



UNEP
FINANCE
INITIATIVE



GOOD
GROWTH
PARTNERSHIP

Deforestation Risks for Banks

Module 4

Use of Nature-Based Solutions to address sustainable land use challenges and related risks

Overall Module Structure

Modules

01

Introduction to deforestation and business case

Learners should be able to:

- ❖ Understand global deforestation context, sustainability issues in commodity supply chains and why it matters to banks
- ❖ Understand risks associated with financing agricultural commodity production and trade

03

Managing financial risk and exploring opportunities

Learners should be able to:

- ❖ Understand mitigation actions that banks can take to reduce their deforestation-related risks.
- ❖ Understand various opportunities and production innovation to support sustainable commodities production.

02

Risk Identification, Screening and Assessment

Learners should be able to:

- ❖ Describe how deforestation-related risks fits within the traditional risk management framework
- ❖ Understand where different deforestation-related assessment tools fall within risk management stage and how to use them.

04

Nature-Based Solutions (NbS)

Learners should be able to:

- ❖ Understand how NbS can be used to mitigate land use risk
- ❖ Understand how NbS can be an investment opportunity for banks



Module 4

- **Section 1: Introduction to Nature-Based Solutions for sustainable land use challenges**
- **Section 2: Greening finance: Nature-Based Solutions in the context of land-use related risks**
- **Section 3: Financing green: Nature-Based Solutions as opportunities for banks**

An aerial photograph of a forest. In the upper left quadrant, there are bright orange and yellow flames with thick white smoke rising from the trees. The rest of the forest is mostly green, with some brown, dead-looking trees scattered throughout. The text 'Section 01' is overlaid in a large, bold, light green font in the center of the image.

Section 01

Introduction to Nature-Based Solutions for
sustainable land use challenges



What are Nature-Based Solutions?

Nature-Based Solutions are ‘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 well-being, ecosystem services and resilience and biodiversity benefits.’” ([UNEA, 2022](#))



What are Nature-Based Solutions ?

'Umbrella concept' for nature-based approaches, and can include:

- ❖ Ecosystem-based Adaptation
- ❖ Ecosystem-based Mitigation
- ❖ Natural climate solutions
- ❖ Green infrastructure
- ❖ Ecological engineering

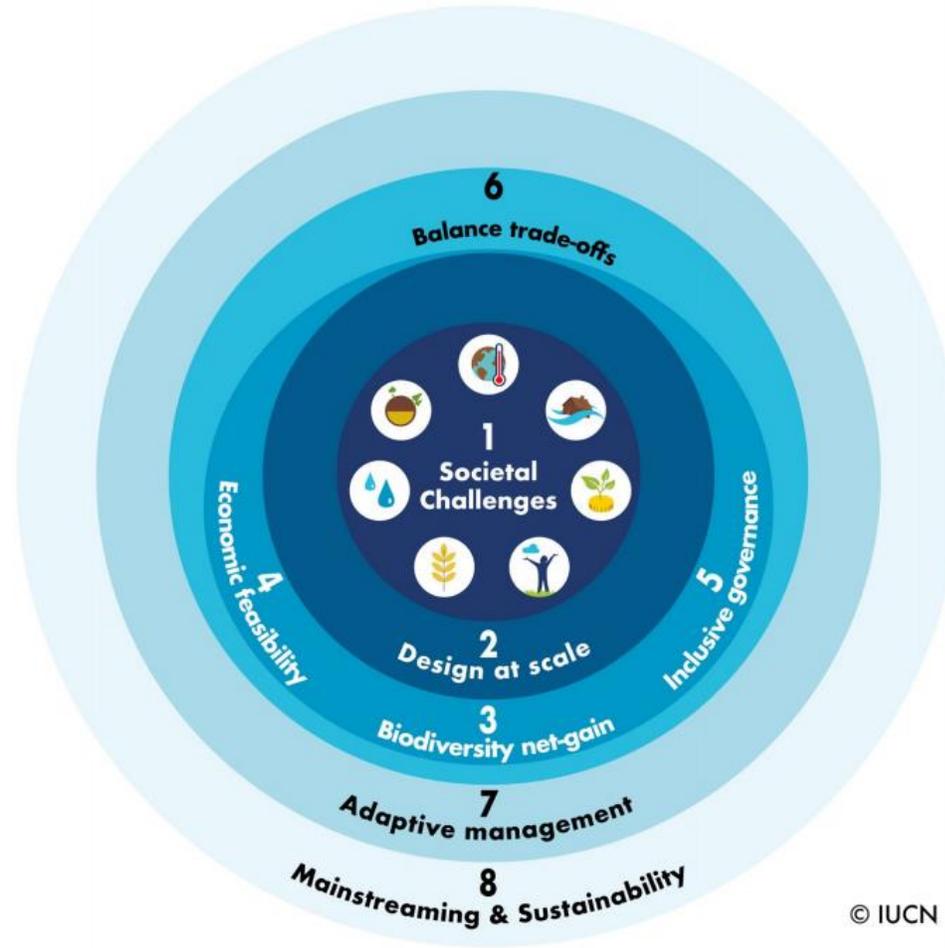
[IUCN, 2021](#)



© IUCN



IUCN Global Standard for Nature-Based Solutions

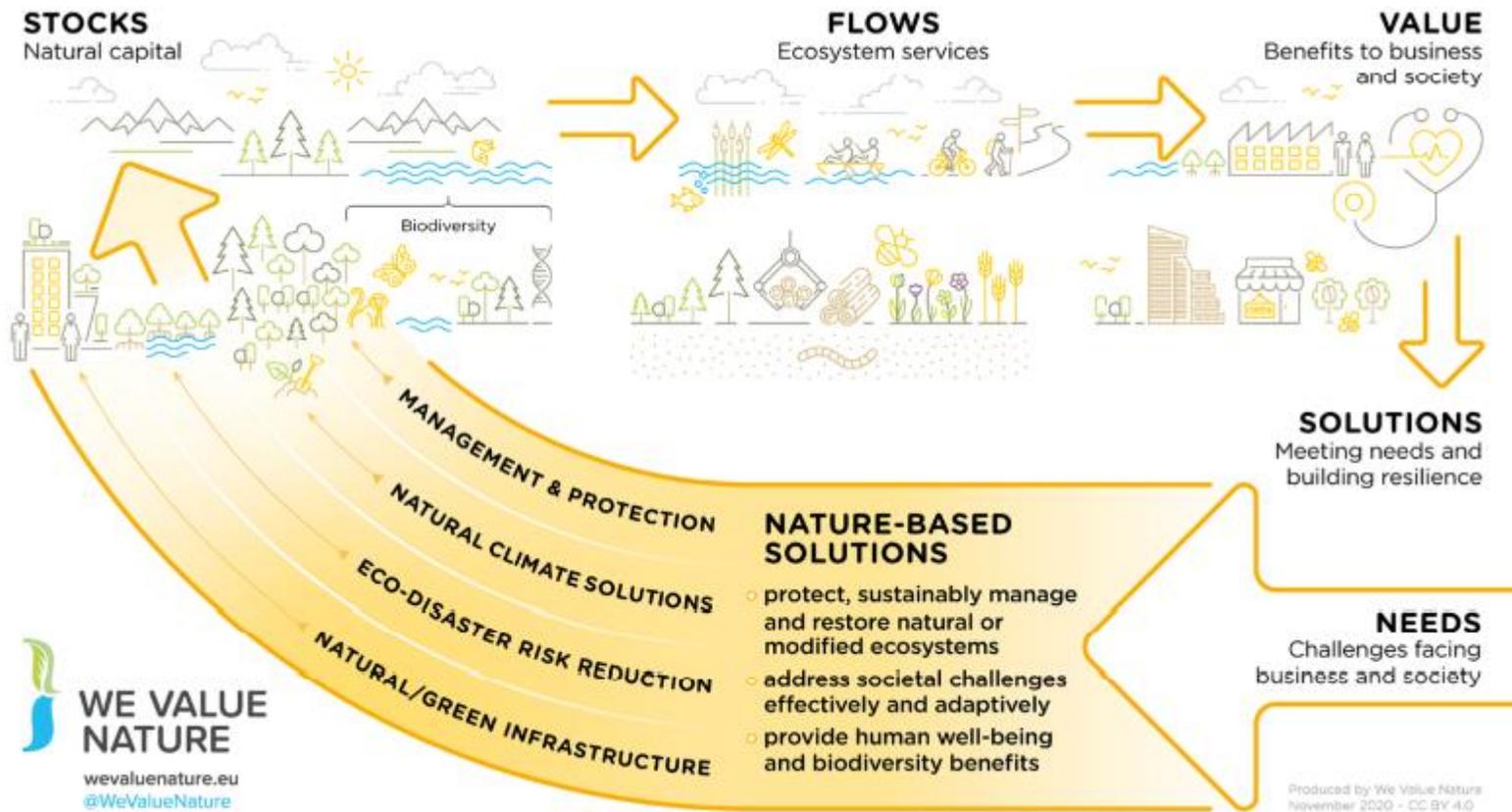


[IUCN, 2020](#)

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How Nature-Based Solutions can help address concerns on our impacts/dependencies on nature?



WBCSD, 2020



Global movement towards tackling land use risk

Following **CoP26** there is a global movement towards finding solutions to towards NetZero:

- ❖ Banking for Impact on Climate in Agriculture Initiative
- ❖ Glasgow Leaders' Declaration on Forests and Land Use ([UK CoP26, 2021](#))
- ❖ The conclusion of the 'Paris rulebook' - ([UNFCCC, 2021](#))
- ❖ The decisions provide clear accounting guidance for emissions trades between countries, and launch a new crediting mechanism that will give market access to all countries interested in attracting green investment through the global carbon market ([IETA, 2021](#))



02.11.2021

GLASGOW LEADERS' DECLARATION ON FORESTS AND LAND USE

Leading banking institutions join forces in new initiative to support decarbonization of the agriculture sector

Rabobank, Santander, Wells Fargo, and Barclays are among top banks working together to support their food, agriculture and land use sector clients in the transition to net-zero.





Global movement towards tackling land use risk

- ❖ Three New York City pension funds will invest \$37 billion in climate change solutions by 2035 to reach net-zero greenhouse gas emissions across their portfolios by 2040 ([Environmental Finance, 2021](#))
- ❖ More than 30 leading financial institutions, collectively with over US\$ 8.7 trillion in assets under management have committed to tackle [agricultural commodity-driven deforestation](#) as part of broader efforts to drive the global shift towards sustainable production and Nature-Based Solutions ([UNFCCC, 2021](#))

As part of these movements, investments in restoring forests and sustainable management of land provides an opportunity to implement Nature-Based Solutions as a way to systematically can tackle both the nature and climate crises

Commitment on Eliminating Agricultural Commodity-Driven Deforestation

Over 30 financial institutions with more than **(US)\$8.7 trillion** in assets under management are committed to work on eliminating agricultural commodity-driven deforestation risks in their investment and lending portfolios by 2025.



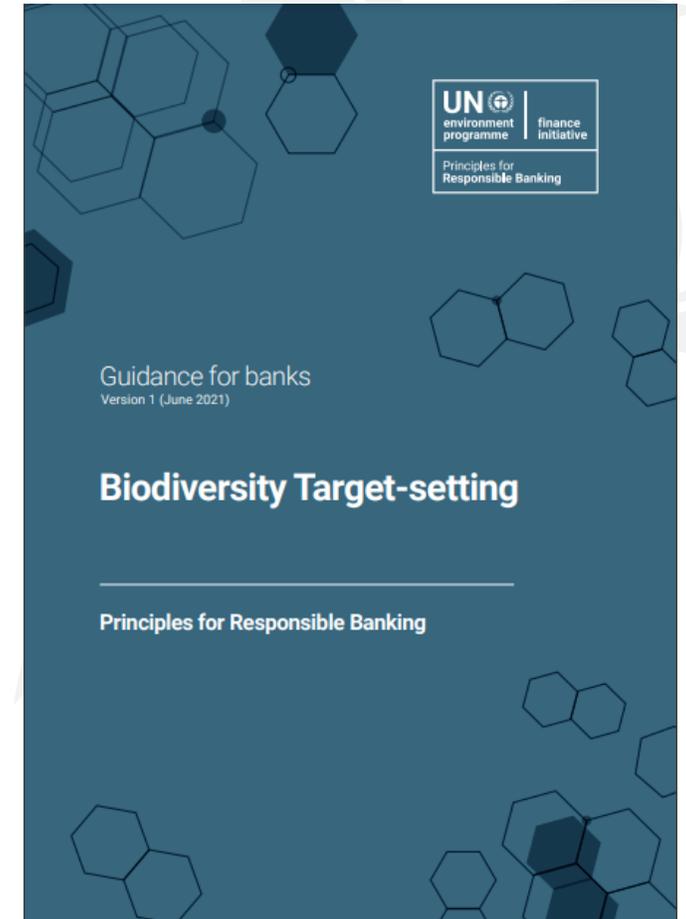
How can Nature-Based Solutions be used to reach global societal targets?

Nature-Based Solutions in financial decision making supports contributions to:

- ❖ UN Sustainable Development Goals
- ❖ the Convention on Biological Diversity
- ❖ the UN Convention to Combat Desertification
- ❖ the UN Climate Framework Convention on Climate Change.

In some cases, Nature-Based Solutions provides an opportunity to target both the climate and biodiversity crises ([Barber et al., 2020](#)), and has been noted as a way for banks to converge on their 'nature positive portfolios' and their 'net zero' strategies ([PRB, 2021](#))

A guidance document for banks has been developed by the Principles of Responsible Banking which highlights the potential of Nature-Based Solutions as a mechanism to achieve biodiversity targets ([PRB, 2021](#))

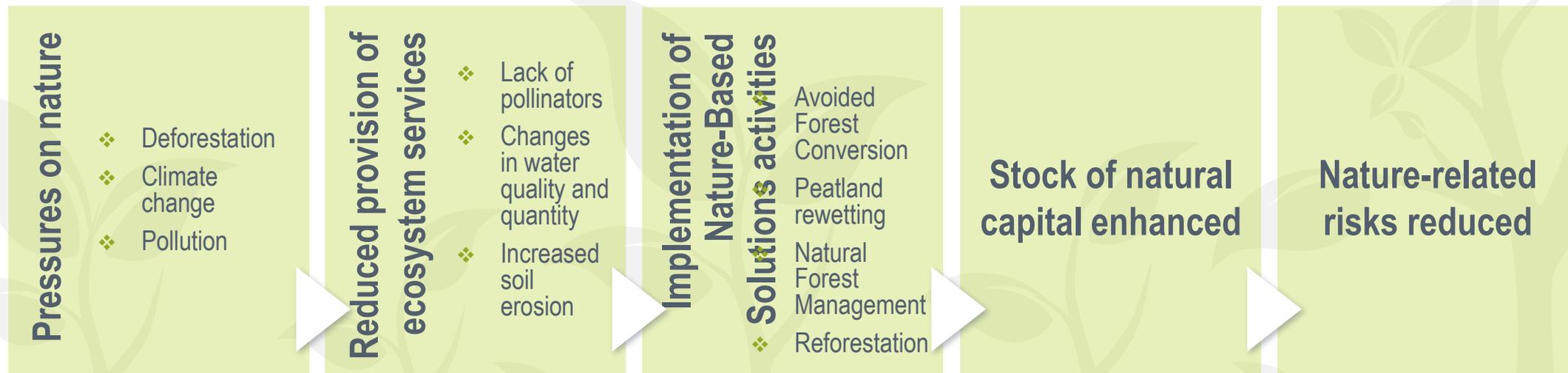




How can a Nature-Based Solution maintain or enhance natural capital?

Nature-Based Solutions can enhance the stock of natural capital, ecosystem services and biodiversity

The following flow diagram highlights how pressures on nature can transpire to a financial risk for a bank:





Quiz



Implementing a Nature-Based Solution will always enhance the stock of natural capital that an operation depends on, reducing the dependency related risk on natural capital.

True or false?

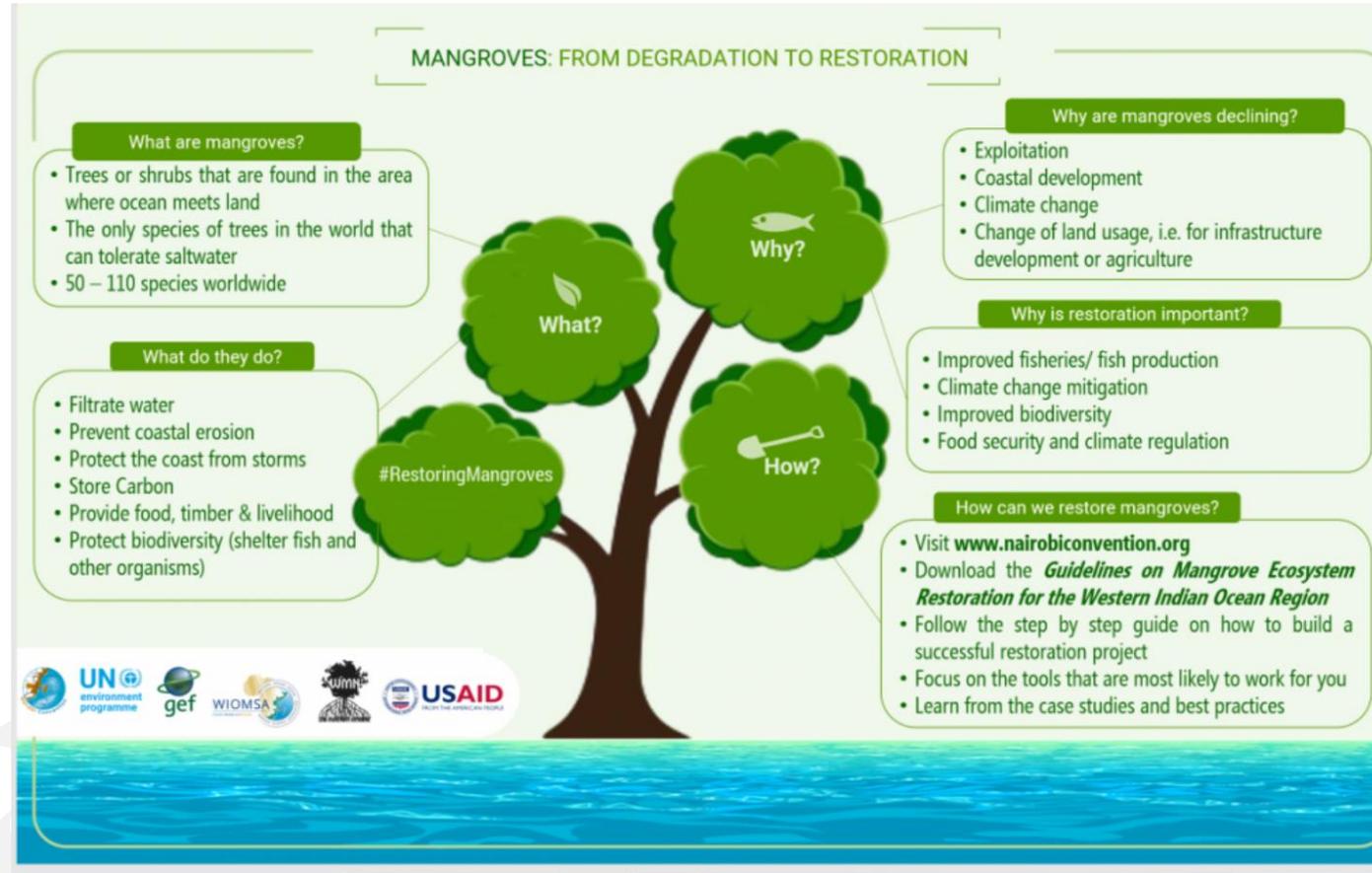


Nature-Based Solutions addressing ecosystem service loss

Risk	Nature-Based Solution
Water scarcity	<ul style="list-style-type: none">• Watershed restoration, including reforestation• Permeable green areas for groundwater replenishment
Landslides	<ul style="list-style-type: none">• Upslope vegetation management• Reforestation and afforestation (where appropriate)
Inland flooding	<ul style="list-style-type: none">• Upslope vegetation management• Forest restoration• Riparian and wetland restoration/creation and management, living weirs and check-dams• Floodplain management
Soil erosion and sedimentation	<ul style="list-style-type: none">• Upslope vegetation restoration and management• Reforestation and afforestation• Management of littoral vegetation and wetlands

Adapted from IDB, 2019

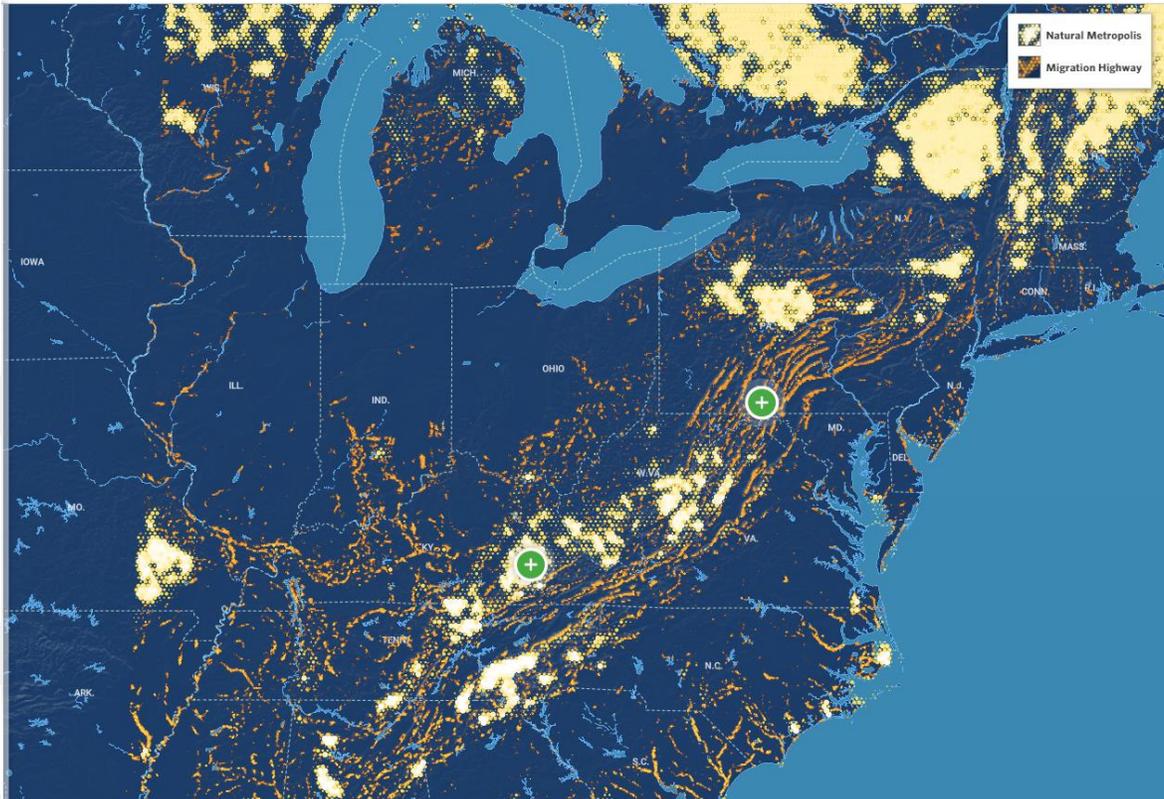
Case Study: How can a Nature-Based Solution enhance natural capital? – Mangrove Reforestation



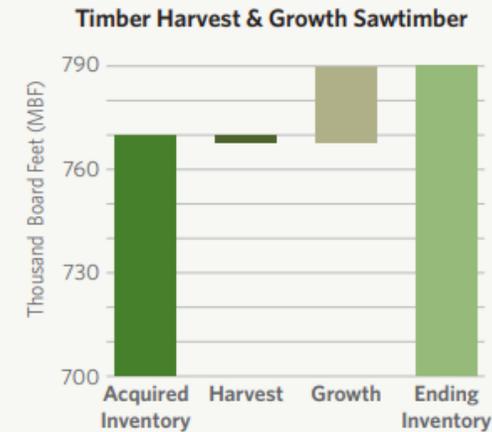
WP, 2020



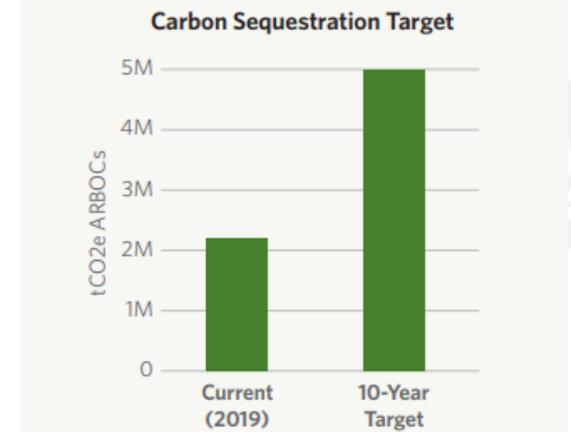
Case Study: Nature-Based Solutions focused timber investments – NatureVest and TNC



TNC, n.d



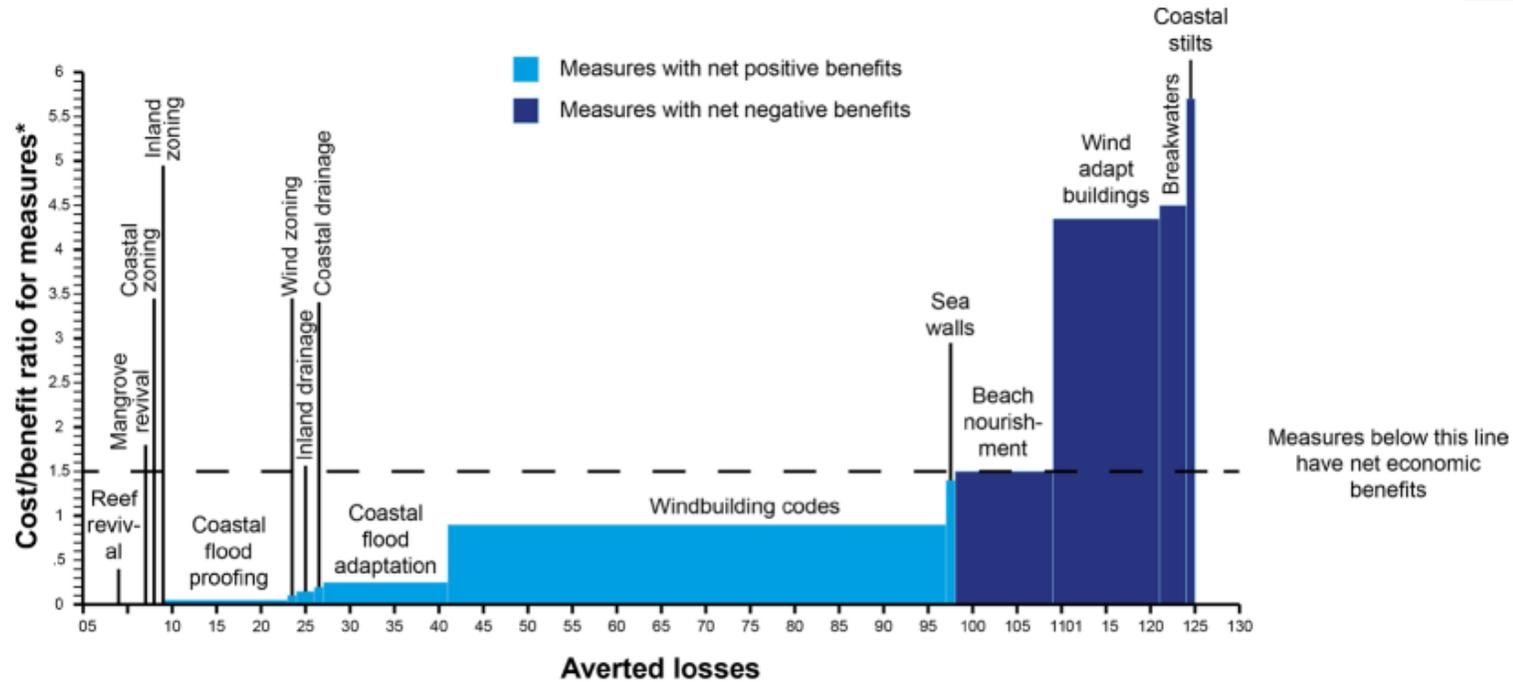
The fund successfully obtained FSC certification on the entire forested area of properties and timber stocking increased as harvest levels were kept below growth levels



The fund has verified sequestration of 2.2 million tCO₂e of carbon, or 44% of target, based on the California Air Resources Board Offset Credits (ARBOCs) issued to the fund. The fund's carbon sequestration in 2019 was equivalent to taking more than 480,000 cars off the road for one year



Case Study: How could Nature-Based Solutions be economically viable?



*Does not account for synergies or dis-synergies between measures (e.g. building sea walls behind a breakwater)

Cost-benefit analysis of coastal protection from natural hazards and climate change through investing in coastal ecosystems and other measures, Barbados

[IUCN, 2020](#)



Summary



❖ **Nature-Based Solutions** are actions used to protect, sustainably manage, and restore ecosystems.

❖ Implementing Nature-Based Solutions can **enhance the stock of natural capital** by creating or enhancing the condition of ecosystems and biodiversity within

❖ Investment into Nature-Based Solutions can support financial institutions in **mitigating their land-use associated risk** and their **contribution to global goals**

An aerial photograph of a forest fire. The image shows a dense forest of green trees, with several areas where the trees are charred and blackened. Thick white smoke is rising from the fire, partially obscuring the trees. The overall scene is one of destruction and environmental impact.

Section 2

Greening finance: Nature-Based Solutions in the context of land-use related risks



Recap on risks

Financial institutions risks

Non-performing loans

Clients may be unable to service debt

Asset values

Assets may become stranded if market conditions change

Revenue/profitability

Market value may deteriorate as revenue and profits are impacted

Soft commodity supply chain risks

Operational

Resource scarcity, biodiversity loss and ecosystem degradation leading to decreased productivity and resilience

Legal

Environmental breaches and un-preparedness for compliance

Regulatory

Legal liabilities due to failure to manage environmental and social risks in activities

Markets

Change in consumption due to changes in societal preferences

Reputational

Companies might be targeted by campaigns due to their involvement in soft commodity value chains

Risks within soft commodity supply chains can affect standard financial metrics (e.g., revenue, asset valuation, or costs) which can affect credit worthiness of clients, or market value of debt, or equities of investee companies.

Soft commodity supply chain



FORESTS

PRODUCERS

TRADERS

PROCESSORS

RETAILERS



CONSUMERS

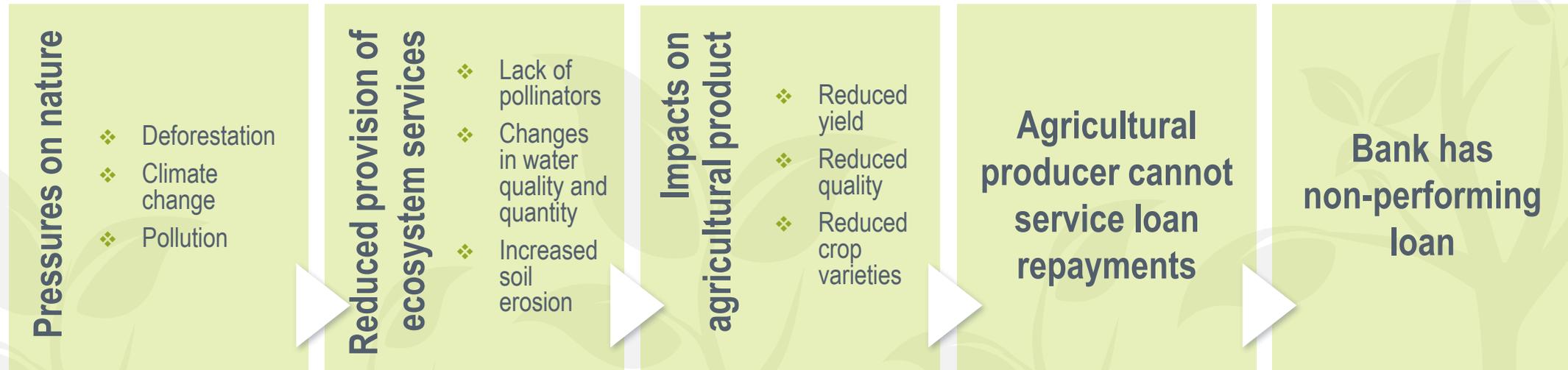
Adapted from: [Bank and Investor Risk Policies on Soft Commodities](#)



Recap on Natural Capital Risks

Banks are exposed to natural capital risks that affect the businesses that they lend to.

The following flow diagram highlights how pressures on nature can transpire to a financial risk for a bank:



Source: [CISL, 2021](#)



Recap of categories of risk response

Monitor

Monitor: no immediate action to change the severity of land-use related risks

Reduce

Reduce: appropriate when the severity of land-use related risks is higher than the bank's risk appetite
Implies some level of land-use related risk, but works towards reducing unmitigated risks.

Avoid

Avoid: appropriate when all or certain land-use related risks are not tolerated by the bank



Actions to reduce land-use risks

Monitor

Nature-Based Solutions can be used as part of a bank's risk mitigation strategy, where Nature-Based Solutions actions are focussed on reducing land use related risks.

Reduce

Actions to reduce land-use related risks are appropriate when the severity of risk is higher than the bank's risk appetite.

Actions can be orientated towards:

- ❖ Client engagement
 - Performance requirements
 - Support clients making the transition
 - Response to non-compliance

Avoid





Actions to reduce land-use risks

Client engagement

- ❖ Performance requirements
- ❖ Support clients making the transition
- ❖ Response to non-compliance



Actions to reduce land-use risks

Client engagement

- ❖ Performance requirements
- ❖ Support clients making the transition
- ❖ Response to non-compliance

Example

A bank can implement Nature-based Solution activities when a risk is forecasted with a potential client (ex-ante). The action to be implemented will aim to mitigate the risk forecasted and reduce it's impact on the client and the bank.

As a result of land-use changes uphill of a client's concession area, reduced soil quality leading to reduced water retention and flow has led to a landslide in a neighbouring concession area.

The client implements ex-ante adaptation measures such as growing drought-tolerant crops, crops adapted to waterlogging, sowing crops early and intercropping (Abid et al., 2020) to overcome water related challenges.



Actions to reduce land-use risks

Client engagement

- ❖ Performance requirements
- ❖ Support clients making the transition
- ❖ Response to non-compliance

Banks can support their clients on a number of ways to increase the likelihood of successful implementation of new Nature-Based Solutions practices to mitigate unsustainable land use related risks:

- ❖ Identification of unsustainable land use related risks
- ❖ Provide technical assistance to support appropriate implementation of Nature-Based Solutions activities to mitigate unsustainable land use related risks ([IBD and UNEP-WCMC, 2021](#))
- ❖ Directing clients towards Nature-Based Solutions through other communication channels (e.g. products, opportunities, funding support, other actors involve within Nature-Based Solutions activity implementation)

Nature-Based Solutions provides a framework to address physical risks resulting from unsustainable land use in a systematic and rationale way.



Actions to reduce land-use risks

Financial Technical Assistance – Hypothetical Case Study

- ❖ A client has known water-related land use risk of reduced surface water quality
- ❖ The bank is aware that this client is at risk of water-related risks, as a result of their due diligence processes.
- ❖ The bank has a consultation with the client on providing financial technical assistance to implement Nature-Based Solutions activities which target risks associated with surface water quality (e.g. reforestation/afforestation).
- ❖ The bank also suggests Nature-Based Solutions through other communication products.

Water challenges	SURFACE WATER QUALITY				GROUNDWATER QUALITY		FLOODS	WATER SCARCITY		
	Nutrients	Sediments	Pesticides	Other chemicals & emerging pollutants	Nitrates	Pesticides	Upstream watershed	Lower river flows	Lower groundwater levels	Droughts
Nature-based solutions										
Reforestation/afforestation	■	■	■		■	■	■	■	■	■
Targeted land protection (including forest protection)	■	■	■		■	■	■	■	■	■
Land-use change from farmland to pasture land	■	■	■		■	■				
Riparian buffer strips/Riparian zone restoration	■	■	■				■			
Aquifer recharge	■	■						■	■	■
Reconnecting rivers to floodplains	■	■					■	■	■	■
Establishing flood bypasses							■			
Wetlands restoration/conservation	■		■				■	■	■	■
Construction of artificial wetlands	■	■		■			■			
Ponds and basins	■	■		■	■		■			
Forestry best management practices (BMP), including forest fuel reduction	■	■			■		■	■	■	
IMPROVED AGRICULTURAL PRACTICES:										
Catch crops/Cover crops	■	■	■		■					
Crop rotation	■	■	■			■				
Conservation tillage	■	■			■					
Reduced fertiliser use	■				■					
Alternative plant protection			■			■				

Source: [FAO, 2021](#)

Actions to reduce land-use risks

Financial Technical Assistance

The Agroforestry Technical Assistance Facility

- Provides farmers with access to training, supporting innovative research and development programs and by assisting commercial initiatives, ATAF will create an enabling environment to increase the resilience of farmers and landscapes in Latin America and Sub-Saharan Africa.
- Donors of ATAF include the Common Fund for Commodities (CFC), African Development Bank, and the French Development Finance Institution
- The ATAF has been supporting 15 Moringa projects and involve 4 million euros of co-funding

Source: [Ataf,2021](#)



ATAF

The ATAF was created by Moringa Partnership to provide technical assistance in relation to investments of the Fund with the goal to amplify and upscale positive environmental and social impacts triggered through Moringa investments. ATAF is a grant based mechanism parallel to the investment of the Moringa Fund.



Actions to reduce land-use risks

Client engagement

- ❖ Performance requirements
- ❖ Support clients making the transition
- ❖ Response to non-compliance

A bank can direct their clients to other communication channels to enhance their understanding and/or implementation of Nature-Based Solutions activities.

These can include:

- ❖ Products (e.g. [Nature-Based Solutions Evidence Platform](#), [Nature4Climate](#), [Ecosystem-based Adaptation Tools Navigator](#), [Investor Framework for Nature-based Solutions](#))
- ❖ Opportunities (see next Section)
- ❖ Funding support (e.g. [RestorationFunders](#))
- ❖ Other actors involved with Nature-Based Solutions activity implementation (E.g. [WBCSD's Nature Action](#) and service and solution providers)

Actions to reduce land-use risks

Types of Nature-Based Solutions

NBS IN AGRICULTURAL PRODUCTION

NbS Activity	01	02	03	04	05	06	07
	GRAZING OPTIMIZATION	IMPROVED RICE CULTIVATION	BIOCHAR	CROPLAND NUTRIENT MANAGEMENT	CONSERVATION AGRICULTURE	TREES IN CROPLANDS	IMPROVED PLANTATIONS
Benefits							
Functions	Improve animal grazing intensity, pasture management and feed practices to reduce GHGs.	Adopt water management techniques, improve drainage, practice residue incorporation.	Increase use of biochar to increase carbon storage	Reduce excessive fertilizer and other additives and remove perverse incentives to increase fertilizer use.	Cultivate additional cover crops in fallow period; shift to reduced or zero tillage.	Promote integration of trees into agriculture lands to increase habitat value.	Extend harvest rotation lengths on intensively managed production forests.
Quantitative example of NbS benefits	1.4B head of cattle of potential; over 90% of cattle on earth	2.9:1 benefit-cost ratio water quality improved	1,102M tons CO ₂ /yr	44M tons of nitrogen per year reduction	4.8B hectares of conservation land	1,040M tons CO ₂ /yr	257M hectares potential

Source: [FAO, 2021](#)



Actions to reduce land-use risks

Types of Nature-Based Solutions -Hypothetical example

Client engagement

- ❖ Performance requirements
- ❖ Support clients making the transition
- ❖ Response to non-compliance

Nature-Based Solutions can be used to mitigate land-use related risks

- **Risk:** Unsustainable management of resources led to degraded ecosystems through charcoal exploitation and deforestation.
- **Problem:** Client has associated problems with deforestation and charcoal exploitation – resulting in water scarcity and reduced soil quality, influencing food production
- **Nature-based Solution:** Improved land use systems and management practices such as restoration of degraded lands, agro-biodiversity conservation and sustainable land use.
- **Results:** Water scarcity and soil fertility addressed by restoration of riparian buffers alongside river banks

Adapted from: [FAO, 2017](#)



Using Nature-Based Solutions for different supply chain actors

Nature-Based Solutions inherently involve direct interaction with forest, land and agriculture.

Banks involved in agricultural lending, can consider using Nature-Based Solutions with their clients to address land-use associated risks with all players along the value chain.

- Upstream actors such as farmers will use land to produce their crops, reducing the stock of natural capital.
- Downstream actors along the value chain, such as retailers will use land to create their infrastructure and building site, reducing the stock of natural capital.



Actions to reduce land-use risks

A client has a land-use related risk (e.g., biodiversity risk, water risk, soil risk or air) and needs to reduce this risk to be compliant with a bank's terms and regulations. A client could implement Nature-Based Solutions as part of a corrective action plan

Client engagement

- ❖ Performance requirements
- ❖ Support clients making the transition
- ❖ Response to non-compliance

The action to be implemented will aim to reduce any further occurrences of the risk to the client and the bank.

- ❖ As a result of land-use changes upstream of a client's concession area, reduced soil quality leading to reduced water retention and increased flow has led to a landslide.
- ❖ To address soil quality, reforestation of upland areas surrounding the stream is required to increase soil stability and quality.
- ❖ The action by a bank includes providing financial technical assistance towards existing clients which includes Nature-Based Solutions to mitigate unsustainable land use risk.



Actions to avoid land-use risks

Monitor

Nature-Based Solutions can be used as part of a bank's risk mitigation strategy, where Nature-Based Solutions actions are focussed on avoiding land use related risks.

Reduce

Actions are when all or certain land use associated risks are not tolerated by the bank.

Avoid

Actions can be orientated towards;

- ❖ Eligibility criteria



Actions to avoid land-use risks

Eligibility criteria

Providing finance only to clients which meet requirements and/or activities related to sustainable land use management in the criteria list (*use of Nature-Based Solutions activities*)

Banks can include the use of Nature-based solution activities within their eligibility criteria to reduce risks associated with unsustainable land use to ensure alignment between banks' internal objectives and/or strategy.

Eligibility criteria: to be met to access finance

The following aspects could be considered:

- ❖ Ensure the use of Nature-Based Solutions activities to mitigate greenhouse gas emissions
- ❖ Ensure the use of Nature-Based Solutions activities to address deforestation risk through the use of reforestation/afforestation

A bank should work with their client to ensure that the transaction is met by working proactively through the provision of financial services and/or third party services to change practices.



Section 2 Summary and Key Messages

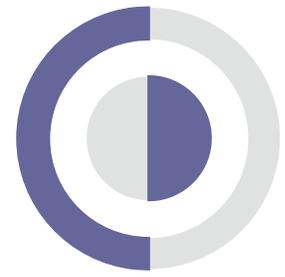
We have explored three categories of risk response:

- **Monitor**
 - No immediate action to change the severity of land-use related risks
- **Reduce**
 - When the risk severity is higher than the risk appetite. Actions to reduce risk can be oriented towards client engagement which includes performance requirements, support clients making the transition and response to non-compliance
- **Avoid**
 - The main way to avoid land-use risk is using eligibility criteria to specifically include the use of Nature-based solution activities to reduce risks associated with unsustainable land use to ensure alignment between banks' internal objectives and/or strategy.



Section 3

Financing green: Nature-Based Solutions as opportunities for banks



Green trends

- There is a **growing interest** by businesses to implement Nature-Based Solutions to tackle the multiple climate and nature-related risks ([WEF, 2020](#))
- It is **necessary to accelerate investments** into high-quality Nature-Based Solutions that deliver both climate solutions and nature benefits ([WBCSD, 2021](#))
- For banks, investing in businesses that adopt a sustainable growth model can future-proof the portfolio to ensure they are ahead of their competitors.

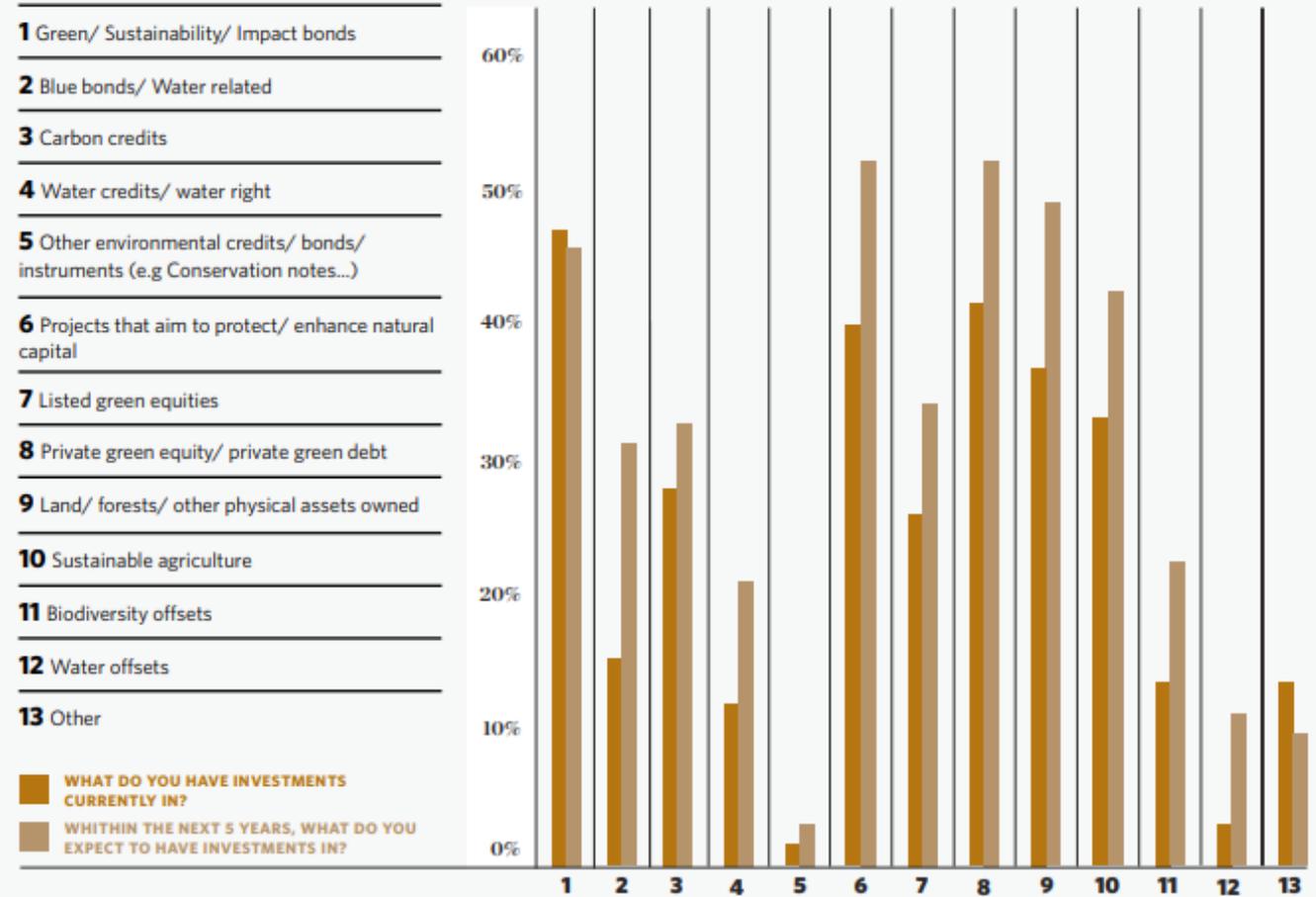
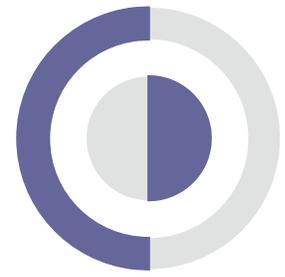


FIGURE 6. INVESTORS' CURRENT AND EXPECTED FUTURE INVESTMENT MIX

(TNC, INVESTING IN NATURE, 2019)

[FAO & TNC, 2021](#)



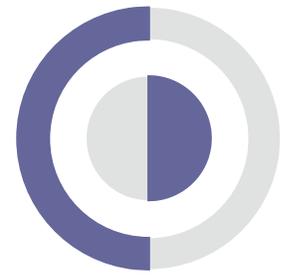
What can Nature-Based Solutions do for banks and their clients?

If implemented properly Nature-Based Solutions can:

- provide cost-effective solutions to address land use needs
- provide additional co-benefits to clients
- provide a return on investment over time

PROJECT CATEGORIES	SUB-SECTORS
PRO-BIODIVERSITY AND ADAPTATION BUSINESSES 	<ul style="list-style-type: none"> • Sustainable forestry (e.g. combining commercial production with safeguarding of the environmental value and services forests provide) • Regenerative agriculture (e.g. practices that increase biodiversity, enrich soils, improve watersheds, enhance ecosystem services) • Sustainable aquaculture (e.g. implementation of aquacultural practices that support or enhance biodiversity or climate adaptation) • Ecotourism (e.g. providing tourism services in natural areas that conserves the environment and improves the well-being of local people)
PAYMENTS FOR ECOSYSTEM SERVICES 	<ul style="list-style-type: none"> • Protecting and enhancing forestry (e.g. projects that either protect existing forest, enhance it or establish new forest) • Biodiversity protection (e.g. maintenance and enhancement of native biodiversity, including terrestrial, freshwater and marine) • Pollution reduction (e.g. reduction of artificial materials and chemicals introduced in to the environment) • Carbon dioxide mitigation (e.g. modifying / eliminating practices generating CO₂ or initiating / increasing practices which sequester CO₂)
GREEN INFRASTRUCTURE 	<ul style="list-style-type: none"> • Green roofs (e.g. system that uses vegetation as the surface of the roof covering instead of artificial materials) • Green walls (e.g. vertical growing medium attached or integrated into the wall of a building) • Ecosystem-based rainwater collection / water re-use systems (e.g using plants and other components of ecosystem as natural filters) • Natural flood protection (e.g restoring, modifying or using natural landscapes to reduce or mitigate the impacts of flooding) • Erosion control (e.g. creating or modifying infrastructure to reduce the effects of erosion, including from anthropogenic activities)
BIODIVERSITY OFFSETS AND COMPENSATION 	<ul style="list-style-type: none"> • Compensation pools (on-site) (e.g. restoration or creation of new habitat areas undertaken at the project site) • Compensation pools (off-site) (e.g restoration or creation of new habitat areas at a location geographically separated from the project site)

Source: [EIB](#)



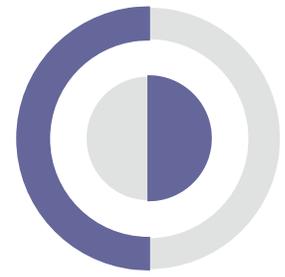
Considerations for Nature-Based Solutions projects

There is a range of considerations when using Nature-Based Solutions to mitigate land-use risks which should be noted.

Below is a non-exhaustive list ([FAO & TNC, 2021](#)):

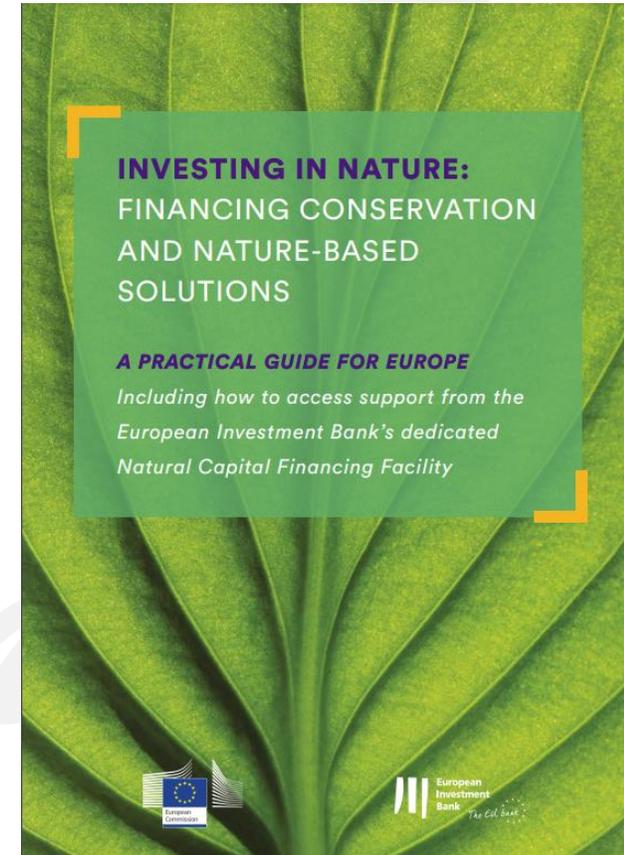
- ❖ The core finance required
- ❖ How impacts can be measured and monitored
- ❖ Factors that influence the return on investment
- ❖ Capacity constraints

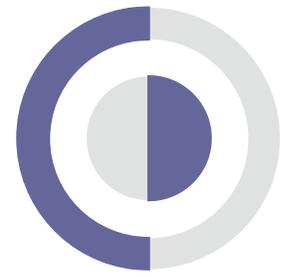




Core finance required

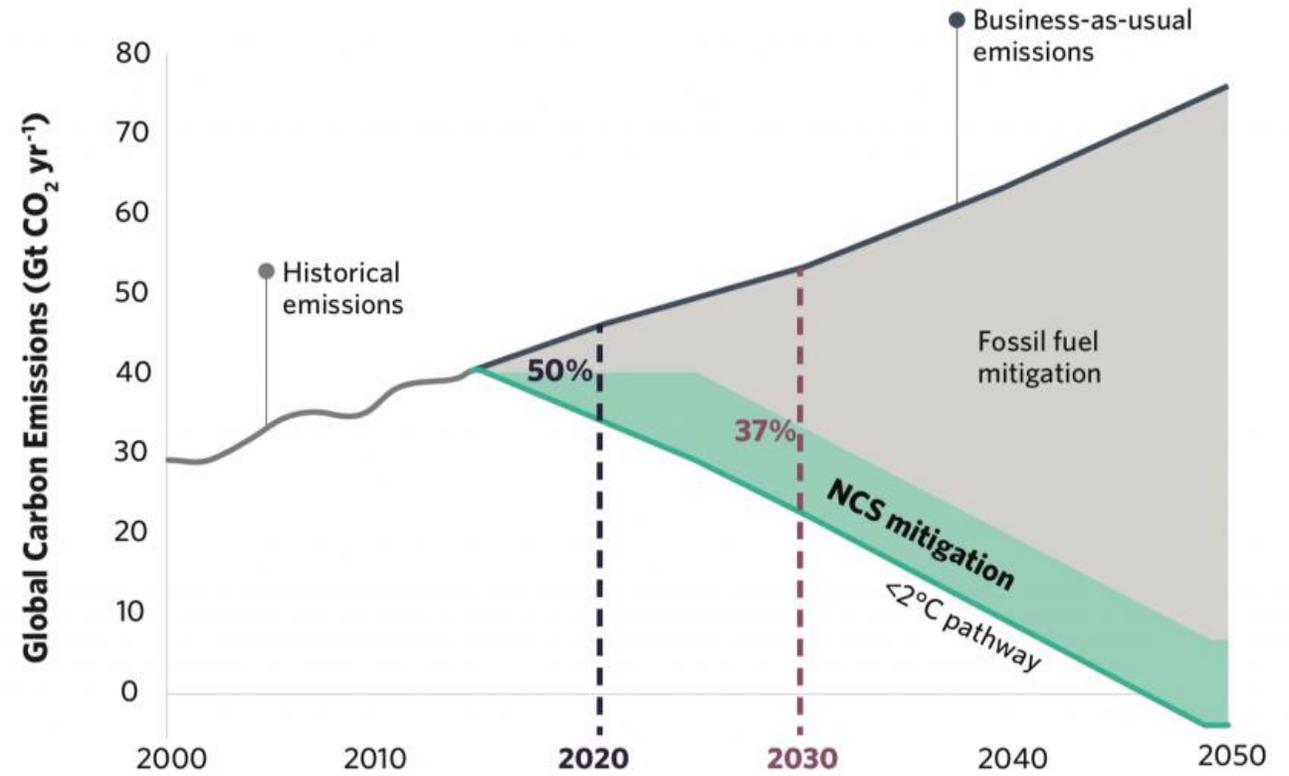
PROJECT EXAMPLE	TYPICAL CASH FLOW PATTERNS OVER TIME	CORE FINANCING NEED
SUSTAINABLE FORESTRY		<ul style="list-style-type: none"> Initial capital investment and ongoing operations (e.g. land acquisition, equipment, planting and maintenance of trees)
SUSTAINABLE AGRICULTURE		<ul style="list-style-type: none"> Capital investment to adjust traditional practices (e.g. additional equipment)
SUSTAINABLE AQUACULTURE		<ul style="list-style-type: none"> Initial capital investment to establish new farm (infrastructure, equipment, purchase of stock etc.)
ECOTOURISM*		<ul style="list-style-type: none"> Initial capital investment for creation of new lodge (infrastructure, equipment, land leases etc.)
CARBON SEQUESTRATION PAYMENTS		<ul style="list-style-type: none"> Initial capital investment to establish new enterprise and start operations (acquire project land, baseline surveys etc.)
GREEN INFRASTRUCTURE*		<ul style="list-style-type: none"> Initial capital outlay for purchase and installation of infrastructure





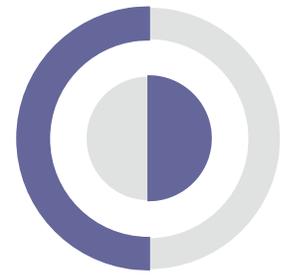
Low carbon economy transition

NATURAL CAPITAL SOLUTIONS (NCS) ARE ESSENTIAL TO STABILISING WARMING TO BELOW 2°C



Source: <http://www.pnas.org/content/114/44/11645/figures-only>

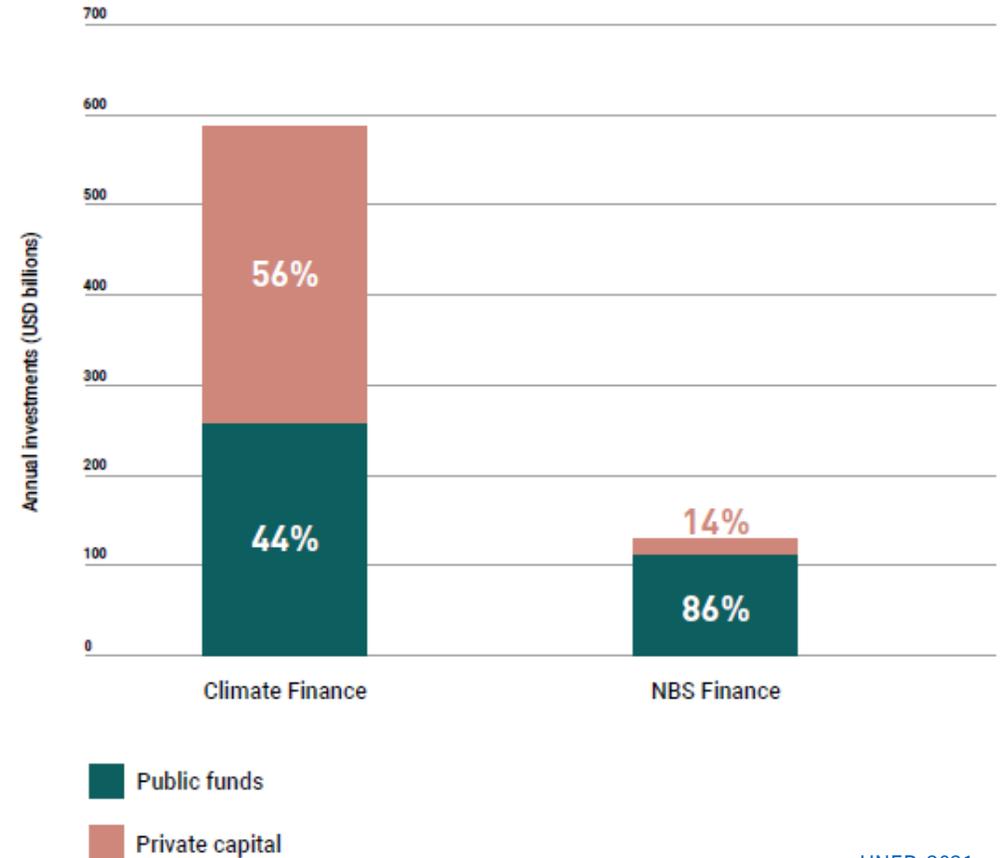




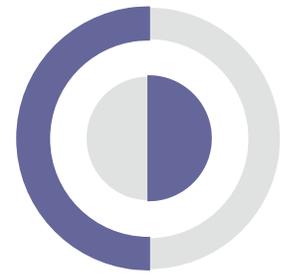
Low carbon economy transition

- ❖ “Nature-Based Solutions offers practical opportunities for creating pathways to deliver investment into nature from global capital markets” [FinanceEarth, 2021](#)
- ❖ In climate finance, private sector investment accounts for most capital flows.
- ❖ For banks there is an opportunity for low carbon economy transition

Climate finance relative to finance for NbS



[UNEP, 2021](#)



Low carbon economy transition

AXA Group Investments has recently approved a new “Natural Capital” target to dedicate **€1.5 bn towards reforestation** contributing to an equivalent annualized impact of 25MT CO² sequestered or avoided once fully deployed.

This results in two different approaches:

- ❖ €1 bn to support forestry management projects in developed markets
- ❖ €500 M to support **Nature-Based Solutions** where the outcome of the initiative can often be measured through the production of carbon credits.

Source: [AXA \(2021\)](#)



AXA Group Ecosystem conversion & Deforestation policy
Natural World Heritage Sites policy
October 2021



AXA

On October 14th 2021, AXA announced new commitments to preserve biodiversity by implementing a plan to fight against the deterioration of forest ecosystems.

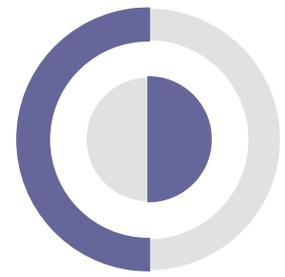


Low carbon economy transition

Example: The Sumatra Merang Peatland Restoration Project

Nature	Peatland ecosystem restoration in Indonesia
Description	The Project is restoring more than 22,900 hectares of peatland rainforest in the Merang region of Indonesia. The project targets the Merang biodiversity corridor, one of the largest and deepest peat swamps in South Sumatra. Climate finance rehabilitates and protects this threatened ecosystem, reducing emissions, and creating a conservation area for hundreds of unique and endangered species.
Partners	This project is part of the Althelia Climate Fund and implemented in partnership with PT GAL and Forest Carbon.
Activities	Regeneration and regrowth of standing trees; Fire prevention; Forest monitoring; Developing sustainable livelihood programmes with villages near the project
Targeted Impacts	Climate: 3.4 million tonnes of CO2 emissions reduced by 2021 Ecosystems: 22,934 hectares of peatland forest restored and protected Species: Restoring habitat for unique and endangered species e.g. Sumatran tiger, rhinoceros hornbill and sun bear
Financial Mechanisms	Registered and validated by the Verified Carbon Standard (VCS) under ID 1899 and the Climate, Community and Biodiversity Standard (CCB), AXA IM has both invested in and purchased carbon credits from the project.

[AXA \(2021\)](#), [Ecosphere \(2020\)](#), [Forest Carbon \(2020, 2021\)](#)



Low carbon economy transition – Scotland's peatlands

- ❖ In 2021, the Scottish government announced a package of funding to accelerate Scotland's transition to a net-zero economy.
- ❖ The basket of funds is part of the Scottish Government's commitment to Nature-Based Solutions to the climate crisis and includes £1.8 billion of investment in low-carbon infrastructure in which it provides £20 million for peatland restoration and a commitment to invest £250 million over the next 10 years.
- ❖ Considering up to 25 per cent of the land cover in Scotland is peatlands, this announcement and the restoration action to come will likely place Scotland in a position as a "peatlands restoration champion".

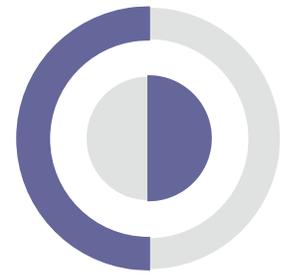
Source: [OECD-WWF Dialogue](#), [NatureScot](#), n.d.



Peatland ACTION Project

Delivering peatland restoration across Scotland.

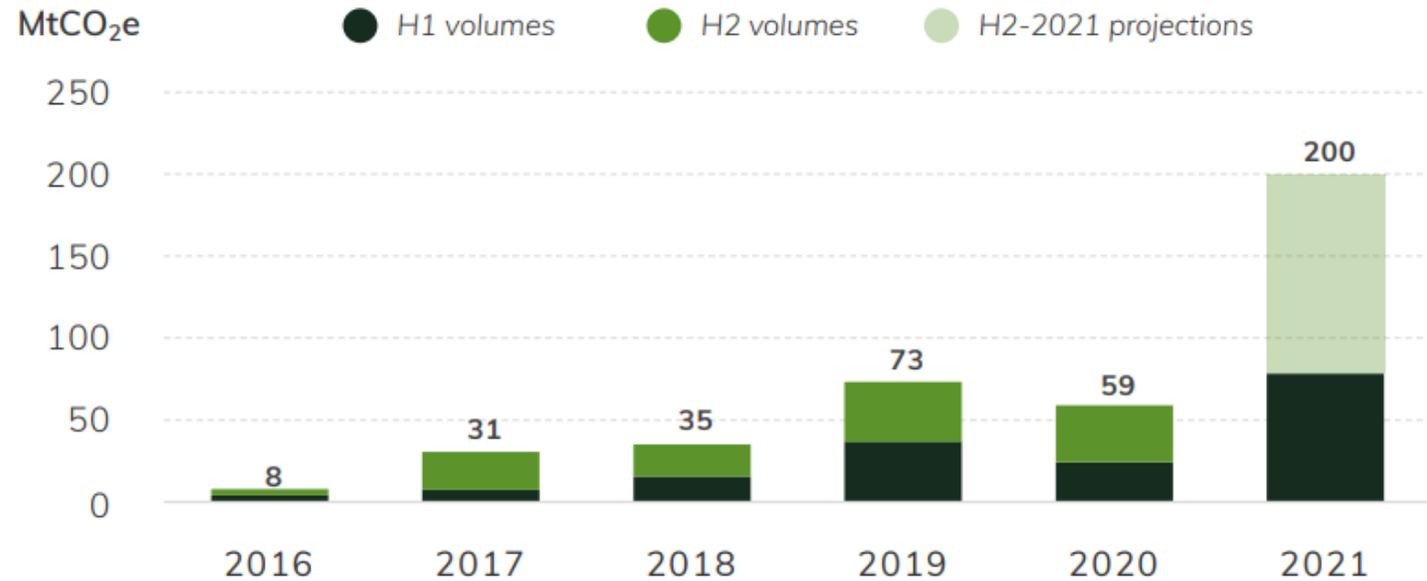


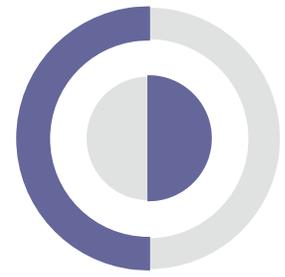


Voluntary carbon markets

- ❖ The issuance of carbon credits from Nature-Based Solutions projects has increased sharply during the first half of 2021.
- ❖ This is equivalent to more than triple the volume observed for the same period last year
- ❖ Increased credibility for banks financing carbon markets through the provision of financial technical assistance for Nature-Based Solutions implementation.

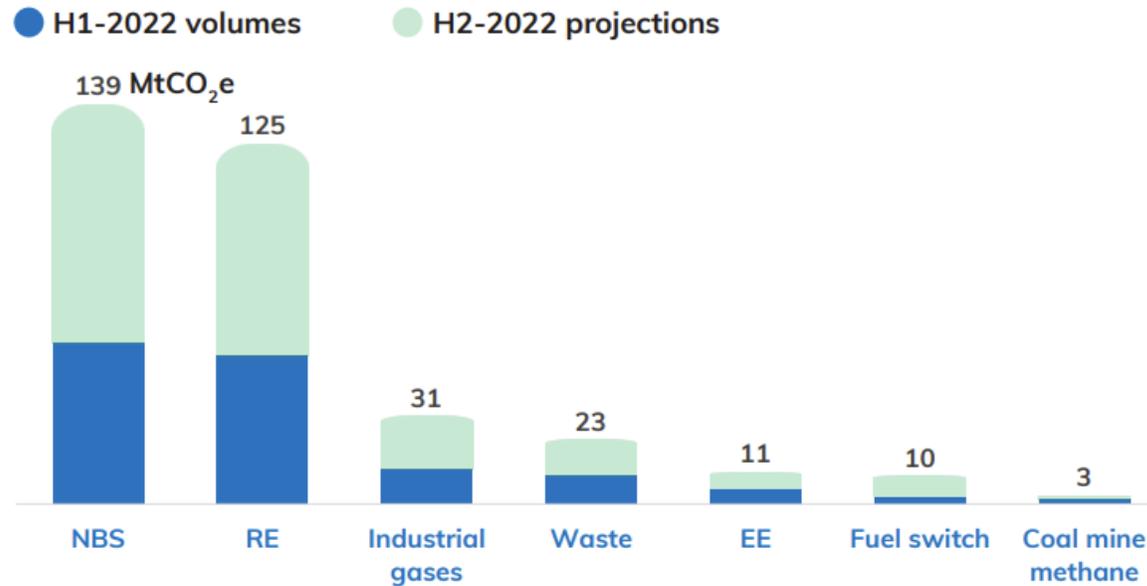
Source: [Climate Focus, 2021](#)





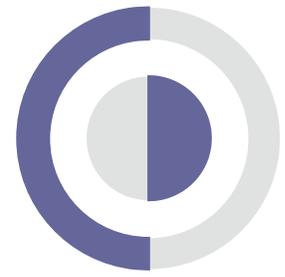
Voluntary carbon markets

Nature-based solutions continue to lead



Credit issuances in H1 2022 were dominated by **nature-based solutions (NBS) and renewable energy (RE) projects**, jointly representing 78% of total issuances in H1 2022. The figure shows total issuances per project category for H1 2022, as well as a forecast based on historical trends for the second half of the year.¹

Source: [Climate Focus, 2022](#)

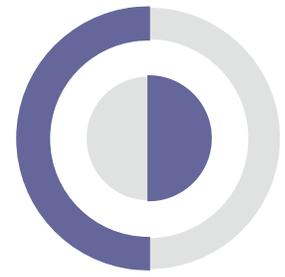


Break-out Group Session



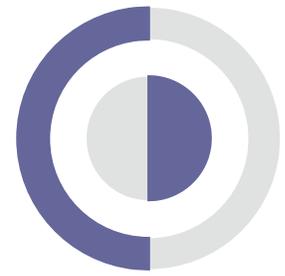
Are Nature-based Solutions already part of your portfolio (or the portfolio of your clients)?

Do you see Nature-based Solutions becoming a more attractive option for banks moving forward?



PROJECT CATEGORIES	SUB-SECTORS
<p>PRO-BIODIVERSITY AND ADAPTATION BUSINESSES</p> 	<ul style="list-style-type: none"> • Sustainable forestry (e.g. combining commercial production with safeguarding of the environmental value and services forests provide) • Regenerative agriculture (e.g. practices that increase biodiversity, enrich soils, improve watersheds, enhance ecosystem services) • Sustainable aquaculture (e.g. implementation of aquacultural practices that support or enhance biodiversity or climate adaptation) • Ecotourism (e.g. providing tourism services in natural areas that conserves the environment and improves the well-being of local people)
<p>PAYMENTS FOR ECOSYSTEM SERVICES</p> 	<ul style="list-style-type: none"> • Protecting and enhancing forestry (e.g. projects that either protect existing forest, enhance it or establish new forest) • Biodiversity protection (e.g. maintenance and enhancement of native biodiversity, including terrestrial, freshwater and marine) • Pollution reduction (e.g. reduction of artificial materials and chemicals introduced in to the environment) • Carbon dioxide mitigation (e.g. modifying / eliminating practices generating CO₂ or initiating / increasing practices which sequester CO₂)
<p>GREEN INFRASTRUCTURE</p> 	<ul style="list-style-type: none"> • Green roofs (e.g. system that uses vegetation as the surface of the roof covering instead of artificial materials) • Green walls (e.g. vertical growing medium attached or integrated into the wall of a building) • Ecosystem-based rainwater collection / water re-use systems (e.g. using plants and other components of ecosystem as natural filters) • Natural flood protection (e.g. restoring, modifying or using natural landscapes to reduce or mitigate the impacts of flooding) • Erosion control (e.g. creating or modifying infrastructure to reduce the effects of erosion, including from anthropogenic activities)
<p>BIODIVERSITY OFFSETS AND COMPENSATION</p> 	<ul style="list-style-type: none"> • Compensation pools (on-site) (e.g. restoration or creation of new habitat areas undertaken at the project site) • Compensation pools (off-site) (e.g. restoration or creation of new habitat areas at a location geographically separated from the project site)





Financial mechanisms - Roncador Investment

- Grupo Roncador is a cattle ranching, and corn and soy farming company in Brazil.
- &Green extended a USD10 million, 8 year loan to upscale Roncador's sustainable farming system that integrates crops with livestock to their farming operation
- Investment will help restore soil fertility, reduce pesticide usage and will have a positive climate impact
- Developed environmental and social action plan with SAIL Ventures (&Green investment advisor) for farmers on how commercially viable cattle and soy farming can be combined with accelerated regulatory compliance and forest protection (by ensuring early compliance with Brazilian Forest Code).

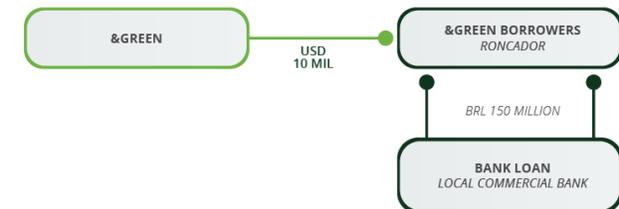
Source: [&Green, n.d.](#)

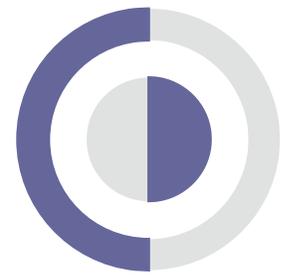
PROJECT AREA



- LAND OF AGRICULTURE
- LAND OF PERMANENT PASTURE

PROJECT STRUCTURE





Financial mechanisms - Sustainability linked loans (SLLs)

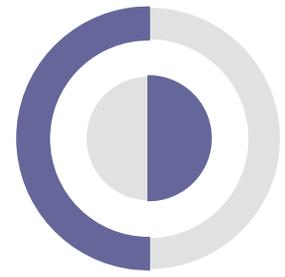
Under the terms of SLLs, companies must pay investors higher interest rates if they fail to hit agreed sustainability targets.

- Agricultural sector's biggest SLLs to date was a USD 2.1bn deal agreed by China's Cofco International in 2019. Through this credit facility, Cofco must pay to its progress in meeting preset targets for ESG performance and improvement in the traceability of its agri-commodities, such as discovering whether its soybeans are linked to deforestation in Brazil.
- In South America, Tereos Sugar & Energy Brazil, announced a \$105m SLL promising to cut carbon emissions and water use in sugarcane production as well as to increase its ESG scores.

SLLs can be made to be in line with Nature-Based Solutions-related targets.

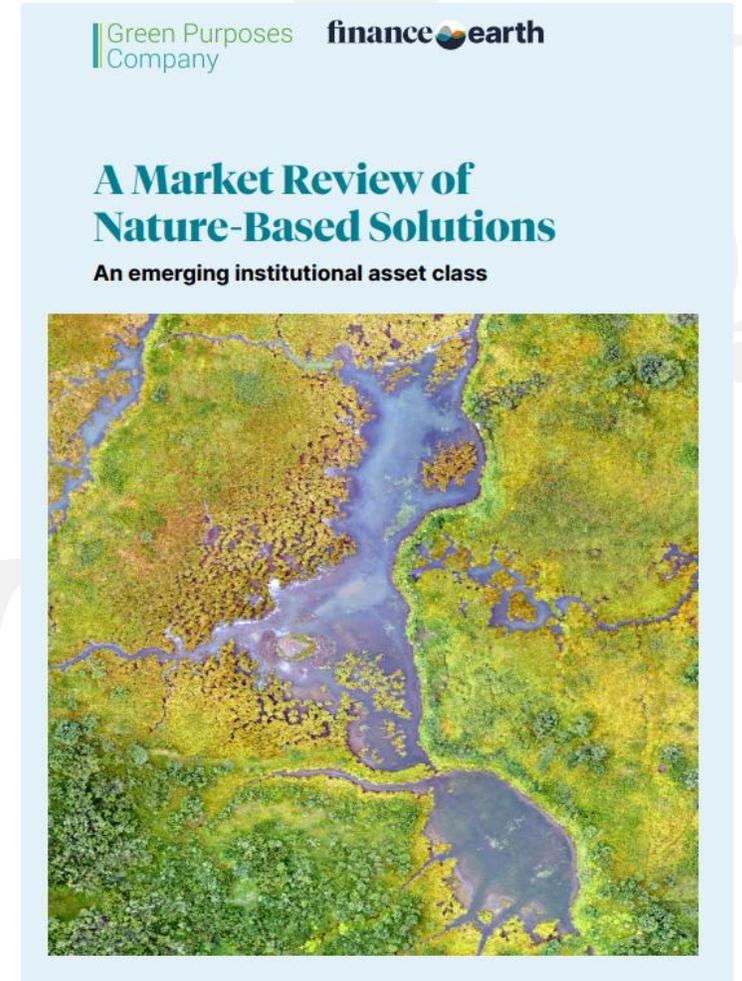
Source: [Financial Times, 2021](#)

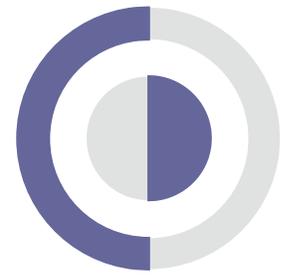
The screenshot shows the Financial Times website interface. At the top right, there are links for 'Sign In' and 'Subscribe'. The main header features the 'FINANCIAL TIMES' logo and the 'myFT' logo. Below the header is a dark banner with the text 'A new world is possible. Let's not go back to what wasn't working anyway.' and a button that says 'If you think the same, join us'. A red navigation bar highlights a 'Special Report Sustainable Food and Agriculture'. Below this, there is a 'Sustainability' section with a '+ Add to myFT' button. The main article title is 'Food industry shows growing appetite for green finance', with a sub-headline 'New issuance standards are helping drive a surge in sustainability-linked loans'. The article features a photograph of a riverbank with several cows grazing. At the bottom of the image, a caption reads: 'Cattle graze near a reservoir in Colorado. New standards for agribusiness debt aim to channel impact finance to the livestock sector © Patrick T Fallon/AFP via Getty Images'.



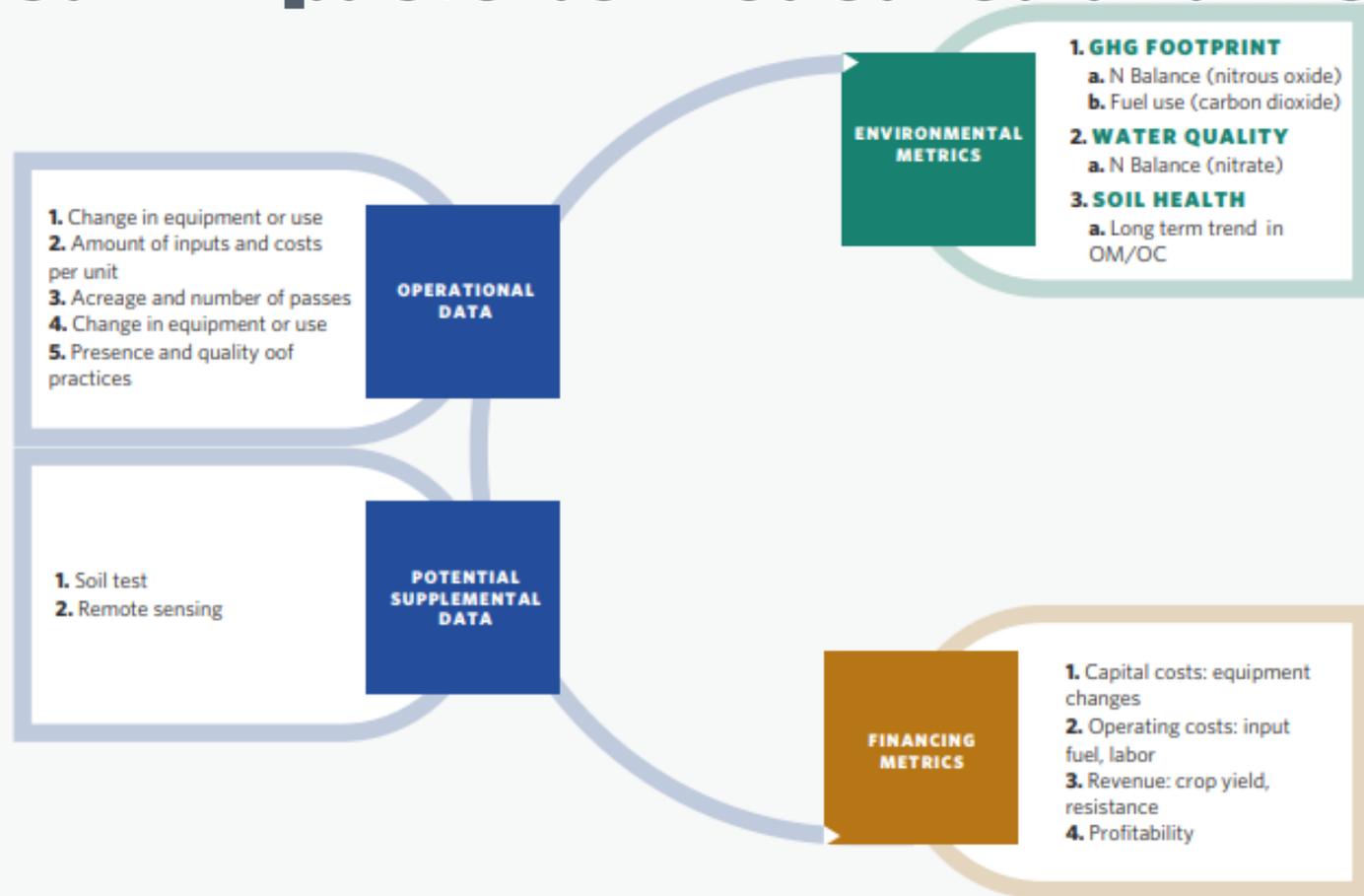
Financial mechanisms: Project aggregation

- Nature-Based Solutions projects are typically small in scale, leading to an increased number of funds and aggregates that are helping to create pathways for institutional investments into Nature-Based Solutions ([FinanceEarth, 2021](#))
- Aggregation increases the number of projects which become commercially viable, enabling investors to effectively spread risk across a portfolio and achieve an appropriate fund size ([FinanceEarth, 2021](#))
- Results in reduced the cost of project development ([IEMA, 2020](#))
- Public-private partnerships needed to accelerate private investment within project aggregation of Nature-Based Solutions ([IEMA, 2020](#))



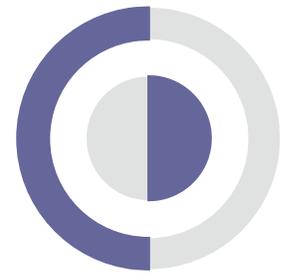


How can impacts be measured and monitored?



FAO, 2021

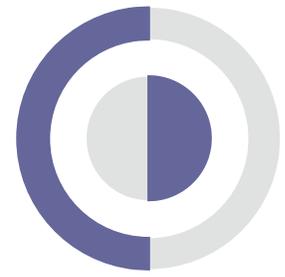
FIGURE 13. PERFORMANCE METRICS AND DATA NEEDS



How can impacts be monitored?

- Robust monitoring and evaluation is essential to advance the adoption of Nature-based Solutions
- Currently there is a lack of evidence demonstrating the environmental effectiveness and return on investment of Nature-based Solutions practices
- Publicly sharing information regarding performance across financial and environmental indicators, as well as lessons learned or effective adjustments to improve performance, will increase the adopted and replication of Nature-based Solutions activities

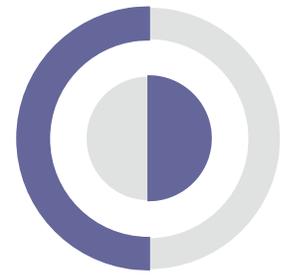
[FAO, 2021](#)



Considerations for successful implementation

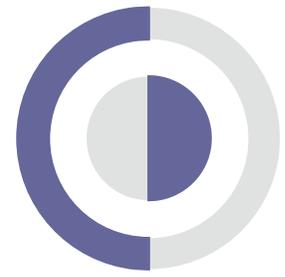
To ensure successful implementation, a bank will need to:

- Provide financial technical capacity to ensure the Nature-based Solutions activities can be implemented
- Develop relationships with third parties to provide indirect technical capacity to ensure appropriate implementation of Nature-based Solutions activities to address land-use risks
- Investment in data acquisition and monitoring to measure impacts
- Build capacity internally within a bank to ensure they can communicate with clients comfortably around Nature-based Solutions



Section 3 Summary and Key Messages

- There is a growing interest by businesses to implement Nature-based Solutions to tackle the multiple climate and nature-related risks, banks that consider investing in businesses that adopt sustainable models are future-proofing their business to ensure they are ahead of their competitors
- There are different financial mechanisms in which a bank can invest within Nature-based Solutions
- There is a range of considerations that a bank should be aware of when providing finance for Nature-Based Solutions activities to mitigate their land-use risk. These include the core finance required, how impacts can be measured and monitored and the factors which can influence the return of investment.



Conclusion

- Nature-Based Solutions provide a systematic way to address unsustainable land use risks and challenges if implemented correctly at the project level. Nature-Based Solutions can provide co-benefits as well as deliver on economic viability.
- For a bank, there is a range of ways in which Nature-Based Solutions can be integrated within green finance – through risk mitigation strategies such as monitor, reduce and avoid.
- There is a global movement towards green investing, providing an opportunity for banks to invest within Nature-Based Solutions to
- There is a range of considerations that a bank should be aware of when providing finance for Nature-Based Solutions activities to mitigate their land-use risk. These include the core finance required, how impacts can be measured and monitored and the factors which can influence the return of investment.