, along with a rough estimate of their financing needs, the specific financial instruments available in the Kenyan market and how commercial banks can utilise them to advance nature-related financing are examined. There are four primary sources of financial capital that can be leveraged and structured to support nature-related outcomes: 1. debt, 2. equity, 3. (retained) earnings / revenues and 4. grants. These are detailed in Annex 4. It is important to note that non-financial capital, such as human capital (people) and physical assets (e.g., buildings, machinery) are excluded. Within these four categories of financial capital, there are a variety of financial and investment instruments relevant to commercial banks in advancing nature-related outcomes. To advance nature-related projects, blended finance structures are often required (see recommendation 16). This chapter provides an overview of the financial instruments and potential financial structures. These should be seen as ‘blueprints’ that can be combined to meet the exact needs of the project, finance recipient and finance provider.

## 5.1 Debt

**Debt is a loan, an arrangement between borrower and lender.** Money is borrowed on the condition that it is paid back with interest, compensating for the risk the lender takes. Repayment can be either the total amount at one time or in tranches. Nature-related projects benefit from more flexible repayment schedules, grace periods, especially if cashflow is seasonal, non-linear, unpredictable (see recommendation 18).

*“The restructuring of KBA’s credit guarantee facility will help banks lower loan costs and reduce collateral requirements, making finance more accessible.”*

## Debt

Nature related financial instrument	High-level description	Availability on the Kenyan market
Green bonds	Debt instruments issued by governments or corporations to finance specific projects with environmental benefits, including conservation and reforestation.	Yes, however, not yet in the nature space <sup>96</sup>
Sustainability-linked bond (SLB)	Debt instrument issued by governments or corporations where the issuer commits to achieving sustainability targets to which the bond’s financial terms are linked. The SLB can be used for general corporate purposes as long as the issuer meets these pre-defined ESG performance targets	No, Kenya’s first SLB is under development. <sup>97</sup>
Debt for nature swap	A financial mechanism where a portion of a country’s sovereign debt is forgiven, restructured, or reduced in exchange for commitments to fund nature-related projects, e.g. environmental conservation.	No, however, the first joint debt for nature swap is in development. <sup>98</sup>
Impact Loans	Loans provided at concessional rates for nature-related businesses, such as eco-tourism, conservation and sustainable agriculture	Yes, in the context of the Kenya Vulture Conservation Project for which Kenya Vulture Conservation, LLC provided a \$10 million fixed-rate loan to the Kipeto Energy wind farm located in Kajiado County, 45 km southwest of Nairobi Kenya.. <sup>99</sup>
Credit lines	Dedicated funds for commercial banks to on-lend for sustainable projects poss. combined with technical assistance	Yes, e.g. EIB’s Greening the Financial System programme
Guarantees	Credit enhancement tool that supports debt financing by reducing the lender’s risk by ensuring repayment if the borrower defaults, e.g. covering X amount of the potential losses on loans to a regenerative farmer.	Yes, e.g. Green Guarantee Facility by the African Guarantee Facility. <sup>100</sup>

<sup>96</sup><https://www.climatebonds.net/2019/10/first-green-bond-kenya-acorn-usd40m-climate-bonds-certified-financing-green-buildings>, last visited 19 March 2025, <https://fsdafrica.org/projects/kenya-green-bond-programme/>, last visited 19 March 2025.

<sup>97</sup><https://www.businessdailyafrica.com/bd/economy/kenya-targets-to-issue-first-sh65bn-sustainability-linked-bond-4925438>, last visited 19 March 2025

<sup>98</sup><https://www.reuters.com/business/environment/african-countries-eye-worlds-first-joint-debt-for-nature-swap-2024-09-26/>, last visited 19 March 2025.

<sup>99</sup>[https://www.nature.org/content/dam/tnc/nature/en/documents/Kenya\\_Vulture\\_Conservation\\_2023\\_Impact\\_Report.pdf](https://www.nature.org/content/dam/tnc/nature/en/documents/Kenya_Vulture_Conservation_2023_Impact_Report.pdf), last visited 19 March 2025.

<sup>100</sup><https://www.eib.org/en/products/advisory-services/gfs/index>, last visited 19 March 2025.

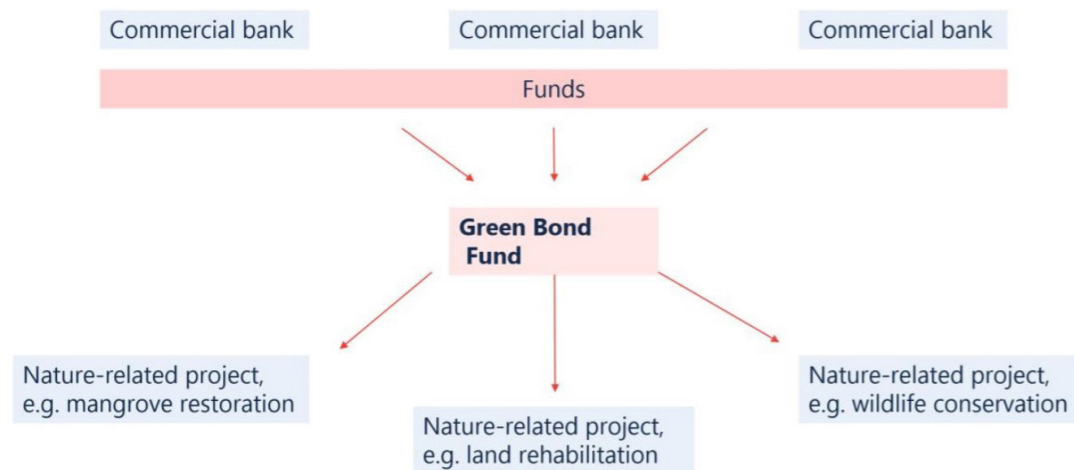


FIGURE 4 HOW COMMERCIAL BANKS CAN CONTRIBUTE TO A POOLED GREEN BOND FUND WHICH FINANCES NATURE-RELATED PROJECTS

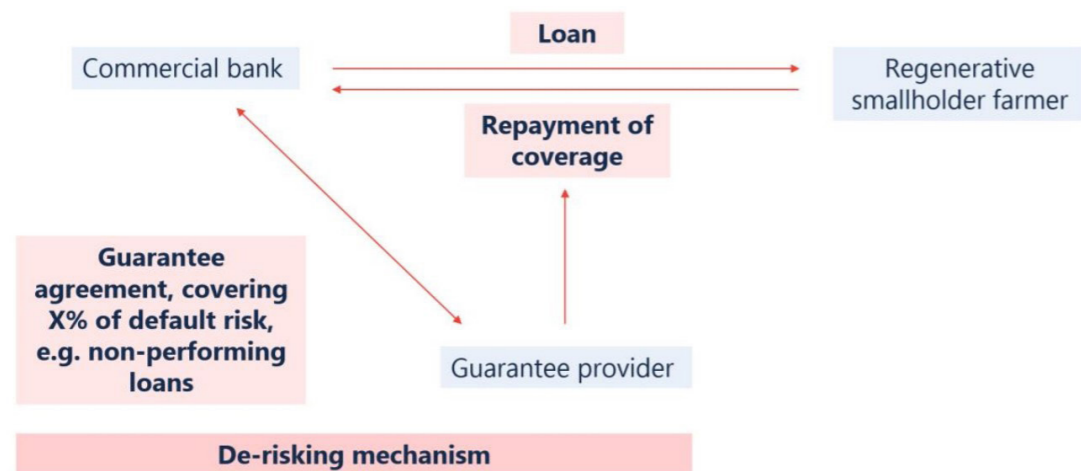


FIGURE 5 HOW A GUARANTEE CAN DE-RISK A COMMERCIAL BANK'S LOAN TO A REGENERATIVE FARMER

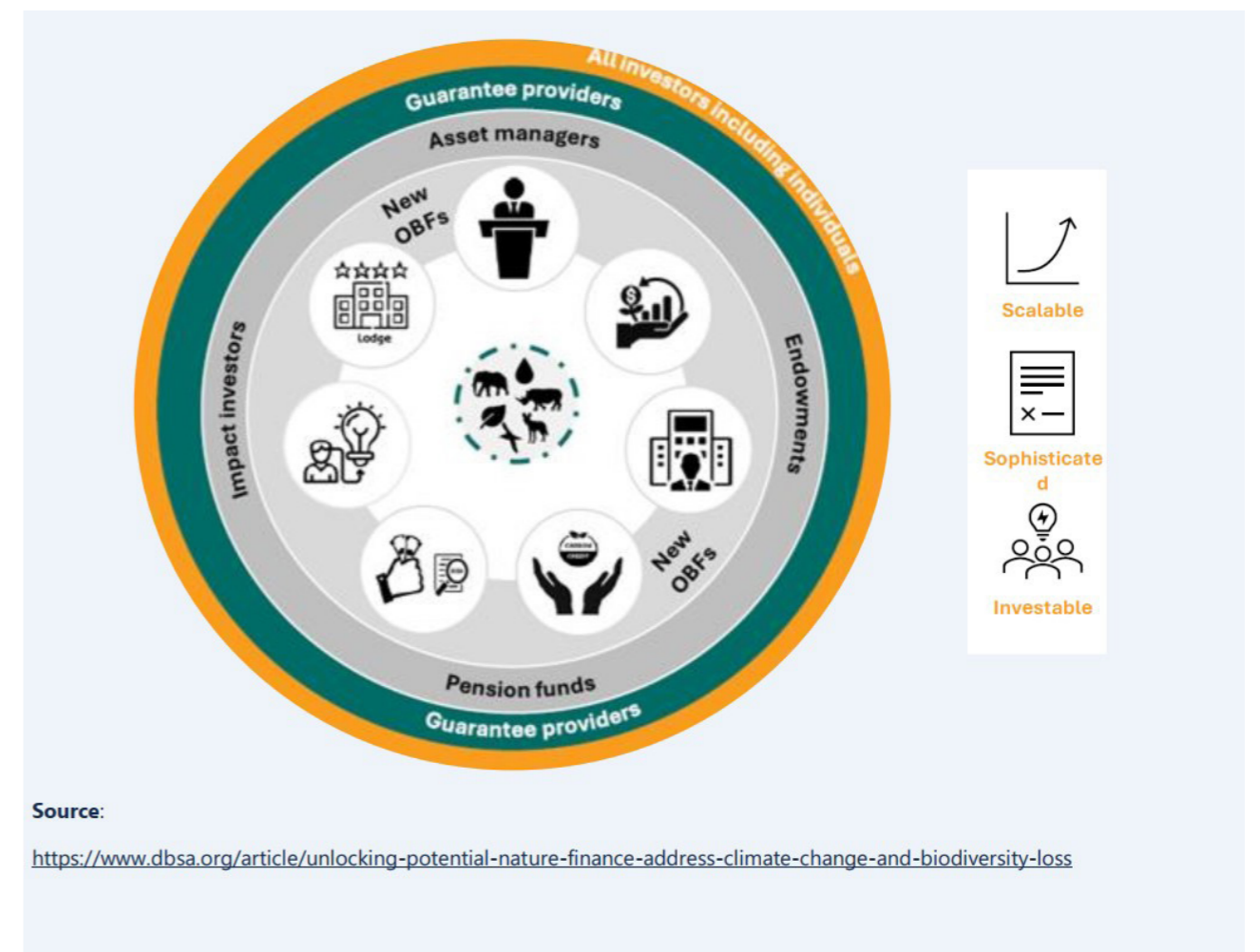
## Case Study

### The Development Bank of South Africa (DBSA) & Rand Merchant Bank (RMB): Developing a new funding model for nature – “Conservation impact bonds”

The Development Bank of South Africa (DSBA) has partnered with Rand Merchant Bank (RMB) to support the biodiversity bond programme using an outcomes-based funding model. Biodiversity outcomes-based bonds are financial instruments that link investor returns to the success of specific biodiversity projects.

For instance, a rhino bond might generate higher returns for investors if the number of rhinos in a protected area increases. By aligning investor interests with conservation outcomes, nature bonds can incentivise effective stewardship of natural resources.

Whilst there are still challenges, e.g. measuring and valuing natural capital in a way that's comparable to traditional assets, the long-term nature of biodiversity conservation, etc., there's a compelling business case for natural capital enabling everyone to participate.



Source:

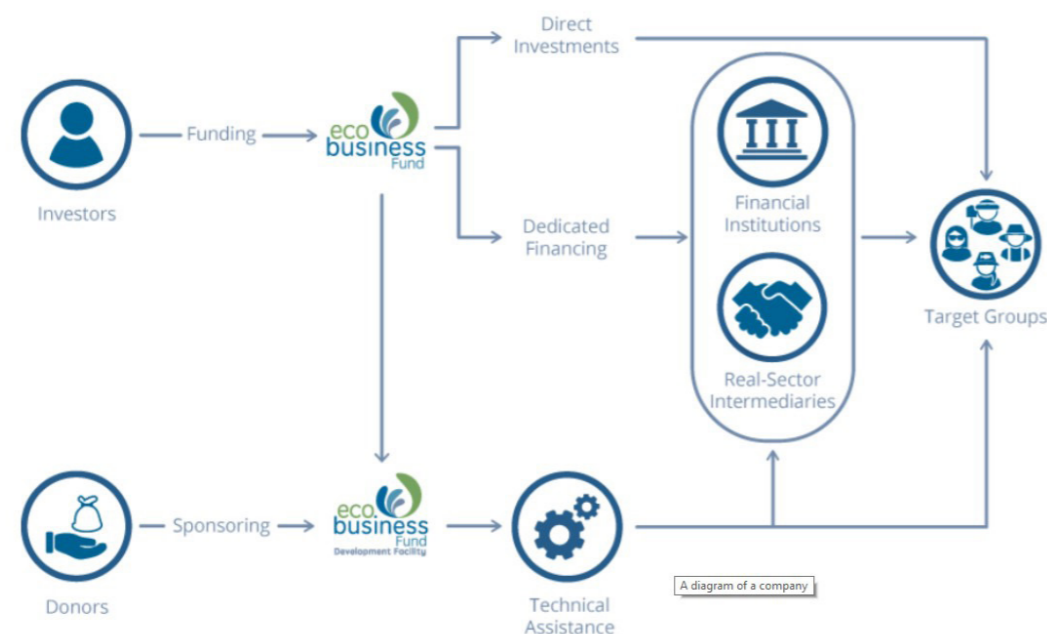
<https://www.dbsa.org/article/unlocking-potential-nature-finance-address-climate-change-and-biodiversity-loss>

## 5.2 Equity

Equity is raising capital, through the sale of ownership of a business, the investor will take a part of the profits or losses that the invested business makes, and accepts the risk that there will be no repayment at all. For this risk, equity investors normally require a higher return than debt providers. Especially emerging nature-related projects may require equity during their start-up phase.

EQUITY		
Nature related financial instrument	High-level description	Availability on the Kenyan market
Pooled Nature-related Finance Funds	Pooled investment funds targeting biodiversity protection, reforestation, and ecosystem restoration	Yes, e.g. Eco Business Fund by Finance in Motion. <sup>102</sup>
Public-Private Partnerships (PPPs)	Equity investment models where commercial banks partner with governments and private investors to fund large-scale nature restoration and conservation projects	Yes, however, not yet in the nature space
Green Venture Capital	Investment in early-stage nature-related businesses.	Yes, e.g. Mirova <sup>103</sup>

TABLE 11 EQUITY INSTRUMENTS TO ADVANCE NATURE-RELATED FINANCING



<sup>102</sup><https://www.ecobusiness.fund/en/>, last visited 19 March 2025.

<sup>103</sup> <https://www.mirova.com/en>, last visited 19 March 2025.

## 5.3 Retained earnings / revenue

Retained earnings are the cumulative net earnings or profits of a private company. Both these profits, and the revenue generating activities that generate these profits, can leverage finance for nature-related outcomes.

RETAINED EARNINGS / REVENUE		
Nature related financial instrument	High-level description	Availability on the Kenyan market
Payment for Ecosystem Services (e.g. carbon credits, biodiversity credits)	Generating revenue by conserving or restoring ecosystems (e.g., carbon credits, biodiversity credits)	Yes, however, limited. Conceived as high risk instruments due to e.g. lacking policy framework, adequate pricing mechanism, etc. Example: Earth Acre <sup>104</sup>
Nature-related fees and levies	Revenue streams from sustainable tourism, conservation fees, or eco-certification schemes.	Yes, eco-tourism is a rather welldeveloped sector in Kenya. <sup>105</sup> Example: Ol Pejeta <sup>106</sup>
Sustainable Agriculture and Forestry Revenues	Income from sustainable agriculture and forestry (e.g., organic farming, agroforestry)	Yes, there are numerous examples of regenerative agriculture projects generating revenue from high-value crops, e.g. macadamia, mango, avocado. Example: Limbua <sup>107</sup>

TABLE 12 NATURE-RELATED EXAMPLES OF RETAINED EARNINGS / REVENUE

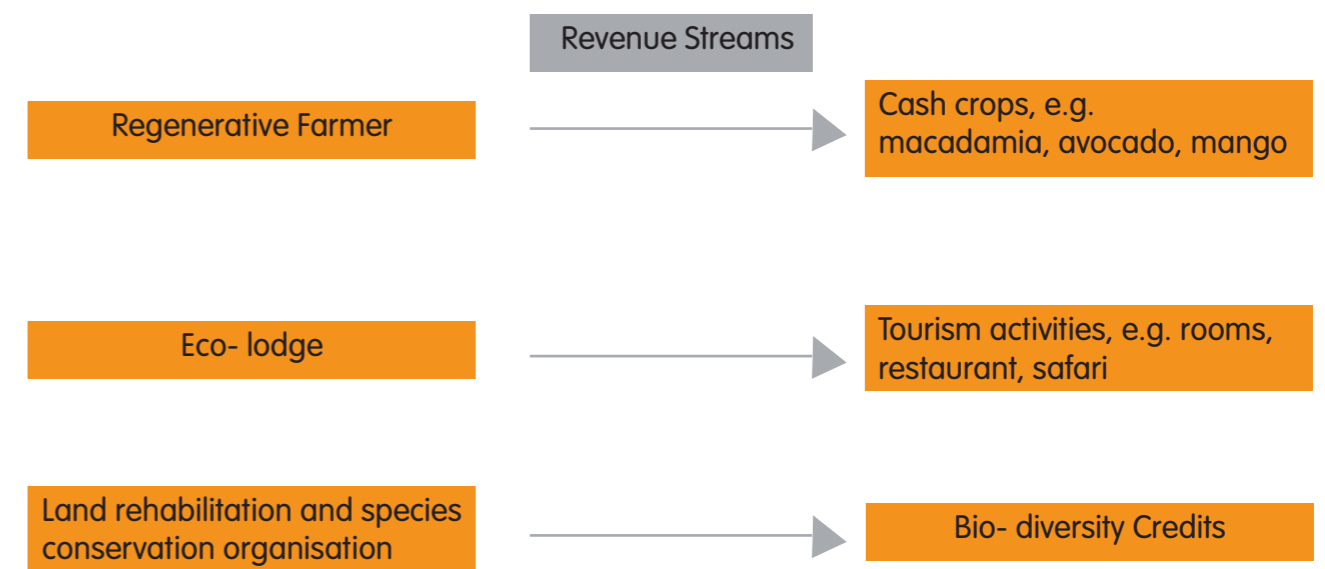


FIGURE 7 ROLE OF (RETAINED) EARNINGS /REVENUE IN ADVANCING NATURE-RELATED FINANCING FOR COMMERCIAL BANKS

<sup>104</sup><https://www.earthacre.com/projects>, last visited 19 March 2025.

<sup>105</sup> <https://ecotourismkenya.org/>, last visited 19 March 2025.

<sup>106</sup> <https://www.olpejetaconservancy.org/>, last visited 19 March 2025

<sup>107</sup> <https://www.limbua-group.com/en>, last visited 19 March 2025.

## 5.4 Grants

A grant is money given to an individual or another entity, for a specific purpose linked to public benefit (see recommendation 20).

GRANTS		
Nature related financial instrument	High-level description	Availability on the Kenyan market
Bilateral and Multilateral Grants	Funding from institutions like the Global Environment Facility (GEF), Green Climate Fund (GCF), and World Bank for nature-related projects.	Yes, and directly to banks (often in the form of a low-interest loan). However, present challenges for banks, as their stringent criteria require a high level of data granularity even in the early stages of the application process.
Government Grants	Subsidies for e.g. sustainable agriculture, reforestation, or marine conservation	Yes, e.g. National Fertilizer Subsidy Programme, however, this programme was not aimed at advancing a nature-positive economy. <sup>108</sup>
Corporate and Philanthropic Grants	Private sector contributions towards nature-related projects	Yes, e.g. Mastercard Foundation <sup>109</sup> , Children's Investment Fund Foundation (CIFF) <sup>109</sup> , etc.

TABLE 13 NATURE-RELATED EXAMPLES OF GRANTS

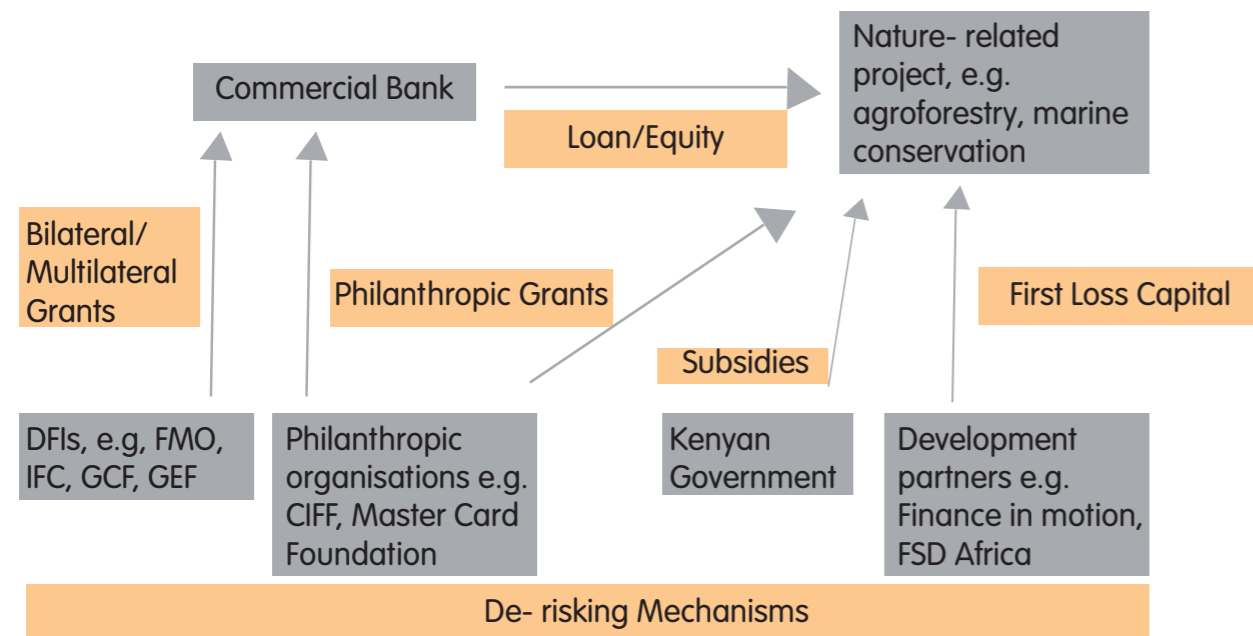


FIGURE 8 USING GRANTS AS DE-RISKING MECHANISMS TO ADVANCE NATURE-RELATED FINANCING IN COMMERCIAL BANKS

<sup>108</sup><https://www.ifpri.org/blog/how-kenyas-national-fertilizer-subsidy-program-working/>, last visited 19 March 2025.

<sup>109</sup> <https://www.mastercard.com/global/en/vision/corp-responsibility/sustainability/wildlife-impact.html>, last visited 19 March 2025.

<sup>110</sup> <https://ciff.org/regions/africa/>, last visited 19 March 2025.

# Examples of nature-related business models



**Based on the most relevant nature-related sectors for the Kenyan economy and the range of financial and investment instruments available on the market four nature-related business models have been developed.** One business model for each of the identified priority sectors: agriculture, forestry (Nature-Positive), wildlife conservation (Nature Conservation), and manufacturing (Do No Harm).

Each business model outlines the following aspects:

- Context
- Introduction to business model
- Revenue generating opportunities
- Main barriers and risks
- Mitigation measures
- Scalability of the business model.
- Type of financing opportunity
- Financial structure
- Positive impacts
- Sample project (hypothetical)

*“A successful approach strikes the right balance between building a strong business case and doing what is ethically and environmentally right.”*

The types of business models vary considerably, and given the ongoing methodological refinements, we have adopted a pragmatic approach. Our focus has been on business models that not only offer opportunities for commercial banks in Kenya to support the transition to a nature-positive economy, but also those that contribute to broader nature-related outcomes. A more quantitative financial analysis of the business models is provided in chapter 8.

SCALE LEVEL – SHADES OF 'GREEN'	SECTOR	BUSINESS MODEL EXAMPLE
Nature-Positive – the highest level of commitment, aiming not only to sustain but to restore and enhance nature	Agriculture	Regenerative agriculture
	Forestry	Agroforestry: organic production of certified high value crops while maintaining a polyculture
Nature Conservation- goes beyond just avoiding harm by actively protecting and maintaining natural ecosystems	Environmental services	Ecotourism aimed at wildlife and ecosystem conservation
Do No Harm- baseline level of environmental responsibility	Manufacturing	Waste-to-energy

TABLE 14 OVERVIEW OF SCALE LEVELS, SECTORS AND PROMISING BUSINESS MODELS

### Context

- The trend in agriculture in Kenya is intensification of agricultural practices and (consequently) depletion of soil and biodiversity.
- Farmers income is based on maximised production and market price. Productivity in Kenya is relatively low.
- Big financial investments are needed for the conversion of farms into more regenerative practices and increasing scale.
- Given the low returns and high risk-profile bank financing is limited in the sector.
- At present, banks primarily focus on risk mitigation, rather than actively leveraging nature-related opportunities.

### Introduction to regenerative agriculture as a business model

Regenerative agriculture offers a way of farming that generates financial, ecological, as well as social returns in a regenerative way. By employing techniques such as zero tillage, protecting the soil with cover crops or crop residues, planting diverse crops, and rotating them periodically, as well as using organic fertiliser farmers can naturally manage weeds, pests, and diseases. These practices help prevent soil erosion and improve resilience to drought. In addition, regenerative agricultural practices result in more reliable yields and do not require as much farm machinery, reducing fuel consumption and labour.

### Revenue generating opportunities

Initial investments and financing requirements are high (establish new practices, reduces land use, purchase of stock, etc.). Revenue generating activities typically start to become profitable in year 3.

- Generating revenue from increased production
- Carbon credit revenues from increased sequestration

### Main barriers and risks include:

The need for farmers to acquire new knowledge and skills, the increased use of herbicides to combat unwelcome plants which may result from not tilling, potentially lower yields (reduced profit margins) and higher costs due to unforeseen circumstances, the dependency on local climate and crop conditions, and the costs and time needed to transition from conventional to regenerative farming, and there can be certification pressure.

Banks look at profitability and liquidity, in addition to long-term value (and collateral). In agricultural business, profitability and liquidity are inherently volatile. This is especially the case for innovative farming solutions, without a historical track record of profitability and liquidity. Consequently, access to financing is limited.

In the case of carbon credits, the associated risks are significant and cannot be borne by smallholder farmers.

### Mitigation measures

- Foundations to provide training to farmers on new farming practices.
- Policy makers to set long-term policies consistent with the principles of nature inclusive farming. Kenya has adopted the [Kenya Strategic Investment Framework](#).
- Financial institutions can make financing more accessible for nature-inclusive farmers and offer longer tenures for proven concepts.
- Farmers can organise themselves in cooperations to leverage offtake contracts, manage carbon credit risks.

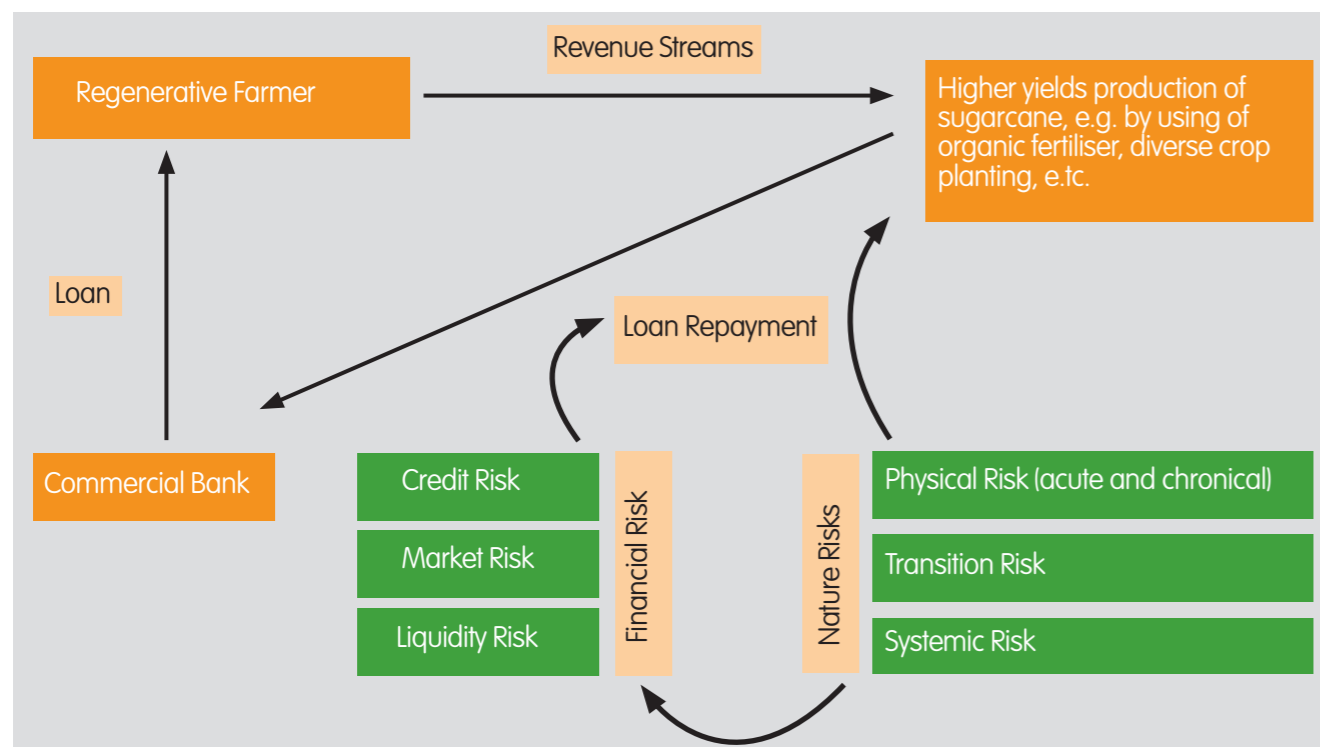
### Scalability of the business model

The potential is high, but currently not yet optimally utilised by banks. The total long-term expected financing need of the agricultural sector in Kenya is USD 10 billion of which at least one third should be directed towards regenerative agriculture in line with COP28 pledges.

Type of financing and investment opportunities

- Bank loans
- Leases
- Private investments
- Blended finance structures including grants

### Financial structure (example)



### Overall nature and climate risk compared to business-as-usual scenario: lower\*

- **Acute physical risks**, such as flooding, drought, heatwaves, wildfire.
- **Chronic physical risks**, such as changing rainfall patterns and soil degradation
- **Transition risks**, such as policy changes regarding land use.
- **Systemic risks**, such as decline in pollinators leading to crop failure.

\* Note that many of these risk drivers are location specific, such as water availability and land-use regulation.

**Overall finance risk:** medium. Financial institutions face higher expected changes in the project risk profile if they lend to projects that operate in for example water-stressed locations or deforestation hotspots, and at a longer tenor.

- **Credit risk**, e.g. water stress leading to operational challenges impacting revenue (if extensive may lead to problems in meeting debt obligations).
- **Market risk**, e.g. regulatory actions leading to stranded assets for regenerative agriculture farmers relying on land-use change for their revenues.
- **Liquidity risk**, e.g. deposit outflow due to unprecedented withdrawals following physical climate events.  
*Other risks:* governance issues, economic and political instability, land use incentives, lack of adequate geospatial and financial data which makes risk pricing difficult, climate variability leading to increased risk and unpredictability.

### Positive impacts

- Increased crop yields supporting livelihoods
- Increased biodiversity
- Carbon sequestration in the soil, reduced carbon footprint
- Improved soil and water quality, improved input/output nitrogen ratio

### Sample project: Cinch Kenya

A regenerative agriculture model can become commercially investable when it integrates sustainable farming practices with robust farmer networks, reliable market access, and diversified revenue streams. One example is Cinch Kenya, a company supporting smallholder farmers across Kenya to adopt regenerative agriculture through organic inputs, agroecological training, and digitised farm monitoring. Farmers grow a variety of crops using practices like composting, cover cropping, and minimal chemical use - improving soil health and resilience to climate change while boosting productivity.

Cinch provides farmers with access to organic inputs, continuous agronomic support, and a digital platform that tracks farm performance and environmental outcomes. This data-driven approach enhances transparency and builds trust with buyers and investors. Cinch also connects farmers to markets through forward contracts and off-take agreements, helping them access better prices for sustainably grown produce. In parallel, the company works with carbon certification partners to monetise improvements in soil organic carbon, unlocking additional revenue streams through voluntary carbon markets.

This model opens several financing avenues for commercial banks - such as input financing for regenerative inputs, working capital for aggregation and logistics, and carbon-revenue-linked credit lines. Cinch's traceability systems, diversified income sources (from crops and carbon), and long-term buyer relationships contribute to stable cash flows, making the model more bankable. Further de-risking is possible through blended finance, insurance, and development partner support.

## NATURE-POSITIVE BUSINESS MODEL – AGROFORESTRY

### Context

- (High) land prices for farmland lead to intensification of agricultural practices and depletion of soil and biodiversity.
- Farmers income is based on maximised production and market price.
- Crop yields and milk produce are low due to poor access to nutritious feeds, water and low producing breeds.
- Banks underestimate the (nature) risks associated with monoculture farming, which leads to financial risks.
- Big financial investments are needed for the conversion of farms towards a viable agroforestry business involving both fast-maturing tree species and cash crops on the same land.
- At present, banks primarily focus on risk mitigation, rather than actively leveraging nature-related opportunities.

### Introduction to nature related carbon projects as a business model

A viable agroforestry business involves a network of smallholder farmers growing both fast-maturing tree species (e.g. grevillea, bamboo, fruit trees) and cash crops (e.g. beans, maize, vegetables) on the same land. An anchor business or cooperative supports farmers with seedlings, training, soil improvement, and commits to buying agroforestry products such as timber, fruits, carbon credits, or medicinal plants. The business aggregates outputs, processes them (e.g. into furniture wood, dried fruit, or oils), and sells to domestic and export markets.

### Revenue generating opportunities

**Initial investments and financing requirements are high. Revenue generating activities include:**

- Sale of tree products: timber, poles, fruits, nuts, resins, oils
- Annual crop sales: vegetables, legumes, cereals
- Carbon credits: from tree planting and soil improvement

### Main barriers and risks include:

- Longer time-to-revenue for tree components more than 10 years depending on species)
- Lack of collateral and track record among smallholder farmers
- Limited technical knowledge on integrating trees with crops
- Diseases and natural hazards
- Market access challenges for tree-based products

### Mitigation measures

- Blended revenue: early returns from crops stabilize cash flow
- Contract farming and offtake agreements with processors or aggregators
- Use of insurance and guarantees (e.g. from DFIs and bilateral/multilateral climate funds)
- Farmer training and monitoring systems for performance tracking
- Co-financing with DFIs, development partners, foundations, etc. for technical support

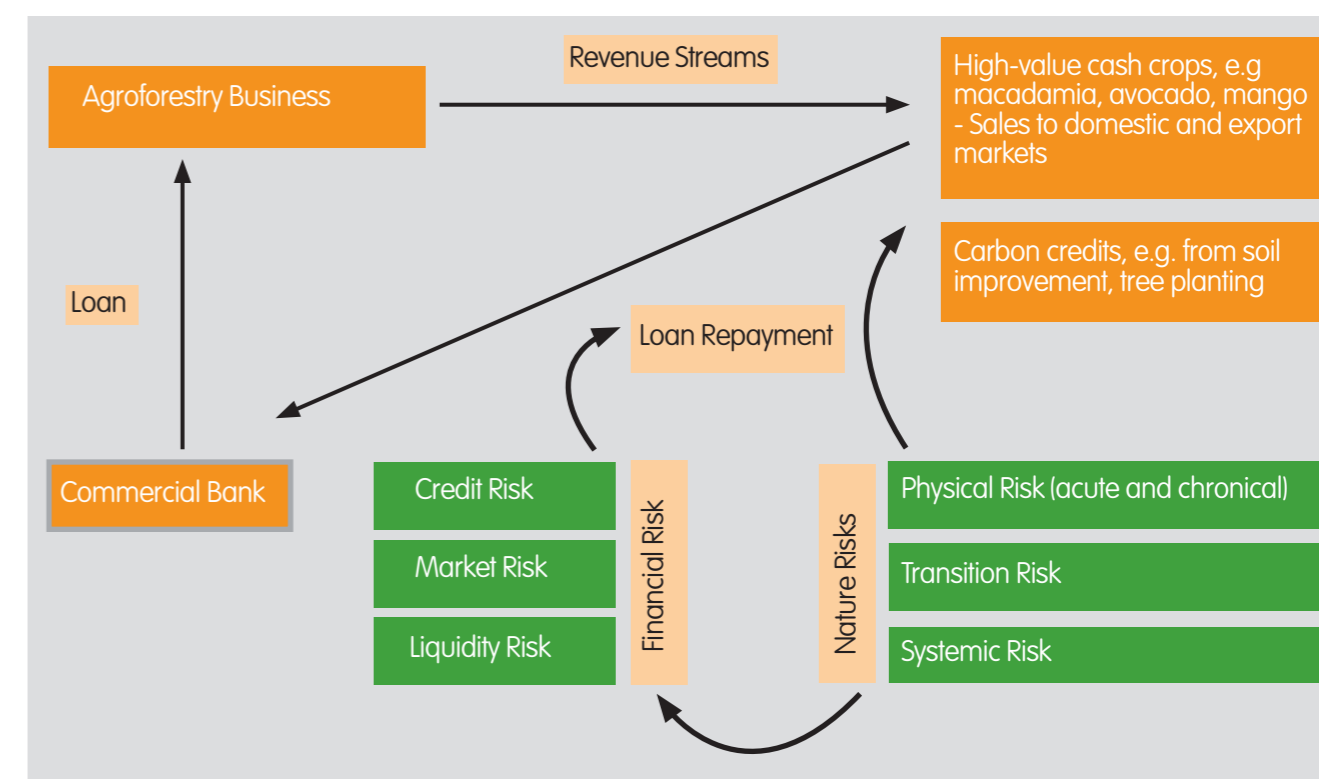
### Scalability of the business model

The potential is high, but currently not yet optimally utilised by banks. The total long-term expected financing need of the agroforestry sector in Kenya is USD 10 billion.

### Types of financing and investment opportunities

- Bank loans
- Private investments
- Blended finance structures including grant

### Financial structure



## Overall nature and climate risks compared to business-as-usual scenario: lower\*

- **Acute physical risks**, such as flooding, drought, heatwaves, wildfire.
- **Chronical physical risks**, such as changing rainfall patterns and soil degradation.
- **Transition risks**, such as policy changes regarding land use.
- **Systemic risks**, such as decline in pollinators leading to crop failure.

\* Note that many of these risk drivers are location specific, such as water availability and land-use regulation.

**Overall finance risk:** medium. Financial institutions face higher expected changes in the project risk profile if they lend to projects that operate in for example water-stressed locations or deforestation hotspots, and at a longer tenor.

- **Credit risk**, e.g. water stress leading to operational challenges impacting revenue (if extensive may lead to problems in meeting debt obligations).
- **Market risk**, e.g. regulatory actions leading to stranded assets for agroforestry businesses relying on land-use change for their revenues.
- **Liquidity risk**, e.g. deposit outflow due to unprecedented withdrawals following physical climate events.

Other risks: governance issues, economic and political instability, land use incentives, lack of adequate geospatial and financial data which makes risk pricing difficult, climate variability leading to increased risk and unpredictability.

## Positive impacts

- Improved soil fertility and biodiversity
- Diversifies and increased farmer incomes
- Reduce reliance on rainfed mono-cropping
- Increased crop yields supporting livelihoods
- Creates long-term rural employment in nurseries, processing, and logistics

## Sample project: Limbua

An agroforestry business model can be commercially investable when it combines tree-based farming with strong aggregation systems, reliable market access, and consistent revenue streams. One practical example is LIMBUA, a Kenyan company that works with Kenyan smallholder farmers to grow high-value tree crops like organic macadamia, avocado and mango intercropped with food crops such as beans, maize, or vegetables. Through an innovative IT system, all products can be traced to source which also allows fair payments to farmers.

A similar model becomes bankable when it supports farmers with training, organic inputs, and long-term offtake contracts, while integrating agroecological practices such as intercropping, soil conservation, and minimal chemical use. LIMBUA aggregates and processes the harvested produce through solar-powered local facilities. By processing their crops on-site Limbua does not only generate more jobs, but also the impact of shipping is limited. LIMBUA sells to local as well as premium export markets in Europe and Asia. Here LIMBUA sells to premium markets, thanks to the acquired certifications.

This structure creates multiple financing opportunities for commercial banks, including working capital for farmer payments and aggregation, asset finance for processing equipment or cold storage, and potential long-term credit tied to export revenue. The model is strengthened by stable cash flows from exports, traceability systems, and sustainability certifications, and can be partially de-risked through carbon revenue, blended finance structures, or guarantees from development partners.

## NATURE CONSERVATION BUSINESS MODEL – ECO-TOURISM

### Context

- Eco-tourism can be defined as tourism that promotes nature and wildlife conservation and benefits local communities.
- The eco-tourism sector is estimated to be worth over \$1 billion per year, accounting for 8.2% of Kenya's GDP.
- Eco-tourism has emerged as a sustainable alternative to mass tourism, and Kenya - home to 24 national parks and over 25,000 animal species - is ideally suited for it.
- There is a great potential for commercial banks to finance and invest in eco-tourism as the sector offers relatively steady revenue streams and thus financial returns. There is a great potential for commercial banks to finance and invest in eco-tourism as the sector offers relatively steady revenue streams and thus financial returns with growing demand.
- Some current barriers include the high upfront costs related to land, construction and licensing.
- Actors like The Nature Conservancy have gained experience in making eco-tourism financially viable for the financial sector, e.g. through their experience with green and sustainability linked bonds as well as debt-for-nature swaps on the continent.

### Introduction to eco-tourism as a business model

An eco-tourism business typically combines low-impact lodges, nature-based activities, and conservation or community partnerships. A viable model involves a private developer or operator establishing eco-lodges, camps, or tour experiences near protected areas (e.g., conservancies, forests, or coastlines). The model often includes revenue-sharing with local communities, sustainable construction, and conservation-based tourism (e.g., wildlife viewing, guided nature walks, cultural visits). It generates consistent cash flow through domestic and international tourists while promoting environmental sustainability.

### Revenue generating opportunities

**Initial investments and financing requirements are high. Revenue generating activities include:**

- Generating revenue from accommodation and hospitality services, e.g. lodges, camps, etc.; nature-based activities, e.g. safaris, hiking, etc; cultural tourism, e.g. community tours, etc.
- Conservation fees and park access levies
- Carbon credit revenues from carbon offsets, conservation, etc.

### Main barriers and risks include:

- (Seasonal) income volatility, e.g. demand shocks due to economic recession
- Upfront capital intensity, e.g. land, construction
- Community conflicts, encroachment and/or human-wildlife conflict
- External climate shocks, e.g. heat waves, floods, etc. leading to environmental degradation

## Mitigation measures

- Partner with NGOs, like The Nature Conservancy, and development partners for upfront capital and technical assistance
- Build in buffer funds and conservative debt structures to manage seasonality
- Establish community conservancy agreements to secure land access and goodwill
- Diversify revenue sources, e.g. off-season retreats
- Ensure nature-resilience of infrastructure and pro-actively contribute to nature conservation

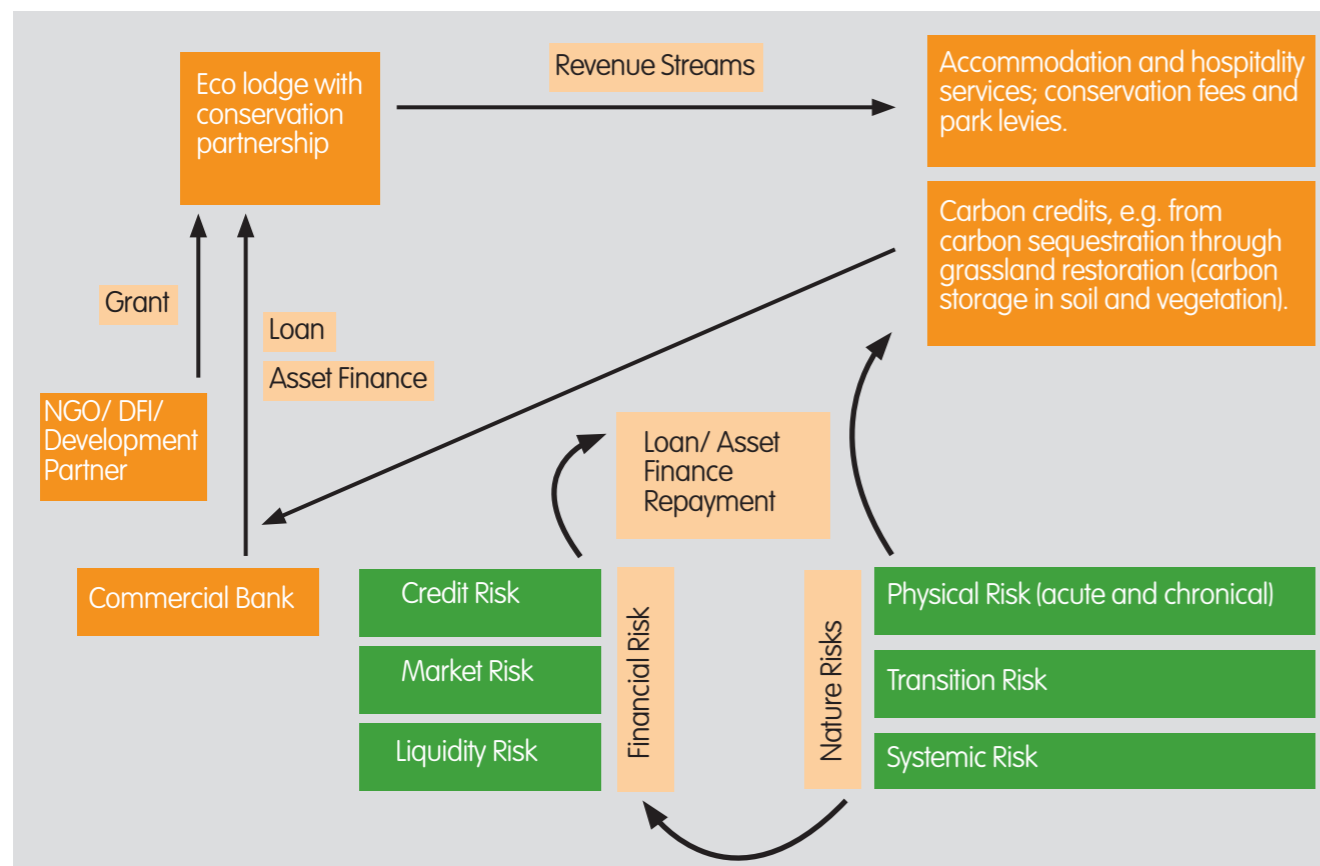
**Scalability of the business model:** The potential is high, but currently not yet optimally utilised by banks. Eco-tourism is highly scalable across Kenya's rich and diverse ecosystems - from the Maasai Mara and Laikipia to coastal forests, Rift Valley lakes, and Mount Kenya. Smaller eco-lodges can be replicated in emerging destinations, especially where communities or conservancies are engaged. Kenya's National Wildlife Strategy encourages private sector investment in sustainable tourism, offering policy support and incentives in priority regions. The total long-term expected financing need of the eco-tourism sector in Kenya is USD 1 billion.

## Overall nature and climate risks compared to business as usual scenario: comparable\*

\* Note that many of these risk drivers are location specific, such as water availability and land-use regulation.

- **Acute physical risks** such as wildfire, flooding, drought, heatwaves affecting tourism.
- **Chronic physical risks**, such as changing rainfall patterns and soil degradation leading to disrupted migration patterns.
- **Transition risks**, such as policy changes regarding wildlife conservation, e.g. prioritising large scale tourism over ecosystem and wildlife conservation
- **Systemic risks**, such as livestock encroachment on conservation areas, food scarcity leading to human-wildlife conflict.

**Overall finance risk:** medium.



## Type of financing and investment opportunities

- Loans, e.g. for lodge construction, solar and water infrastructure.
- Asset finance, e.g. safari vehicles, equipment.
- Blended finance options, e.g. GEF/GCF funding, The Nature Conservancy, philanthropic organisations.
- **Credit risk:** e.g. volatility of the carbon market, lack of tangible assets that can serve as collateral.
- **Market risk,** e.g. regulatory actions leading to stranded assets relying on land-use change for their revenues.
- **Liquidity risk,** e.g. deposit outflow due to unprecedented withdrawals following physical climate events.

Other risks: governance issues, economic and political instability, lack of law enforcement regarding illegal poaching, limited policy coherence.

## Positive impacts

- Biodiversity and natural ecosystem conservation
- Generation of sustainable livelihoods for local communities
- Supports growing local capacity on ecosystem conservation and maintaining indigenous knowledge

## Sample project: Ol Pejeta

An eco-tourism business model can be commercially investable when it combines nature-based tourism with strong conservation partnerships, reliable visitor demand, and diversified income streams. One practical example is Ol Pejeta Conservancy in Kenya, a wildlife conservancy that blends tourism with community engagement and wildlife protection.

A similar model becomes bankable when it integrates eco-friendly infrastructure, high-quality guest experiences, and partnerships with local communities and conservation organizations. The business generates revenue through accommodation, park entry fees, guided wildlife experiences, and cultural activities - while also attracting grants, donations, or sustainability-linked incentives. Facilities such as eco-lodges or tented camps operate within or adjacent to conservancies, using solar power, water recycling, and local materials to reduce environmental impact.

The structure creates multiple financing opportunities for commercial banks, including loans for lodge construction, asset finance for safari vehicles, or working capital for operations and staffing. With predictable seasonal income and clear market linkages via tour operators, eco-tourism ventures like Ol Pejeta can de-risk lending through multi-year offtake agreements, donor partnerships, and government support.

## DO NO HARM BUSINESS MODEL – WASTE-TO-ENERGY

## Context

- Kenya's manufacturing sector is one of the largest recipients of bank lending, reflecting its economic importance.
- The sector generates significant volumes of wastewater and organic effluents.
- Rapid urbanisation and rising energy demand make waste-to-energy an appealing model, offering dual benefits: waste reduction and renewable energy generation.
- Wastewater treatment infrastructure remains underdeveloped.
- However, national policies such as the Sustainable Waste Management Act 2022 and NEMA's discharge regulations are pushing for improved waste management.
- Simultaneously, there is growing pressure to increase the share of renewable and decentralised energy sources.
- There is strong potential to convert wastewater—particularly from food and beverage, textile, and agro-processing industries—into biogas or electricity.
- This can help manufacturers reduce energy costs while addressing environmental and regulatory challenges, making waste-to-energy a compelling solution for the sector.

## Introduction to regenerative agriculture as a business model

This business model focuses on deploying on-site anaerobic digestion systems or integrated wastewater treatment plants with energy recovery at manufacturing companies. Commercial banks can play a role in financing the instalment of waste-to-energy plants within factory compounds, retrofitting existing wastewater systems to make them more sustainable, and co-developing clustered treatment facilities (e.g. for industrial parks).

## Revenue generating opportunities

- Energy cost savings
- Energy sales – feeding produced energy back into the grid
- Carbon credit revenues
- By-product sales, e.g. biofertilizer, slag

## Main barriers and risks include:

- High upfront capital costs – particularly for SMEs and mid-sized manufacturers
- Market instability - fluctuating energy prices
- Equipment failure

## Mitigation measures

- Collaborate with equipment suppliers to defer upfront costs
- Longer-term energy offtake agreements
- Equipment and performance risk insurance

Scalability of the business model: The potential is high, but currently not yet optimally utilised by banks. For example, within certain industry clusters shared waste-to-energy hubs in manufacturing zones could be introduced, etc. The total long-term expected financing need of the manufacturing sector in Kenya is USD 20-30 billion.

## Type of financing and investment opportunities

- Loans
- Leasing, e.g. equipment
- Blended finance options, e.g. GEF/GCF funding, DFI, philanthropic organisations.

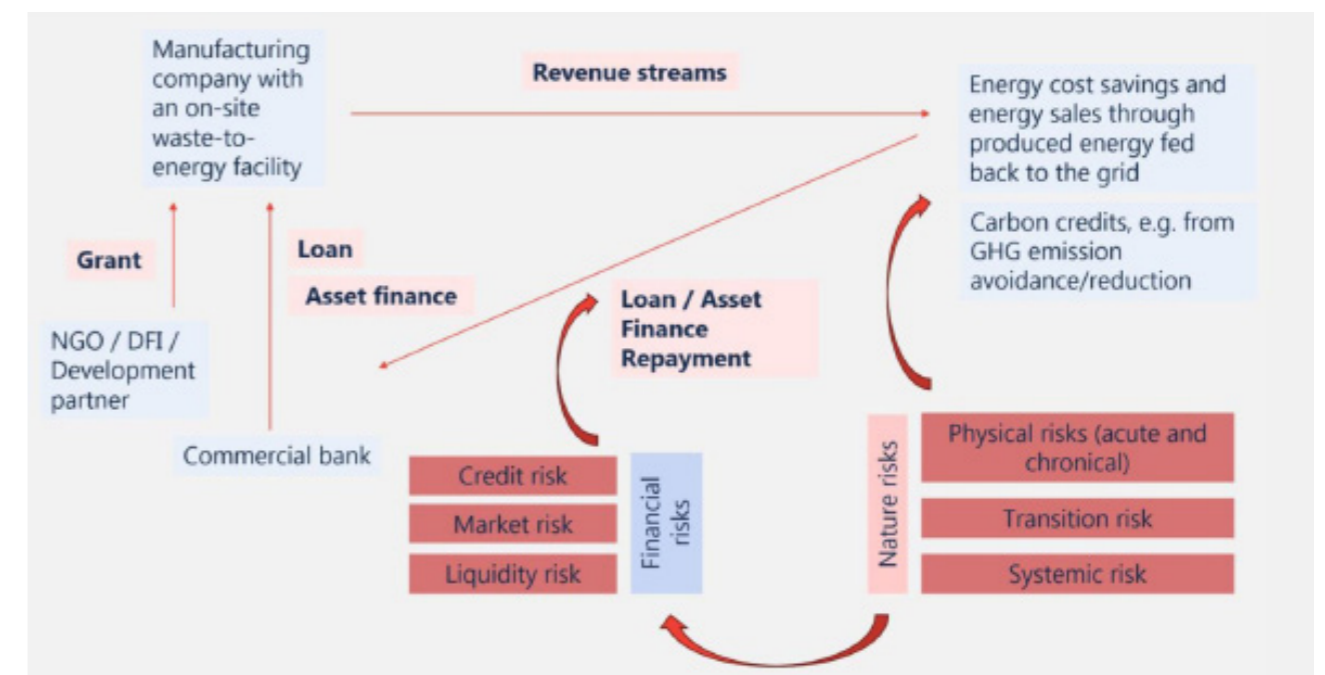
## Overall nature and climate risks compared to business as usual scenario: lower\*

\* Note that many of these risk drivers are location specific, such as water availability and land-use regulation.

- **Acute physical risks** such as flooding, heavy rains, droughts, heatwaves.
- **Chronical physical risks**, such as rising temperatures, declining water resources, soil degradation and resource scarcity.
- **Transition risks**, such as policy changes regarding carbon emission regulation, market shift towards eco-friendly and carbon-neutral products, supply chain disruptions.
- **Systemic risks**, climate change vulnerability of energy-intensive industry, infrastructure damage and logistics disruptions.

**Overall finance risk:** low.

- **Credit risk:** demand for treated industrial waste water dries up.



- **Market risk**, e.g. volatile prices – spiking input costs due to imported raw materials with same output prices weakens loan repayment ability., reduced revenue due to disruption in global market trends.
- **Liquidity risk**, e.g. high fixed costs combined with sales dip due to physical climate-related events.

Other risks: governance issues, economic and political instability, raised insurance costs due to flooding and drought.

### Positive impacts

- Reduction in GHG emissions
- Improved wastewater treatment
- Employment opportunities

### Sample project: Gorge Farm Energy Park

A waste-to-energy business model becomes commercially investable when it combines reliable feedstock supply and strong off-take agreements for energy or by-products. One practical example is Gorge Farm Energy Park in Kenya, a pioneering facility that converts organic agricultural waste into renewable electricity using anaerobic digestion. This is Africa's first grid connect Anaerobic Digester plant. The electricity generated is enough to cultivate its many hectares of vegetables and flowers and enough to power up to 5,000- 6,000 rural homes. For \$0.10/kWh, the firm signed an agreement to sell electricity to the country's power distributor, Kenya Power.

For a waste-to-energy project to become bankable it is essential that it integrates stable input streams (e.g., food waste or agro-processing waste), long-term energy purchase agreements, and potential carbon credit revenue. Revenue is generated through electricity sales, production and sale of organic fertiliser, carbon credits as well as energy cost savings from on-site energy use. The model supports diverse financing opportunities for commercial banks, such as: project finance for biogas infrastructure, equipment leasing for digesters and working capital for waste collection, operations, and maintenance. By securing predictable revenues from electricity sales, carbon markets, and fertiliser by-products, the project can de-risk lending through structured contracts and policy incentives (e.g., renewable energy targets or carbon offset schemes).





Zooming in  
on projects  
contributing to  
nature-positive  
outcomes



## 7.1 Assessing project opportunities by banks.

**Nature-related financing and investment opportunities can arise at direct project level, but also through nature adjacent investments.** As primary providers of capital, banks are in a position to work with existing and new clients, at project finance level, corporate finance level, and SME finance level to advance nature-related projects. Opportunities can be originated from project developers directly, but there are also opportunities to finance SMEs that operate in the value chain of larger projects (e.g. producer of biofertilizer that supplies a regenerative farm may require a loan). Different projects, in different sectors, and client segments require different types of financing (see recommendation 14).

**When identifying nature-related and specifically projects contributing to nature-positive outcomes banks should take a two-step approach.**<sup>111</sup> First banks need to check whether the investment would protect, restore or enhance the sustainable use and management of nature, or enable these actions, in line with the nature-positive finance definition. Secondly, banks need to apply the three nature-positive eligibility criteria to determine if the investment could be tracked as nature-positive finance.

The World Bank has taken the MDB Common Principles and established a more detailed technical methodology for identifying and tracking finance supporting nature.<sup>112</sup> Other actors, like the European Investment Bank (EIB) have also developed eligibility methods for investors to assess climate and environmental sustainability impacts of their investment projects. EIB's Green Eligibility Checker<sup>113</sup> however is broader in scope than nature positive financing.

Step 1 allows for the identification of eligible nature finance activities by using a taxonomy of eligible activities developed for key sectors (and subsectors) deemed to have the greatest proven potential to contribute positively to biodiversity and ecosystem services. The World Bank has developed such a taxonomy for 13 sub-sectors and two cross-cutting themes. The sectors include agriculture, fishing, and forestry; energy and extractives; financial sector; industry, trade and services; transportation; water, sanitation, and waste management. The cross-cutting themes are renewable natural resources management; and urban development and disaster risk management.

*“For Kenyan banks, the Green Finance Taxonomy should serve as a basis for assessing whether an economic activity qualifies.”*

<sup>111</sup>This approach is outlined in the MDB Common Principles for tracking nature-positive finance, available at <https://thedocs.worldbank.org/en/doc/2172d705757311c25a67451763548735-0320012023/original/2023-0329-MDB-Common-Principles-V3.pdf>, last visited 12 February 2025.

<sup>112</sup> International Development Association's Twentieth Replenishment and Mid-Term Review: Note on Nature Finance Tracking Methodology (2024), World Bank, available at <https://documents1.worldbank.org/curated/en/099020524182036310/pdf/BOSIB1722f330c0fd18f8818b41d9bbe465.pdf>, last visited 10 February 2025.

<sup>113</sup> Green Eligibility Tracker, available at <https://greenchecker.eib.org/>, last visited 12 February 2025.

Step 2 screens whether the finance has potential adverse risks to and impacts on nature on the project level. The emerging global consensus is that nature positive finance should deliver measurable positive gains for nature and should not cause significant harm to living and non-living components of nature (e.g., air, land, water). Finance potentially qualifies as nature-positive if it meets the following criteria:

- Does not introduce significant adverse risks to or impacts on nature that exacerbate the direct drivers of nature loss, meaning that it should be considered how the project interacts with some of the direct drivers of nature loss, and whether finance may exacerbate these pressures looking at (a) pollution from GHG and non-GHG pollutant, water and soil pollutants, waste, (b) direct exploitation of living and non-living natural resources (e.g. water use), and (3) the introduction or spread of invasive alien species;
- Does not introduce risks of conversion of natural habitat or critical habitat, which also captures the driver of land and sea use change; and
- Does not introduce risks of adverse impacts on Critically Endangered or Endangered species\*.

\*Based on the Global IUCN Red List of Threatened Species, available at <https://www.iucnredlist.org/>

Step 3 looks at whether finance is expected to deliver a meaningful and measurable positive contribution to nature outcomes and could therefore be tagged as nature positive finance. This step should outline a clear causal pathway demonstrating how the finance is expected to enable improvement in the state of biodiversity or ecosystem services compared with business-as-usual. Relevant tools for banks to assess this could be the theory of change of a specific project which summarizes the justification and rationale for strong causality between the qualifying finance and the expected enhancement of biodiversity or ecosystem services.

The three step approach as developed by the World Bank in its technical methodology is as follows:

## 7.2 Current state of Kenyan banks financing nature projects.

**While some banks have a pipeline and track record in projects promoting nature-positive outcomes, the majority of Kenyan banks is not well-versed in nature-positive financing and, as a result, does not recognise such projects within their portfolios and pipelines.** Interviews revealed that Kenyan banks are largely unfamiliar with the criteria for assessing eligible activities contributing to nature-positive outcomes (see recommendation 11). Only two out of the five Kenyan banks interviewed currently define financing nature-positive outcomes as a strategic goal while only one bank had a labelled nature-related portfolio. Approximately three of the interviewed banks already finance projects that contribute to nature-positive outcomes, however, they do not tag these projects as such. For example in the agricultural sector, these banks are already financing smaller scale activities that could be classified as nature-positive such as providing working capital for crop production with integration of climate resilient seeds and loans for bio-composting units for fertiliser production.

These differences between banks can be explained by the fact that banks are at different stages of development regarding financing nature-positive outcomes. The larger tier 1 banks may already have taken first steps in obtaining funding from the Green Climate Fund (GCF) and some have received support from development partners catalysing their nature-related/positive financing journey and attracting follow-on investors (see recommendation 19, 27 and 24-26). On the other hand, most tier 2 banks are still focused on technical assistance and capacity building activities as well as CSR initiatives and do not yet have the financial resources and capacity to start looking at financing nature positive outcomes from a commercial angle (see recommendation 15). Therefore, a case-by-case approach is needed to effectively leverage the potential for Kenyan commercial banks to engage in financing nature-positive outcomes.

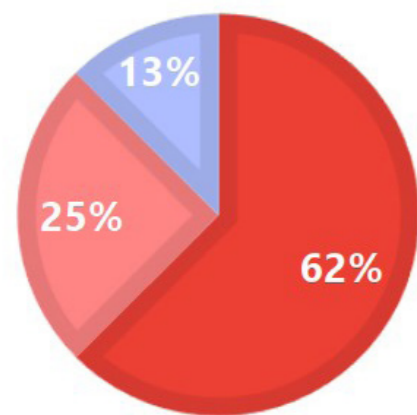
Looking at the supply side, few large-scale projects contributing to nature-positive outcomes that meet the abovementioned eligibility criteria are currently considered to be bankable. They do not generate sufficient revenue to attract commercial investment and blended finance structures need to be further developed together with relevant partners (development finance partners, organisations / foundations) (see recommendation 21). In various interviews it was stated that the Kenyan nature-positive economy is still nascent and initiatives to create a pipeline of eligible nature-positive financing opportunities have only started recently (see recommendation 22). For example, through FSD Africa's CAPE programme aimed at providing project development and transaction advisory services to high-impact and high-integrity nature-based projects to develop them to financial close.<sup>14</sup>

As part of the study 16 projects contributing to nature-positive outcomes have been shared that require financing. The projects can be classified as follows:

*“Technical assistance alone is not enough - it must be directly connected to access to finance in order to drive real change.”*

### DEGREE OF NATURE-POSITIVE OUTCOMES

■ High ■ Medium ■ Low

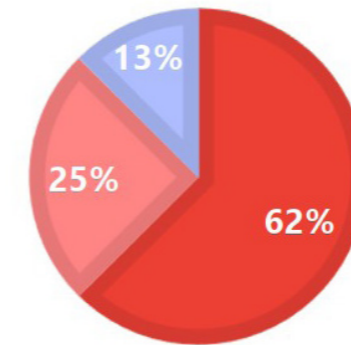


### Degree of nature-positive outcomes explained

The majority of projects (62%) make a significant contribution to nature-positive outcomes, aiming to halt and reverse nature loss through the restoration and enhancement of ecosystems. However, some projects partially take a conservation-focused approach, seeking to protect and maintain existing ecosystems in their current state - for example, through wildlife conservation or landscape protection.

### EXPECTED CREDIT RISKS

■ High ■ Medium ■ Low ■



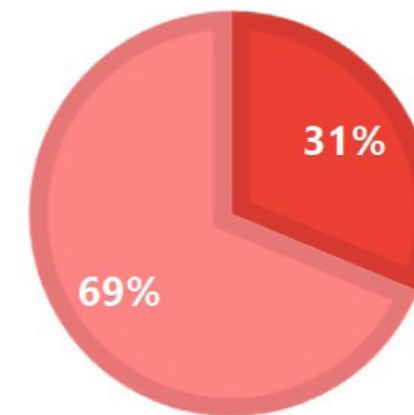
### Expected credit risks explained

The majority of the high risk projects are small, early-stage, innovative businesses that introduce new technologies with little precedent. Furthermore, most are tied to carbon and biodiversity credit markets as a means of generating revenue. However, these markets remain largely unregulated and are rapidly evolving, making them a riskier prospect for banks to finance.

Some of the medium and low risk projects have already attracted funding from DFIs, development partners and philanthropic organisation which enabled them to scale and further solidify their business model. Others were co-developed with a group of implementing partners including DFIs, UN organisations and NGOs which also mitigates the risk.

### NATURE-AND CLIMATE RISKS

■ Lower ■ Comparable



### Expected nature and climate risks explained

Approximately one third of the projects face lower climate and nature-related risks compared to a business-as-usual scenario. For example, a regenerative agriculture project may be benchmarked against conventional farming practices.

This reduced risk profile can, among other factors, be attributed to the adoption of climate- and nature-resilient business models. These include the use of organic fertilisers made from agricultural waste, an optimal mix of land uses (such as rewilding, conservation, agroforestry, grasslands for livestock, and crop production), rainwater harvesting, the introduction of bees and black soldier flies, and soil stabilisation techniques.

Collectively, these practices contribute to greater drought resilience, improved soil health, reduced erosion, alleviation of water stress, and enhanced biodiversity - thereby lowering exposure to nature- and climate risks.

Related to the 16 projects, we have included an overview of barriers that usually are highlighted by banks, along with suggested mitigation measures to address them.

<sup>14</sup><https://cape.fsdafrica.org/>, last visited 13 February 2025.

OBSERVED BARRIERS	SUGGESTED MITIGATION MEASURES
Forest, landscape, and mangrove restoration and protection projects typically have long payback horizons, as it takes time to reach profitability. This is compounded by the high upfront costs associated with large-scale nature projects	Forest, landscape, and mangrove restoration projects often face high upfront costs and long timelines to profitability. To address this, developers can structure cofinancing with concessional capital from sources such as multilateral climate funds (e.g. GEF, GCF) or DFIs to de-risk early-stage investment. Blended finance instruments - such as partial risk guarantees or first-loss capital - can enhance the project's risk-return profile and crowd in private capital. Bridging finance or partnerships with impact investors who can absorb early-stage risk, along with collaboration with DFIs and development partners offering patient capital, can help ease cashflow constraints and sustain project momentum over longer timeframes. (see recommendations 24, 25, 26)
Smallholder farmers often lack traditional forms of collateral, formal credit histories, or consistent income, which makes them high-risk borrowers	Concessional finance guarantees can be used to partially cover losses if a loan becomes non-performing due to project failure or external shocks. This approach not only improves the risk-return profile of early-stage smallholder farming initiatives but also helps mobilise additional private capital by offering a financial safety net in case of default (see recommendation 26). Weather Index Insurance offered by banks through their bancassurance arm can be another way of improving the risk profile of a small-holder farmer
Complex and unclear land rights, along with benefit-sharing mechanisms on community managed lands, can give rise to legal and reputational risks.	Engaging trusted local institutions and NGOs helps build credibility, navigate cultural and legal complexities, and foster community trust. Ensuring FPIC respects community rights and strengthens social licence to operate. Formal agreements with communities and landholders provide legal clarity on land use and benefitsharing arrangements, reducing the risk of disputes and enhancing long-term project stability and legitimacy (see recommendations 30, 31)
The target sectors of these projects are exposed to acute and chronic physical, transition, and systemic risks.	To mitigate exposure to climate-related and systemic risks, project developers and financiers should embed adaptive management into project design and due diligence. This includes promoting climate-resilient business models, diversifying income streams (e.g. combining carbon credits with sustainable agriculture or ecotourism), and encouraging regular stress testing by banks to assess financial performance under different risk scenarios (see recommendation 10)

A lack of technical understanding withing banks makes it difficult to accurately assess the value of conservation-focused business models	To address the lack of technical understanding, targeted training for credit risk officers and investment teams can help bridge the knowledge gap. Educating staff on how to evaluate conservation-focused business models - considering both financial and ecological performance - enables more accurate risk assessments and informed lending decisions. This includes understanding ecosystem service values, revenue models from carbon and biodiversity credits, and the role of natural capital in long-term economic resilience (see recommendation 12).
Cashflows from carbon and biodiversity credits are often uncertain due to market fluctuations and lengthy verification timelines. Generating these credits typically requires several years of data collection and third-party verification, which delays returns	Forward offtake agreements involve pre-selling a portion of future carbon or biodiversity credits to buyers at an agreed price and volume. This approach helps stabilise expected cashflows, reduce revenue uncertainty, and improve the project's bankability. It can also attract investors by demonstrating market demand and providing early-stage financial security despite the long verification timelines (see recommendation 10, 26).
There are limited approved methodologies and a short track record for technology-based projects in the carbon and biodiversity space which may lead to integrity issues.	Given the limited number of approved methodologies and short track record for tech-based carbon and biodiversity projects, it is important to build trust and credibility through a phased approach. Financing a pilot project focused on delivering measurable outcomes - such as improved soil health, increased yields, or enhanced revenue - can serve as proof of concept and attract further investment. Aligning with high-integrity standards, such as those under Verra, and following best practices helps ensure environmental credibility and mitigates concerns around project integrity and long-term impact (see recommendation 10, 26).

TABLE 15 OVERVIEW OF BARRIERS AT PROJECT LEVEL AND MITIGATION MEASURES

### 7.3 Nature-positive opportunities in project phases.

**As illustrated by the detailed project analysis, DFIs play a crucial role in creating an enabling environment for long-term growth of Kenya's nature-positive economy.** This includes initiatives such as establishing short-term working capital bridge financing facilities, e.g. for forestry and large-scale mangrove restoration projects (see recommendation 24). One such example is FMO's Mobilising Finance for Forests (MFF) programme, which aims to unlock private sector investment in projects that protect and restore tropical forests, including those in Africa.<sup>115</sup> These types of programmes can provide risk capital, enabling a strong project launch and positioning initiatives which contribute to nature-positive outcomes as commercially attractive investments. Longer tenures and an initial grace period are particularly beneficial, as it has been demonstrated that projects contributing to nature-positive outcomes often require long-term funding. The example below illustrates which types of financing are required in each of the respective project phases for such large-scale projects. This may be particularly relevant for larger tier 1 banks that focus on project finance.

<sup>115</sup><https://www.fmo.nl/about-mff>, last visited 13 February 2025.



FIGURE 8 OVERVIEW OF TYPICAL FINANCING NEEDS DURING PHASES OF LARGE-SCALE NATURE RELATED PROJECTS

### 7.4 Nature positive financing opportunities in the value chain.

Given that most Kenyan banks are at the early stages of their nature journey, it is important to focus on achievable quick wins. Several such opportunities were identified during the interviews, which banks can implement early on in their nature-related financing efforts. For instance, banks can explore opportunities further along the agricultural value chain, such as financing regenerative smallholder farmers - an approach with cumulative benefits that could potentially qualify as an investment advancing nature-positive outcomes. Value chain overviews can support investment teams in understanding the relationships between various actors - many of whom may already be existing borrowers with established, trusted relationships - and help identify viable nature-positive financing opportunities. This insight will be particularly useful when designing projects and fostering collaboration between actors within the value chain. The following overview provides an example of the agricultural value chain, highlighting specific financing opportunities for banks lending to SMEs. This may be particularly relevant for smaller tier 2/3 banks that focus on SME financing. The figure below shows the nature positive financing opportunities for banks

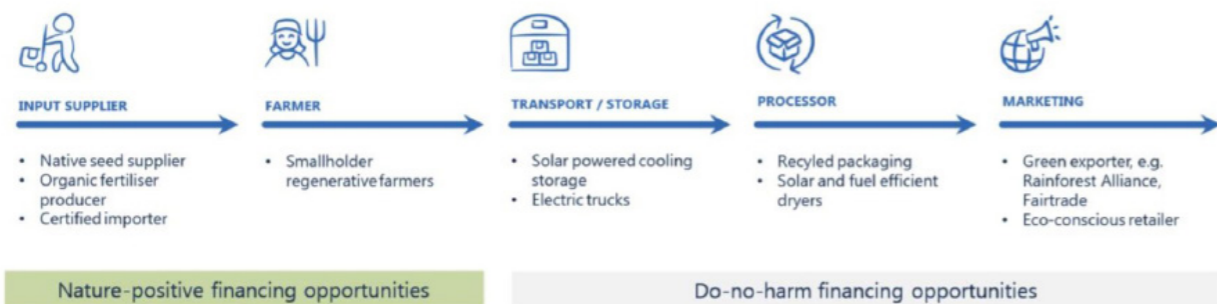
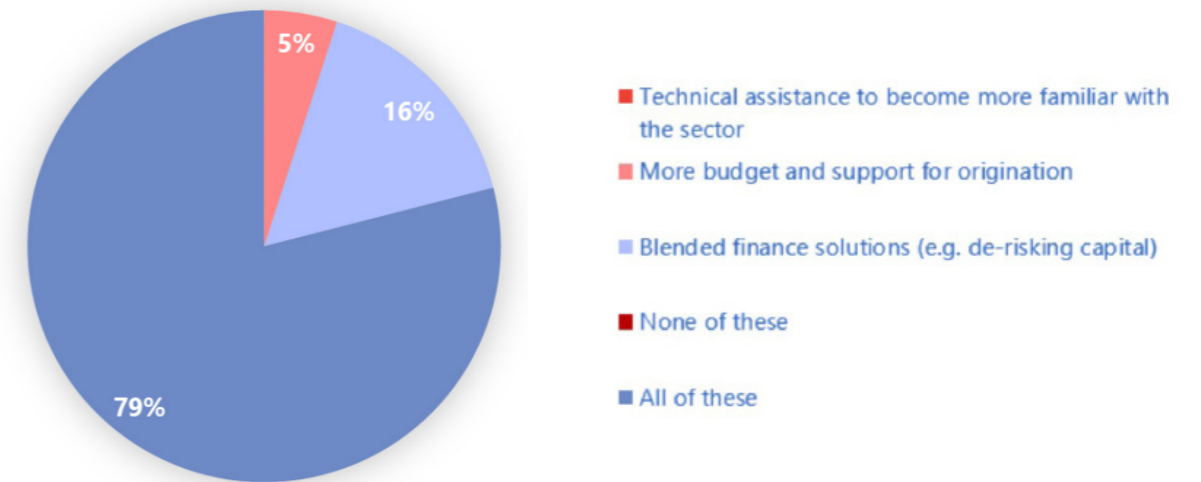


FIGURE 9 NATURE POSITIVE OPPORTUNITIES IN THE VALUE CHAIN

### 7.5 Working together to advance the private finance activity.

Concerted efforts by stakeholders are required to advance the finance activity of Kenyan banks to advance the nature-positive space. Workshop participants representing their organisations identified they require the following financial instruments. 79% of the participants indicated they require technical assistance to become more familiar with the sectors and theme, more budget and support for origination, as well as blended finance solutions in the form of de-risking capital (see recommendation 16, 24-26).



Project developers are actively seeking nature finance, while financial institutions are increasingly looking for opportunities to invest and diversify their portfolio- whether by supporting innovative projects that deliver nature- positive outcomes or by helping existing initiatives, that can already be part of a bank's portfolio, transition. However, a gap remains between the supply and demand sides of nature finance. To bridge this, blended finance including de- risking mechanisms can build the bridge between grants and private capital. This will be essential for nature- related opportunities to truly flourish."



Guidance on   
nature-related  
risks and their  
financial impact

## 8.1 Introduction.

There are critical linkages between nature-related risks and financial risks, highlighting their growing relevance for the banking sector. This chapter begins by examining the key nature impacts and dependencies across sectors that are vital to Kenya's economy. The chapter then delves into a more quantitative assessment of nature and financial risks associated with thematic investment areas of interest to Kenyan banks - namely regenerative agriculture, agroforestry, eco-tourism, and waste-to-energy, with watershed restoration serving as a cross-cutting theme. By exploring how these environmental dependencies and impacts translate into nature- and financial risks, the chapter underscores potential threats to banks' financial stability. It concludes by offering practical guidance on how banks can identify, assess, and manage nature-related risks at both the portfolio and project levels, including the role of financial instruments such as insurance and guarantees. Recommendations are also provided for integrating these risks into broader risk management frameworks.

## 8.2 Interlinkages between nature risks and finance risks.

Understanding the impacts and dependencies that key sectors for the Kenyan economy have on nature is critical for identifying potential sources of risk (see recommendation 17). Businesses depend on ecosystem services to operate. For example, forests provide wood for timber producers, farmers depend upon insects and birds to pollinate crops, and a power plant may depend on the erosion control and flood protection offered by mangrove swamps. These dependencies can present physical risk to business operations, manifesting through degradation of nature and the resulting loss of ecosystem services. Companies also impact nature through their operations, including the release of pollutants, extraction of resources and conversion of land. When these production processes are misaligned with changing regulation, market dynamics or community expectations, the firm becomes exposed to transition risk that can lead to financial costs. Impacts and dependencies on nature can also spread through the entire natural or economic system, hitting tipping points and creating systemic risk for companies. For banks, which are deeply interconnected with the real economy through lending and investment, nature-related risks can thus be transmitted in various ways, affecting creditworthiness, asset values, operational continuity, and overall financial stability.

*"Identifying nature-related risks is just the first step; the real question is what comes next - how do these risks translate into financial decisions?"*

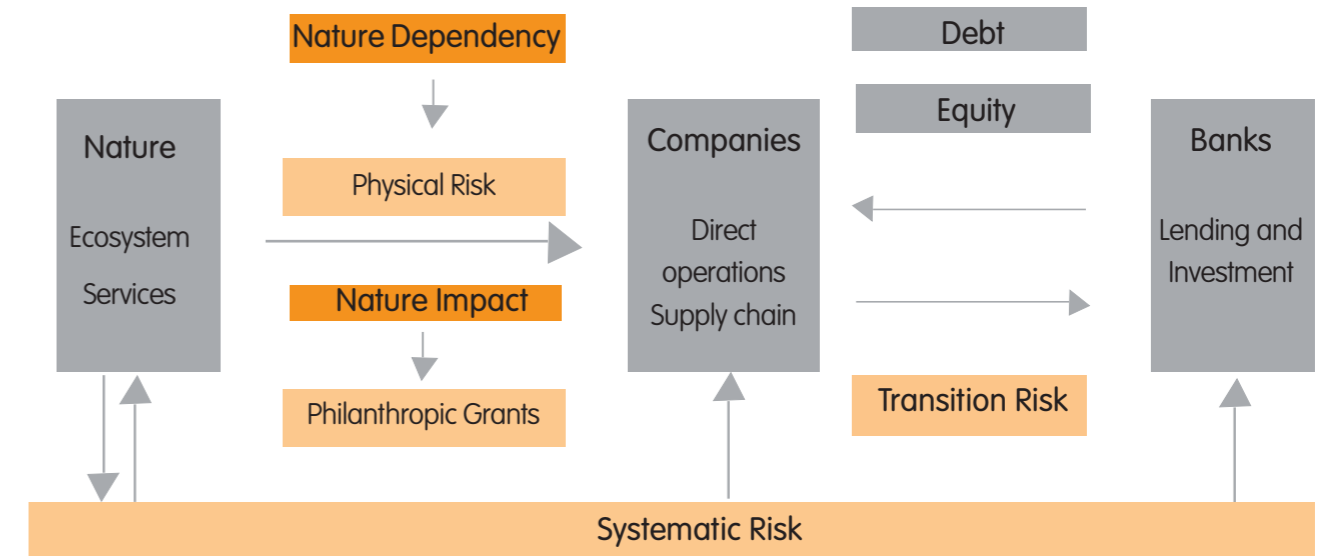


FIGURE 10 HOW NATURE IMPACTS AND DEPENDENCIES LEAD TO NATURE-RISKS THAT CAN BE TRANSMITTED TO FINANCIAL INSTITUTIONS

SOURCE: [WHEN THE BEE STINGS. COUNTING THE COST OF NATURE-RELATED RISKS, BLOOMBERG NEF \(2023\)](#)

The nature-related risks and dependencies for the key nature-related sectors in Kenya are displayed in Table 16.<sup>116</sup> This overview has been based on the ENCORE tool as well as literature review. Annex 5 includes an interpretation of the outcomes for each sector as presented in the table. Annex 6 provides detailed definitions of the different types of nature- and finance risks.

<sup>116</sup>The overview has been based on the following report: Prioritising Nature-related Disclosures – Considerations for high-risk sectors (2022), UNEP, available at: <https://www.unepfi.org/wordpress/wp-content/uploads/2022/04/Prioritising-nature-related-disclosures.pdf>, last visited 28 March 2025.

Direct Impact dark red = very high materiality Light red = high materiality					Direct Dependencies dark green = very high materiality Light green = high materiality				
	Land/sea use change	Resource exploitation	Climate change	Pollution	Invasive species / other	Direct physical input	Enabling production	Mitigating direct impacts	Protecting form disruption
Agriculture (incl. food), forestry and fisheries	Dark Red	Dark Red	Light Red	Light Red	Light Red	Dark Green	Dark Green		Dark Green
Environmental services, specifically wildlife conservation							Light Green	Light Green	Dark Green
Water resource management	Light Red					Dark Green	Light Green	Dark Green	Light Green
Energy	Dark Red	Dark Red	Light Red	Light Red	Light Red	Dark Green	Dark Green		Dark Green
Manufacturing		Light Red	Light Red	Light Red		Dark Green			
Real Estate (incl. Construction)	Dark Red	Light Red	Light Red	Light Red		Dark Green			Light Green

FIGURE 11 OVERVIEW OF DIRECT IMPACTS AND DEPENDENCIES ON KEY NATURE-RELATED SECTORS  
SOURCE: PRIORITISING NATURE-RELATED DISCLOSURES. CONSIDERATIONS FOR HIGH-RISK SECTORS, UN WCMC (2022)

### 8.3 Quantitative assessment of investment opportunities.

The following overview gives a quantitative assessment of risks associated with thematic investment areas of interest to Kenyan banks. Namely regenerative agriculture, agroforestry, eco-tourism, and waste-to-energy, with watershed restoration serving as a cross-cutting theme.

#### Disclaimer: current limitations in data availability and market experience

The quantitative assessment of (credit) risks associated in relation to nature-related investments and the risks linked to nature loss in core investment sectors for banks in Kenya should be viewed in light of the current limitations in data availability and market experience.

Nature-related investments remain an emerging and evolving area of practice. At present, there is a significant lack of publicly available data on the business case and credit risk performance of nature-related sectors or business models. Furthermore, financial institutions that have engaged in such investments to date have generally not disclosed the scarce data that they have available.

As a result, this overview relies on hypothetical, illustrative examples intended to demonstrate the directional business case and plausible credit risk and pricing impacts of investing in nature-related sectors, as compared to those associated with continued nature loss in conventional investment sectors. These examples are not predictive or exhaustive but are instead designed to support exploratory analysis and strategic direction. Accordingly, users of this guidance should interpret the findings and insights as indicative rather than definitive. Institutions are encouraged to build a track record of nature-related investments and further develop internal data and analytical frameworks to assess these risks and opportunities as the market matures and more empirical evidence becomes available (see also recommendations 19 and 31).

#### Cross-cutting: Watershed restoration project in the Aberdares

**Context:** The Aberdare Range is a key water catchment area for Nairobi, Central Kenya and parts of the Rift Valley, providing critical water resources for urban water supply, agriculture and livestock farming, hydropower production. Degradation of springs and watersheds due to deforestation, land encroachment and poor water management has led to declining spring water yields reducing water supply reliability, increased sedimentation, raising water treatment costs, more frequent droughts and floods affecting agricultural productivity and insurance costs, reduced hydropower efficiency leading to lost revenue.

**The project:** A watershed and spring restoration project (e.g. reforestation, terracing, wetland conservation and controlled grazing) aims to improve water security.

#### Financial risk analysis:

##### 1. Establish the risk baseline

Pre-Restoration Scenario (Higher Risk)

- Water treatment costs for Nairobi Water & Sewerage Company: \$10M/year (due to high sedimentation).
- Hydropower production losses (due to lower river flows and sedimentation): \$20M/year.
- Agricultural drought-related insurance claims: \$15M/year.
- Due to water supply risk, lenders apply a 500 bps credit spread over a 7% risk-free rate cost of debt = 12%. Leverage is 60% debt / 40% equity. Equity investors require a 15% IRR. WACC ≈ 12%.

Post-Restoration Scenario (Lower Risk)

- Improved spring recharge More stable water supply.
- Lower sedimentation Water treatment costs drop by 30% (saving \$3M/year).
- Hydropower production stabilizes Revenue losses reduced by 30% (saving \$6M/year).
- Reduced drought risk Lower insurance claims (saving \$5M/year).
- Investors perceive lower risk, with improved water security, the credit spread narrows to 400 bps over the 7% risk-free rate cost of debt = 11%. Leverage increases to 70% debt / 30% equity. Equity IRR reduces to 14% reducing WACC from 12% to 11.5%.

**2. Financial Model Components**

**1. Cost of the Restoration Project**

- Estimated at \$50M over a 20-year period.

**2. Annual Financial Benefits After Restoration**

- Water treatment savings: \$3M
- Increased hydropower revenue: \$6M
- Reduced agricultural insurance claims: \$5M
- Total Annual Benefit: \$14M

**3. NPV Calculation Before and After Risk Pricing Effect**

We will calculate the Net Present Value (NPV) using:

- Pre-restoration discount rate (WACC = 12%)
- Post-restoration discount rate (WACC = 11.5%)

**4. NPV Results for Aberdares Water Spring / Watershed Restoration Project**

- NPV (Pre-Project, 12% WACC): \$84.45M
- NPV (Post-Project, 11.5% WACC): \$88.78M

**Key Takeaways:**

- The project is financially viable, even before considering the risk pricing effect.
- Lower perceived risk reduces the cost of capital, increasing the project’s financial value by \$4.33M.
- Water security improves, leading to savings in water treatment, hydropower revenue, and insurance costs.
- The project could attract green financing or carbon credit opportunities, further improving its economic case.

**5. Sensitivity Analysis & Risk Factors for the Aberdares Water Spring / Watershed Restoration Project**

Sensitivity Analysis: Impact of Key Variables on NPV. We will analyze how changes in key assumptions affect the project’s financial viability:

- Scenario 1: Lower Benefits (Conservative Case) Annual savings decrease by 20%.
- Scenario 2: Higher Benefits (Optimistic Case) Annual savings increase by 20%.
- Scenario 3: Lower Discount Rate (More Favorable Financing) WACC drops to 8%.
- Scenario 4: Higher Discount Rate (More Risky Investment) WACC remains at 12%, even post-restoration.

SCENARIO	NPV (PRE-RESTORATION, 12% WACC)	NPV (POST-RESTORATION, 11.5% WACC)	CHANGE DUE TO RISK PRICING EFFECT
Base case (original assumptions)	\$ 84.45M	\$88.78M	+\$ 4.33M
Lower benefits (-20%) (conservative case)	\$57.56M	\$61.02M	+\$3.46M
Higher benefits (+20%) (optimistic case)	\$111.34M	\$116.53M	+\$5.19M
Lower discount rate (8%)	-	\$126.73M	-
Higher discount rate (12% stays post project)	\$84.45M	\$84.45M	No effect

**Sensitivity analysis results for each scenario:**

**Key Takeaways**

1. In a worst-case scenario (lower benefits), the project remains financially viable with an NPV of \$61.02M post-restoration.
2. If benefits are higher than expected, NPV increases to \$116.53M, making the project even more attractive.
3. A lower discount rate (8%) would boost NPV to \$126.73M, suggesting that securing cheaper financing (e.g., green bonds, grants) can significantly enhance project viability.
4. If WACC remains at 12% even post-restoration, the project loses the risk-pricing advantage, but it still breaks even.

The analysis can change based on a refinement of the following risks:

**Environmental Risks**

- Climate Change Impact Reduced rainfall could lower expected water yield, affecting financial benefits.
- Natural Disasters (e.g., Landslides) Could temporarily disrupt hydropower generation or increase sedimentation.

**Financial & Market Risks**

- Fluctuating Hydropower Prices If electricity tariffs drop, hydropower revenue gains may be lower than expected.
- Regulatory Changes Policy shifts (e.g., stricter environmental laws) could affect project funding or costs.

### Socioeconomic & Political Risks

- Community Resistance If local farmers resist conservation efforts, implementation costs may rise.
- Government Budget Constraints If public financing is cut, private sector investment might be needed.

Ultimately, at a more systemic level, the aim of the project would be to improve water security, leading to cost savings for businesses, insurers and investors. Financial risks of businesses, farms positively affected by this project, should be reduced.

### Regenerative agriculture vs. conventional farming in Laikipia

**Context:** Regenerative agricultural projects can potentially be financially viable in Kenya based on the following assumptions:

- Higher Yields & Lower Costs: Improved soil health leads to increased productivity and reduced input costs.
- Carbon Credit Revenue: Farmers can earn \$10–\$30 per ton of CO<sub>2</sub> sequestered, creating an alternative income stream.
- Resilience Against Climate Shocks: Agroforestry & soil restoration reduce drought vulnerability.
- Access to Green Finance: Kenyan farmers can apply for climate-smart agriculture funding from development banks and ESG investors.

**The project:** Let's consider a 500-acre farm in Laikipia County producing maize, beans, and vegetables.

METRIC	CONVENTIONAL FARMING	REGENERATIVE AGRICULTURE	IMPACT
Investment costs	\$ 1,250,000	\$ 2,000,000	Higher upfront investment due to soil preparation, etc
Annual Revenue	\$ 500,000	\$ 600,000	+20% (higher yields, diverse income sources)
Input costs	\$ 300,000	\$ 240,000	- 20% (natural fertilizers, improved water retention)
Profit margin	40%	66%	Higher due to lower costs
	\$200,000	\$400,000	
Soil fertility over 10 years	Depleting	Improving	Sustainable production
Financing costs	12% loan interest	11% impact linked loan	Access to green finance
Carbon credits income	\$0	\$40,000 per year	Additional revenue stream
Land value appreciation	- 10%	+ 20%	Higher asset valuation

### Discounted cash flow analysis:

To determine the investment viability, we compare Net Present Value (NPV) and Internal Rate of Return (IRR) over 10 years.

METRIC	CONVENTIONAL FARMING	REGENERATIVE AGRICULTURE
NPV (10 years)	- \$120,000	\$ 356,000
IRR	9.6%	15.1%
Payback period	6.3 years	5 years

### Financial Projection

**Result:** Regenerative agriculture can have a higher IRR (15.1%) and faster payback period (5 years) due to reduced costs, higher yields and additional carbon credit income.

Risk Pricing Benefits:

- Lower Cost of Capital: ESG-focused investors offer cheaper financing for sustainable farming.
- Reduced Market Volatility: Diversified crops & carbon credits stabilize income.
- Long-Term Asset Growth: Healthier soil & biodiversity increase land value over time.

A regenerative farm in Kenya can significantly increase profitability, lower financial risks, and secure long-term value appreciation compared to conventional farming.

### Eco-tourism in the Maasai Mara

**Context:** Kenya's eco-tourism sector leverages its rich biodiversity, wildlife conservation efforts, and sustainable tourism initiatives to attract visitors while maintaining environmental and social responsibility. A well-designed eco-tourism project can provide higher profitability, lower financial risks, and long-term asset appreciation compared to conventional tourism models.

**The project:** Let's consider a 20-room ecolodge in the Maasai Mara using solar energy, rainwater harvesting, and local community partnerships vs. a conventional safari lodge.

### Financial projections:

METRIC	CONVENTIONAL SAFARI LODGE	ECO-LODGE	IMPACT
Initial investment	\$4M	\$5.5M	+37.5% for sustainability features
Annual Revenue	\$1.2M	\$1.4M	+ 16.5% due to premium pricing and higher occupancy
Annual Operating Costs	\$600K	\$450K	- 25% due to energy/ water efficiency
Net Operating Income	\$600K	\$950K	+ 58% increase
Average Occupancy Rate	65%	75%	Higher due to eco-tourism demand
Room Rate (p/night)	\$300	\$400	+ 33.3% price premium
Loan Interest rate	12%	11%	Lower cost of capital (green loans)

**Discounted cash flow analysis:**

We evaluate the NPV and IRR over 10 years.

METRIC	CONVENTIONAL LODGE	ECO-LODGE
NPV (10 years)	\$ -610K	\$ 95K
IRR	8.1%	11.4%
Payback period	6.7 years	5.8 years

**Result:** The eco-lodge can have a higher IRR (11.4%), a higher NPV and faster payback period (5.8 years) due to higher occupancy rates, premium pricing, and operational cost savings.

**Risk pricing and financing benefits:**

- Lower Cost of Capital: Access to green bonds, impact investors, and concessional loans.
- Resilience to Climate Risks: Sustainable design reduces operational disruptions (e.g., drought, power shortages).
- Stronger Market Positioning: Eco-tourism aligns with global travel trends, ensuring long-term revenue stability.
- Government Incentives: Kenya offers tax incentives for conservation-focused projects.

A nature-positive eco-tourism project in Kenya has higher profitability, lower risks, and better long-term value than a conventional safari lodge. The combination of higher occupancy rates, cost savings, and green financing makes it a financially superior investment

**Waste-to-energy project in Nairobi vs. a landfill project**

Context: Waste-to-energy projects convert municipal solid waste into electricity, reducing landfill waste while generating revenue from power sales, carbon credits, and tipping fees. In Kenya, these projects are gaining traction due to rising waste levels, energy deficits, and government incentives for renewable energy.

The project: Let's assume a 300-ton per day waste-to-energy plant in Nairobi, producing electricity while reducing landfill waste.

METRIC	LANDFILL DISPOSAL	WASTE-TO-ENERGY PLANT	IMPACT
Initial investment	\$15M	\$25M	+66.6% for waste-to-energy plant infrastructure
Annual Revenue	\$2	\$6.75M	New revenue from power sales and tipping fees
Annual Operating Costs	\$1M	\$3M	Higher but offset by revenue
Net Operating Income	\$1M	\$4.25M	Profitable waste-to-energy operations
Carbon Credit Income	0%	\$500K	Additional revenue stream
Power Output	0MW	8MW	Supplies electricity to 40,000 homes
Loan Interest rate	12%	11%	Lower due to green loans finance access

**Financial projections:**

**Discounted cash flow analysis:**

METRIC	CONVENTIONAL LODGE	ECO-LODGE
NPV (10 years)	\$ -610K	\$ 95K
IRR	8.1%	11.4%
Payback period	6.7 years	5.8 years

We evaluate Net Present Value (NPV) and Internal Rate of Return (IRR) over 10 years.

**Result:** The waste-to-energy project can have an 11% IRR, a positive NPV of \$29K, and a 5.9-year payback period, making it financially attractive.



**Risk pricing and financing benefits:**

- Lower Cost of Capital: WTE projects qualify for climate finance, green bonds, and concessional loans.
- Government Support: Kenya offers incentives like VAT exemptions on renewable energy equipment.
- Market Stability: Electricity sales through Kenya Power's feed-in tariff ensure consistent cash flow.
- Environmental Compliance: Reduces landfill waste, aligns with ESG policies, and attracts impact investors.

A waste-to-energy project in Kenya can be financially viable, reduces environmental risks, and qualifies for green financing. The multiple revenue streams (power sales, carbon credits, and tipping fees) make it a low-risk, high-return investment compared to traditional waste disposal.

**8.4 Identifying nature-related risks within banks' portfolios.**

Following the close interlinkages between nature risks and financial risks, banks are advised to analyse the impact of nature-related risks on their business (see recommendation 29). The TNFD has introduced the Locate, Evaluate, Assess, and Prepare (LEAP) approach, which can be a helpful starting point.<sup>117</sup> Annex 7 provides a more detailed overview of the steps to be taken by banks under this approach.

Following the LEAP approach, banks should begin the Locate phase by examining their portfolios to identify their exposure to nature-related risks. Heatmapping is one technique to identify qualitatively potential or actual exposure to nature-related risk, revealing whether activities materially depend on or impact nature, and potential portfolio exposure to a range of nature-related dependencies and impacts across sectors.<sup>118</sup> For example, a heatmap can illustrate how a bank's loan portfolio is influenced by factors such as soil quality, water quality, and land use - and how, in turn, the portfolio may impact air quality or contribute to pollution. At the same time, this exercise will enable banks to identify and tag nature-related opportunities within their portfolios - something most banks have yet to undertake. As an illustration, an example of a heatmap from an asset management company is included below (see recommendation 29).



FIGURE 12 EXAMPLE OF A HEATMAP SHOWCASING NATURE-RELATED RISKS

SOURCE: GUIDANCE ON THE IDENTIFICATION AND ASSESSMENT OF NATURE-RELATED ISSUES: THE TNFD LEAP APPROACH (2023)

Banks that have already begun implementing the IFRS S2 Climate-related Disclosures are encouraged to leverage that experience in their nature-related risk assessments, as both share key similarities (see recommendation 10).<sup>119</sup> Some banks have already begun mapping their portfolios against nature-related risks with the support of technical assistance and capacity building. This assistance enabled them to input their portfolio into a ready-made tool that assessed inter alia the exposure, key locations, impacts, dependencies and

<sup>117</sup>Guidance on the identification and assessment of nature-related issues: the TNFD LEAP approach (2023), Taskforce on Nature-related Financial Disclosures, p. 235-239, available at [https://tnfd.global/wp-content/uploads/2023/08/Guidance\\_on\\_the\\_identification\\_and\\_assessment\\_of\\_nature-related\\_issues\\_The\\_TNFD\\_LEAP\\_approach\\_V1.1\\_October2023.pdf?v=1698403116](https://tnfd.global/wp-content/uploads/2023/08/Guidance_on_the_identification_and_assessment_of_nature-related_issues_The_TNFD_LEAP_approach_V1.1_October2023.pdf?v=1698403116), last visited 13 February 2025.

<sup>118</sup> Guidance on the identification and assessment of nature-related issues: the TNFD LEAP approach (2023), Taskforce on Nature-related Financial Disclosures, p. 235-239, available at [https://tnfd.global/wp-content/uploads/2023/08/Guidance\\_on\\_the\\_identification\\_and\\_assessment\\_of\\_nature-related\\_issues\\_The\\_TNFD\\_LEAP\\_approach\\_V1.1\\_October2023.pdf?v=1698403116](https://tnfd.global/wp-content/uploads/2023/08/Guidance_on_the_identification_and_assessment_of_nature-related_issues_The_TNFD_LEAP_approach_V1.1_October2023.pdf?v=1698403116), last visited 13 February 2025.

<sup>119</sup> <https://www.ifrs.org/issued-standards/ifrs-sustainability-standards-navigator/ifrs-s2-climate-related-disclosures/>, last visited 13 February 2025.

the physical, transition and systemic risks. For banks that have not yet commenced this journey, various online tools are available to serve as a starting point (see recommendation 29). A list of available online tools can be found in Annex 8.

**Following a nature-related risk assessment of a bank's portfolio, it is essential to quantify the financial impact of those risks on the portfolio.**<sup>120</sup> The first step is to translate the projected effects of nature risks on profitability into changes in asset valuations. This involves using an asset valuation model that estimates the impact of nature-related factors - such as biodiversity loss, water scarcity, or land degradation - on the market value of various financial instruments, including loans, equities, and fixed-income securities. The model accounts for changes in expected cash flows, default probabilities, and loss given default. For equities, valuation changes are derived from adjustments to the discounted stream of future profits, reflecting nature-related impacts. The estimation of the loan book value change is more nuanced and follows a five-step approach outlined in the figure below.

- 1. Estimate change in credit rating and probability of default (PD) based on changes in profits.** Use changes in borrower profitability to assess potential shifts in credit ratings and the corresponding probability of default.
- 2. Estimate change in loss given default (LGD) based on change in PD.** Adjust the expected loss severity in the event of default by modelling how changes in PD influence LGD.
- 3. Estimate change in annual expected losses (EL) from change in PD and LGD for each year and scenario.** Calculate yearly expected losses by combining updated PD and LGD values under each scenario.
- 4. Compute difference of EL compared to EL under the baseline scenario.** Determine the incremental risk by comparing scenario-based expected losses to those under a baseline (no nature-related impact) scenario.
- 5. Apply in-year "excess" expected losses to loan book value.** Translate the additional expected losses into a percentage reduction in loan book value, using a specific year (Year X) as the reference point.

Once individual asset values are recalculated, they are aggregated to determine the total portfolio-level impact. In cases where detailed exposure data is unavailable, such as for certain sectors or regions, banks can rely on a synthetic portfolio - constructed to reflect a representative mix of exposures - to estimate potential financial effects at the portfolio level.

<sup>120</sup>This paragraph has been based on Nature and financial institutions in Africa: A first assessment of opportunities and risks, FDS Africa (2022), available at [https://fsdafira.org/wp-content/uploads/2022/06/Nature-and-financial-institutions-in-africa-a-first-assessment-of-opportunities-and-risks\\_compressed.pdf](https://fsdafira.org/wp-content/uploads/2022/06/Nature-and-financial-institutions-in-africa-a-first-assessment-of-opportunities-and-risks_compressed.pdf), last visited 1 April 2025.

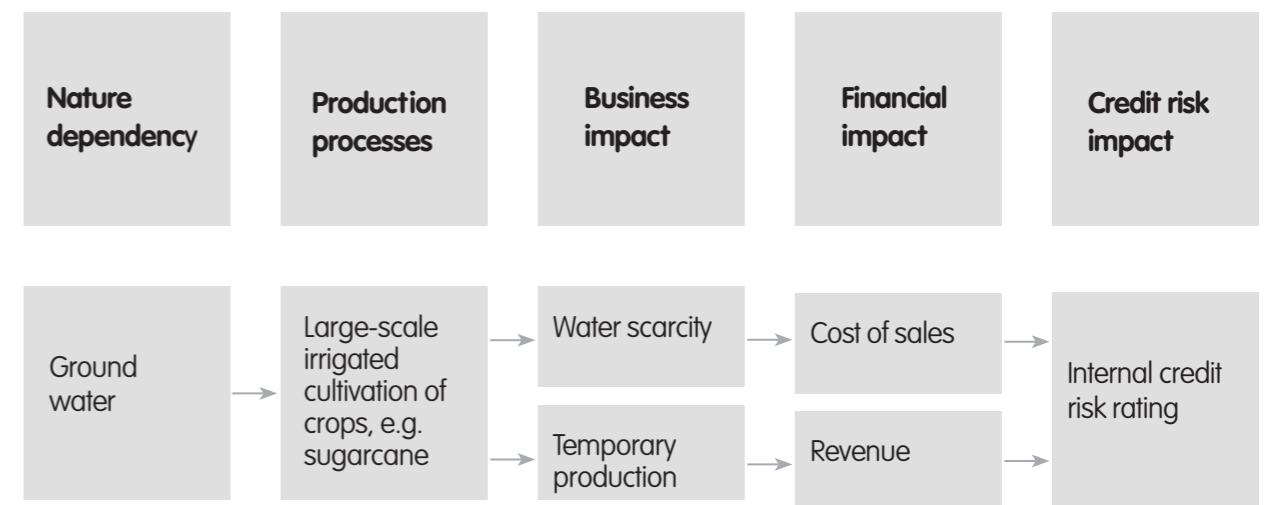
## 8.5 Identifying nature-related risks within projects.

For commercial banks in Kenya to finance projects contributing to nature-positive outcomes, it is essential that such projects are not only environmentally sound but also commercially viable. Credit risk officers require clear and credible information on a project's expected revenue streams and profitability over its lifecycle to make informed lending decisions. However, a critical gap often exists between the nature-related risks embedded within projects and the ability of credit risk officers to accurately assess their financial implications. Many project proposals overlook or inadequately disclose how dependencies on ecosystems - or impacts on them - could affect project performance. This disconnect makes it challenging to identify potential "red flags," such as exposure to water scarcity, land degradation, or biodiversity loss, all of which can threaten a project's financial viability.

To bridge this gap, it is recommended that banks seek technical assistance to support more robust assessments of nature-related risks at the project level. This also presents an opportunity to strengthen internal capacity by training credit risk officers, as many banks indicated during interviews confirmed that their teams currently lack the expertise to evaluate nature-related risks within projects effectively (see recommendation 17). In the longer term, integrating environmental specialists - such as ecologists - into risk departments could enhance project evaluations by adding a nature-focused perspective alongside traditional financial assessments (see recommendation 29).

The figure below illustrates how nature-related impacts, dependencies and risks can translate into credit risk impact on the project level. A regenerative farmer is dependent on the provision of ground water which may be disrupted when the state of nature deteriorates. This in turn may affect certain production processes such as the large-scale irrigated arable crops which require ground water for numerous operational activities. The regenerative farmer may face a drop in crop production and additional costs to secure alternative water resources. This business disruption is reflected in the financial statements of the farmer, e.g. through **reduced** revenue and increased cost of sales. These changes will factor into the bank's credit risk model, e.g. downgrade the farmer's internal rating and alter the perception of the ability of the farmer to repay its loan.

At present, the lending portfolios of many Kenyan banks for now remain concentrated in "do no harm" sectors with significant nature impacts and dependencies that can give rise to nature-related risks (see recommendation 23, 28). To accurately assess these risks for specific projects and support the development of more resilient portfolios, it is highly relevant for banks to make meaningful progress in aligning with nature- and climate risk disclosure frameworks such as IFRS S2 (formerly TCFD) and TNFD. The transparency requirements set out in these frameworks will incentivise banks to actively engage with clients to obtain relevant data for reporting (see recommendation 10).



## 8.6 Mitigating nature-related risks through guarantees and insurance.

Mitigating nature-related risks is essential for Kenyan commercial banks looking to finance nature-positive outcomes. As shown in this study, many nature-related projects - such as those in ecosystem restoration, sustainable agriculture, and conservation - are perceived as high-risk by banks due to their long time horizons, limited track records, and the fact that many projects are linked to carbon and biodiversity credit schemes to create revenue. Guarantee mechanisms and insurance products offer practical solutions to help de-risk such investments, providing banks with greater confidence to lend. These instruments work by covering a portion of potential losses - for example, through first-loss guarantees or weather-indexed insurance - thereby reducing the financial exposure of banks if a project underperforms or is disrupted. By increasing predictability and reducing downside risk, such tools can play a pivotal role in unlocking private capital for nature-positive initiatives. See recommendations 16, 24-26)

Firstly looking at guarantee structures, there are established best practices for accessible lending models that minimise risk, some of which have been successfully implemented in the water sector. One such structure uses a loan guarantee facility to cover 80% of potential losses on non-performing loans within a defined portfolio, which could include loans to smallholder farmers adopting regenerative agriculture. The bank absorbs the remaining 20% of the loss, making it easier to finance projects contributing to nature-positive outcomes. Discussions with banks during the interviews have highlighted that this could be a viable path forward for some that already experience low levels of non-repayment on certain agricultural loans, which could be classified as nature-positive (see recommendation 18). A success story on how a guarantee structure can work to mobilise private finance in the nature-based carbon space is included in the below.

### Case Study

#### Example of how a guarantee structure can work to mobilise private finance

Enhanced Rock Weathering (ERW) is a nature-based carbon removal technology that permanently locks away CO<sub>2</sub>. This natural process is accelerated by organisations like UNDO which spreads crushed silicate rock on agricultural land, increasing the surface area of the rock and therefore increasing its contact with CO<sub>2</sub>.

End 2023, UNDO, alongside CUR8, British Airways, and Standard Chartered, announced a first-of-a-kind solution to unlock upfront project financing, allowing carbon removal developers to gain easier access to operational capital. This, in turn, allows them to scale through long-term offtake agreements.

This deal was orchestrated by CUR8, which supported British Airways in purchasing a carbon removal offtake for more than 4,000 tonnes from UNDO and delivered debt financing to fund UNDO's operations off the back of the removal credit purchase in partnership with Standard Chartered Bank. Specialist insurers CFC and WTW also provided non-delivery risk insurance, which pays out in the event of non-delivery of carbon credits, as part of the transaction. CUR8 aims to build on this product to further develop scale-up financing products across the carbon removal industry.

Standard Chartered has described the deal, which was based on the proceeds from the offtake agreement, as a "bridge to bankability" and claims it provides a model that can be copied to enable the CDR sector to scale. A similar financial structure could possibly also work for other nature-positive projects that banks would like to take up.

#### Sources:

<https://un-do.com/resources/blog/carbon-removal-financing-and-enhanced-rock-weathering-pioneering-a-first-of-a-kind-financial-solution/>

<https://www.sustainableviews.com/carbon-removal-receives-debt-financing-boost-4beac7be/>

On the other hand, the insurance sector has a vital role to play in de-risking early-stage projects that aim to deliver nature-positive outcomes (see recommendation 33).<sup>121</sup> As risk managers, insurers can support businesses in identifying, preventing, and mitigating nature-related risks and impacts by leveraging their industry-specific expertise and research.<sup>122</sup> Services offered may include environmental sensitivity analyses to help businesses understand their interactions with nature and assess potential impacts. Insurers can also support both communities and businesses in managing nature-related risks through risk research, data, and analytics - for instance, by developing nature-related risk models. In this context, the Kenyan insurance industry could be instrumental in enabling commercial banks to reduce risks across their portfolios by helping companies within their value chains to better understand and address nature-related risks and impacts.

In addition, insurers have a role in promoting activities that deliver nature-positive outcomes by setting underwriting policies, criteria, and guidelines for projects operating in areas of high biodiversity value and in sectors with significant impacts on nature.<sup>123</sup> The Kenyan insurance sector is also critical to unlocking investment in projects contributing to nature-positive outcomes as many of them are still in early stages. The case study below demonstrates how an underwriting facility can help de-risk such projects, making them more appealing to Kenyan commercial banks.

### Case Study

#### Example of how a underwriting facility can de-risk early stage projects contributing to nature-positive outcomes

FSD Africa has recently launched a first-of-its-kind underwriting facility, backed by East African insurers including ICEA Lion, Kenya Re, Old Mutual, GA, and Mayfair, to de-risk the early-stage development of geothermal energy projects in countries such as Kenya. The facility aims to underwrite up to US\$2 million per project during the early development phase, with any additional risk transferred to external reinsurers. Growth in Kenya's geothermal energy sector has long been constrained by the high upfront investment required and the significant risk that drilled wells may prove commercially unviable. This facility directly addresses that challenge by mitigating the low-probability but high-cost risk of unproductive wells. By using insurance capital to de-risk early-stage development, the facility makes geothermal projects more attractive to private investors. It not only marks a major milestone in Africa's transition to sustainable energy but also sets a precedent for future initiatives designed to de-risk and support other high-impact sectors across the continent.

Transferring this example to the sectors relevant for a nature-positive economy in Kenya, this model could be applied to a large-scale mangrove or landscape restoration project, where similar early-stage risks deter private investment. Just as the underwriting facility covers the risk of drilling unviable wells in geothermal projects, a comparable facility could insure against the failure of mangrove and landscape restoration projects to meet ecological or carbon sequestration targets - risks that are often outside the control of project developers. These risks may stem from factors such as extreme weather events, changes in tidal or salinity patterns, or delayed community uptake, all of which can undermine project outcomes despite best efforts. By using insurance capital to absorb these early-stage uncertainties, such a facility would help de-risk investment in mangrove restoration, making it more attractive for Kenyan commercial banks to invest in.

<sup>121</sup><https://www.unepfi.org/insurance/insurance/projects/nature-positive-insurance/>, last visited 4 April 2025.

<sup>122</sup> Insuring a Resilient Nature-Positive Future. Global guide for insurers on setting priority actions for nature, UNEP FI (2024), available at: [https://www.unepfi.org/wordpress/wp-content/uploads/2024/12/Insurance-for-Nature-Positive\\_Priority-Actions-for-Insurance.pdf](https://www.unepfi.org/wordpress/wp-content/uploads/2024/12/Insurance-for-Nature-Positive_Priority-Actions-for-Insurance.pdf), last visited 4 April 2025.

<sup>123</sup> Nature-Positive Insurance: Evolving Thinking and Practices, UNEP FI (2023), available at: <https://www.unepfi.org/wordpress/wp-content/uploads/2023/09/Nature-Positive-Insurance-Briefing-Paper.pdf>, last visited 4 April 2025.

This insurance mechanism can be applied to regenerative agriculture projects, such as those generating revenue from organically produced cash crops (e.g. sugar cane, avocado, macadamia). Some of the early-stage risks these projects face can be covered, e.g. lower initial yields during the transition to organic practices. An underwriting facility could be designed to cover a portion of these risks, for example by insuring against crop failure, underperformance in yield, or delays in certification processes that affect market access and pricing.

**Sources:**

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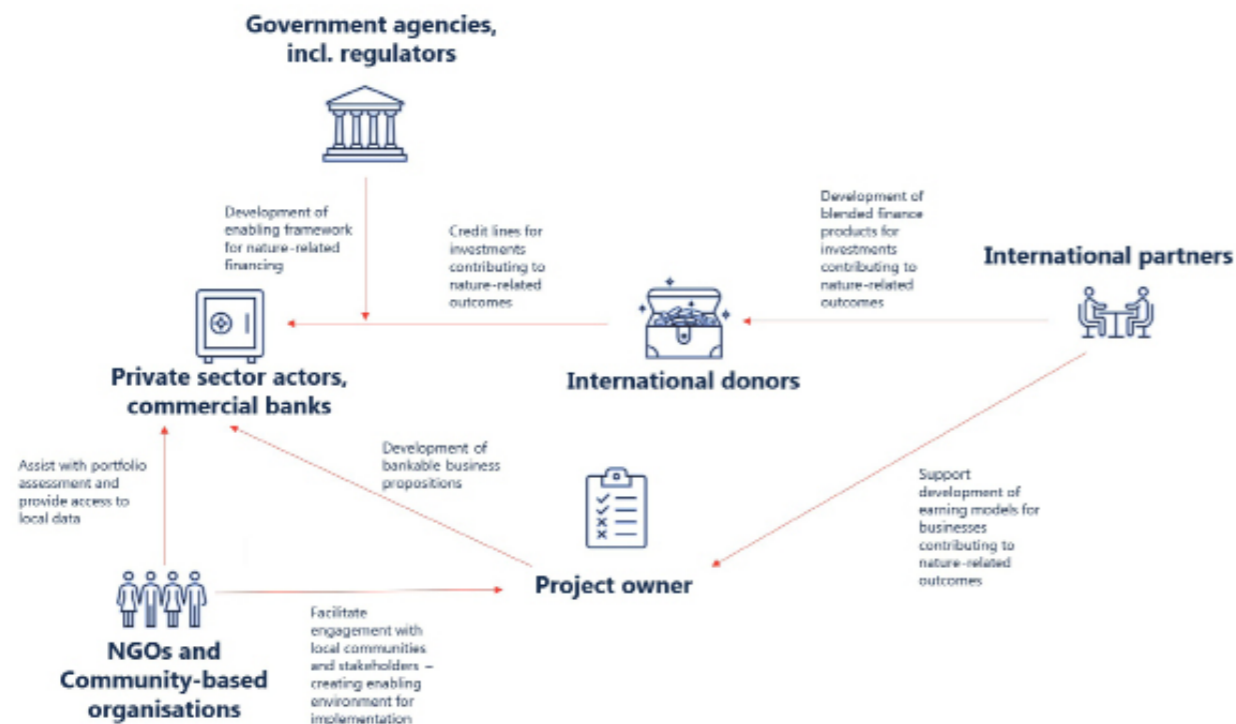
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# Recommendations and way forward



## 9. Recommendations and way forward

Although Kenya's market for nature-related - and particularly nature-positive - financing is still in its early stages, this report highlights tangible first steps that Kenyan banks can take on their nature journey. There is significant potential to build a thriving nature-positive economy in Kenya. Realising this potential will require close collaboration among all relevant stakeholder groups, each contributing through their unique roles. This chapter sets out clear recommendations for each group, outlining the next steps needed to unlock their full potential in driving nature-positive outcomes.



### Government Agencies, including regulators

Government Agencies including regulators play a vital role in shaping the regulatory framework necessary to foster an enabling environment for banks to finance nature-positive projects and to manage the risks associated with nature as a new or emerging asset class.

For example, the Central Bank of Kenya (CBK) can take the following concrete actions to support financing towards nature-positive outcomes:

1. Given the absence of a dedicated framework for nature-positive financing in Kenya, it is recommended that CBK define such investments and establish national benchmarks and criteria within the Kenya Green Finance Taxonomy (KGFT). Currently, the KGFT addresses ecosystem protection and restoration only under the broad "do no significant harm" criteria. However, no technical screening criteria exist for key areas such as nature-based solutions, ecosystem conservation, wildlife management, or forestry and land rehabilitation. Developing these criteria - as the KGFT is a living document - would be highly beneficial. It would provide banks with clear definitions and standards to assess economic activities contributing to nature-positive outcomes and enable them to tag these activities accordingly using a product code.

2. A robust regulatory framework building on the Climate Change (Carbon Markets) Regulations 2024<sup>124</sup> as well as the Kenya Sovereign Green Bond Framework<sup>125</sup> is also essential to support the development of new nature-related financial instruments, such as biodiversity credits and species bonds (e.g., lion bonds and rhino bonds). Banks are often reluctant to engage in unregulated markets, so regulatory clarity is crucial.
3. In addition, it is advisable for CBK to integrate nature-related risks into its existing Guidance on Climate-Related Risk Management. This would encourage commercial banks to begin assessing nature-related risks without the added burden of complying with a separate framework. Such integration could also help identify opportunities for banks to contribute to a nature-positive economy, as nature risk heat mapping can simultaneously reveal opportunities in key sectors.

The government also has a key role in incentivising nature-positive financing by making it more attractive to banks.

4. Tax incentives can be introduced for nature-positive activities in sectors such as wildlife conservation and agroforestry. South Africa successfully implemented such policies in 2015.
5. Another potential incentive is the introduction of a special legal status for nature conservancies, similar to the regime currently applied to Special Economic Zones (SEZs).

Incorporating financial considerations into environmental regulation is just as important as financial regulation itself.

6. We therefore strongly recommend including financial sector stakeholders in the National Biodiversity Strategy and Action Plan (NBSAP) to encourage commitment and ensure effective implementation.

To close the nature-finance gap, private sector involvement is essential.

7. The government can set targets for private finance mobilisation, with clear milestones for 2030, 2040, and 2050. In addition, the government should also assess government expenditures on negative impacts.

### Private sector actors, specifically commercial banks

Commercial banks have a critical role to play in building a thriving nature-positive economy in Kenya, as they are responsible for providing local commercial finance to projects that contribute to nature-positive outcomes.

8. For nature-related financing to gain traction within banks, strong high-level support from Boards and senior management is essential to set the direction. A useful starting point could be the development of a high-level position statement, which outlines a commitment to phase out investments harmful to nature and sets short-, medium-, and long-term targets for nature-related investments. This statement could, for instance, be developed by the Kenya Bankers Association (KBA) for use by all member banks.
9. Following this, banks could adopt a strategic roadmap, endorsed at C-suite level, to define their approach to nature-related financing.
  - Staff incentives can help align teams with the bank's strategic priorities and support the achievement of targets.
  - As nature and climate risks are often interconnected, banks should seek to integrate them in policies and practices where applicable.

Interviews with banks revealed growing enthusiasm for nature-positive financing. However, most institutions are still unfamiliar with this area, having primarily focused on climate-related issues. Against this backdrop, we recommend the following:

<sup>124</sup>The Climate Change (Carbon Markets) Regulations 2024, available at <https://ke.chm-cbd.net/sites/ke/files/2024-05/LN%2084-CLIMATE%20CHANGE%20%28CARBON%20MARKETS%29%20REGULATIONS%2C%202024%20formatted.pdf>, last visited 9 April 2025.

<sup>125</sup>Kenya Sovereign Green Bond Framework, available at <https://www.fsdafrica.org/wp-content/uploads/2021/06/Kenya-Sovereign-Green-Bond-Framework.pdf>, last visited 9 April 2025.

10. Where possible, banks should build on their existing climate-related initiatives. Nature-related risks and opportunities can be integrated into ongoing work in climate mitigation and adaptation, particularly within frameworks such as IFRS S1 and S2 (TCFD implementation).

11. Seek partnerships with organisations that have expertise in nature-related finance. This includes hosting introductory webinars and training sessions for all staff to build awareness of nature-related investment.

12. Deliver targeted training for specific teams on more technical subjects, including:

- How to assess nature-related risks across the portfolio, in collaboration with sustainability teams and organisations like WWF Kenya or NatureFinance.
- The interlinkages between nature-related and financial risks, with input from the risk/finance team.
- Opportunities in blended finance, in partnership with development finance institutions.
- Nature-related data collection, monitoring and evaluation, and its integration into management information systems, with operations/M&E teams.
- Development of a user-friendly operational manual on nature-related finance for loan officers. This could include inclusion/exclusion criteria, due diligence checklists, risk-based pricing guidance, and a list of partners to help de-risk loans.
- Develop easy-to-digest materials on pilot projects, its successes and learnings.

It may be worth exploring whether these training efforts, sharing of knowledge and resources could be coordinated through the Kenya Bankers Association. Few banks in Kenya currently identify as having financed nature-related projects.

13. Interviews suggest, however, that many banks are already financing nature-positive activities without recognising them as such. As a first step, banks should review their current pipelines and portfolios to identify and tag nature-related risks and opportunities using available tools. Alternatively, they could work with expert partners to assess their portfolios sector by sector, identifying links to nature-positive investment opportunities.

14. Origination of nature-related opportunities may take several forms:

- New clients developing nature-focused projects may be supported through project finance teams.
- Existing corporate clients launching nature-related initiatives may benefit from proactive engagement by corporate finance teams.
- Large-scale projects may create opportunities within their value chains for SMEs requiring financing – for example, a biofertiliser supplier serving a regenerative farm might need a loan.

15. Many banks already undertake CSR activities through their foundations, some of which have nature-related components. A practical first step could be to assess whether these initiatives can be mainstreamed into core banking activities.

As the return on investment for nature-positive projects is not yet well established and perceived financial risks remain high, particularly credit risk, the following actions are advised:

16. When exploring new opportunities, banks should consider blended finance models, combining commercial lending with donor support or concessional capital. Focusing on smaller-scale projects lower down the value chain may also reduce risk. External expertise may be required for structuring and financial modelling if it is not available in-house.

17. Invest in training credit risk officers to assess both climate- and nature-related risks. In parallel, banks should consider building specialised internal capacity — including hiring environmental experts such as ecologists — to evaluate projects from a nature-risk perspective.

18. Explore established lending models that de-risk investment. For instance, a model used in the water sector employs a loan guarantee facility to cover 80% of potential losses on non-performing loans in a defined portfolio. The bank absorbs only 20% of the risk, making nature-positive financing more feasible. Interviews suggest that this structure could be adapted for nature-related loans, especially for sectors like regenerative agriculture and agroforestry, which are already showing low default rates.

19. Build a track record of nature-related investments. To do so, banks may need to show flexibility on grace periods and loan tenors. Development finance partners can offer support through risk-sharing mechanisms, grant funding, and technical assistance.

20. Banks should also seek to engage with philanthropic foundations, as well as international front-runner banks, which may be able to provide patient capital to support the early stages of nature-positive projects, particularly during cash flow ramp-up.

### **Project owners (borrowers)**

At present, there is insufficient integration between nature-positive project developers and the financial sector, which hampers the development of bankable business propositions. To address this gap, we recommend the following:

21. Project developers should seek to better understand the requirements and expectations of banks in relation to nature-related financing.

22. It is also advisable for project owners to develop viable earning models or projects that contribute to nature-positive outcomes, ideally in close collaboration with development partners. Where needed, external expertise in bespoke financial structuring and modelling should be engaged.

23. Project developers should continue to raise awareness of the concept of “nature-positive” and highlight the essential role of the financial sector in building a nature-positive economy.

### **International donors and DFIs**

Development partners and DFIs play a key role in strengthening Kenya’s market for nature-positive financing. They can offer financial instruments that complement those available in the market. Once proven effective, these instruments can be scaled and adopted by commercial banks. In this context, DFIs are encouraged to:

24. Continue developing short-term working capital and bridge financing facilities, which are essential for enabling strong project kick-offs and positioning nature-positive projects as commercially attractive investments.

25. Provide risk capital with longer tenures and initial grace periods, recognising that nature-positive projects often require long-term funding commitments.

26. Deploy first-loss guarantees and technical assistance facilities to support project development and reduce risk.

Funds such as the GEF and GCF present challenges for banks due to stringent requirements and the need for detailed data even in early application stages.

27. It is advisable for banks to raise these concerns collectively with the GEF and GCF, potentially through the Kenya Bankers Association.

Finally, development partners and DFIs can support the market by working with commercial banks to organise bootcamps that raise awareness and educate project owners on the lending requirements for nature-positive projects.

## Non-governmental organisations (NGOs) and Community-Based Organisations

NGOs and foundations have played a vital role in raising awareness of the importance of nature-positive financing, both within the financial sector and more broadly. To continue building momentum, we recommend the following:

28. NGOs and foundations should continue to promote the concept of “nature-positive” and emphasise the financial sector’s essential role in driving a nature-positive economy. Efforts should focus on encouraging action and experimentation, even if banks’ policies and practices are not yet fully developed.
29. NGOs, foundations, and other expert organisations can support banks by helping assess their portfolios and identify nature-related investment opportunities across sectors — for example, by doing sector deep-dives and quantifying the monetary value of ecosystem services.
30. Successful financing of nature-positive projects requires strong engagement with local communities and stakeholders. NGOs should play a key role in facilitating these relationships and creating an enabling environment for implementation.
31. By leveraging their access to local data, NGOs can also enhance the availability of geospatial and financial information, which can then be integrated into global data platforms.

In addition, NGOs and foundations should work to establish a strong network of like-minded organisations committed to advancing a nature-positive economy.

32. In this context, it is recommended that platforms such as the Kenya Bankers Association and the Kenya Private Sector Alliance invest in uniting the banking ecosystem and fostering collaboration between policymakers, regulators, and the private and financial sectors.

## Insurers

As risk managers, insurers can support businesses in identifying, preventing, and mitigating nature-related risks and impacts by leveraging their industry-specific expertise and research.<sup>126</sup>

33. Services offered may include environmental sensitivity analyses to help businesses understand their interactions with nature and assess potential impacts.
34. Insurers can also support both communities and businesses in managing nature-related risks through risk research, data, and analytics - for instance, by developing nature-related risk models.
35. In this context, the Kenyan insurance industry could be instrumental in enabling commercial banks to reduce risks across their portfolios by helping companies within their value chains to better understand and address nature-related risks and impacts.
36. In addition, insurers have a role in promoting activities that deliver nature-positive outcomes by setting underwriting policies, criteria, and guidelines for projects operating in areas of high biodiversity value and in sectors with significant impacts on nature.<sup>127</sup>
37. Assessment of climate related risks for insurers (flooding, drought, fire); incentives for solutions such as lower fees in case of risk mitigation.

<sup>126</sup>Insuring a Resilient Nature-Positive Future. Global guide for insurers on setting priority actions for nature, UNEP FI (2024), available at: [https://www.unepfi.org/wordpress/wp-content/uploads/2024/12/Insurance-for-Nature-Positive\\_Priority-Actions-for-Insurance.pdf](https://www.unepfi.org/wordpress/wp-content/uploads/2024/12/Insurance-for-Nature-Positive_Priority-Actions-for-Insurance.pdf), last visited 4 April 2025.

<sup>127</sup>Nature-Positive Insurance: Evolving Thinking and Practices, UNEP FI (2023), available at: <https://www.unepfi.org/wordpress/wp-content/uploads/2023/09/Nature-Positive-Insurance-Briefing-Paper.pdf>, last visited 4 April 2025.

## Annex 1 List of interviewees and validation workshop participants

Interviewees from the following organisations have been engaged:

- African Natural Capital Alliance (ANCA): Established in 2022, the ANCA is an African-led collaborative multi-stakeholder initiative, acting as vehicle to drive coordinated advocacy and action across the continent.
- Conservation International: A global nonprofit organization dedicated to protecting nature and biodiversity through science, policy, and partnerships to promote sustainable development.
- The Co-operative Bank of Kenya Limited (Co-op Bank): Founded in 1965, commercial bank offers a wide range of innovative financial solutions leveraging on their heavy investment in multi-channels, national and regional presence.
- Development Bank of South-Africa (DBSA): The DBSA is a government-owned development finance institution, established in 1983, with the mandate to promote economic growth as well as regional integration for sustainable development projects and programmes across the African continent.
- European Investment Bank (EIB): The European Investment Bank is the lending arm of the European Union, one of the biggest multilateral financial institutions in the world and one of the largest providers of climate finance.
- Equity Bank: Founded in 1984, Equity and was originally a provider of mortgage financing for the majority of customers who fell into the low income population and now offers integrated financial services that socially and economically empower consumers, businesses and communities.
- Family Bank: Established in 1984, Family Bank Kenya is a leading commercial bank committed to financial inclusion, innovation, and supporting SMEs, with a strong presence across the country.
- FMO: The Dutch entrepreneurial development bank with a mission to enable entrepreneurs to increase inclusive and sustainable prosperity.
- Financial Sector Deepening Africa (FSD Africa): Established in 2012 and supported by UK aid, FSD Africa is a specialist development agency working to make finance work for Africa’s future.
- International Union for Conservation of Nature (IUCN): A membership Union of government and civil society organisations that work together to advance sustainable development and create a just world that values and conserves nature.
- Kenya Commercial Bank (KCB): A leading financial institution offering a wide range of banking services, with a strong focus on innovation, corporate banking, and SME growth across the region.
- NCBA Bank: NCBA Investment Bank is one of Kenya’s leading investment banking service providers with a range of corporate finance solutions designed specifically for medium to large organizations.
- Nature Finance: As a mission led, not-for-profit institutional framework that blends multiple modalities and associated financing flows, Nature Finance’s mission is to align global finance with equitable, nature-positive outcomes.
- Private Infrastructure Development Group (PIDG): The Private Infrastructure Development Group (PIDG) is a multilateral organisation governed by donors from seven countries and the World Bank and mobilises private investment in infrastructure in frontier markets, with the aim of boosting economic growth and combating poverty.
- The Nature Conservancy: Founded in the U.S. through grassroots action in 1951, The Nature Conservancy, a global environmental nonprofit working to create a world where people and nature can thrive, has grown to become one of the most effective and wide-reaching environmental organizations in the world.

- Taskforce on Nature-related Financial Disclosures (TNFD): A market-led, science-based and government-backed initiative providing organisations with the tools to act on evolving nature-related issues supported by national governments, businesses and financial institutions worldwide. The Taskforce consists of 40 individual Taskforce Members representing financial institutions, corporates and market service providers with over USD 20 trillion in assets.
- UNCDF: As a hybrid development and finance organization with a unique capital mandate, the UN Capital Development Fund is positioned to act as a catalyst in high-risk markets, particularly in Least Developed Countries, Small Island Developing States, and fragile/conflict-affected countries.
- UNEP Finance Initiative (UNEP FI): Founded in 1992, UNEP FI brings together a large network of banks, insurers and investors that catalyses action across the financial system to deliver more sustainable global economies. UNEP FI also provides members with resources that will help them implement and comply with sustainable finance regulations and reporting requirements.
- World Bank: The World Bank is an international development organization owned by 187 countries. Its role is to reduce poverty by lending money to the governments of its poorer members to improve their economies and to improve the standard of living of their people.
- WWF-Kenya: World Wide Fund for Nature Kenya (WWF-Kenya) is a locally registered non-governmental conservation organization; an affiliate of World Wide Fund for Nature International (WWF). It has been working in Kenya since 1962 alongside the government, civil society, private sector organisations and local communities to contribute towards providing an enabling environment for the achievement of sustainable natural resource management.

## Annex 2 Potential eligible activities contributing to nature-positive outcomes

Potential eligible activities contributing to nature-positive outcomes have been identified.<sup>128</sup> The list of activities provided is non-exhaustive; there may be additional eligible opportunities available within the current pipelines of Kenyan banks that are not captured.

Agriculture:

- Rehabilitation of degraded lands with native and/or naturalized species.
- Reduction in synthetic fertilizer use by at least 20% on project implementation to reduce downstream eutrophication, and to promote use of biofertilizer and other organic solutions (for example, composting).
- Reduction in pesticide use by at least 20% on project implementation and promotion of biosolutions; switching from monocropping to diversified cropping systems, including intercropping and use of cover crops to improve resilience and soil quality; significant reduction of tillage or implementation of no-till practices.
- Cultivation of native or naturalized species that can more readily adapt to variations in production cycles, water quality/quantity, and temperatures; infrastructure that uses natural or combined green/grey solutions that prevent runoff of agrochemicals and sediment into rivers or coastal basins.
- The use of sustainable agricultural practices/varieties/technology and/or infrastructure that increases crop yields/quality on existing land without increasing the environmental footprint.
- Design, implementation, use, or improvement of traceability mechanisms, data, and technologies used to prevent deforestation and monitor biodiversity benefits at the corporate level or along the supply chain.
- Efficient irrigation – promote efficient water allocation, water recycling, sustainable reuse of greywater, rainwater harvesting, and utilization of native species that have low water consumption. This is conditional to avoid depletion of natural resources.

- Climate adaptation and resilience measures that also conserve and/or restore ecosystems (for example, drought-resistant seeds, nutrient cycling, water storage, ecotone levees, floodplain restoration, water storage with watershed restoration or conservation – all projects that make agribusiness more resilient to threats like flooding and drought).
- Conservation and production of native or naturalized seed varieties, especially endemic species.
- Adoption of practices and/or technologies in supply chain management to promote zero deforestation or other positive effects on biodiversity.
- Farming and grazing practices that, among other benefits, rebuild soil organic matter, restore degraded soil biodiversity, enhance and maintain ecosystem function, and preserve native seed and livestock varieties; sustainable fibre production and other activities that focus on recuperation of the ecosystem through improved land management and that operate throughout the supply chain.
- Production and trade of certified crops/commodities in line with robust sustainability certifications which follow audit protocols that confirm biodiversity and potential climate benefits.
- Adoption of innovation and technologies that improve land-use and agricultural practices, such as geospatial data tools and tools to detect soil degradation.

### Sustainable forestry:

- Reforestation with native or naturalized species resulting in biodiversity benefits and ecosystem services (for example, carbon sequestration, water quality, water supply in areas of critical ecological flow).
- Afforestation (plantations) or natural forest regeneration on degraded lands with native or naturalized species to create production buffer zones or biodiversity corridors, especially when adjacent to or connecting virgin forest or protected areas.
- Native non-timber forest products contributing to forest conservation, soil retention and recovery, and alternative livelihoods.
- Sustainable forest management: forest production and management that meets international best practices and internationally accepted quality certification standards to ensure ecological, economic, and social benefits.
- Sustainable tree-crop production that incorporates native or naturalized species and does not cause or result in deforestation or loss of natural forests or any other biodiversity hotspot that has high conservation value or high carbon stock ecosystems.
- Agroforestry systems linked to sustainable agricultural practices. Mixed tree and crop production, using native or naturalized species, appropriate for local climate conditions.

### Environmental services - wildlife conservation:

- Research and development and technology that helps to identify, monitor, report on, and verify biodiversity and business impacts. Examples include geographic information systems for biodiversity protection and artificial intelligence tools and software to track wildlife and monitor displacements in areas where poaching may occur.
- Rewilding through creating and restoring habitats for wildlife, including developing biodiversity corridors.
- Alternative production practices, or products such as sustainable hydroponics and alternatives to beef, to reduce pressure on land and prevent land conversion. This includes agricultural practices that contribute to the protection of wildlife, especially endangered and threatened species (wildlife friendly options), and businesses that promote wildlife-friendly practices to improve land management, establish corridors for wildlife movement, and reduce demand for bushmeat

<sup>128</sup>As the Kenyan Green Finance Taxonomy had not yet been completed, the EU Taxonomy Delegated Regulation 2023/2486, available at [https://eur-lex.europa.eu/eli/reg\\_del/2023/2486/oj](https://eur-lex.europa.eu/eli/reg_del/2023/2486/oj), last visited 12 February 2025 as well as the IFC Biodiversity Finance Metrics (2024), available at <https://www.ifc.org/content/dam/ifc/doc/2024/ifc-biodiversity-finance-metrics-for-impact-reporting.pdf>, last visited 12 February 2025 have been taken into account.

### Annex 3 Overview of sources used to estimate finance opportunity per sector

SECTOR	SOURCES	CALCULATION METHOD
<b>AGRICULTURE (INCLUDING FOOD), FORESTRY &amp; FISHING</b>	<p><a href="https://statskenya.co.ke/at-stats-kenya/about/county-contribution-to-agriculture-forestry-and-fishing-data/41/">https://statskenya.co.ke/at-stats-kenya/about/county-contribution-to-agriculture-forestry-and-fishing-data/41/</a>, last visited 11 February 2025.</p> <p><a href="https://fininsightskenya.com/deep-dive-into-kenyas-agricultural-sector-challenges-opportunities-and-investment-outlook/">https://fininsightskenya.com/deep-dive-into-kenyas-agricultural-sector-challenges-opportunities-and-investment-outlook/</a>, last visited 11 February 2025.</p> <p><a href="https://www.fao.org/kenya/fao-in-kenya/kenya-at-a-glance/en/">https://www.fao.org/kenya/fao-in-kenya/kenya-at-a-glance/en/</a>, last visited 11 February 2025.</p>	The total investment opportunity in Kenya's agricultural sector amounts to approximately USD 8.5-10 billion over the next decade – derived the short-, medium-, and long-term investment opportunity from this number.
<b>ENVIRONMENTAL SERVICES – in particular, environmental protection in the form of wildlife conservation</b>	<p><a href="https://news.cgtn.com/news/2024-10-01/Kenya-launches-strategic-plan-to-boost-wildlife-conservation-1xkUJnIXyE/p.html">https://news.cgtn.com/news/2024-10-01/Kenya-launches-strategic-plan-to-boost-wildlife-conservation-1xkUJnIXyE/p.html</a>, last visited 11 February 2025.</p> <p>Ministry of Tourism and Wildlife (2018) National Wildlife Strategy 2030. A bridge Version. Blueprint to transform wildlife conservation in Kenya. Nairobi, Kenya. Available at <a href="https://www.tourism.go.ke/wp-content/uploads/2018/06/WILDLIFE-STRATEGY2030-Final-VI-Online.pdf">https://www.tourism.go.ke/wp-content/uploads/2018/06/WILDLIFE-STRATEGY2030-Final-VI-Online.pdf</a>, last visited 11 February 2025.</p>	The Kenya Wildlife Service strategic plan outlines the need for substantial investments, potentially around USD 1 billion over the next decade to restore critical ecosystems, secure wildlife corridors, and implement scientific management programs - derived the short-, medium-, and long-term investment opportunity from this number.
<b>WATER RESOURCE MANAGEMENT</b>	<p><a href="https://kiffwa.com/wp-content/uploads/2022/07/KIFFWA-Brochure.pdf">https://kiffwa.com/wp-content/uploads/2022/07/KIFFWA-Brochure.pdf</a>, last visited 11 February 2025.</p> <p>Based on Kenya's Climate Risk Country Profile, available at: <a href="https://climateknowledgeportal.worldbank.org/sites/default/files/2021-05/15724-WB_Kenya%20Country%20Profile-WEB.pdf">https://climateknowledgeportal.worldbank.org/sites/default/files/2021-05/15724-WB_Kenya%20Country%20Profile-WEB.pdf</a>, last visited 11 February 2025.</p> <p>Environment protection, water and natural resources sector report for the MTEF <a href="https://www.treasury.go.ke/wp-content/uploads/2023/12/ENVIRONMENT-PROTECTION-WATER-AND-NATURAL-RESOURCES-SECTOR-REPORT-1.pdf">https://www.treasury.go.ke/wp-content/uploads/2023/12/ENVIRONMENT-PROTECTION-WATER-AND-NATURAL-RESOURCES-SECTOR-REPORT-1.pdf</a> last visited 11 February 2025.</p>	There's currently a water investment gap of approximately USD 1.1 billion annually according to KIFFWA - derived the short-, medium-, and long-term investment opportunity from this number.
<b>MANUFACTURING</b>	<p>Supply Chain Finance Market Assessment, IFC (2022), available at: <a href="https://www.ifc.org/content/dam/ifc/doc/mgrt/202210-supply-chain-finance-market-assessment-kenya.pdf">https://www.ifc.org/content/dam/ifc/doc/mgrt/202210-supply-chain-finance-market-assessment-kenya.pdf</a>, last visited 19 March 2025.</p> <p>Strategic Plan 2023-2027, Ministry of Investments, Trade and Industry (2024), available at <a href="https://www.industrialization.go.ke/sites/default/files/2024-09/STARTEGIC%20PLAN%202023-2027.pdf">https://www.industrialization.go.ke/sites/default/files/2024-09/STARTEGIC%20PLAN%202023-2027.pdf</a>, last visited 21 March 2025.</p>	Kenya's manufacturing sector faces a substantial financing gap, particularly among Micro, Small, and Medium Enterprises (MSMEs). This gap is estimated at approximately KSh 2.2 trillion (equivalent to USD 19.3 billion) - - derived the short-, medium-, and long-term investment opportunity from this number.

SECTOR	SOURCES	CALCULATION METHOD
<b>REAL ESTATE</b>	<p>Enabling Private-Sector Participation in Infrastructure and Social Services, available at <a href="https://documents1.worldbank.org/curated/en/937611523856702598/pdf/125276-BRI-PUBLIC-13-4-2018-14-34-37-MFDBriefKenyaInfrastructure.pdf#:~:text=Kenya%20faces%20a%20significant%20infrastructure,57%20percent%20of%20GDP%2C%20this">https://documents1.worldbank.org/curated/en/937611523856702598/pdf/125276-BRI-PUBLIC-13-4-2018-14-34-37-MFDBriefKenyaInfrastructure.pdf#:~:text=Kenya%20faces%20a%20significant%20infrastructure,57%20percent%20of%20GDP%2C%20this</a>, last visited 9 April 2025. Real Estate Survey Report 2023/2024, Kenya National Bureau of Statistics (2024) available at: <a href="https://www.knbs.or.ke/wpcontent/uploads/2025/01/2023-24-Real-Estate-SurveyReport.pdf">https://www.knbs.or.ke/wpcontent/uploads/2025/01/2023-24-Real-Estate-SurveyReport.pdf</a>, last visited 19 March 2025.</p> <p><a href="https://www.statista.com/outlook/fmo/real-estate/kenya">https://www.statista.com/outlook/fmo/real-estate/kenya</a> last visited 19 March 2025.</p> <p>Strategic Plan (2020-2025), National Construction Authority, available at: <a href="https://www.nca.go.ke:81/media/NCA-Strategic-Plan-2020-2025.pdf">https://www.nca.go.ke:81/media/NCA-Strategic-Plan-2020-2025.pdf</a>, last visited 11 February 2025.</p>	Kenya faces a significant infrastructure financing deficit estimated at \$2.1 billion annually, which constrains growth and development. Sustained expenditures of almost \$4 billion per year will be required to meet the country's infrastructure needs - derived the short-, medium-, and long-term investment opportunity from this number.
<b>ENERGY</b>	<p><a href="https://www.trade.gov/country-commercial-guides/kenya-energy-electrical-power-systems">https://www.trade.gov/country-commercial-guides/kenya-energy-electrical-power-systems</a>, last visited 11 February 2025.</p>	The Kenya Country Commercial Guide estimates the total investment opportunity in Kenya's electricity supply sector at approximately USD 6.2 billion annually – derived the short-, medium-, and long-term investment opportunity from this number.

## Annex 4 Overview of financial instruments

Source of financial capital	In a sentence	Basic Pre-conditions	Basic stakeholders	Costs associated for the recipient	Example(s) in nature-related finance context
<b>Debt</b>	Debt finance is money borrowed by a person or entity from another person or entity	A certain level of security that the money will be repaid (and often insurance in the case that it is not).	Lender (who lends the money), and borrower (who borrows it)	Medium. Capital must be repaid, usually with and interest cost. Administrative costs.	Bank lends to company to enable sustainable production (e.g. solar drip irrigation system, organic fertiliser, native species), company sells the produce and pays the bank back.
<b>Equity</b>	Equity finance is money raised by an entity in return for an ownership stake.	A private entity, valued at a price agreed between buyer and seller	A private entity (who sells the equity stake), and a buyer (or investor) who purchases the stake	High. Giving away ownership. Administrative costs.	Investor buys stake in company that has a business model that promotes nature-positive outcomes.
<b>(Retained Earnings / Revenue</b>	Retained earnings are the cumulative net earnings or profits of a private company. Both these profits, and the revenue generating activities that generate these profits, can leverage finance for nature-related outcomes.	A revenue generating activity (and for retained earnings, costs that are less than revenue in a given period).	Buyers (who pay for a product/service) and sellers (who earn the revenue)	Low. Retained earnings have opportunity costs. Revenues have variable and fixed costs associated with generating them.	Sale of products/services that contribute to a nature-positive economy. Carbon/biodiversity credits.
<b>Grants</b>	A grant is money given to an individual or another entity, for a specific purpose linked to public benefit.	A purpose worth granting to.	Grantor (who makes the grant), and grantee (who receives it)	Low. Administrative costs. Usually no expectation of payback.	Donor finances NGO to implement activities contributing to nature-positive outcomes. Government pays community to protect an area.

## Annex 5 Nature-related impacts and dependencies per sector

### Agriculture (incl. Food), Forestry and Fishing:

Impacts with very high materiality ratings include those related to terrestrial, freshwater, and marine ecosystems—depending on the product type - as well as water use. Other significant impacts involve the use of natural resources (e.g., fish), GHG emissions, various forms of pollution, ecological disturbances, and biological changes. Examples include the potential spread of diseases through livestock, accidental release of fish species into natural water bodies, increased insect mortality from pesticide use affecting non-target species, and the growing resistance to antibiotics.

The agriculture and forestry sector is among the most directly dependent on nature, relying heavily on three main types of ecosystem services:

1. Direct physical inputs - such as water for irrigation or livestock, and raw materials like wood for timber.
2. Enabling services - including pollination for crops and nursery habitats for aquaculture and fisheries.
3. Protective services - such as natural defences against hazards like flooding (e.g., mangroves protecting aquaculture operations) and broader climate regulation.

Environmental Services – in particular, environmental protection in the form of wildlife conservation:

Wildlife conservation has high materiality ratings related to land/sea use change and resource exploitation. Establishing protected areas often restricts land access for agriculture, settlement, or infrastructure, potentially displacing communities and limiting local development. Similarly, conservation measures that prohibit hunting, fishing, or timber use can disrupt traditional livelihoods and create tension with local populations.

Conservation efforts have a very high dependency on maintaining stable land and sea use patterns, as well as healthy ecosystems. Intact habitats and undisturbed landscapes are essential for species survival, making conservation highly vulnerable to land degradation or unsustainable exploitation. Additionally, conservation depends strongly on ecosystem integrity to buffer against climate change and invasive species, which can destabilize ecosystems and threaten protected biodiversity.

### Water resource management:

Water resource management may have very high negative impacts on land/sea use change, particularly through the construction of dams, reservoirs, and irrigation infrastructure that flood habitats and alter ecosystems. It also has high negative impacts on pollution and invasive species, especially when poorly managed systems spread contaminants or facilitate the spread of non-native aquatic organisms through canals and transfers.

This sector is very highly dependent on direct physical inputs like freshwater from rivers, rainfall, and aquifers. It also relies heavily on natural ecosystems such as wetlands and forests to maintain water quality, support recharge, and buffer against floods and droughts. Without stable climate conditions and healthy ecosystems, water systems become increasingly vulnerable to disruption, reducing both water security and ecosystem services.

### Energy:

The energy sector has substantial direct impacts on ecosystems across terrestrial, freshwater, and marine environments, particularly in the extraction and production of fossil fuels and hydropower generation. These activities often lead to land and habitat disruption, water body alterations, and biodiversity loss. Water use is also a major impact, especially in cooling processes and hydropower operations. Additionally, the sector is a major contributor to greenhouse gas emissions and other pollutants, and its operations can cause ecological disturbances—such as noise, light pollution, and the spread of invasive species.

Energy production relies heavily on direct physical inputs from nature, such as organic material used in biomass energy. The sector is also dependent on ecosystem services that support its operations—for example, consistent water flow for hydropower and cooling systems in thermal and nuclear plants. Furthermore, renewable energy infrastructure, such as wind and solar farms, depends on stable climate conditions and natural protective services (e.g. flood and storm regulation) to ensure consistent energy generation and minimize operational risks.

### Real estate:

In the real estate-focused construction sector, the most significant direct impact is land use change. Construction activities -such as site clearing, excavation, and building - can lead to habitat loss, ecosystem disruption, and landscape fragmentation. These impacts are especially pronounced in urban expansion and large-scale developments. The sector also contributes to GHG emissions through construction equipment, transportation, and material production. Additionally, water consumption during construction processes (e.g. concrete mixing, dust suppression) further intensifies the sector's environmental footprint.

The construction sector heavily depends on water as a critical input for various on-site processes, such as material preparation and equipment cleaning. It also relies on a steady supply of raw materials—many of which are sourced from natural ecosystems. Beyond these inputs, construction projects are dependent on regulating ecosystem services that help safeguard infrastructure and minimize disruptions, such as flood and storm protection and local climate regulation.

### Manufacturing:

The manufacturing sector exerts significant pressures on nature, with water use identified as the most material impact. High volumes of water are consumed across key industrial activities, including glassmaking, paper production, and houseware manufacturing. This sector also contributes heavily to greenhouse gas emissions, largely due to the operation of energy-intensive machinery. Additionally, manufacturing activities generate a wide range of pollutants and non-product outputs - such as waste glass, metals, and plastics - that can directly harm ecosystems if not properly managed.

Manufacturing operations are directly dependent on ecosystem services that provide essential physical inputs. Chief among these are freshwater resources, which are vital for processes like cooling, cleaning, and production. The sector also relies heavily on raw materials, including minerals and metals, which are extracted from natural ecosystems. Furthermore, manufacturing facilities benefit from supporting ecosystem services such as water flow regulation and natural flood or storm protection, which help maintain operational stability and infrastructure integrity.

## Annex 6 – Types of Nature- and Finance Risks

In its recommendations, the TNFD has outlined the different types of risks banks should consider which has been addressed for each of the sectors as well as the business models:<sup>129</sup>

- **Nature-related physical risks:** risks to an organization that result from the degradation of nature and consequential loss of ecosystem services. These risks can be acute or chronic. Acute risks can be described as the occurrence of short term, specific events that change the state of nature, e.g. oil spills, forest fires, pests affecting a harvest. Chronic risks are gradual changes to the state of nature, e.g. pollution stemming from pesticide use or climate change.
- **Nature-related transition risks:** risks to an organisation that result from a misalignment of economic actors with actions aimed at protecting, restoring and/or reducing negative impacts on nature. The most relevant types of transition risks for the Kenyan market are the following:
- **Market risks:** changing dynamics in overall markets, including changes in consumer preferences, which arise from changing physical, regulatory, technological and reputational conditions and stakeholder dynamics – e.g. the market value of a company is affected by assets that have decreased in value because there is insufficient freshwater for the production process, or the value of the business' production process is reduced by the emergence of new technologies that require less water to operate.
- **Reputational risks:** changes in perception concerning an organization's actual or perceived nature impacts, including at the local, economic and societal level. This can result from direct company impacts, industry impacts and/or impacts of activities upstream and/or downstream in a value chain.
- **Nature-related systemic risks:** risks to an organisation that arise from the breakdown of the entire system, rather than the failure of individual parts.
- **Ecosystem stability risk:** risk of the destabilisation of a critical natural system, so it can no longer provide ecosystem services in the same manner as before.

Financial stability risk: risk that a materialisation and compounding of physical and/or transition risk leads to destabilisation of an entire financial system. IMF has identified five main channels through which nature-related risks could transmit to the financial sector which have been addressed for each of the sectors as well as the business models:<sup>130</sup>

- 1. Credit risks** arise when counterparties - such as businesses receiving loans - face increased difficulty in meeting their financial obligations. In the context of nature-related risks, this can be driven by several factors, including the degradation of ecosystems, unsustainable land use, and climate-related hazards. For Kenyan banks, the exposure is particularly acute where loan portfolios include companies whose business models heavily depend on nature, such as agriculture, forestry, or eco-tourism. For instance, a Kenyan regenerative smallholder farmer may suffer reduced crop yields and rising production costs due to prolonged droughts and shifting rainfall patterns, ultimately affecting their ability to repay loans.
- 2. Market risks** arise from fluctuations in the value of financial assets due to external shocks or shifts in investor sentiment. In the context of nature-related risks, these shocks can stem from sudden losses in the real economy - such as those caused by environmental degradation - as well as from evolving regulatory frameworks, changing consumer preferences, or updated transition plans toward more sustainable economic models. For instance, concentrated financial stress to agroforestry businesses may lead to a drop

<sup>129</sup>Recommendations of the Taskforce on Nature-related Financial Disclosures (2023), Taskforce on Nature-related Financial Disclosures, p. 33-36, available at: [https://tnfd.global/wp-content/uploads/2023/08/Recommendations\\_of\\_the\\_Taskforce\\_on\\_Nature-related\\_Financial\\_Disclosures\\_September\\_2023.pdf](https://tnfd.global/wp-content/uploads/2023/08/Recommendations_of_the_Taskforce_on_Nature-related_Financial_Disclosures_September_2023.pdf), last visited 13 February 2025.

<sup>130</sup> IMF Staff Climate Notes 2024/002, Embedded in Nature: Nature-Related Economic and Financial Risks and Policy Considerations, available at <https://www.imf.org/en/Publications/staff-climate-notes/Issues/2024/10/01/Embedded-in-Nature-Nature-Related-Economic-and-Financial-Risks-and-Policy-Considerations-555072>, last visited 28 March 2025.

in equity valuations or collateral values. This may trigger broader market volatility, affecting the pricing of related financial products such as green bonds or sector-specific loans. Moreover, if the Kenyan government introduces new land right or forestry policies this could accelerate a shift in asset prices as investors reassess the value and prospects of e.g. agroforestry businesses.

**3. Liquidity risks** arise when financial institutions are unable to meet short-term obligations due to a lack of easily accessible funds. In the context of nature-related risks, this may occur when borrowers operating in highly nature-dependent sectors - such as agriculture, fishing, or eco-tourism - face sudden revenue shortfalls due to ecosystem degradation or extreme weather events. These disruptions can lead to a rise in non-performing loans, putting pressure on a bank's cash flow and liquidity buffers. For example, a prolonged drought affecting Kenya's agricultural sector could result in widespread loan defaults, forcing banks to hold illiquid, non-performing assets. If multiple institutions are similarly exposed, this could contribute to sector-wide liquidity stress, limiting the availability of credit and reducing the overall stability of the financial system.

**4. Underwriting risks** refer to the potential for losses resulting from incorrect or inadequate assessment of risks during the approval of loans or insurance products. Nature-related risks pose a particular challenge in this context, especially where dependencies on natural systems or exposure to environmental hazards are not fully understood or factored into risk models. In Kenya, this may manifest in cases where loans are extended to businesses reliant on natural resources - such as regenerative small scale farms or eco-tourism businesses - without fully accounting for risks like water scarcity, soil degradation, or biodiversity loss. If such risks materialise, project revenues may fall short of expectations, increasing the likelihood of default. Inaccurate underwriting not only affects individual loan performance but can also contribute to systemic weaknesses if repeated across a bank's portfolio.

**5. Operational risks** refer to potential losses arising from disruptions to a financial institution's internal processes, systems, people, or external dependencies such as suppliers and infrastructure. In the context of nature-related risks, these disruptions can stem from increasing frequency and severity of natural hazard events, as well as from the evolving legal and regulatory landscape surrounding environmental protection and sustainability. Additionally, operational risks can be compounded by litigation and reputational damage when banks are perceived to be linked to environmentally harmful activities. In Kenya, the growing incidence of nature-related hazards - such as wildfires, flash floods, and prolonged droughts - poses a direct threat to the continuity of banking operations, e.g. through direct physical damage of a bank's branch or indirect effects such as electricity and internet disruptions resulting in temporary service outages.

## Annex 7 – LEAP approach

The LEAP approach contains the following steps which banks should take when assessing their portfolios on nature-related risks:

- 1. Locate:** the objective of this phase is to identify the banks' potentially material sources of nature-related dependencies, impacts, risks and opportunities. The key outcomes of this phase are:
  - Solid understanding of moderate and high nature-related dependencies and impacts filtered by sector, value chain (upstream and downstream) and geography;
  - A list and/or map of ecologically sensitive locations that the bank operates in, and a broader set of assessment locations to take into the Evaluate phase of LEAP; and
  - Understanding of the proportion of the business model, value chains and/or capital portfolio assessed for its interface with nature.
- 2. Evaluate:** in this phase the bank develops an understanding of their potentially material dependencies and impacts on nature. The desired outputs after this phase are:
  - A list of relevant environmental assets and ecosystem services;
  - A list of the organisation's dependencies and impacts on nature;
  - Analysis of potentially material dependencies and impacts on nature; and
  - A list of material dependencies and impacts (for disclosure using an impact materiality approach).
- 3. Assess:** during this phase the aim of the bank is to understand which nature-related risks and opportunities are material and should be disclosed by the organisation. This is done through identification, measurement and prioritisation of nature-related risks and opportunities originating from the dependencies and impacts on nature identified in the Locate and Evaluate phases. The outputs of this phase are:
  - A 'longlist' of relevant nature-related risks and opportunities, which can be plotted into any existing risk matrix in use by the organisation;
  - A 'shortlist' of material nature-related risks and opportunities, and a list of priority locations; and
  - An outline of the process followed to adapt existing risk processes and associated elements to integrate nature-related risks and opportunities.
- 4. Prepare:** during the last phase the bank decides how to respond to the material nature-related issues identified in the previous phases, including what to disclose and how to disclose the material issues identified. The desired outputs for this phase include:
  - Agreement on how the organisation will respond to the nature-related issues identified in the LEAP approach, including through setting effective goals and targets;
  - A discussion within the organisation of its governance and risk management processes in light of its nature-related assessment;
  - The setting of nature-related targets and goals by the organisation in light of its nature-related assessment; and
  - The production and publication of a set of TNFD-aligned disclosures.

## Annex 8 – List of available tools to assess nature-risks

- ENCORE tool:<sup>131</sup> The ENCORE tool sets out how the economy – sectors, subsectors and activities – depends and impacts on nature. Financial institutions in particular can use data from ENCORE to identify nature-related risks they are exposed to through their lending, underwriting and investment in high-risk industries and sub-industries.
- WWF Biodiversity Risk Filter:<sup>132</sup> Corporate and portfolio-level screening tool to help companies and investors to prioritise action on what and where it matters the most to address biodiversity risks for enhancing business resilience and contributing to a sustainable future.
- NatureAlign Tool:<sup>133</sup> NatureAlign is a suite of analytical modules developed by NatureFinance to support stakeholders within the financial system in aligning their financial flows with nature positive outcomes. The first module of NatureAlign has been made available as a free web app.
- SEEA tool:<sup>134</sup> The System of Environmental Economic Accounting tool is an integrated and comprehensive statistical framework for organizing data about habitats and landscapes, measuring the ecosystem services, tracking changes in ecosystem assets, and linking this information to economic and other human activity.
- IUCN Red List:<sup>135</sup> Established in 1964, the International Union for Conservation of Nature's Red List of Threatened Species has evolved to become the world's most comprehensive information source on the global extinction risk status of animal, fungus and plant species.
- IUCN Global Standard for Nature-based solutions (NbS):<sup>136</sup> The IUCN Global Standard guides users to design and implement NbS in a way that allows nature to deliver its valuable ecosystem services. In addition, the Global Standard sets clear benchmarks to measure the progress of NbS based on 8 criteria with 28 associated indicators.
- Science Based Targets Initiative - Guidance on Nature:<sup>137</sup> The SBTi aims to eventually provide methods for companies to align targets with a number of sustainability objectives, also called SBTs, for nature, which will enable companies to align their efforts with global nature-related sustainability efforts, such as the GBF.
- SASB Materiality Finder:<sup>138</sup> The Materiality Finder makes it easy to both look up companies or industries and compare industries side-by-side. It offers: an overview of the SASB Standards, a fast way to search the topics in an industry and the ability to search by company, the ability to compare up to four industries side-by-side.
- GRI Sector Standards:<sup>139</sup> the Sector Standards are designed to help identify a sector's most significant impacts and reflect stakeholder expectations for sustainability reporting. They describe the sustainability context for a sector, outline organizations' likely material topics based on the sector's most significant impacts, and list disclosures that are relevant for the sector to report on. Oil and gas, coal, agriculture, aquaculture, and fishing are the first sectors prioritized under the Sector Program based on their significant environmental, social and economic impacts.

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<sup>131</sup> <https://encorenature.org/en>, last visited 13 February 2025.

<sup>132</sup> <https://riskfilter.org/biodiversity/home>, last visited 13 February 2025.

<sup>133</sup> <https://www.naturefinance.net/making-change/nature-risk/naturealign/>, last visited 13 February 2025.

<sup>134</sup> <https://seea.un.org/ecosystem-accounting>, last visited 13 February 2025.

<sup>135</sup> <https://iucn.org/red-list-ecosystems-inventor>, last visited 13 February 2025.

<sup>136</sup> <https://portals.iucn.org/library/sites/library/files/documents/2020-020-En.pdf>, last visited 13 February 2025.

<sup>137</sup> <https://sciencebasedtargetsnetwork.org/wp-content/uploads/2020/09/SBTN-initial-guidance-for-business.pdf>; <https://sciencebasedtargetsnetwork.org/resources/>, last visited 13 February 2025.

<sup>138</sup> <https://sasb.ifrs.org/standards/materiality-finder/>, last visited 14 February 2025

<sup>139</sup> <https://www.globalreporting.org/standards/sector-program/>, last visited 14 February 2025.



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