Report #05

Enhancing Climate and Disaster Resilience through Nature-based Solutions Across ASEAN and ASEAN Member States: Financing Barriers, Enablers and Opportunities

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Disclaimer

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The report is one of several undertaken under the TAF-GTEI to provide insights into the awareness, role and uptake of nature-based solutions across ASEAN. It has not been formally endorsed by the European Union, ASEAN or ASEAN Member States.

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List of Abbreviations

ACB	ASEAN Centre for Biodiversity
ADB	Asian Development Bank
AF	Adaptation Fund
AI	Artificial Intelligence
AIIB	Asian Infrastructure Investment Bank
AMS	ASEAN Member State
APEC	Asia-Pacific Economic Cooperation
ASEAN	Association of Southeast Asian Nations
AADMER	ASEAN Agreement on Disaster Management and Emergency Response
BIOFIN UNDP	Biodiversity Finance Initiative
BTR	Biennial Transparency Report
CBA	Cost-Benefit Analysis
CBD	Convention on Biological Diversity
CBET	Community-based Ecotourism
CBT	Climate Budget Tagging
CCA	Climate Change Adaptation
CCM	Climate Change Mitigation
CPEIR	Climate Public Expenditure and Institutional Review
CRI	Global Climate Risk Index
DfN	Debt-for-nature
DRR	Disaster Risk Reduction
EbA	Ecosystem-based Adaptation
Eco-DRR	Ecosystem-Based Disaster Risk Reduction
EU	European Union
GCF	Green Climate Fund
GDP	Gross Domestic Product
GEF	Global Environment Facility
GIZ	Deutsche Gesellschaft für Internationale Zusammenarbeit GmbH
Ha	Hectares
ICM	Integrated Coastal Management
IUCN	International Union for Conservation of Nature
IWRM	Integrated Water Resources Management
LMB	Lower Mekong Basin
M&E	Monitoring and Evaluation
MPA	Marine Protected Area
MRC	Mekong River Commission

MRV	Monitoring, Reporting and Verification
NAP	National Adaptation Plan
NbS	Nature-based solutions
NBSAP	National Biodiversity Strategies and Action Plan
NDC	Nationally Determined Contributions
NGO	Non-Governmental Organisation
NTFP	Non-timber Forest Product
ODA	Overseas Development Assistance
OECM	Other Effective area-based Conservation Measures
PES	Payment for Ecosystem Service
REDD+	Reducing emissions from deforestation and forest degradation in developing countries
SDG	Sustainable Development Goal
TAF-GTEI	Technical Assistance Facility for the Green Team Europe Initiative
UNDP	United Nations Development Programme
UNEA	United Nations Environment Assembly
UNFCCC	United Nations Framework Convention on Climate Change
WCS	Wildlife Conservation Society

Executive Summary

ASEAN and its Member States are among the world's most climate-vulnerable regions, facing escalating risks from extreme weather events, biodiversity loss, deforestation, and land degradation. At the same time, ecosystems – forests, wetlands, coastal systems – offer powerful opportunities for resilience and sustainable development. **Nature-based Solutions (NbS)** are increasingly recognised across ASEAN as a critical pathway to address these complex, interconnected challenges. ASEAN and ASEAN Member States (AMS) have identified NbS as a strategic climate priority as part of the ASEAN Climate Change Strategic Action Plan 2025-2030 and other cross-sectoral policy mechanisms. AMS are increasingly prioritising NbS in their policy targets and financing frameworks and allocations. NbS-related financing is increasing across ASEAN, however the creation of enabling environments and opportunities for traditional, alternative and innovative financing are not always well understood or accessible to national stakeholders, limiting the effective implementation and upscaling of NbS. More clarity is needed on the existing NbS financing landscape, priorities, good practices and range of financing mechanisms deployed across ASEAN and AMS.

Study Focuses and Objectives

This ASEAN NbS Finance report, supported by the EU-funded Technical Assistance Facility to the Green Team Europe Initiative (TAF-GTEI), provides a review of the current NbS finance landscape across ASEAN – with a focus on NbS for climate and disaster resilience – to understand how ASEAN and its Member States can collectively and individually scale-up NbS financing and mainstreaming.

The study specifically aims to provide ASEAN and six AMS – **Cambodia, Indonesia, Lao PDR, Philippines, Thailand, and Viet Nam** – with a high-level stocktake of existing NbS financing mechanisms and practices. It also provides recommendations for the integration of NbS into key financing decisions and practical actions, to enhance climate and disaster resilience. The objectives of the study are to:

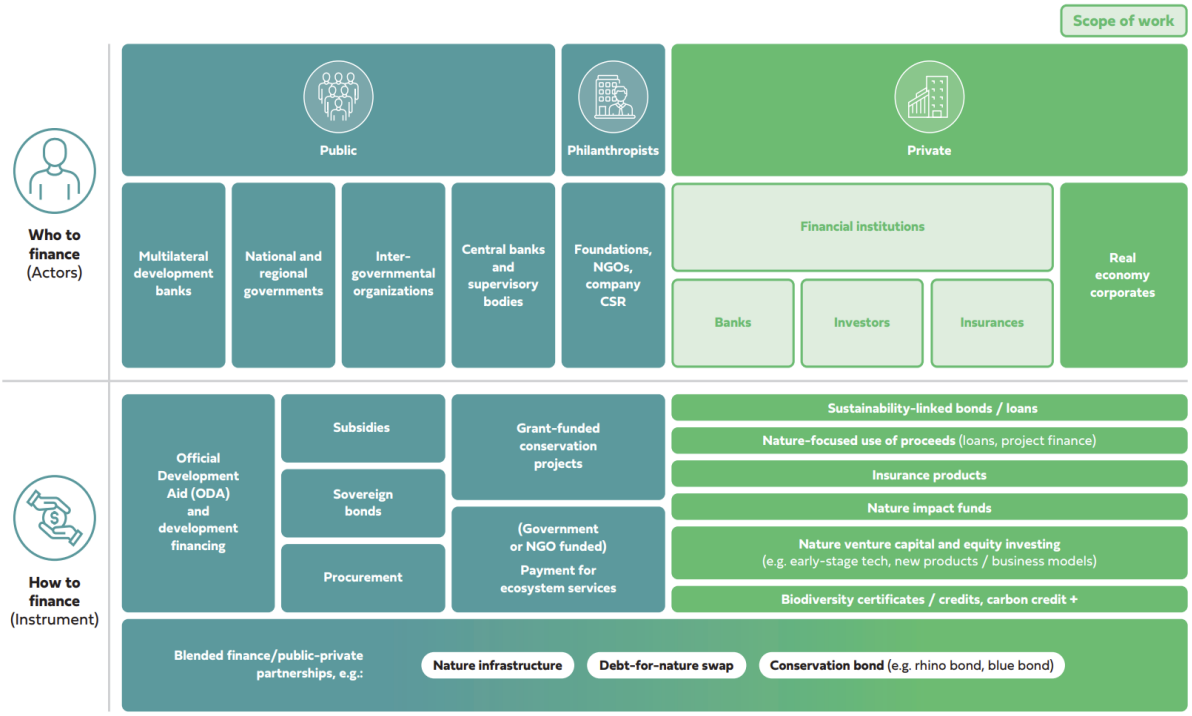
1. Provide a stocktake of existing NbS financing and projects across the target AMS
2. Assess the degree of NbS integration into financial frameworks, traditional and alternative innovative funding mechanisms and cross-sectoral engagement and alignment on NbS
3. Identify national and common barriers to NbS financing
4. Identify national and common enablers and opportunities for NbS financing
5. Identify gaps, opportunities and actions to harmonise NbS finance within ASEAN and across AMS

The study's development has been facilitated via the engagement of more than 70 key AMS stakeholders, to gather comprehensive insights on country and regional specific cases. The report is anticipated to serve as valuable resources for policymakers and financial actors in making informed decisions on NbS frameworks, approaches, financial models and investments, paving the way for the incorporation of NbS into ASEAN-relevant instruments. In addition, the study outputs will provide a useful evidence base for regional coordinators, investors, donors, implementers, economists, planners, researchers, campaigners, and other relevant stakeholders.

Regional NbS Finance Stocktake

This report has undertaken a stocktake on the level of integration of NbS into financing decisions across the six AMS. The countries comprise similar yet distinct biophysical conditions, sectors, industries, and natural and human risk drivers, that shape the multiplicity of needs for NbS financing across scales and sectors. The wide-ranging scope of NbS, including varied approaches across different landscapes and sectors, creates complex financing considerations, leveraging a range of public vs private (and blended) actors and instruments (Figure 1) and traditional vs alternative (including innovative) financing approaches.

Figure 1: Summary of key actors and instruments for NbS financing



Source: CISL et al. (2024)

Example approaches are provided in this report for each AMS. This study highlights the need to ensure diversity and resilience in NbS financing approaches, particularly considering the current political and economic climate.

Public funding for NbS across ASEAN is predominantly allocated through biodiversity-related budgets, with limited sector-specific allocations for nature-based or hybrid initiatives. Adaptation-related budget allocations for line agencies are a focal area for NbS allocations (often typically more so than for biodiversity), offering potential to scale up domestic NbS financing through programmes and activities. Disaster risk funding is focused more on domestic reserves for disaster management and response, than preventative measures that could align with NbS interventions (however, this still offers potential and could be targeted further for NbS). Whilst countries like the Philippines receive substantial public budget allocations for NbS-related initiatives, in other AMS, including Cambodia and Lao PDR, there is almost no direct government funding for NbS activities.

International development finance, led by the Global Environment Facility (GEF), Green Climate Fund (GCF), World Bank and Asian Development Bank (ADB) grants and loans, is typically the main source of explicit NbS financing for CCA and DRR (aligned with the IUCN Global Standard on NbS) across most AMS. This is targeted predominantly on mainstreaming projects in (i) water resources, (ii) agriculture, (iii) urban/land use, (iv) coastal/marine, and (iv) biodiversity sectors. Development finance – along with public and blended finance – also offers a catalytic role to derisk nature-based financing opportunities across ASEAN and attract private sector investment. Whilst efforts are being conceptualised and piloted (e.g. ADB Nature Finance Hub and World Bank Indonesia Coral Bond), this is still somewhat limited and requires significant attention to support scaling up.

Across all AMS, **national climate and biodiversity funds** offer relatively accessible and targeted options for sub-national stakeholders to finance locally-led NbS projects (e.g. Cambodia Climate Change Alliance – CCCA), although challenges currently exist with unlocking NbS potential (e.g. Philippines Survival Fund – PSF), linked to NbS awareness and the capacities of regional and local stakeholders to access the funds. Such funds are supporting both traditional approaches (e.g. tree planting projects) and more nuanced, innovative practices (e.g. blended finance and cost-benefit need assessments).

Most NbS financing in ASEAN is via public sector mechanisms (government or development finance). Existing **private sector**-led NbS investments are limited, and where present, largely comprise commercial Payment for Ecosystem Service (PES), ecotourism and nature-friendly agriculture schemes. There is interest in blue/green financing, but there have been few impact investing initiatives (e.g. green bonds) to date that directly targets NbS outcomes, largely due to a lack of enabling environment, buy-in risks, challenges in ensuring financial returns, and low NbS awareness.

All AMS are progressing with **innovative** NbS financing mechanisms, largely focused on establishing national NbS funds and piloting NbS measures. The Mekong countries source more of their NbS finance from international development partners, whilst the Philippines and Indonesia operate a mix of national (funds) and international development finance. Blended finance approaches are increasingly being considered across AMS.

All AMS have undertaken **ecosystem valuation** assessments (largely on a project-by-project basis, although the Philippines, for example, has developed a national natural capital accounting system). NbS cost-benefit analyses have demonstrated widespread cost-effectiveness successes across different sectors compared to convention hard measures, although most studies are not easily accessible or centralised. Accessible platforms and portfolios are needed to collate datasets, evidence-based findings and incorporate M&E systems.

Establishing and maintaining robust government-led NbS **financing frameworks**, **M&E tools** and **budget tagging** is a challenge across all AMS. Where present, climate and/or biodiversity systems may align and provide insights on NbS funding to some degree (i.e. focused on restoration-related outcomes or wider macro details, e.g. river basin planning), although there is often a lack of NbS-linked budget codes, reporting and data gaps. The Philippines (e.g. NICCDIES system) and Viet Nam both have explicit NbS tagging codes or M&E indicators in their climate budget tracking and tagging systems.

A summary of the NbS financing approaches across the target AMS is provided on Table 1 below.

Table 1: NbS financing approaches across ASEAN and the target AMS

Country	Key climate adaptation and disaster-led NbS finance actor	Key climate adaptation and disaster-led NbS financing instrument	Focal sectors for NbS finance	Example successful/ innovative NbS finance mechanism	NbS well-integrated into climate M&E and tagging system
Cambodia	International development finance	Grant/ecotourism	Agriculture, water, biodiversity	CCCA NbS projects	No
Indonesia	National fund (IEF) (with government &development finance)	Grant/loan	Water, coastal/marine, urban/land use	IEF integrated blended finance projects	No
Lao PDR	International development finance	Grant	Water, urban, biodiversity	GEF/GCF funded urban resilience NbS projects	No
Philippines	National funds (several)	Grant/loan	Water, urban, biodiversity, coastal/marine	National programmes for NbS/PCP4NbS	Yes
Thailand	International development finance	Grant	Water, urban, coastal/marine, biodiversity	ThaiCL Fund/ Koh Tao	No

Viet Nam	International development finance	Public budget/grant/PES/ loan	Agriculture, water, urban, coastal	Climate M&E system	Yes
ASEAN-wide	International development finance	Grant/loan	Agriculture, water, urban, coastal/marine, biodiversity	ADB Nature Solutions Finance Hub	-

Common Barriers and Enablers to AMS NbS Finance Mainstreaming

A range of common overarching (i) barriers, (ii) enablers, and (iii) gaps and opportunities to NbS financing – either consistent or common across all AMS – have been identified in this report. This have been identified based on the national finance analysis and stakeholder consultations, divided into institutional and capacity, financing, and technical areas, relevant across public vs private sector finance.

Institutional and capacity	Financing	Technical
Barriers		
Lack of enabling financing frameworks, standards, and indicators to support NbS investments (public/private)	Public funding allocation and hard infrastructure prioritisation under climate and disaster risk financing across departments (public)	Need to ensure robust NbS-related budget tagging and reporting (public)
Ability and capacity to unlock national and international resources for NbS projects (public)	Lack of NbS investment bankability, scalability, and suitable market (private)	Lack of established ecosystem data, valuation approaches, and piloting evidence base to inform investment decisions (public/private)
Enablers		
NbS direct or indirect inclusion in regional and national financing frameworks and interest in developing innovative financing mechanisms (public/private)	Public budget commitments for climate change adaptation and disaster risk reduction (public)	Establishment of climate, disaster, and biodiversity budget tagging and expenditure (public)
	National climate and environmental funds supporting NbS projects (public)	
	Strong support from international donors and development partners on NbS interventions, aligned with IUCN Global Standards on NbS (public)	Evidence of successes and buy-in from NbS piloting, CBA, and capacity building (public/private)
	Existing efforts to support NbS-related traditional financing mechanisms across PES, ecotourism, agriculture, and carbon finance (public/private)	
Gaps and opportunities		
Integrate NbS into finance and budget frameworks to provide clarity and foster the development of financing mechanisms (public/private)	Build NbS into national and sub-national cross-sectoral public budget cycles (public)	Government budget tagging and reporting framework and indicators for NbS (public)
	Fostering national climate and environmental funds as key self-sustaining national funding sources for NbS (public/private)	
Establishing national platforms and networks for multi-sector and multi-stakeholder engagement,	Leveraging and building on existing traditional financing mechanisms with (i) international and (ii) private	Establishment of an evidence base and record of NbS demonstration projects,

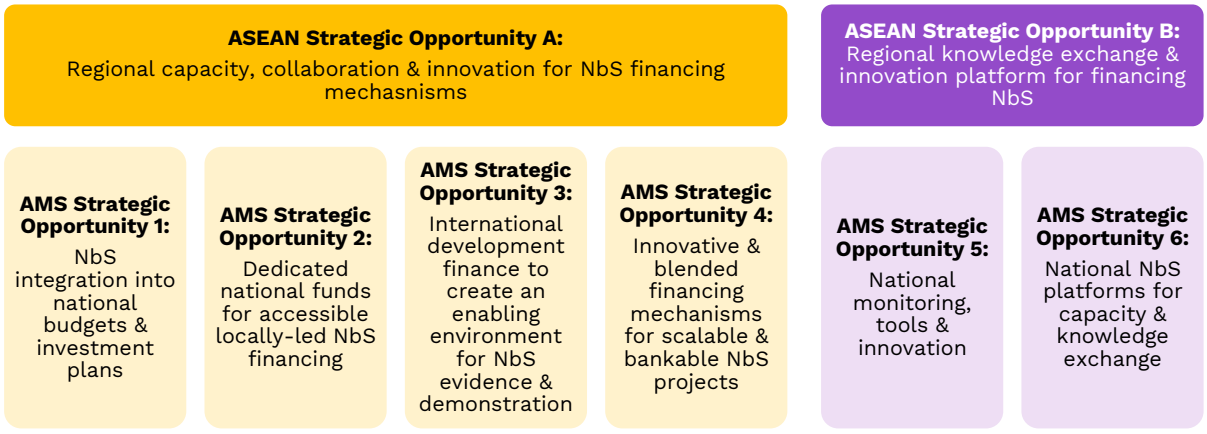
awareness raising, collaboration, and capacity building on NbS financing (public/ private)	sector support across priority sectors (public/private)	standards, norms, and valuation approaches to upscale NbS knowledge sharing and investment (public/private)
	Unlocking new alternative and innovative financing mechanisms for scalable and bankable NbS initiatives in 'low hanging fruit' sectors (public/private)	

ASEAN NbS Finance Opportunities

Several recommendations have been suggested to support NbS finance mainstreaming across ASEAN and AMS. This could include an ASEAN-wide common approach to increasing NbS financing and strengthening cross-sectoral governance and regional cooperation, working towards the following goals by 2030 and beyond:

1. Strengthen ASEAN's role in providing a regional platform for knowledge-sharing, capacity-building and collaboration on NbS financing.
2. Integrate NbS into financing frameworks, strategies and standards.
3. Integrate NbS into national public budgets, investment plans and financial tracking systems, with a focus on priority sectors.
4. Leverage the ability of dedicated national climate and environment funds to provide a long-term mechanism for locally led NbS financing.
5. Build the awareness and capacity of AMS to access international NbS funding opportunities.
6. Establish and scale up public and private investments in NbS projects through nature and climate financing hubs, derisking facilities, accelerators and innovative and blended finance approaches.
7. Identify and develop cross-border and transboundary NbS financing mechanisms to support regional resilience and cooperation.
8. Develop multi-stakeholder and cross-sectoral national NbS research, M&E, and knowledge-sharing platforms to strengthen evidence-based investment and innovative financing for NbS.
9. Develop enabling and analytical tools to identify and map opportunities for NbS project financing.

The ASEAN opportunities are grounded in capacity-building and knowledge-sharing principles, supported by global and regional AMS-to-AMS exchanges. The AMS opportunities focus on national-level decisions, mechanisms, and interventions to build the enabling environment, capacity, and financial resources to mainstream NbS.



Ultimately, each AMS can consider and build on the opportunities and actions outlined in this study, aligning these with its own national implementation plans, strategies, and frameworks. They should also consider their existing capacity, support network and prioritisation or strategic importance given to NbS financing.

1 Introduction

1.1 Rationale and objective

1.1.1 Context

ASEAN Member States (AMS) face substantial vulnerability to the impacts of climate change. According to the Global Climate Risk Index (CRI) 2020, some of these countries rank within the top 10 nations most severely affected by extreme climate and meteorological events (hydrometeorological hazards) from 2000 to 2019. Additionally, the region contends with an environment that is gradually deteriorating, characterised by intensive anthropogenetic activity. This combination of factors creates an environment conducive to disasters, leading to escalating negative consequences across economic, environmental, and social spheres.

However, as ASEAN encompasses a wide range of rich terrestrial and marine ecosystems and services – including one of the world's major rivers, some of the highest forest and mangrove cover globally, as well as critical wetland and peatland sites – as well as local indigenous knowledge and practices, the region offers some of the most promising opportunities for an ecosystem-led approach to climate and disaster resilience. NbS are increasingly receiving significant attention and recognition across ASEAN, as part of an overall strategy and ecosystem-based approach to address climate change and ecological degradation in the region.

ASEAN and its Member States have identified NbS as a key priority as part of various regional strategic policies and plans, including under the ASEAN Climate Change Strategic Action Plan (ACCSAP) 2025-2030, and countries are increasingly prioritising NbS in their national development, climate, disaster and sectoral policies, as well as their financing priorities. It is important to take stock and share current NbS financing experiences, successes, and challenges. The creation of enabling environments and opportunities for NbS financing sources are not always well understood or accessible to national stakeholders, with more clarity needed on available NbS funding frameworks and sources and their relevance for AMS. Furthermore, there are still clear financing gaps and needs that are limiting the implementation and upscaling of NbS.

To meet climate, disaster, and biodiversity goals, financial flows must be directed towards a mixture of community-led NbS initiatives and large-scale 'bankable' NbS projects that deliver financial, conservation, climate, and socio-economic impact. This study therefore delves into the barriers, enablers, and opportunities for NbS finance mainstreaming in ASEAN and across AMS.

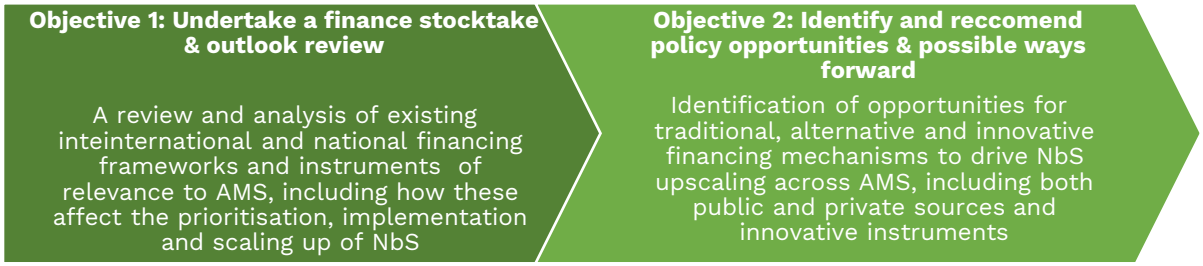
1.1.2 Objectives

The Technical Assistance Facility for the Green Team Europe Initiative (TAF-GTEI) is a regional effort funded by the European Union (EU) and a major part of the broader Green Team Europe Initiative in partnership with ASEAN. TAF-GTEI aims to strengthen the EU's and ASEAN's partnership while mitigating adverse environmental impacts, climate-related issues, and disaster risks. A focal outcome of the project is to build on cooperation with and within ASEAN for developing and implementing ambitious climate financing mechanisms, including for the enhancement of NbS for CCM, CCA and DRR.

This study supports TAF-GTEI's outcomes, aiming to conduct a review of the current NbS financing environment landscape across ASEAN and across six targeted AMS – with a focus on NbS for climate and disaster resilience – to understand how it supports, permits, or restricts NbS investment and adoption. It aims to build on existing regional NbS studies, stocktakes and policy briefs developed to date, including the ASEAN-led publications:

- *Study on Nature-based Solutions in ASEAN*, adopted by the ASEAN Ministers on Agriculture and Forestry at its 44th meeting in October 2022
- *Strengthening the Implementation of Nature-based Solutions in ASEAN: Challenges and the Way Forward*, policy brief under the ASEAN Socio-Cultural Community (ASCC) in October 2024
- *Issues and Challenges in Tackling Climate Change through Nature-Based Solutions in ASEAN: Mainstreaming Nature-based Solutions Framework, Financing, Advisory Services and Knowledge Tools*, trend report under ASCC in May 2025.

The study builds on the findings of these publications and further aims to identify common regional barriers and enablers for NbS financing within ASEAN and AMS. The study also identifies possible future opportunities for ASEAN and AMS to better integrate NbS into financial frameworks, foster, and draw from traditional and alternative innovative funding mechanisms and foster cross-sectoral engagement and alignment on NbS going forward.



The study has a spatial focus on six targeted AMS – Cambodia, Indonesia, Lao PDR, Philippines, Thailand, Viet Nam – as well as ASEAN as a regional platform. A national NbS financing profile has been developed for each of the six AMS, presented in Annex 1.

To strengthen the findings, the study has engaged with a range of targeted AMS stakeholders. This has supported the gathering of comprehensive insights on country-level and regional NbS stocktakes, good practices and the co-identification of possible NbS mainstreaming opportunities.

The objectives and findings of this study aim to build on, complement and should be reviewed in accordance with other co-developed studies by the EU TAF-GTEI project, including:

- *Report 1:* Climate Risks and Hazard Analysis in ASEAN: Inventory of Nature-based Solutions Experiences in ASEAN Member States
- *Report 2: Nature-based Solution Characterisation and Typology Development for ASEAN Region*
- *Report 3: Catalogue of Nature-based Solutions Practices in ASEAN Region*
- *Report 4: NbS policy stocktake and opportunities for ASEAN and AMS*
- Report 5: This report

1.2 Target beneficiaries

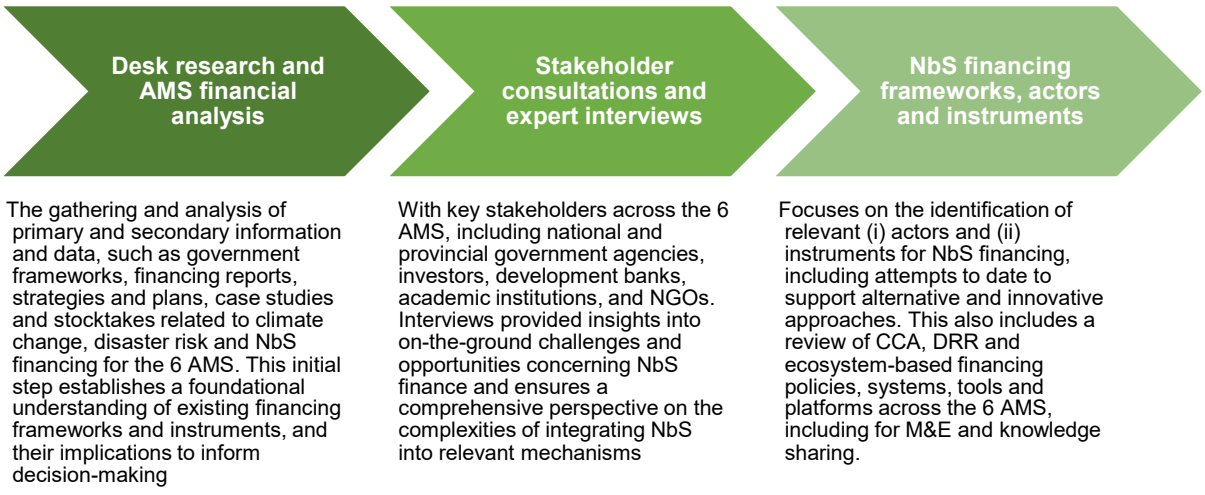
The study's outcomes are anticipated to serve as valuable resources for policymakers and financial stakeholders to build awareness on NbS financing approaches and current trajectories. In addition, the report provides a valuable evidence base for regional coordinators, investors, donors, implementers, economists, planners, researchers, campaigners, and other stakeholders.

It is hoped that this information will aid in developing frameworks, approaches, models, and resource allocations to integrate NbS into AMS financial landscapes going forward. Furthermore, the study's outcomes offer credible and effective choices for strategic finance decisions and suitable delivery pathways, that are specifically tailored for ASEAN bodies and AMS government agencies.

1.3 Approach and framework

The finance analysis combines various research techniques to develop a holistic understanding of national and international, public and private financing mechanisms and their interactions in supporting or restricting NbS adoption and investment. The multi-step approach consists of the following stages:

Figure 2: Key methodological considerations



1.3.1 Stakeholder consultations

In recent years, various definitions of NbS have been proposed. It was only at the 5th United Nations Environment Assembly (UNEA) meeting held in February 2022, Nairobi, that global consensus was reached on the definition of NbS as:

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

Meanwhile, the IUCN (2020) defines NbS as:

> *Actions that protect, sustainably manage, and restore natural or modified ecosystems in ways that address societal challenges effectively and adaptively, while providing benefits to human well-being and biodiversity.*

NbS are considered a framework for ecosystem-based approaches. The NbS umbrella encompasses ecosystem-based adaptation (EbA) – addressing climatic hazards and adaptation to long-term climatic change and its impacts – and ecosystem-based disaster risk reduction (Eco-DRR) – addressing climatic and non-climatic hazards. NbS are critical to the global sustainability, climate, disaster and biodiversity goals, and integrating these commitments into national level financing decisions. NbS deliver multiple benefits for climate, nature and people, and offer significant potential for addressing climate and disaster-related challenges and building local resilience, besides serving as carbon sinks for climate mitigation.

NbS-related investments are considered as those involving ecosystem-based approaches that *support – not inhibit* – biodiversity outcomes, aligned with the IUCN Global Standard for NbS. Climate finance directed towards initiatives that typically undermine biodiversity outcomes (e.g. various projects in forestry and agriculture sectors) are not considered in this study.

1.3.2 Nature-based solutions for climate and disaster risk resilience

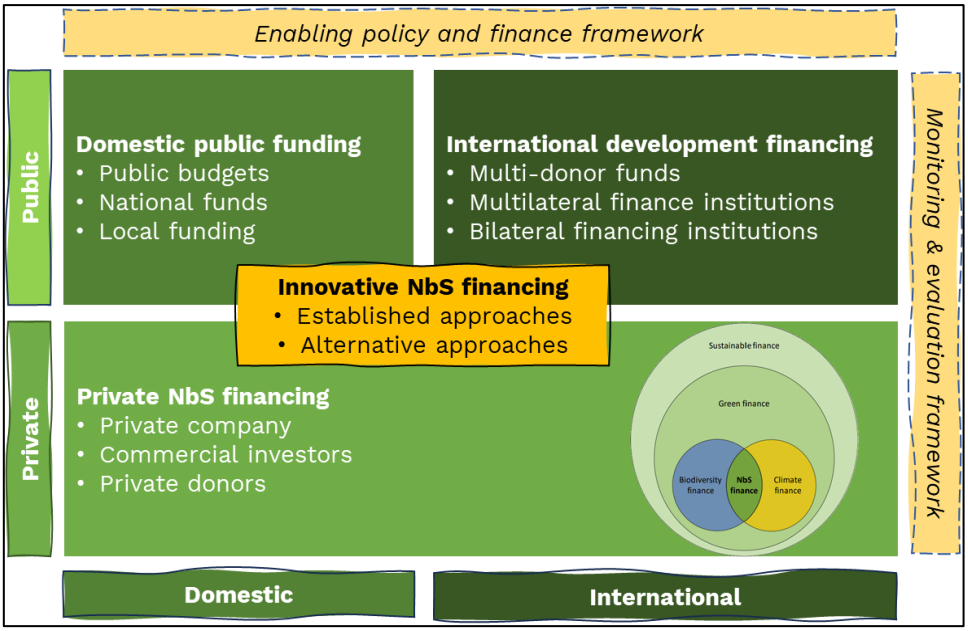
Key finance-related stakeholders representing a range of NbS experiences and perspectives were selected to participate in in-person interviews. Interviews focused on key considerations including (i) institutional mandates, financing frameworks and mechanisms relevant to NbS, (ii) NbS integration across key national and international financing instruments, including examples of innovative NbS projects, (iii) barriers and challenges to NbS financing, and (iv) enablers, gaps and opportunities for upscaling NbS finance. A list of all stakeholders consulted is provided in Annex 2.

1.3.3 Components of NbS financing approaches

As there is methodological difficulty in assessing the scope of NbS financial support, a lack of budget/funding 'codes' on NbS, and a general lack of data about whether NbS projects are delivering positive outcomes on the ground and for whom[1], this analysis is largely based on secondary climate expenditure reviews and publicly available AMS climate, disaster, and biodiversity financing reporting at the national level and across priority sectors. It is further supported by a range of case studies.

The study identifies and assesses the application, accessibility, and effectiveness of existing financing sources that support NbS mainstreaming across a range of actors in ASEAN and selected AMS. A variety of national and international public, private, and blended finance mechanisms and models are explored for each AMS (Figure 3).

Figure 3: NbS financing approaches considered in this study[2]



[1] Seddon et al., 2020; SEI, 2022
[2] Figure adapted from CFNT, 2025

National financing

(i) public budget and (ii) national government-led funds:

Domestic climate finance sources are allocated to measures that are both technically and financially feasible. This guarantees that available funds are directed towards climate, disaster and biodiversity projects with clear financial viability, measurable impact, and potential for scalability.

International development financing

(i) multi-donor funds, (ii) multilateral and bilateral finance:

These funds provide for financial and technical assistance, enhanced climate, disaster, livelihood and ecosystem resilience, and/or the strengthening of institutional and policy frameworks. They are particularly applicable and useful for supporting an enabling environment to overcome domestic barriers for NbS financing and providing 'de-risking' elements to supports and unlock domestic finance.

Private sector financing

(i) private companies, (ii) financial investors:

The private sector can further support the scaling up of NbS projects, in tandem with public funding. They offer important alternative financing solutions and untapped potential. Approaches and environmental and social safeguards are important when considering private finance options.

Enabling landscape: Fiscal and climate policies and regulatory frameworks provide a critical context for national financing priorities across climate, disaster, and biodiversity activities. They often emphasise the main financing priorities and create an enabling environment for the mainstreaming and upscaling of NbS financing. One key example is the formulation and implementation of national adaptation plans (NAP) and associated financing strategies, which support the implementation of enhanced actions, including through NbS. International commitments – such as Nationally Determined Contributions (NDC) and National Biodiversity Strategies and Action Plans (NBSAP) – also outline priorities and opportunities for climate adaptation, disaster risk reduction, biodiversity, and NbS financing. Key national and cross-sectoral enablers include national financing frameworks, strategies, roadmaps and blueprints across priority sectors, that often refer to ecosystem-linked financing approaches. Private sector-led climate finance principles and frameworks can also provide an enabling environment for nature-positive collaboration and investments.

Reporting, monitoring and evaluation (M&E): AMS have developed, or are in the process of developing, standardised methodologies for climate and biodiversity budget tagging, tracking climate-related expenditures, assessing the impact of funded projects, and evaluating progress towards climate targets. Measurement, Reporting, and Verification (MRV) mechanisms play a crucial role in ensuring transparency, accountability, and comparability and are explored in this study. Where available, they can provide lessons to help to improve targeted NbS financial flows. Robust M&E frameworks include regular reporting and sharing of information, which helps to track progress, measure impact, and build confidence among funders, governments, and investors. This provides information and data required by budget agencies and investors to show NbS benefits, demonstrate a return on investment, justify funding, and attract future investments. M&E can also compare and review NbS costs and benefits compared to traditional infrastructure or grey solutions. Well-designed M&E systems ensure that NbS projects deliver measurable benefits, strengthening their role in resilience-building efforts.

Exploring innovative mechanisms: A key focus of this study is unlocking alternative and innovative (i.e. moving away from a focus just on traditional/conventional approaches) NbS financing mechanisms, including creative or new approaches designed to mobilise financial resources to build climate, disaster, and ecosystem resilience. These mechanisms aim to unlock funding from diverse sources and enable scalable climate action. They often combine public, private, and philanthropic investments to overcome financial barriers and support underfunded areas, reduce risks (de-risking), scale finance and promote sustainability.

Finance actors at regional, national and sub-national level

The main stakeholder groups and actors involved in national and international, public and private sector NbS finance, and that are explored in this study, include those presented in Table 2.

Table 2: Types of public and private finance actors examined in the study (green = national, blue = international, purple = private)

Actor	Description	NbS Relevance
Domestic public sector budget (line agencies/ municipalities)	Money that the government provides to the public sector to invest in the economy. The government uses public funding to pay for ecosystem services	Provision of national budgets and public expenditure on NbS-related activities
National funds	National environment, climate, disaster, or biodiversity funds that receive finance from government funding or international development partners, to finance national NbS-related projects	Provision of funds to local sub-national recipients for project-based NbS activities
International multi-donor funds and initiatives	A way to pool money via a designated authority, designed to receive contributions from multiple donors to support specific goals	Support from donors such as GCF and GEF for medium-term projects on NbS
Multilateral and bilateral development banks and institutions	Provide development financial support, such as loans and grants, to member nations for projects (and public investment). They also offer non-financial services such as policy advice, technical assistance, and training	Provision of loans or grants from development partners, such as the World Bank, for national NbS-related projects
National or international foundations/ NGOs	A nonprofit organisation or charitable trust that provides grants to support charitable causes. They can be public or private	Grants for NbS programmes or projects
Private sector (businesses and markets)	Part of a country's economy that is run by individuals and companies, rather than the government, made up of for-profit businesses	Investment in sustainable corporate activities that align with NbS outcomes in sectors such as agriculture, tourism and water resources
Private sector (impact/ commercial investors an insurers)	Impact investors invest in businesses, projects, or initiatives with the goal of generating both financial returns and positive social or environmental impact, balancing financial performance with measurable benefit for climate action, biodiversity conservation, social equity, and community development	Impact investors play a role in scaling up financing for NbS by providing capital for projects that protect, restore, and sustainably manage ecosystems

Finance mechanisms at regional, national and sub-national level

NbS financing can support the coupled financing of biodiversity and climate action, under the umbrella of sustainable and green finance[3]. There are a range of instruments that can be directed through public, private, and blended finance to support NbS. These comprise typical mechanisms, including grants and loans, or alternative approaches, such as market-based and blended finance. Either of these categories can foster innovative NbS financing, depending on how they are directed, supporting upscaling and transformation (Table 2).[4]

The study examines both traditional or established and alternative instruments for innovative NbS financing. Traditional NbS finance comprises more of a focus on government, development partner, and donor funding, with limited financial return expectations. Alternative finance leverages private or blended capital, market-driven mechanisms or non-established approaches, often with the aim of creating more financially viable, sustainable, bankable, and scalable solutions.

Table 3: Types of finance instruments supporting innovative NbS financing examined in the study (*green = traditional, blue = alternative*)[5]

Instrument	Description	NbS relevance
National budget allocations (public)	The use of annual or multi-year government funds received from public revenue, that is earmarked and spent by national-level ministries or sub-national departments on public policies, programmes and initiatives	Budget allocated to ministries involved in NbS-related activities, such as climate, biodiversity and disaster departments
Grants (public and private)	Direct non-repayable funds/ contribution from a donor or government to a recipient in return for undertaking a specific activity	Voluntary payments made of own free-will, whether a direct beneficiary of the NbS, or simply to contribute to its implementation. Typically used to finance NbS feasibility studies, capacity building, or piloting activities
Subsidies (public)	A financial contribution from the government to an organisation to promote beneficial outcomes. They can take the form of grants, low-interest loans, or favourable tax treatment	Environmental subsidies to provide financial incentives from the government to businesses, farmers, and households to encourage protection and restoration activities
Loans (public and private)	Transfer of capital in return for a promise to repay that capital over time, generally with interest, involving direct lending from a lender to a borrower	Government or private sector loans, including green or sustainability-linked loans, which have the potential to be used for financing NbS-related programmes or projects, often for capital costs (i.e. implementation)
Debt financing instruments/ Bonds (public and private)	Transfer of capital in return for a promise to repayment over time, generally with interest, mediated through debt markets	Can include green or blue bonds, providing funds from investors to help fund NbS-related activities for conservation and climate action at scale
Equity (public and private)	Financing raised by selling an ownership share of an asset, potentially with a claim to some of its profits. This can be motivated by a desire to have impact (impact investing) or be purely commercial	Revenue raised by selling an ownership share of an NbS-related asset (e.g. forest, wetland)
Income or non-repayment	Instruments for raising revenue	Revenues can then be used to finance NbS activities. Some can be used by landowners (e.g. ecotourism), others

[3] Figure source: GIZ, 2021

[4] There may be other instruments that are more suitable for specific NbS actions or contexts, which can be identified through a more detailed assessment of the financial needs and gaps, as well as the available sources and mechanisms of funding for AMS

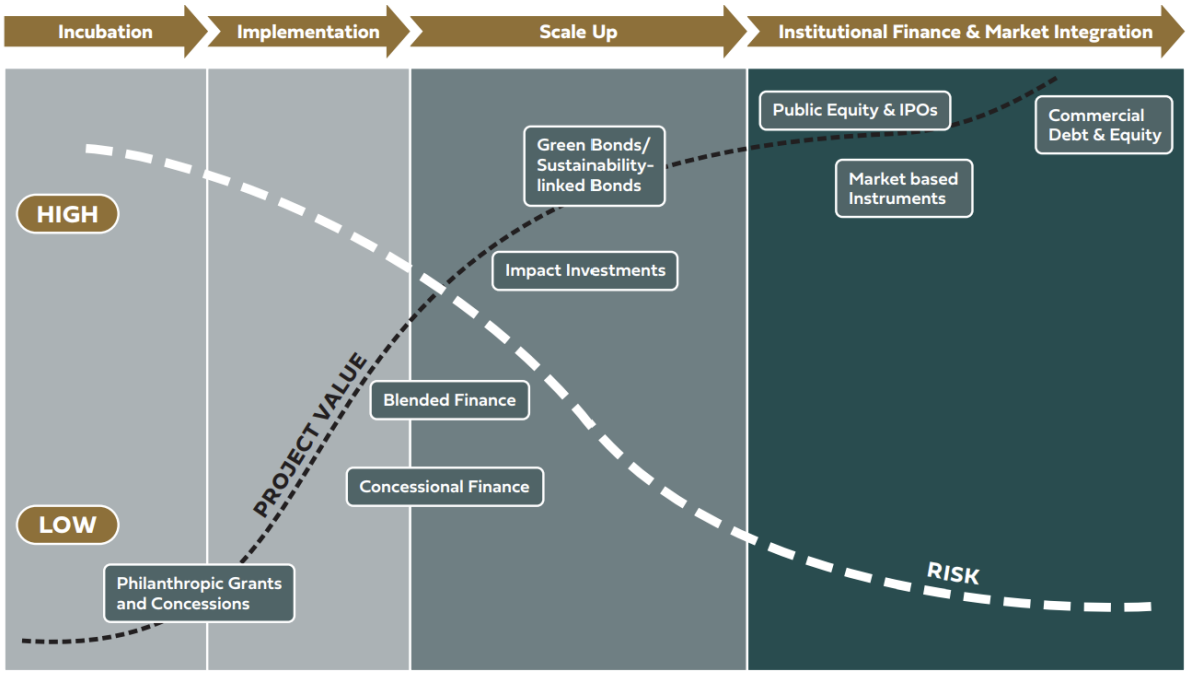
[5] Adapted from Van Raalte and Ranger, 2023, UNFCCC, 2022

instruments (public and private)		can only be levied by government-sanctioned associations or governments (e.g. national park entry fees)
Blended finance (public and private)	The strategic use of capital from public or philanthropic sources to mobilise private sector investment in developing countries, with the aim of advancing SDGs and climate objectives	Legal agreements that reduce, restructure or 'de-risk' the costs of financing NbS, either by providing assets or use of assets at below market rates or by shifting financing of upfront costs in return for ongoing payments
Result-based payment (e.g. REDD+) (public and private)	A payment made after certain pre-agreed results are achieved and verified. The payment is conditional (i.e. no verified results means no payment) and often non-commercial (government, donor, or fund)	Countries get paid by international donors (e.g. GCF or World Bank Forest Carbon Partnership Facility) for verified emission reductions
Market-based tradable rights and permits (e.g. carbon credits, REDD+, PES) (public and private)	Revenue is raised by selling the 'rights' or permit to an asset	Revenue is raised by selling the 'rights' to ecosystem services generated by NbS-related assets. This payment can be relatively informal (e.g. PES), through structured markets for CCM (e.g. voluntary carbon market), offsetting damage to biodiversity elsewhere, or reducing impacts
Other market mechanisms (e.g. debt-for-nature-swaps) (public and private)	An agreement between a country and a lender where the country exchanges/ reduces its debt for the lender's agreement to support environmental projects. A debt-for-nature (DfN) swap is an agreement where a debtor (i.e. country) and creditor restructure, reduce, or cancel public debt, redirecting funds towards domestic nature-positive initiatives instead of foreign debt repayment	By redirecting funds originally allocated for debt repayment, swaps can unlock innovative sources of funding for NbS-related activities
Insurance product (parametric) (private)	Parametric insurance provides coverage for individuals or organisations based on the occurrence of a predefined event, with payouts determined by the event's intensity. To encourage its adoption, banks and financial institutions need to be incentivised through reduced tariffs	Initially established for insuring against disasters, such as earthquakes and typhoons, parametric insurance is now being used to finance EbA protection measures, such as mangrove and coral reef conservation and restoration

Different types of financial instruments support different phases of NbS development – from incubation (moving from early-stage disconnected and higher risk piloting to aligned efforts), implementation and scaling up (moving from smaller, discrete and ad hoc initiatives to larger-scale proven and standardised approaches), and ultimately full-on NbS integration and mainstreaming (extensive, diverse and well-established NbS financing approaches) (Figure 4).

AMS are each at different phases of NbS development, aligned with factors such as their national economic and finance context, level of prioritisation for NbS related approaches and level of activity across finance actors and markets.

Figure 4: Stages of nature-based financing



Source: CISL et al. (2024)

1.3.4 Scope and considerations

It is important to recognise that this study does not represent a complete review of all relevant NbS financing mechanisms, actors and approaches across the ASEAN region; rather, it offers an overview of current trends, priority and good practice initiatives that address relevant challenges and solutions within the region. Not all instruments are a priority for the target AMS, and this study cannot cover all of them in detail.

This analysis has predominantly focused on national level fiscal policy and public financing mechanisms, with limited sub-national analysis, apart from demonstration via selected sub-national case study examples where relevant. The study reviews financial actors and mechanisms that are accessible online or have been directly provided to the project team. The analysis also largely focuses on English language information sources.

The identified barriers, enablers, and possible opportunities focus predominantly on finance-related mechanisms—an accompanied NbS policy report outlines ways forward for NbS policy integration.

2 Common Trends, Approaches and Priorities for NbS Financing across ASEAN

2.1 ASEAN climate and disaster financing priorities and risk profiles

AMS face significant vulnerability to climate change due to their exposure to extreme weather events, environmental degradation, and socioeconomic challenges. The Global CRI (2020) ranks the Philippines, Viet Nam, and Thailand among the top 10 countries most affected by hydrometeorological hazards from 2000-2019. The region experiences annual damages exceeding USD 4.4 billion due to natural hazard-related disasters such as floods, storms, rain-induced landslides, and droughts, with vulnerable sectors and communities the most at-risk.[6]

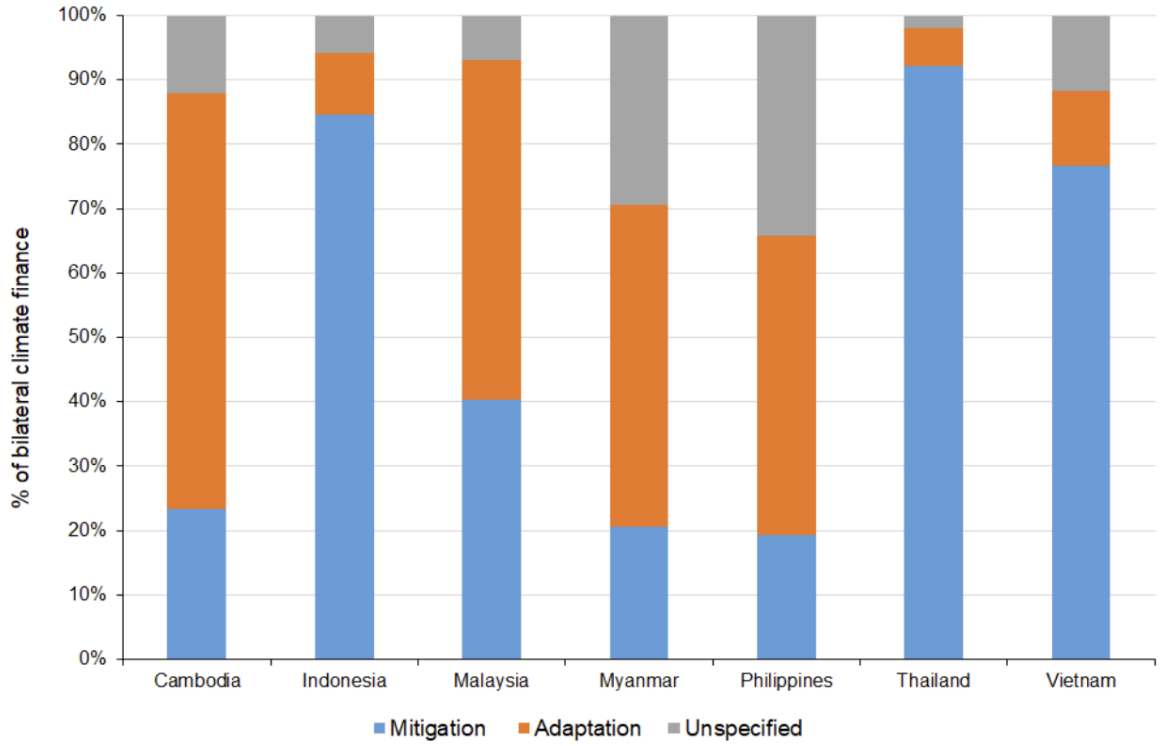
ASEAN economies are reliant on a range of key resource dependant sectors and ecosystems and the services they provide, including tropical forests, mangroves, river basins wetlands, and coral reefs. While economies in the region are diversifying to reduce dependence on vulnerable agriculture and degrading natural resource assets, many AMS remain reliant, with over 20% of their gross domestic product (GDP) derived from these sectors. According to ASEAN's Climate Finance Strategy (2024), the top five priority development sectors for AMS climate and disaster risk financing include: (i) water; (ii) public health; (iii) biodiversity, forestry, and watershed management; (iv) food security (agriculture, livestock and fisheries); and (v) coastal zone protection and marine resources.

Climate-related disasters cause significant economic losses, impacting agriculture, infrastructure, tourism, settlements and other areas. Recent floods in Thailand and extensive losses of forest cover in Indonesia, have triggered billions of USD in damages and liability costs. In Kratie, Cambodia, climate-induced disasters such as floods and droughts severely impact micro businesses in the tourism and hospitality sector, disrupting operations and profits.[7]

ASEAN's climate finance needs are projected to reach USD 422.16 billion by 2030, with mitigation comprising the majority at USD 293.01 billion, with USD 129.15 billion for adaptation. However, current annual climate finance flows range between USD 3.2 to 6 billion, highlighting a significant funding gap. Between 2013 and 2017, 60% of climate finance was allocated to mitigation, primarily in energy and transport. Adaptation funding mainly comes from grants, supporting disaster, water, agriculture, forestry, and land use sectors.[8]

[6] ASEAN, N.D.
[7] Ding and Beh, 2022; Resendiz et al., 2025
[8] UNFCCC, 2024

Figure 5: Allocation of bilateral climate finance between mitigation and adaptation across AMS (UNFCCC, 2020)



2.2 Stocktake of ASEAN-led and regional green Finance frameworks, markets, and mechanisms for NbS integration

At the regional level, ASEAN has made considerable progress in developing frameworks to facilitate the mobilisation of sustainable finance. The ASEAN Green Taxonomy is a framework to guide and classify economic activities that support environmental sustainability and the transition to a low-carbon economy. It provides a shared reference point for AMS, businesses, and investors to identify and prioritise activities that contribute to sustainability goals. One of its key objectives is to protect ecosystems, focusing on activities that conserve biodiversity, protect natural ecosystems, and ensure sustainable resource use.

In terms of climate, the ASEAN Climate Finance Access and Mobilisation Strategy (2024) is expected to be implemented by ASEAN Working Group on Climate Change (AWGCC). The ASEAN Strategy for Carbon Neutrality also outlines eight key strategies aimed at accelerating ASEAN's transition toward a low-carbon economy. Among these strategies, establishing an interoperable carbon market stands out as a transformative approach to unify regional carbon reduction efforts. Each AMS has also put in place policies and financial frameworks on climate change to achieve their NDC.

The ASEAN Natural Capital Roadmap (2021) highlights the need for shifts in institutional governance, policies, and incentives for natural capital management to drive competitive, legal and transparent private investment in nature, along with well-funded government budgets for natural resource management. The roadmap also outlines seven 'flagship programmes', including one on building climate resilience through inclusive NbS.[9]

Bilateral ASEAN financing agreements and funding mechanisms are also supporting NbS mainstreaming across the region. For example, the EU-funded TAF-GTEI regional project with ASEAN is supporting and piloting NbS-related policy mechanisms, toolkits, knowledge exchange and capacity building activities across ASEAN and AMS. Recently the EU – as part of its EU Contribution to ASEAN – has pledged EUR 15 million between 2025-2030 to the Asian

[9] Steele et al., 2021

Development Bank (ADB) led Nature Solutions Finance Hub (NSFH – see Box 1). The pledge aims to catalyse nature-positive infrastructure financing, policy reform, and capacity building to support ASEAN with meeting its climate and biodiversity goals through large-scale priority NbS investments in the region.[10]

The ASEAN-UK Green Transition Fund (GTF) provides up to GBP 40 million in funding from 2024-2029. The Fund aims to accelerate ASEAN's transition to a climate-resilient economy by reducing sectoral emissions, fostering green economic growth and improving the local livelihoods. One of five key pillars is focused on *Enhancing Nature-based Solutions for Climate Mitigation (Nature-based Solutions)*. This is particularly concerned with NbS for agriculture, forestry, environment and climate change, to build capacity to promote NbS, ecosystem-based approaches, build transboundary frameworks and platforms, foster NbS models and monitoring and investment in natural capital.[11]

Other relevant institutional networks and partnerships important for NbS financing across the ASEAN region include ADB, the World Bank, Asia-Pacific Economic Cooperation, Asia Pacific Partnership, South Asian Association for Regional Cooperation, United Nations Economic and Social Commission for Asia and the Pacific, UNDP Biodiversity Finance Initiative (BIOFIN) and the Southeast Asia Climate and Nature-based Solutions (SCeNe) Coalition. Several of these can serve as regional financing, collaboration and knowledge hubs, to support project preparation (from concept to implementation), de-risking and large-scale demonstration (Box 1).

[10] EU-ASEAN NSFH https://euinasean.eu/nsfh-programme/
[11] UK-PACT https://www.ukpact.co.uk/regional-fund/asean-gtf

Box 1: Regional NbS financing and knowledge sharing platforms and facilities

Asian Development Bank (ADB) Nature Solutions Finance Hub (NSFH)

NSFH is a platform combining an integrated set of activities – with innovative finance approaches – to scale up NbS projects and finance flows for a measurable impact in biodiversity conservation and climate resilience.

The platform aims to create "signature" NbS projects that are bankable and scalable, along with policy, capacity, and finance instruments that can demonstrate how public funds are best leveraged to catalyse private investment towards NbS projects. The NSFH will aim to catalyse at least USD 5 billion in capital flows into NbS projects across Asia and the Pacific of which at least 15% will come from the private sector.

*More information on the hub can be found **here***

Southeast Asia Climate and Nature-based Solutions (SCeNe) Coalition

The SCeNe Coalitions is a partnership of nine leading NGOs with a strong presence in Southeast Asia, aiming to support local frontline organisations in accelerating high-quality NbS projects.

The coalition focuses on accelerating and scaling up high-quality, high-integrity, triple-benefit (climate, nature, and people) NbS, by directing climate finance towards NbS initiatives. SCeNe has developed several tools and resources to support NbS project delivery and investment, including showcasing to potential investors.

*More information on the SCeNe Coalition can be found **here***

2.3 Stocktake of NbS financing mechanisms and approaches across AMS

NbS finance has emerged as a critical approach to close the financing gap for climate and biodiversity across AMS. NbS-related financing is typically led by grants from public and international development finance institutions (non-commercial) that prioritise climate and disaster resilience, biodiversity conservation and social benefits. Despite this, NbS remains under-prioritised and under-resourced across both public and private financing landscape.

Existing financing mechanisms require greater access to the substantial pools of capital necessary to drive the scaling up of NbS implementation and transformative change. A key concern for NbS upscaling is bankability for both public and private actors. Bankable NbS projects generate financial returns while delivering locally led environmental and social benefits, contributing to the creation of climate-resilient and sustainable landscapes and economies. Their bankability allows for innovation, scaling up and cost-effective investment opportunities with multiple benefits. Bankable NbS can attract funding, offer cost-effective investment opportunities and drive long-term sustainability, that involve local stakeholders. Nevertheless, given the diversity, landscape complexity, maturity and institutional capacity of AMS, there is no single clear pathway to scaling

up NbS opportunities across the region. An integrated, multi-financed and multi-phased approach is required.[12]

Public government spending on natural resource management in ASEAN is relatively limited and is typically less of a priority for AMS finance ministry spending and budget allocations, when considered against other development priorities. NbS-related spending is typically considered through climate, disaster and biodiversity state budget tagging or climate public expenditure and institutional reviews, supported by development partners (e.g. UNDP and BIOFIN), if present. Historically, most AMS have prioritised the financing of hard infrastructure solutions in the face of climate and disaster risks, with national and sectoral policies and financial flows directed towards such measures. These interventions have often focus on immediate, discrete, and short-term solutions for socio-economic benefits, as opposed to building on the multiple, longer-term benefits provided by integrated and resilient nature-based and hybrid measures across a landscape or seascape. Some successful public funded programmes have been demonstrated in the Philippines and Viet Nam, through national greening and resilience building programmes.

Alternative NbS-related financing is sourced from **national environment or climate funds**, which receive revenues from subsidy reforms, taxes, and other sources. For example, Indonesia, Lao PDR, the Philippines, and Viet Nam host national forest-based funds. Therefore, whilst finance ministries often resist earmarking revenues for a specific purpose, dedicated national funds can foster local NbS projects and ensure long-term public investment in ecosystem-led protection and restoration activities.

Government-led frameworks, systems, and tools required to monitor, report, and evaluate CCA, DRR, and NbS benefits – along with multi-stakeholder engagement and partnership platforms – are also still in early development stages. At both national and sub-national levels, MRV and M&E systems are essential for implementing NDCs, tracking climate and nature-based financial sources and flows, and ensuring funds reach their intended beneficiaries. To meet the reporting obligations of the Paris Agreement, countries must maintain consistency in climate finance within their MRV and M&E systems.

International climate and biodiversity funds such as the Green Climate Fund (GCF), Global Environment Facility (GEF), and the Adaptation Fund (AF) have been leading CCA and NbS financiers, alongside multilateral and bilateral development banks and institutions, led by the Asian Development Bank (ADB), the World Bank, and the Asian Infrastructure Investment Bank (AIIB), as well as the EU, US, Germany, Japan, China, and Korea, among many others.

International development finance institutions are supporting the transition to building the investment case for financing nature by demonstrating financial viability through successful projects. Lao PDR for example is successfully leveraging development finance grants from GCF and others, to demonstrate urban and water sector EbA projects, that are being successfully integrated and scaled up across the country, with different donors and multi-project phases.

Many of the large multi-lateral development banks, such as ADB and the World Bank, along with bilateral partners, are looking into opportunities for early-stage, concessionary or risk-mitigating financing (e.g. loans, grants, carbon credits, DfN swaps blended finance) that can catalyse the development of infrastructure and other projects that support NbS and conservation efforts. Indonesia for example has demonstrated some of the most innovative financing mechanisms through its World Bank backed coral bond, UNDP supported reef insurance projects and debt-for-nature swap with the US government.

Other areas of interest include the increasing role of institutional and philanthropic investors, although Southeast Asia receives relatively little when assessed against other regions according to the Ford Foundation (2022), with only 7% of donor funds represented in the region in 2021, compared to 39% in Latin America, and 16% in Africa.

More traditional **private** and/or blended Instruments such as Payment for Ecosystem Services (PES), nature-friendly agriculture schemes, ecotourism and REDD+ have been prioritised and applied to varying extent by AMS, to support natural resource conservation and restoration activities, including community-based schemes. Cambodia is successfully exploring, piloting and

[12] WWF, 2024

establishing strong agricultural and ecotourism sector market-based initiatives, which are priority NbS-related financing mechanisms for the country. Meanwhile, Viet Nam is a leader across the region for PES and is now diversifying away from solely river basin-based hydropower schemes to also wetland-based PES, such as at Tram Trim in the Mekong Delta.

Private impact investment, business schemes, results-based financing and market-based initiatives are growing in the region, with increasing interest, accessible markets, projects numbers and total invested capital. In the last decade, NbS has progressively been funded through mitigation-led voluntary carbon market activities. Forests ('green carbon') are the most recognised, with increasing interest in 'blue carbon' aquatic ecosystem abatement potential of mangroves, coral reefs, and seagrass beds – a new priority avenue for many AMS. The appeal for non-carbon NbS-related benefits is also growing, but not yet a primary investment driver. A key next step for private finance is unlocking NbS for climate and disaster-led schemes, with social and biodiversity benefits, on top of mitigation (carbon) potential.

The inherent nature of NbS projects presents significant risks, including their location in remote and vulnerable areas or high-risk markets and the challenge of monetising benefits. Additionally, investors typically prioritise financial returns, whereas bankable NbS initiatives emphasise a broader range of environmental and socio-economic benefits and community participation.[13] Leveraging alternative, non-traditional financing mechanisms, such as blended and innovative finance instruments, is essential to address climate and disaster finance needs of AMS. The strategic use of restricted public funds as concessionary capital can catalyse private sector investment in NbS activities. Climate-aligned financial products (e.g. green bonds), along with advancements in nature-friendly business models driven by robust environmental and socio-economic data, AI, and M&E, can generate new market opportunities. Pilot projects provide low-risk opportunities to engage in NbS financing, build capacity and knowledge exchange. Additionally, increasing public finance and implementing supportive fiscal policies are crucial for upscaling NbS finance.[14]

The AMS analysed in this report comprise similar yet distinct biophysical conditions, sectors, industries, and natural and human risk drivers, that shape the multiplicity of needs for NbS financing across scales and sectors. NbS financing across AMS is complex, yet several commonalities exist. Based on a review of AMS national profiles, six common NbS financing approaches and mechanisms have been identified, presented in Figure 6.

[13] WWF, 2024. A recent study by WWF suggested that, at a minimum, a bankable NbS enterprise will require an internal rate of return (IRR) of 8-10% to meet investor expectations

[14] UNFCCC, 2024

Figure 6: Common NbS financing approaches and mechanisms across AMS

International development finance, led by GEF and GCF donor grant funds, typically provide the main source of resilience-related NbS financing across many AMS. Additional multi-lateral and bi-lateral partner mechanisms via ADB, World Bank, EU, IKI, USAID have also supported financing and co-financing for strategic NbS programmes (including hybrid green-gray projects). These are targeted predominantly towards mainstreaming projects in (i) water resources, (ii) agriculture, (iii) urban/land use, (iv) coastal/marine, and (iv) biodiversity sectors.

Public funding for NbS is predominantly allocated through environment ministry biodiversity/nature-related budgets, with limited sector-specific allocations for ecosystem-based or hybrid initiatives. Climate budget allocations for line agencies are generally significantly higher for climate adaption, offering potential to scale up domestic NbS financing via this mechanism. Disaster resilience funding is focused more on domestic reserves for disaster management and response, than preventative measures that could align with NbS interventions.

Government-led **NbS financing frameworks, M&E tools and budget tagging** is a challenge across all AMS. Where present, climate and/or biodiversity systems may align and provide insights on NbS funding to some degree, although there is often a lack of NbS-linked budget codes and significant reporting and data gaps. The Philippines and Viet Nam both have explicit NbS tagging codes or M&E indicators in their climate budget tracking and tagging systems.

All AMS have **examples of ecosystem valuation and NbS CBA successes** for different sectors, although these are not easily accessible or centralised. Platforms are needed to collate datasets, findings and incorporate into M&E systems.

Across all AMS, **national climate and biodiversity funds** offer relatively straightforward and accessible options to finance locally-led NbS projects, although challenges currently exist with unlocking NbS potential, linked to criteria, awareness and capacities of regional and local stakeholders to access the funds.

Private sector-led NbS investments are largely aligned with commercial ecotourism operators, nature-friendly agriculture schemes, and PES. There has been very limited impact investing or insurance schemes to date, that directly targets NbS outcomes.

All AMS are progressing with **innovative NbS financing mechanisms,** largely focused on establishing NbS funds and piloting NbS. The Mekong countries source more of their climate and disaster related NbS finance from international financing, whilst the Philippines and Indonesia operate a mixture of national (funds) and international development finance, along with blended finance approaches.

A detailed review of the NbS financing profiles for ASEAN and the six studied AMS is presented in Annex 1. A summary of their profiles is presented in Table 4 below.

General evidence underscores the importance of exploring a diverse range of resilient financing mechanisms, to cope with challenges in mapping and accessing finance in an ever changing landscape, economic uncertainties (market shocks and variability), changes in government priorities, regulations and mandates (linked to election priorities and ministerial mergers), development finance cuts (for example the impact of USAID pulling out of many successful and ongoing programmes and projects, such as on biodiverse landscapes and seascapes Cambodia and in the Philippines), the short-term nature of development project financing windows (e.g. typically 2-5 years), as well as barriers with building private sector interest and buy-in for what is often seen as high risk (or uncertain returns) for NbS activities.

As outlined, AMS have approached, prioritised, and mobilised financing for NbS in different ways, with a focus on establishing regional NbS platforms and accelerators, NbS pilot and demonstration projects, government-led resilience and greening programmes, M&E systems, and innovative national funding bodies to support locally led community-based projects or research and economic valuation studies.

Table 4: NbS Financing Approaches across ASEAN and the Target AMS

Country	Key climate adaptation and disaster-led NbS finance actor	Key climate adaptation and disaster-led NbS financing instrument	Focal sectors for NbS finance	Example successful/ innovative NbS finance mechanism	NbS well-integrated into climate M&E and tagging system
Cambodia	International development finance	Grant / ecotourism	Agriculture, water, biodiversity	CCCA NbS projects	No
Indonesia	National fund (IEF) (with government and development finance)	Grant / loan	Water, coastal/ marine, urban/land use	IEF integrated blended finance projects	No
Lao PDR	International development finance	Grant	Water, urban, biodiversity	GEF/GCF funded urban resilience NbS projects	No
Philippines	National funds (several)	Grant / loan	Water, urban, biodiversity, coastal/marine	National programmes for NbS / PCP4NbS	Yes
Thailand	International development finance	Grant	Water, urban, coastal/marine, biodiversity	ThaiCL Fund / Koh Tao	No
Viet Nam	International development finance	Public budget / grant / PES / loan	Agriculture, water, urban, coastal	Climate M&E system	Yes
ASEAN-wide	International development finance	Grant / loan	Agriculture, water, urban, coastal/marine, biodiversity	ADB Nature Solutions Finance Hub	-

Table 5 outlines detailed examples of successful NbS financing mechanisms across the different AMS, illustrating the variety of financing instruments and diverse financial actors, as well as outlining possible opportunities for future insights, learnings, upscaling and/or replication within and across AMS. Whilst some initiatives directly support NbS-led interventions, others align with NbS through co-benefits.

Table 5: Examples of good practice and innovative NbS-related financing approaches across AMS

AMS	Financial actor	Funding instrument	Aligned priority sector	NbS integration mechanism	Scope and description	NbS relevance and project details	NbS innovation, upscaling and replication potential
Loan							
Indonesia	ADM Capital	Blended finance impact fund (2022-)	Agriculture/ forestry	Finance mechanism	The **Asia Climate-smart Landscapes Fund** (ACLF) aims to address the significant funding gap for small and medium-sized enterprises (SME) engaged in forest rehabilitation, sustainable agriculture, agroforestry and aquaculture by providing medium-term secured lending. The USD 200 million blended finance fund brings together leading blended finance proponents, impact investors and NGOs. Public institutions, such as the US International Development Finance Corporation provide partial credit guarantees | Details	Prospects to support SMEs with restoration activities, including forest-based watershed restoration, ecological agriculture and rehabilitation of agricultural landscapes	Opportunities to scale up NbS finance for SME – a historic challenge area to date in the region
Philippines	*Financier:* ADB *Implementer:* DPWH (various)	Grant and Loan	Water resources	(i) Capacity building, (ii) policy, (iii) piloting technical interventions	The regional TA on **Protecting and Investing in Natural Capital in Asia and the Pacific** provided expertise in integrating NbS investment options into the proposed FRM master plans for the Abra, Buayan–Malungon, and Tagum–Libuganon river basins. ADB are supporting DPWH to develop comprehensive basin-level flood risk management master plans	NbS included green and inclusive interventions that respect river dynamics and ecosystem functions. These interventions were grouped by function with related actions for flood conveyance (e.g. reviving old channels), water retention (e.g. wetland restoration), bank erosion control (e.g. meander	The project developed a guidance brief – *Nature-Based Solutions for Flood Risk Management Revitalising Philippine Rivers to Boost Climate Resilience and Enhance Environmental Sustainability*, highlighting lessons from the Philippines on how NbS can be scaled up to strengthen cost-effective flood risk management.

					that integrate NbS approaches to through natural river management, with short, medium, and long-term strategies, as well as feasibility studies and detailed designs of priority NbS and hybrid infrastructure | Details	restoration), flood impact reduction (e.g. zonation)	.
Grant							
Lao PDR	*Donor*: GCF (USD 11.5 million) *Lead agency*: MoNRE *Supported by*: UNEP	Grant (2020-2025)	Urban development (flooding)	(i) Capacity building, (ii) policy, (iii) piloting technical interventions	The **Building resilience of urban populations with ecosystem-based solutions in Lao PDR** project aims to build climate resilience of local communities in the cities of Vientiane, Paksan, Savannakhet and Pakse, through the implementation of an integrated approach to flood management and EbA solutions to reduce impacts of urban flooding and help manage climate induced floods in the long-term | Details	Under the project, MoNRE has signed agreements with the NUoL to establish an EbA Knowledge Hub. The project will also develop a national urban EbA guidelines for flood reduction in Lao PDR and support capacity building, develop a report on economic valuation of ecosystem services for wetlands and urban streams, and design and install permeable paving solutions, and rehabilitate wetlands and streams across Vientiane, Paksan, Savannakhet and Pakse.	The project aims to test an alternative approach to urban flood control in Lao PDR, moving away from traditional grey infrastructure, towards mainstreamed EbA. This represents one of the first such large-scale examples in ASEAN and could serve as a model for other AMS facing similar climate challenges. The establishment of an NbS hub and urban EbA guidelines is critical for guiding future policies and projects in Lao PDR going forward.
Philippines	*Financier:* Government of Canada (CAD 8 mil) *Implementer:* Pending (various) *Supported by:* Forest	Grant (2024-2028)	Cross-cutting	(i) Capacity building, (ii) policy, (iii) piloting technical interventions, (iv) finance mechanism	The **Philippines-Canada Partnership on Nature-based Solutions (NbS) for Climate Adaptation (PCP4NbS)** aims strengthen the climate resilience of communities, particularly rural and indigenous women, and ensure co-benefits from,	Grounded in the guiding principles of the IUCN Global Standard for NbS, the programme will target three wins: biodiversity conservation, climate adaptation, and ensuring gender	The Special Fund supports three types of grants over the Program lifetime: (1) site-based grants to implement NbS; (2) thematic grants to demonstrate NbS; and (3) grants to sustain public support for NbS. It will support participatory

	Foundation Philippines (FFP)				and for ecosystems. To support participatory development, implementation, and enhancement of NbS for CCA, a Special Fund has been established under the program, to provide grants for local projects | Details	equality in natural-resource management.	and coordinated projects on a large scale, to meet local needs, while contributing to national commitments and targets.
Market (results-based) mechanisms							
Indonesia	*Issuer*: US Department of State *Implementer*: MMAF, MoF *Supporting Partners*: YKAN, YKCI, CI, TNC	Debt-for-nature (2024-)	(i) Coastal/ marine, (ii) ecosystem/ biodiversity	Finance mechanism	The USA and Indonesian Governments, alongside key implementing partners of the Global Fund for Coral Reefs, have signed a USD 35 million **debt-for-nature swap** to protect Indonesia's coral reef ecosystems | Details	Coral reef protection and restoration, to support Indonesia's vision to protect 30 per cent of its waters and enhance management effectiveness of its coral reef environment	Debt-for-nature swaps have been explored in several AMS (e.g. Lao PDR) and offer a good option for nature finance, if the right debt-aligned mechanisms are in place
Cambodia	*Financier*: USAID, WCS, Critical Ecosystem Partnership Fund (CEPF), Mekong Strategic Partners *Implementer*: Ibis Rice Conservation Co. Ltd (IRCC)	Conservation finance (PES, micro-loans, insurance)	Agriculture	Finance mechanism	**Ibis Rice** is a market-based conservation finance mechanism that integrates sustainable agriculture, certification schemes, and premium market access to incentivise conservation, reduce deforestation and protect threatened species. It was founded by WCS and operates primarily as a results-based PES model, incentivising and rewarding farmers for adhering to biodiversity-friendly practices. Farmers are paid a guaranteed premium for their crops, with rice purchased and sold to national and international markets via	Ibis Rice has helped preserve over 500,000 Ha of forest, reducing deforestation by 75%, and supported over 2,000 wildlife-friendly farmers. The initiative delivers climate-resilient NbS measures, such as constructing wildlife-friendly ponds, implementing cover crops, and community composting.	Ibis Rice is continually expanding to new areas, involving new farmers and upscaled financing mechanisms. The model presents an opportunity for establishing similar initiatives across the Mekong region in particular

					the Wildlife Conservation Association. To protect against extreme events, a crop insurance scheme is being piloted to support farmers in case of crop failure. Schemes have been implemented around forest regions and protected area buffers across Stung Treng, Ratanakiri and Mondulkiri provinces | Details		
Lao PDR	*Operator:* Yorla Pa	Equity/ eco-tourism (2015-)	Ecosystem/ biodiversity	Finance mechanism	**Yorla Pa** is a **private ecotourism** initiative operating two sites within protected forest areas through conservation concessions. The core ethos of the company is for conservation gains, with ecotourism the sustainable investment mechanism focused on long-term economic returns. One of the sites, Nam Pien Yorla Pa, operates as a 5000 Ha ecotourism site covering 2% of the Phou Khao Khouay NBCA, with plans to expand further into the future. The initiative employs local community members, and the area is co-managed as a management board between Yorla Pa, the NBCA, Vientiane authorities and local community representatives | Details	The ecotourism initiative provides a source of conservation finance for community-based livelihoods (for those previously engaged in harmful activities) and the protection of an important water source forest. The organisation also supports restoration activities within targeted degraded areas, monitoring and patrolling within wider protected areas, and wildlife education.	Nature-based tourism has the potential to become the largest rural employer, yet barriers including a lack of enabling landscape, limit its expansion. The Yorla Pa ecotourism model is promoted by the 9th NSEDP for replication across Lao PDR. Support with planning and nature-positive tourism concessions in protected areas and OECMs may provide NbS financing opportunities.

Thailand	*Implementer*: Department of Marine and Coastal Resources (DMCR) and Koh Tao sub-district municipality *Financial supporter*: UNDP BIOFIN	Blended finance (USD 290,000) 2021-2025	Tourism/ coastal	Finance mechanism	UNDP's BIOFIN is supporting **Koh Tao** municipality and DMCR to establish a tourist user fee of 20 baht (about USD 0.60) to generate funding for ecosystem protection and restoration activities. Contributions have also been made by Krungthai Bank in supporting community livelihoods and conservation | Details	The funds are being directed towards the restoration of coral reefs. Krungthai Bank support has also been directed towards local communities for nature conservation on the island.	This first-of-its-kind legal framework was announced back in 2021. Since then, this initiative has raised over $450,000, with expectations of generating around $360,000 annually. Following the success of the Koh Tao model, there are opportunities to expand to other at-risk islands located outside of protected areas, particularly those with high tourist numbers, to fund nature-based protection and restoration activities.
Bonds							
Indonesia	*Issuer*: Indonesia Government, World Bank, GEF *Implementer*: IEF (with BAPPENAS, MMAF) *Financier*: Investors (USD 10 mil), IBRD (USD 5 mil), GEF (USD 13.76), BNP Paris (USD 1.1 mil)	Green bond (2025- / under develop.)	(i) Coastal/ marine, (ii) ecosystem/ biodiversity	Finance mechanism	The **Indonesia Coral Bond**, the world's first outcome-based financing instrument for coral reef conservation, aims to enhance biodiversity in 5.3 million Ha of priority MPAs. Inspired by the World Bank's Rhino Bond, it channels bond coupon payments into conservation efforts, generating resources to improve management and biodiversity outcomes | Details	Inclusion of an ecosystem-based bond vs species-based bond offers potential for NbS protection and restoration related activities for CCA/DRR (including coral reefs, mangroves, seagrass meadows)	Pilot schemes such as this are critical to explore replication potential and buy-in from future investors. Demonstrating success will enable replication across Indonesia and other AMS (e.g. Philippines)
Insurance product							
Indonesia	*Project Lead*: UNDP	Parametric/ hybrid insurance (2024-2025)	(i) Coastal/ marine, (ii) ecosystem/ biodiversity	Finance mechanism	UNDP's Insurance & Risk Finance Facility, in collaboration with Swiss Re, is partnering with the	Supports the protection and restoration of reefs, andf reef-based sustainable livelihoods,	As above

	Supporting Partners: Swiss Re *Financial Support*: The UK's Blue Planet Fund				Indonesian government and insurance industry to develop a sustainable, long-term **reef insurance solution** for vulnerable and at-risk sites. Support is provided to local communities earning less than $15/day, relying on tourism, agriculture, seaweed cultivation, fishing, and aquaculture | Details	particularly in relation to their importance for CCA and DRR. It also contributes to Indonesia's vision to protect 30 per cent of its waters	
Blended finance							
Cambodia	*Financier*: Various (CEPF, USAID) *Implementer*: Rising Phoenix (supported by BirdLife International and MoE)	Blended finance (2015- / under develop.)	Biodiversity	(i) Capacity building, (ii) Practical demonstration	**Rising Phoenix Co. Ltd.** Is managed as a social enterprise and aims to conserve and restore Siem Pang Wildlife Sanctuary, using business principles through partnerships. The company sets out to combine the traditional donor approach with a private sector business model to secure the long-term conservation of Siem Pang. Rising Phoenix aims to provide up to USD 500,000 annually, either directly or via a trust fund, for exclusive management of the Wildlife Sanctuary. Recently, through a CEPF grant and support from USAID Morodok Baitang, Rising Phoenix is working on the creation of demonstration sites within the sanctuary. In addition, a study for the implementation of a REDD+ project is currently	Rising Phoenix aims to reverse forest decline at Siem Pang through rewilding efforts to ensure a healthy ecosystem. On the ground demonstration efforts include the community-led restoration of seasonal wetlands (trapeangs) and forests (dry dipterocarp) for biodiversity conservation and drought resilience.	Rising Phoenix is cultivating an innovative blended finance model, including grants, REDD+, ecotourism and private investments, for nature conservation and climate resilience.

					underway, covering approximately 100,000 Ha of the 130,000 Ha within the sanctuary, following MoE's approval for development by Rising Phoenix in 2023. The company is also exploring opportunities for ecotourism to generate revenue while promoting conservation | Details		
Thailand	*Donor*: GCF, RID and Krungsi Bank (USD 33.91 million) *Lead agency*: MoAC *Supported by*: UNDP	Blended finance (2022-2027)	Agriculture	(i) Capacity building, (ii) policy, (iii) practical demonstration	The **Enhancing climate resilience in Thailand through effective water management and sustainable agriculture** project aims to build resilience in the Yom and Nan River basins (Greater Chao Phraya River Basin) by improving water management and agricultural practices in response to climate induced floods and droughts, benefitting 62,000 inhabitants. The project's broader goal is to secure livelihoods, enhance food security, and improve resilience in vulnerable rural communities in northern Thailand | Details	The project will strengthen local capacities for climate-informed planning, enhance water infrastructure with integrated EbA measures, and support farmers in adapting to climate challenges	The project presents an example of scalable blended finance mechanism for demonstrating and integrating EbA the agricultural sector. It also aims to influence/ demonstrate EbA measures for inclusion in national water management policy
Viet Nam	*Financier*: GEF and ADB (loan - USD 170 million ADB, grants - USD 12.83 million GEF, and USD 4 million ADB)	Blended finance	Housing (Urban)	(i) Capacity building, (ii) policy, (iii) piloting technical interventions, (iv) finance mechanism	The **Secondary Green Cities Development Project**, co-financed by GEF and ADB, aims to demonstrate economically competitive, environmentally sustainable and socially	Water-sensitive urban design pilot projects in the priority cities are integrating NbS by rehabilitating ponds, parks, and rivers	These efforts are incorporating green and hybrid infrastructure approaches into locals plans, and are developing new standards, supported by cost-benefit analyses comparing NbS

	Implementer: MoNRE, Thua Thien Hue, Vinh Phuc and Ha Giang Province PPC				inclusive development for the cities of Vinh Yen, Hue, and Ha Giang. The project cities' green and climate resilient development approaches will be scaled up for nationwide climate resilient development in Viet Nam | Details		and traditional grey infrastructure. These pilots offer opportunities for demonstration and future replication

3 Common Barriers, Enablers and Gaps for NbS Financing Approaches across ASEAN

3.1 Common barriers and challenges for NbS financing across ASEAN

Seven overarching finance barriers – either consistent or common across all AMS – have been identified based on the national analysis and stakeholder consultations. These are considered across (i) institutional and capacity, (ii) financing, and (iii) technical barriers, as presented below.

Institutional and capacity barriers

1. **Enabling financing frameworks, standards, and indicators to support NbS investments (public/private - consistent):** There is generally an absence of well-defined NbS regulatory frameworks, metrics and criteria to inform NbS financing priorities government budgets and private investments. Policy gaps elated to capitalising on ecosystem valuation and competing government spending were also identified. In certain AMS, clarity on the climate/NbS financing lead agency was missing. The lack of clear policies, regulations and incentives, along with the absence of a well-established framework for NbS, creates confusion and uncertainty for private sector actors, which hinders private investment.
2. **Ability and capacity to unlock national and international resources for NbS projects (public - consistent):** A large portion of cross-sectoral NbS financing comes from international development partners and donors, through grants or concessional finance. AMS line agencies often face challenges with a lack of expertise and awareness on NbS, the complexity in accessing and managing funds and eligibility criteria of these sources. Furthermore, while AMS have well-established national climate funds, they remain underutilised due to limited awareness and technical capacity to develop and submit projects for NbS funding opportunities. More guidance is needed to unlock these funds for NbS projects, particularly for local governments.

Financing barriers

1. **Public funding allocation and prioritisation for hard infrastructure for climate and disaster resilience (public - consistent):** To date, most public expenditure for adaptation and disaster resilience has been allocated towards hard infrastructure, leaving little allocation for NbS-relared measures as they are still not commonplace (although this is increasing steadily). Government budget allocations often prioritise well-established, shorter-term reactive measures over longer-term proactive and adaptive strategies - key elements of NbS - due to challenges in quantifying their outcomes and the time needed to demonstrate benefits and effectiveness.
2. **Lack of NbS investment bankability, scalability, and suitable market (private - consistent):** AMS are working to mobilise private funding to complement public financing for climate action, ecosystem restoration, and biodiversity conservation. However, private sector investment in NbS-related resilience building projects remains limited. Attracting scalable private capital for sustainable and equitable projects presents a key challenge. Public incentives for private-sector-led ecosystem-based initiatives are scarce, and NbS projects often face risks related to land tenure, politics, and reputation. Financial institutions struggle with viability, high upfront costs, and uncertain long-term returns.
3. **Short-term nature and lack of alignment of development projects (public - consistent):** Many stakeholders commented on the short-termish of donor and development finance projects, that often follow shorter cyclical financing windows (e.g. 3-5 years). Projects therefore often do not continue through to implementation (or maintenance/moniotoring periods). Many also do not demonstrate strong enough alignment and coherence with national priorities and targets, other ongoing activities and local context

Technical barriers

1. **Ensuring robust NbS-related budget tagging and reporting (public - consistent):** Within the current CBT/CCET systems, there is some allowance for recording/reporting and stocktaking on NbS-related activities. However, AMS are lacking strong indicators and targets and not all initiatives are recorded/reported on by ministries. This also means that NbS initiatives may have been undertaken, but have not been acknowledged/ recorded, and thus do not add to the NbS knowledge base.
2. **Lack of established ecosystem data, valuation approaches, cost-benefit approaches and piloting evidence base to inform investment decisions (public/private - consistent):** AMS lack sufficient data, information, evidence and impact measurements to assess ecosystem valuations and undertake comprehensive NbS cost-benefit analysis for different types of NbS measures and projects to integrate them into decision-making. Limited economic analysis and cost norms hinder NbS integration into financial decision-making.

3.2 Common enablers for NbS financing across ASEAN

Eight overarching enablers of public and private sector-led NbS financing have been identified based on the national analysis and stakeholder consultations. These are divided into (i) institutional and capacity, (ii) financing, and (iii) technical enablers and are presented below.

Institutional and capacity enablers

1. **NbS inclusion in financing frameworks and interest in developing innovative financing mechanisms (public/private - often):** Whilst private or blended NbS financing mechanisms have not yet been widely implemented, NbS is referenced in various government development and finance documents (e.g. NDC/NAP financing and implementation plans and Taxonomy documents). This raises the awareness and importance of NbS across different financial stakeholder groups and platforms. There is also real interest - particularly from government-related groups, to iexpand NbS financing opportunities.
2. **Locally-led and inclusive NbS initiatives to ensure local ownership and long-term sustainability (public/private - often):** Direct involvement of communities in the planning, design and implementation of NbS activities - including women-led EbA schemes or those involving marginalised groups - can integrate local traditional landscape knowledge, support inclusive efforts, foster sustainable and resilient livelihoods and help avoid unintended consequences. Local communities have also demonstrated support for the long term monitoring, maintenance and protection of NbS measures through local ownnership

Financing enablers

1. **Public budget commitments for CCA and DRR (public - consistent):** Most AMS demonstrate a strong commitment to climate and disaster action, through public budget allocations, support, and targets. This foundation provides opportunities to integrate NbS into government financing plans, annual budgets, and frameworks.
2. **National climate and environmental funds supporting NbS projects (public - consistent):** National funds provide a key source of sub-national funding on CCA and DRR, including for NbS activities, such as urban greening, mangrove restoration, river basin planning and forest rehabilitation. The fund provides a strong foundation to develop further and mobilise more innovative sources of finance.
3. **Strong support from international donors and development partners on NbS interventions, aligned with IUCN Global Standards on NbS (public - consistent):** International development partners and donors are engaged across ASEAN in establishing and partnering with AMS for targeted and comprehensive NbS projects and programmes at the national and sub-national level, supporting institutional governmance, policy, finance mechanisms, and on the ground projects.
4. **Existing efforts to support NbS-related traditional financing mechanisms across PES, ecotourism, agriculture, and carbon finance (public/private – often):** Historically, most of the traditional national ecosystem funding mechanisms, outside of public budgets and ODA spending, have focused on PES, ecotourism, ecological agriculture and carbon finance. While these aren't directly aligned with NbS apporaches, they support NbS co-benefits and upscaling opportunities for protection and restoration activities.

Technical enablers

1. **Establishment of climate, disaster, and biodiversity budget tagging and expenditure (public - consistent):** To identify public spending, recording and reporting on CCA, DRR and biodiversity, AMS have developed (or are in the process of developing) CBT/CCET frameworks and systems. While gaps remain, they provide a foundation for M&E of NbS-related public budget tagging and evaluation. Certain AMS, including the Philippines, have also already established NbS-related typology codes for ministries and local governments to report on linked projects and activities.
2. **Evidence of successes, cost-effectiveness and buy-in from NbS piloting, CBA, and capacity building (public/ private - consistent):** AMS are establishing evidence bases for the successful implementation of NbS projects across ASEAN. In particular, attempts are being made and successes are being shown in sectors that can be deemed as 'low hanging fruit' for NbS integration. Leading areas include the water (river basin planning) and urban sectors, where NbS mainstreaming efforts are demonstrated across all Mekong countries, the Philippines, and increasingly Indonesia.

3.3 Common gaps and future needs for upscaling NbS finance across ASEAN

Eight public and private sector-led NbS financing gaps and future needs have been identified based on the national analysis and stakeholder consultations. These are divided into (i) institutional and capacity, (ii) financing, and (iii) technical gaps and needs, presented below.

Institutional and capacity gaps and needs

1. **NbS integration into finance srategies and budget frameworks (public/private):** NbS provides a cross-cutting approach to biodiversity, climate and disaster financing. There is a need for NbS financing frameworks or strategies - either standalone or combined into NAP or climate financing frameworks. There is currently a lack of capacity and/or direction on NbS financing approaches and priorities across key sectors. This should also include clarity on the lead agency responsible for climate and NbS financing. This is gap across both government policy and private sector standards.
2. **National platforms and networks for multi-sector and multi-stakeholder engagement, collaboration, and capacity building on NbS financing (public/ private):** During consultations, a key gap noted by stakeholders was the lack of a formal space to share knowledge and best practices, across national and international financial stakeholders, including for coordination, innovation and capacity development activities on NbS financing.

Financing gaps and needs

1. **NbS integration into national and sub-national cross-sectoral public budget cycles (public):** Transforming from public NbS financing focused on biodiversity and conservation activities, towards an integrated cross-sectoral budget allocation approach for priority climate-risk sectors is a critical need and gap that can provide a key step for NbS mainstreaming. Ministries of Finance and Investment need to work with other ministries to incorporate NbS-related commitments in annual budget cycles.
2. **Building national climate and environmental funds as key self-sustaining national funding sources for NbS (public/private):** Across AMS, there are a range of national funds that may provide unlocked potential for multi-source NbS financing initiatives at the sub-national level, from national environment funds to village funds. A current gap is the capacity and awareness within national and sub-national agencies on how to access funds for domestic-led NbS financing. Past awareness raising efforts (e.g., in Thailand) on developing NbS project concepts for submission to the national fund have demonstrated success in undertaking such initiatives.
3. **Regional and national NbS financing hubs or project preparation facilities (public/private):** ASEAN and AMS need support to develop an effective portfolio of pilot projects and partner options. To do this effectively, this requires support via project preparation facilities. Such platforms are strongly needed to support AMS with technical needs (e.g. training, tools, data) and for faster replication and scale for success and to help projects secure traditional and new alternative sources of funds. *Aligned with point 5.*
4. **Build on whats already working (public/private):** AMS have demonstrated widespread successes in NbS-related financing through traditional mechanisms, such as hybrid NbS, restoration grant programmes, PES, and CBET schemes. These build an experience and knowledge base that can be scaled up and replicated across AMS - for example, the exapnsion of PES from river basins to wetlands and coastal areas. Therefore, while alternative innovative mechanisms are critical going forward to reach a transformative scale, traditional approaches are also needed for policy development, early stage project preparation, piloting, demonstration, and capacity building initiatives. Integrating NbS and hard infrastructure measures through a hybrid approach may offer an easier entry point and quick wins, particularly across Mekong countries.
5. **Reaching for scalable and bankable NbS initiatives in 'low-hanging fruit' sectors (public/private):** AMS have established a range of innovative pilot projects and funds to support NbS financing and mainstreaming. A key gap however is the development of more diverse bankable project pipelines and scalable financing mechanisms, as well as creating an enabling landscape that is attractive for private and blended finance opportunities. There is a need for improvements in access to both grants and concessional sources of finance to help to scale up the mobilisation of private sources of finance from domestic and international sources.

Technical gaps and needs

1. **Government budget tagging and reporting framework and indicators for NbS (public):** AMS, including the Philippines and Viet Nam, are demonstrating the effectiveness of incorporating NbS indicators and budget codes, however, in many AMS this is still a gap. These are largely quantitive (e.g., number of NbS projects); therefore going forward, comprehensive NbS-related indicators, targets, and budget codes will be needed across priority sectors to build an understanding of NbS portfolios.
2. **Sufficient vidence base and record of NbS demonstration projects, standards, norms, and valuation approaches (public/private):** NbS projects are being developed across all key sectors, demonstrating the feasibility and viability of NbS approaches. However, there is a need for further piloting and large-scale demonstration, with subsequent sharing of experiences with relevant stakeholders and potential partners - both government agencies and financial institutions - on performance, cost-benefit evidence, technical feasibility, and opportunities for replication. In time, this will increase the bankability of NbS initiatives.

4 ASEAN NbS Financing Recommendations

This section presents a range of key recommendations that can be used to frame and guide how ASEAN and its Member States can collectively (and individually) scale-up NbS financing and mainstreaming by 2030 and beyond. The objective of these recommendations is to assist AMS with identifying, strengthening and scaling up NbS financing to enhance resilience through cost-effective approaches that offer multiple co-benefits. The recommendations are rooted in and build on discussions with AMS, as well as the barriers, enablers and gaps identified in this report. It provides governments and other relevant stakeholders with a concise summary of strategic areas and priority actions to consider and build on within their own complementary NbS financing mechanisms and action plans. It is hoped that these recommendations can inform ongoing discussions and the prioritisation of NbS actions across ASEAN, that can be implemented going forward, aligned with AMS priorities.

Recommendations are organised into **two overarching regional** (ASEAN-wide) and **six national** (AMS-level) strategic opportunities and associated priority actions. Whilst the opportunities are interconnected, they do not need to be considered as a step-by-step process. Many AMS will be well-advanced (or in the process of progressing) with some of the priority actions, yet opportunities may exist to strengthen and build on such activities. The recommendations of this report should be considered in parallel with the ASEAN NbS Policy report.

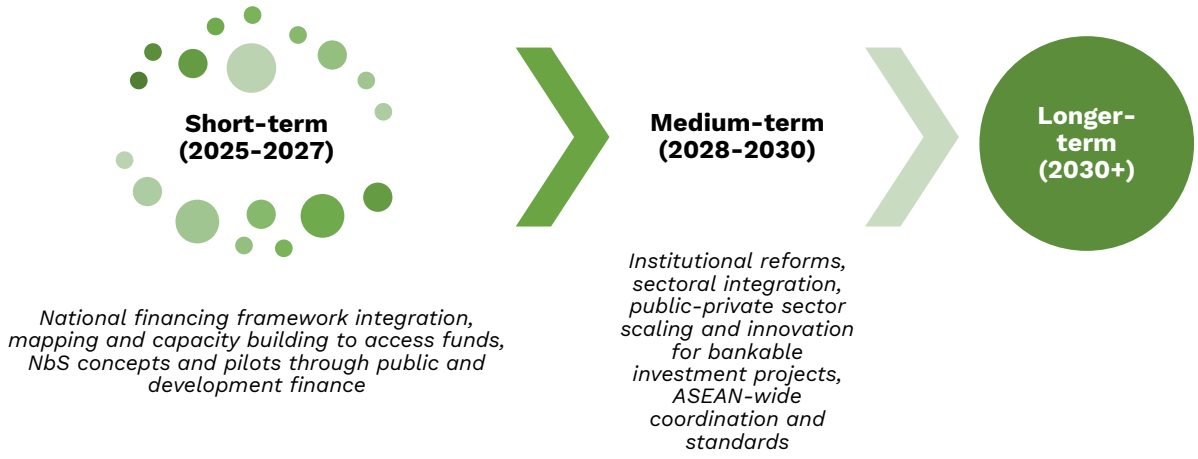
4.1 Financing objectives

An ASEAN-wide approach to enabling, financing and implementing NbS at scale, strengthening cross-sectoral governance and regional cooperation and working towards the following NbS financing objectives by 2030 and beyond:

1. Strengthen ASEAN's role in providing a regional platform for knowledge-sharing, capacity-building and collaboration on NbS financing.
2. Integrate NbS into financing frameworks, strategies and standards.
3. Integrate NbS into national public budgets, investment plans and financial tracking systems, with a focus on priority sectors.
4. Leverage the ability of dedicated national climate and environment funds to provide a long-term mechanism for locally led NbS financing.
5. Build the awareness and capacity of AMS to access international NbS funding opportunities.
6. Establish and scale up public and private investments in NbS projects through nature and climate financing hubs, derisking facilities, accelerators and innovative and blended finance approaches.
7. Identify and develop cross-border and transboundary NbS financing mechanisms to support regional resilience and cooperation.
8. Develop multi-stakeholder and cross-sectoral national NbS research, M&E, and knowledge-sharing platforms to strengthen evidence-based investment and innovative financing for NbS.
9. Develop enabling and analytical tools to identify and map opportunities for NbS project financing.

Timeline: Opportunities are presented across a range of strategic short-term and longer-term priorities over a 5-year period, working towards the mainstreaming of NbS across AMS financing mechanisms and flows. The identified opportunities aim to align with the ASEAN Climate Change Strategic Action Plan (CCSAP) 2025-2030 and other key global and regional policies.

Figure 7: Recommended timeline for action to 2030



4.2 Framework for strategic opportunities and priority actions

NbS financing opportunities are divided into two components: (i) overarching ASEAN-wide regional strategic opportunities (implemented by ASEAN Secretariat) and (ii) nationally-relevant AMS strategic opportunities (implemented by national government).

The ASEAN opportunities are grounded in governance, mainstreaming innovation, capacity building and knowledge sharing principles, supported by global and regional AMS-AMS exchanges. The AMS opportunities are focused on national-level decisions, mechanisms and interventions to build the enabling environment, instruments, capacity and financial resources to mainstream NbS.

Figure 8: NbS finance opportunity focus areas (regional ASEAN (top) and national AMS (bottom))

Further details on each strategic opportunity and priority actions within these is presented below. Each section comprises three components: (i) a brief overview and context, (ii) a summary of possible priority actions AMS could implement (if they haven't already), to make progress on the strategic areas, and (iii) good practice examples or resources for implementing one or multiple actions. The aim is for these to be realistic and reflect the priorities and current NbS financing development phases across AMS.

4.3 Implementation and governance

4.3.1 Cross-cutting enabling mechanisms

Each of the proposed ASEAN and AMS strategic opportunities are grounded in and apply the following five cross-cutting enablers to support the scaling-up and success of NbS actions.

Figure 9: Cross-cutting enabling mechanisms for NbS action

1. Governance & frameworks
Mechanisms to integrate NbS into institutional, policy, strategies and budget decisions

2. Finance mechanisms
Mechanisms to integrate NbS into funding intstruments and financial flows

3. Technical standards, tools & innovation
Supporting guidance, tools and information platforms to expedite the mainstreaming of NbS financing and implementation

4. Skills & capacity building
Working with governments and other stakeholders to build awareness, capacity and skills to foster NbS integration

5. Stakeholder engagement, collaboration & knowledge exchange
Multi-stakeholder engagement and partnerships, including with communities, to share experiences and support with financing mechanisms and prioritisation activities

4.3.2 Enabling stakeholders and actors

Opportunities are largely targeted and aligned with national government responsibilities, activities and priorities. Other stakeholder groups, including NGOs, research organisations, private sectors and financial institutions are critical to supporting the implementation of many of the strategic opportunities and priority actions.

4.4 ASEAN-wide strategic opportunities and priority actions

4.4.1 ASEAN Strategic Opportunity A: Regional capacity and collaboration for NbS financing mechanisms

Context and importance: A priority for AMS is leveraging domestic and international financing mechanisms to mainstreaming NbS across national and sub-national activities. ASEAN can provide a platform for external actors and AMS-AMS exchanges to build the capacity, awareness and networks for integrating NbS into public budgets, channelling NbS finance through national funds and scoping international funding platforms and windows to support NbS mainstreaming and demonstration and working with regional NbS platforms and accelerators (amongst other areas and needs identified by AMS). Ultimately, to reach the scale of funding and investment necessary to build climate resilience, biodiversity protection and sustainable development across ASEAN, alternative, innovative NbS financing mechanisms are required, that unlock and blend public and private finance. ASEAN can provide a foundation to foster collaboration and knowledge exchange on establishing portfolios of scalable and bankable NbS schemes.

Objective: *To build the capacity of AMS to increase awareness, access NbS funding opportunities and develop bankable NbS initiatives that deliver widespread and long-term impacts and benefits.*

Priority actions:

Short-term action (2025-2027)

1. Capacity building on maximising international development funding and private sector finance for NbS (including the role of national NbS funds)
2. Capacity building and knowledge sharing workshops to develop a range of local community led and/or large-scale and bankable NbS concepts
3. Foster bilateral and multi-lateral engagement and scope financing opportunities for regional NbS programmes and projects

Medium-term action (2028-2030)

1. Strengthen NbS integration across ASEAN-related financing mechanisms
2. Foster engagement with finance actors and networks across ASEAN to support innovative NbS financing and unlock ASEAN-wide cross-border and transboundary NbS financing mechanisms (e.g. ADB Nature Finance Hub, Mekong region, Coral Triangle etc.)

4.4.2 ASEAN Strategic Opportunity B: Regional knowledge exchange & innovation platform

Context and importance: ASEAN is well-positioned to establish a regional NbS platform, hub or taskforce to bring together perspectives, expertise and tools from across the region. Such a platform can drive knowledge exchange and innovation, including on the capacity needs, collaboration opportunities and systems needed to scale up and mainstream NbS. It can bring together stakeholders across different AMS, from public to private sector representatives.

Objective: *To establish an ASEAN NbS platform to facilitate awareness raising, capacity building, knowledge exchange, innovation and action planning on NbS financing.*

Priority actions:

Short-term action (2025-2027)

1. Establish a cross-ASEAN platform, hub, taskforce or working group on NbS
2. Undertake detailed regional NbS financing stocktake and stakeholder mapping
3. Identify and map priority AMS NbS needs, opportunities and actions, including for NbS financing
4. Collate good practice examples of NbS financing initiatives, lessons and cost-benefit evidence

Medium-term action (2028-2030)

1. Undertake capacity building and knowledge sharing workshops for priority areas, across multi-stakeholder groups (also linked to Strategic Opportunity A)
2. Develop regional guidelines on NbS financing (across priority areas)

4.5 AMS-level Strategic Opportunities and Priority Actions

4.5.1 AMS Strategic Opportunity 1: NbS integration into national budgets & investment plans

Context and importance: The majority of NbS-related budget provisions are allocated to environment ministries for national and sub-national nature conservation/biodiversity related activities. Additional NbS-aligned public investments generally include reforestation/greening programmes across rural and urban contexts, also led by environment ministries. The integration of NbS into the budgets and long-term PPPs of other priority sectors (e.g. agriculture, water, urban and coastal/marine) has the potential to support mainstreaming activities at the national and sub-national level. Integrating NbS with hard infrastructure measures through a hybrid approach, for example, may offer a strategic entry point with quick wins, particularly across Mekong countries. Ministries of finance and investment need to work with other ministries to incorporate NbS-related commitments in annual budget cycles.

In addition, well-established public-private sector financing initiatives, including government-led watershed PES, REDD+ carbon finance, and protected area/ecotourism fees, can build public sector investment potential, often via national funds (see Strategic Opportunity 2).

Objective: *To build nature-based allocations into national and sub-national cross-sectoral public budget cycles and long-term investment plans.*

Priority actions:

Short-term action (2025-2027)

1. Integrate NbS into public climate and disaster financing frameworks
2. Map existing financial resources supporting NbS within public budgets (national and sub-national) and possible gaps/budget opportunities across priority sectors
3. Scope and align NbS priorities with established/traditional public-private funding mechanisms (PES, park fees, REDD+)

Medium-term action (2028-2030)

1. Integrate ecosystem-based allocations into annual public budget cycles across priority sectors to increase spending on NbS
2. Build and establish strategic NbS programmes and projects into 3-5-year public investment programme cycles/plans

Box 2: Good practice example - Indonesia National Peatland and Mangrove Restoration Program

Programme: Indonesia's National Peatland and Mangrove Restoration Program (2020-2024) is a fully publicly funded initiative under MoEF. USD 1 billion in public spending (2021-2024) directed to:

- Re-wetting drained peatlands to prevent wildfires.
- Community-based agroforestry programs for degraded peatland restoration.
- Riparian buffer zones to improve water retention in agricultural landscapes.

Outcomes: 300,000 hectares of peatlands restored, reducing CO_2 emissions & improving soil health. Increased water retention for farmers in Sumatra & Kalimantan.

4.5.2 AMS Strategic Opportunity 2: Dedicated national funds for accessible locally led NbS financing

Context and importance: National climate and environment funds provide a foundation for strategic and long-term public investment for NbS mainstreaming. Across AMS, there are a range of national funds that provide opportunities for multi-source NbS financing initiatives at the sub-national level, from national environment funds to village funds, which support initiatives including urban greening, mangrove restoration, river basin planning and forest rehabilitation. These funds should be better positioned and scaled up, to provide targeted investments for NbS capacity building, piloting, demonstration and M&E.

Objective: *To leverage national climate, environment and multi-functional funds as key self-sustaining domestic-led funding mechanisms for NbS implementation and capacity building.*

Priority actions:

Short-term action (2025-2027)

1. Develop guidelines for sub-national agencies and municipalities on technical opportunities and processes in applying to national funds for NbS projects
2. Support capacity building/awareness raising initiatives for on how sub-national agencies and municipalities can access, develop concepts and apply to national funds for NbS projects

Medium-term action (2028-2030)

1. Establish formalised NbS arm/component/theme within national funds
2. Increasingly integrate blended finance from public, private, multilateral and bilateral sources through the national funds for NbS activities

Box 3: Good practice example - Scaling up innovative finance through the IEF, Indonesia

The Indonesian Environment Fund (IEF) under the MoF, has a strong enabling mechanism from the government for managing and disbursing environment and climate funds. IEF is uniquely positioned to collect funds from a range of different donors (philanthropic, development finance, state budget, private sector) and deliver funds and direct/indirect benefits to various beneficiaries (provinces, private sector, local community, NGOs and universities).

IEF is progressively working towards integrating innovative and blended financial mechanisms and projects to scale up NbS financing, across its thematic program areas and priority funds, such as its publicly financed Disaster Risk Fund, World Bank funded Mangrove Fund and proposed Coral Bond, supported by World Bank and BNP Paribas.

Further details on IEF's work areas, funds and activities can be found here.

4.5.3 AMS Strategic Opportunity 3: International development finance to create an enabling environment for NbS evidence and demonstration

Context and importance: AMS need to leverage external finance to fill the climate and biodiversity funding gap and strengthen the enabling environment for NbS mainstreaming. International development finance is fundamental for policy development, institutional capacity, early phase piloting, demonstration, and awareness raising activities. This may include (i) institutional and policy-led grant projects supported by bilateral partnerships, such as the EU, JICA, and IKI, (ii) on-the-ground piloting supported by donor funds such as GEF, GCF, AF and the Global EbA Fund, as well as (iii) development bank grant-loan programmes for NbS and hybrid green-grey interventions within priority sectors, including via ADB and the World Bank. Such mechanisms are already contributing to creating an enabling environment, evidence base and supporting NbS mainstreaming across priority sectors.

Objective: To further leverage international development finance to build an enabling environment and demonstrate NbS mainstreaming potential across priority sectors.

Priority actions:

Short-term action (2025-2027)

1. Identify, map and align strategic NbS financial support needs and priority focus areas (sectors and landscapes) to meet cross-cutting climate and biodversity targets
2. Prioritise NbS within cross-sectoral international financing strategies

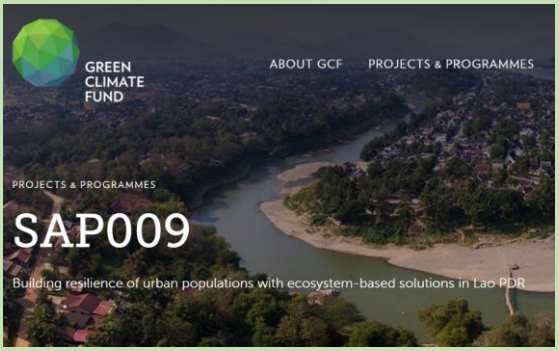
Medium-term action (2028-2030)

1. Scope and implement a range of strategic pilot and demonstration projects across priority sectors to build standardised approaches, evidence base, valuation and cost norms, local capacity and MEL

Box 4: Good practice example - Aligning international development finance opportunities for priority sectoral NbS projects – urban and water projects in Lao PDR

Lao PDR receives a significant proportion of its international NbS funding through grants from donor agencies such as GCF and GEF, and bilateral institutions such as New Zealand's MFAT. The country has successfully leveraged these funds to focus on integrating NbS across two priority sectors – urban and water resources.

Example projects are presented in earlier sections of this report. Through this, Lao PDR is successfully building (i) a strong enabling environment through policy updates and sectoral guidelines, (ii) a comprehensive evidence base through piloting, demonstration and M&E, and (iii) institutional strengthening through capacity building workshops and the launch of a cross-sectoral and multi-stakeholder NbS Hub.



Such examples show the importance of targeting strategic international financing opportunities and partnerships, to channel flows towards priority areas.

4.5.4 AMS Strategic Opportunity 4: Innovative and blended financing mechanisms for scalable and bankable NbS projects

Context and importance: To reach the scale of funding and investment necessary to build climate resilience, biodiversity protection and sustainable development across ASEAN, alternative, innovative NbS financing mechanisms are required, that unlock and blend public and private finance. This study has illustrated a range of innovative pilot funds and projects that have already been established to support NbS mainstreaming. These range from (i) private-led NbS investments such as nature-based insurance and green bonds, to (ii) public-private initiatives and derisking facilities such as blended finance platforms, local PES, privately backed DfN swaps, ecotourism, and voluntary carbon markets.

The next step is building on NbS pilot initiatives and developing scalable financing mechanisms and bankable project pipelines. Creating an enabling landscape that is attractive for private and blended finance opportunities, along with improvements in accessing grants and concessional sources of finance, can help with derisking to mobilise domestic and international capital.

Objective: To transition towards integrated, large-scale and bankable NbS initiatives that deliver widespread and long-term impacts and benefits

Priority actions:

Short-term action (2025-2027)

1. Identify priority areas and entry points for alternative NbS financing mechanisms, and develop project concept and portfolio opportunities for innovative NbS mainstreaming
2. Scope and pilot innovative NbS financing mechanisms and partnerships, including working with the private sector and regional actors

Medium-term action (2028-2030)

1. Integrate NbS into private sector frameworks, investment strategies and platforms
2. Develop bankable and scalable NbS projects across priority sectors
3. Build NbS investment opportunities into private finance platforms and mechanisms

Box 5: Good practice example - Bankable projects through ADB's Nature Solutions Finance Hub (NSFH)

NSFH is a platform combining an integrated set of activities – with innovative finance approaches – to scale up NbS projects and finance flows for a measurable impact in biodiversity conservation and climate resilience.

The platform aims to create "signature" NbS projects that are bankable and scalable, along with policy, capacity, and finance instruments that can demonstrate how public funds are best leveraged to catalyse private investment towards NbS projects. The NSFH will aim to catalyse at least $5 billion in capital flows into NbS projects across Asia and the Pacific of which at least 15% will come from the private sector.

The hub will provide opportunities to leverage significant blended finance towards large-scale NbS projects across AMS, whereby future engagement between ADB and AMS will be critical to guide priority areas.

More information on the hub can be found here

4.5.5 AMS Strategic Opportunity 5: National monitoring, tools and innovation

Context and importance: AMS are increasingly incorporating NbS indicators and budget codes to support public financing allocations and reporting and monitoring for NbS implementation. Measurable and comprehensive NbS-related targets, indicators, and codes now need to be further integrated into public financial plans and strategies, in particular across priority sectors.

AMS are also demonstrating the feasibility and viability of NbS approaches, through pilot projects, and the sharing of experiences with relevant stakeholders and potential partners - both government agencies and financial institutions - on project monitoring, evaluation and learning (MEL), cost-benefit evidence, technical feasibility, and opportunities for replication. Through government or external-led platforms, it is important that AMS collate and stocktake information on NbS project details, successes and failures. This can inform and update policies, plans, targets, cost norms, technical standards and budget commitments. In time, this will build the evidence base and bankability of NbS initiatives.

Objective: To foster MEL, financial analysis tools, ecosystem valuation approaches and innovations in data and information platforms, to support the integration of NbS into financing mechanisms and reporting systems

Priority actions:

Short-term action (2025-2027)

1. Establish NbS indicators and typologies for reporting, tracking and budget tagging
2. Develop and pilot NbS technical standards and cost norms across priority sectors

Medium-term action (2028-2030)

1. Integrate NbS indicators into public and private climate and biodiversity (and other) reporting, tracking and tagging systems
2. Formalise ecosystem valuation approaches, cost norm standards and M&E system on NbS for public spending prioritisation

Box 6: Good practice example - Philippines approaches to climate and NbS budget tagging

In the Philippines, climate expenditure tagging was developed by the Department of Budget and Management and the Climate Change Commission, piloted at Local Government Units. The process aims to increase budget transparency, assess trends, and integrate climate considerations into ministries and agencies. In 2021, over 15,000 projects across 34 agencies were climate-tagged, representing 6.26% of the national budget, with 93% supporting climate adaptation and disaster risk reduction (DRR). A climate change typology and coding structure were also developed to align with the National Climate Change Action Plan (NCCAP) and includes several NbS-related codes.

Evidence from the Philippines shows that the successful implementation of the Climate Change Expenditure Tagging depended on assigning clear responsibilities to all agencies and strong local-level integration.

This summary is based on a review document provided here

4.5.6 AMS Strategic Opportunity 6: National NbS platforms for capacity and knowledge exchange

Context and importance: Multi-stakeholder networks and platforms can support improved coordination, innovation, capacity development and collaboration activities on NbS financing. They can also facilitate the collation and M&E of NbS initiatives, as well as expenditure reviews, tagging, ecosystem valuation, CBA, and cost norms. There is an opportunity for countries to establish national cross-sectoral and multi-stakeholder NbS platforms - or 'hubs' - led by government agencies or relevant national institutions.

Objective: To provide a space for multi-stakeholder discussions and collaborations on NbS financing needs and possible innovative solutions

Priority actions:

Short-term action (2025-2027)

1. Form multi-stakeholder NbS platforms (Hub/taskforce/TWG) to discuss financing needs and opportunities
2. Collate ecosystem valuation and cost-benefit analysis reporting evidence from NbS demonstration projects

Medium-term action (2028-2030)

1. Establish or support online, open-access NbS knowledge sharing and reporting portals, or integrate into existing climate platforms
2. Develop project concepts and collaborations across private-public sector for NbS

Box 7: Good practice example - The application of innovative data and tools to identify locally-led project investments – the Southeast Asia Climate and Nature-based Solutions (SCeNe) Coalition

The SCeNe Coalitions is a partnership of nine leading NGOs with a strong presence in Southeast Asia, aiming to support local frontline organisations in accelerating high-quality NbS projects. The coalition focuses on accelerating and scaling up high-quality, high-integrity, triple-benefit (climate, nature, and people) NbS, by directing climate finance towards NbS initiatives. SCeNe has developed several tools and resources to support and empower local organizations for project delivery and investment in NbS, including showcasing projects to potential investors.

*More information on the SCeNe Coalition can be found **here***

4.6 Recommendations for implementation and way forward

Nine high value NbS strategic opportunities have been identified and recommended for ASEAN and AMS to consider in the next five years and beyond. These include possible actions for AMS to review, consider and build on, aligning these with their own national financing plans, strategies and frameworks, and considering their existing capacity, support network and prioritisation/strategic importance given to NbS financing. As new evidence, perspectives, stakeholders, mechanisms, and opportunities for NbS financing arise in the coming years, the priority actions outlined in this report may evolve.

Annex 1: ASEAN and AMS NbS Finance Profiles

1 ASEAN Finance Profile

1.1 Climate and disaster risk and ecosystem resilience financing landscape

At the regional level, ASEAN has made considerable progress in developing frameworks to facilitate the mobilisation of sustainable finance. The ASEAN Green Taxonomy is a framework to guide and classify economic activities that support environmental sustainability and the transition to a low-carbon economy. It provides a shared reference point for ASEAN member states, businesses, and investors to identify and prioritise activities that contribute to sustainability goals. One of its key objectives is to protect ecosystems, focusing on activities that conserve biodiversity, protect natural ecosystems, and ensure sustainable resource use.

In terms of climate, the ASEAN Climate Finance Access and Mobilisation Strategy (2024) is expected to be implemented by ASEAN Working Group on Climate Change (AWGCC). The ASEAN Strategy for Carbon Neutrality also outlines eight key strategies aimed at accelerating ASEAN's transition toward a low-carbon economy. Among these strategies, establishing an interoperable carbon market stands out as a transformative approach to unify regional carbon reduction efforts.

The ASEAN Natural Capital Roadmap (2021) highlights the need for shifts in institutional governance, policies and incentives for natural capital management to drive competitive, legal and transparent private investment in nature, along with well-funded government budgets for natural resource management. The roadmap also outlines seven 'flagship programmes', including one on building climate resilience through inclusive NbS.[15]

Bilateral ASEAN financing agreements and funding mechanisms are also supporting NbS mainstreaming across the region. For example, the EU-funded TAF-GTEI regional project in partnership with ASEAN is supporting and piloting NbS-related policy mechanisms, toolkits, knowledge exchange and capacity building activities across ASEAN and AMS. Recently the EU – as part of its EU Contribution to ASEAN – has pledged EUR 15 million between 2025-2030 to the Asian Development Bank (ADB) led Nature Solutions Finance Hub (NSFH–see Box 8). The pledge aims to catalyse nature-positive infrastructure financing, policy reform, and capacity building to support ASEAN with meeting its climate and biodiversity goals through large-scale priority NbS investments in the region.[16]

The ASEAN-UK Green Transition Fund (GTF) provides up to GBP 40 million in funding from 2024-2029. The Fund aims to accelerate ASEAN's transition to a climate-resilient economy by reducing sectoral emissions, fostering green economic growth and improving the local livelihoods. One of five key pillars is focused on *Enhancing Nature-based Solutions for Climate Mitigation (Nature-based Solutions)*. This is particularly concerned with NbS for agriculture, forestry, environment and climate change, to build capacity to promote NbS, ecosystem-based approaches, build transboundary frameworks and platforms, foster NbS models and monitoring and investment in natural capital.[17]

[15] Steele et al., 2021
[16] EU-ASEAN NSFH https://euinasean.eu/nsfh-programme/
[17] UK-PACT https://www.ukpact.co.uk/regional-fund/asean-gtf

Other relevant institutional networks and partnerships important for NbS financing across the ASEAN region include ADB, the World Bank, Asia-Pacific Economic Cooperation, Asia Pacific Partnership, South Asian Association for Regional Cooperation, United Nations Economic and Social Commission for Asia and the Pacific, UNDP Biodiversity Finance Initiative (BIOFIN) and the Southeast Asia Climate and Nature-based Solutions (SCeNe) Coalition. Several of these serve as regional financing, collaboration and knowledge hubs, to support project preparation (from concept to implementation), de-risking and large-scale demonstration (Box 8).

Box 8: Regional NbS financing and knowledge sharing platforms and facilities

Asian Development Bank (ADB) Nature Solutions Finance Hub (NSFH)

NSFH is a platform combining an integrated set of activities – with innovative finance approaches – to scale up NbS projects and finance flows for a measurable impact in biodiversity conservation and climate resilience.

The platform aims to create "signature" NbS projects that are bankable and scalable, along with policy, capacity, and finance instruments that can demonstrate how public funds are best leveraged to catalyse private investment towards NbS projects. The NSFH will aim to catalyze at least $5 billion in capital flows into NbS projects across Asia and the Pacific of which at least 15% will come from the private sector.

*More information on the hub can be found **here***

Southeast Asia Climate and Nature-based Solutions (SCeNe) Coalition

The SCeNe Coalitions is a partnership of nine leading NGOs with a strong presence in Southeast Asia, aiming to support local frontline organisations in accelerating high-quality NbS projects.

The coalition focuses on accelerating and scaling up high-quality, high-integrity, triple-benefit (climate, nature, and people) NbS, by directing climate finance towards NbS initiatives. SCeNe has developed several tools and resources to support NbS project delivery and investment, including showcasing to potential investors.

*More information on the SCeNe Coalition can be found **here***

1.2 Barriers and enablers for NbS financing

There are several existing barriers to upscaling NbS financing initiatives through ASEAN.

Figure 10: Barriers to NbS financing in ASEAN

1. Lack of NbS mainstreaming into asean financing plans

NbS has not yet been extensively integrated into ASEAN-led financing platforms, frameworks, plans and initiatives, as it is still a relatively new approach.

2. Lack of detailed NbS financing knowledge sharing and exchange

NbS-specific financing workshops, discussions and collaborations, to build AMS knowledge on NbS finance opportunities, or link different stakeholder perspectives and interests (e.g. government, international partners and the private sector) have not been extensively held across ASEAN.

3. Lack of NbS financing projects enacted through ASEAN

There has been a lack of ASEAN-led formal NbS development initiatives and projects to date, although new projects and financing partnerships have been established in recent years.

Despite the identified barriers, there are several key enablers and successes that supporting NbS financing through ASEAN.

Figure 11: Enablers of NbS finance integration in ASEAN

1. Nbs prioritisation across asean

NbS is an increasingly strategic priority area within ASEAN for climate and biodiversity, across its various groups (from agriculture to climate) platforms, plans and engagement with AMS. As presented in this report, ASEAN has various frameworks that support and enable the uptake of NbS across ASEAN (to some degree, although with no overaching framework).

2. Transboundary collaboration and projects

ASEAN has already supported a range of well established climate and biodiversity financing projects across AMS, including transboundary capacity building and knowledge sharing projects on NbS financing.

3. Regional nbs knowledge exchange platform

ASEAN is already well positioned - through its existing channels and multi-stakeholder platforms - to foster capacity development, collaboration and prioritisation on NbS in the region, including on NbS financing.

1.3 Opportunities for NbS financing

Based on stakeholder consultations and a stocktake of ASEAN financing approaches, several gaps have been identified that may provide opportunities to better support NbS financing.

1. NbS mainstreaming into ASEAN-wide financing frameworks

ASEAN should aim to review opportunities to better integrate NbS-specific objectives, targets and actions into financing-related platforms, frameworks and initiatives across ASEAN working groups and units.

2. Foster more transboundary collaboration and projects

Opportunities should be explored to promote and establish transboundary financing mechanisms, capacity building initiatives, partnerships and projects on NbS across relevant regions (e.g. Mekong and Coral Triangle) to foster increasing NbS implementation and upscaling. This could include working with existing platforms such as the ADB Nature Finance Hub and the SCeNe Coalition, to develop regional products, tools and projects.

3. Regional NbS knowledge exchange, capacity development & innovation platform for collaboration & project development

A regional NbS platform, hub or taskforce could bring together perspectives, expertise and tools from across the region. Such a platform can drive knowledge exchange, capacity development and innovation, built on capacity needs, collaboration opportunities and systems needed to scale up and mainstream NbS. It can bring together stakeholders across different ASEAN groups and AMS, including on integrating NbS into public budgets, channelling NbS finance through national funds, scoping international funding platforms and windows to support NbS mainstreaming.

2 Cambodia National Finance Profile

2.1 Climate and disaster risk and ecosystem resilience financing landscape

Cambodia is threatened by a range of climate and disaster risk. The most widespread risk is flooding, causing 55% of all annual economic losses, followed by drought with 28%.

Natural capital, including forest resources, account for around 40% of Cambodia's wealth and contributes significantly to its economy, including across critical ecosystems such as the Tonle Sap Lake, Mekong River, coastal zone, and highlands. These ecosystems support agriculture, forests and fishery-based livelihoods and have contributed to Cambodia's strong economic growth. Cambodia's ambitious LTS4CN aims to halt deforestation, afforest 1.6 million Ha, and restore 1.1 million Ha to their natural forest state. The World Bank modelled LTS4CN-related policies, projecting a 65% reduction in deforestation by 2030 (with elimination by 2035) and a USD1.9 billion increase in erosion mitigation services. It also predicts improved water regulating services, reduced flood risks, and economic co-benefits.

Total climate adaptation investment needs to meet NDC targets are estimated at USD 2.04 billion. Cambodia's national budget allocations for climate related expenditure have increased by over 280% between 2009-2017. The government has dedicated just over 1% of GDP in public expenditure to respond to climate change, according to regular expenditure reviews.[18]

Cambodia's NDC and National Adaptation Plan Financing Framework and Implementation Plan (CNAPFFIP, 2017) identifies (i) agriculture, (ii) infrastructure (and urban), and (iii) water resources as priority sectors requiring significant funding. The remaining top five sectors for adaptation financing needs include (iv) livelihoods and biodiversity, (v) coastal.

2.2 NbS financing approaches

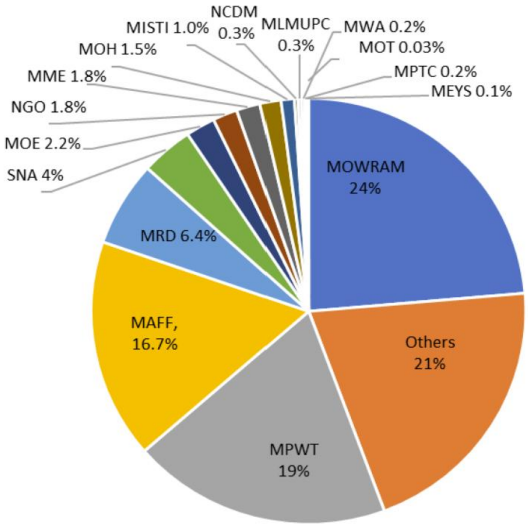
2.2.1 Domestic public financing

Finance policy: MoE's Circular Strategy on Environment 2023-2028 aims to guide and prioritise work to ensure environmental sustainability and integrity, in response to climate change and to promote a green economy. The government also endorsed the National REDD+ Strategy 2017–2026, which is implemented in two phases for readiness and implementation.

Cambodia's CNAPFFIP is aligned with Cambodia's Climate Change Strategic Plan (CCCSP) and identifies adaptation-related funding gaps across priority sectors (agriculture, fisheries and forestry, water resources, transport, health, tourism, energy, urban and land use). The plan identifies opportunities to increase adaptation-related national (public and private) and international funding. It outlines several NbS-related priorities, such as EbA approaches with involvement from communities for carbon-led forestry, with funding through REDD+, as well as EbA for fisheries resilience with potential funding from CCCA, GEF or GCF. The plan also highlights a general preference for attracting adaptation grants over loans, as adaptation programs are typically less profitable and appear less attractive for lenders and investors.

Public budget: Cambodia has been a pioneer for integrating climate action into public spending policy. It was one of five countries participating in the first Climate Public Expenditure and Review (CPER) and one of the first AMS to establish a Climate Change Financing Framework.[18] Domestically financed climate expenditure accounted for 48% of total climate spending in 2023, up from 37% in 2022. The main source for climate financing comes from national line agency budgets, and the Cambodian Climate Change Alliance (see below). Most of the national climate budget is put towards infrastructure-led adaptation activities (97% of climate spending), followed by energy and agriculture, with limited line agency potential for NbS programmes and projects.[19] MOWRAM, MPWT and MAFF receive most of the climate budget (Figure 12).

Figure 12: Climate expenditure per ministry, 2023



According to UNDP's Biodiversity Finance Initiative (BIOFIN) biodiversity expenditure review (BER), annual biodiversity spending was around USD 112 million in 2018, equivalent to 2% of the national budget, or 0.5% of GDP. Cambodia's NBSAP targets USD 135 million per year, suggesting a sizable funding gap.[20]

National funds: The **Cambodia Climate Change Alliance (CCCA)** was a joint initiative to address climate change in Cambodia and was historically the main domestic climate financing fund. It is implemented by DCC and supported by the EU, UNDP, Sweden, Denmark and the UK. To date the CCCA has undergone three phases, providing a platform to pool resources for mainstreaming climate action into national and sub-national policies and programmes. The next stage for the CCCA (or its replacement) is not yet clear.

Box 9: CCCA–challenges and opportunities for upscaling NbS-related financing

CCCA3 ran from July 2019-June 2024, with a total budget of USD 11,868,895. The CCCA also included a facility grant mechanism, supporting innovative pilot projects, research partnerships and line agency initiatives. Most grants focused on mitigation-led projects. A single NbS-led resilience building study is recorded through CCCA on *Appropriate Costing Methods of Climate Change Adaptation in Infrastructure Development: Experimental Studies for Road and Related Infrastructure Projects in Cambodia*.

2.2.2 Private sector financing

Cambodia's NAP financing plan notes the limited extent to which private investments can support adaptation financing priorities, although this needs to be explored further. Existing private sector led initiatives are largely focused on traditional mechanisms, including (i) PES for smallholder farmers, fishers and foresters (supported by large agriculture and hydropower companies), (ii) community-based ecotourism (CBET) initiatives in and around protected areas and wetlands, and (iii) regenerative and nature-inclusive agriculture projects (see Table 7 for examples).

The Cambodian Sustainable Finance Initiative is led by the Association of Banks in Cambodia and supported by USAID, PACT, Wildlife Conservation Society (WCS), and Mekong Strategic Partners. In partnership with the National Bank of Cambodia, MoE and NCSD, the initiative aims

[18] Thorn, et al., 2022
[19] CCM expenditure accounts for 3% of the CPER 2023, while CCA accounts for 97%. This is broadly in line with the government's policy priorities, with CCA is the main priority, while mitigation is a smaller but growing component of the climate change response. CCM is significantly funded by the private sector, especially through investments in renewable energy.
[20] Most biodiversity expenditure data for was sourced from development partners and government budgets. Data from the private sector was not accessible.

to develop voluntary environmental and social lending standards, embedding sustainability into local bank policies and practices, and supporting an enabling environment for NbS investments.

Cambodia's REDD+ Taskforce coordinates REDD+ projects in the country, aligned with the National REDD+ Strategy. All current REDD+ projects in Cambodia are operating within the voluntary carbon market. According to the forest reference level submitted to the UNFCCC, Cambodia can claim the production of around 10 million tons of carbon credits per year to obtain funds for results-based payment, presenting opportunities for alternative NbS-linked financing. Between 2016-2020, Cambodia's forest sector generated close to USD 12 million with the sale of emission reduction credits.[21]

2.2.3 International development financing

Multi-donor funds: A large proportion of international NbS financing is sourced from global funds such as GEF. Cambodia is also preparing itself to gain direct access to emerging global climate funds, including GCF, and other financial mechanisms under the Paris Agreement.

Multilateral and bilateral development finance: Cambodia has sought CCA financial support in recent years from multilateral (ADB, UN Agencies, World Bank) and bilateral partners (top five include China, France, Republic of Korea, EU, USA). According to 2022 NCSD data, most international adaptation funding was provided to agriculture and water sectors.

Current NbS-focused efforts are focused across water resources, agriculture, forestry, coastal and biodiversity sectors, supported by partners such as UNDP, International Climate Initiative (IKI), GIZ, EU, Swedish International Development Cooperation, Agency (SIDA) and WCS. Examples of innovative NbS-related funding mechanisms are outlined in Table 7.

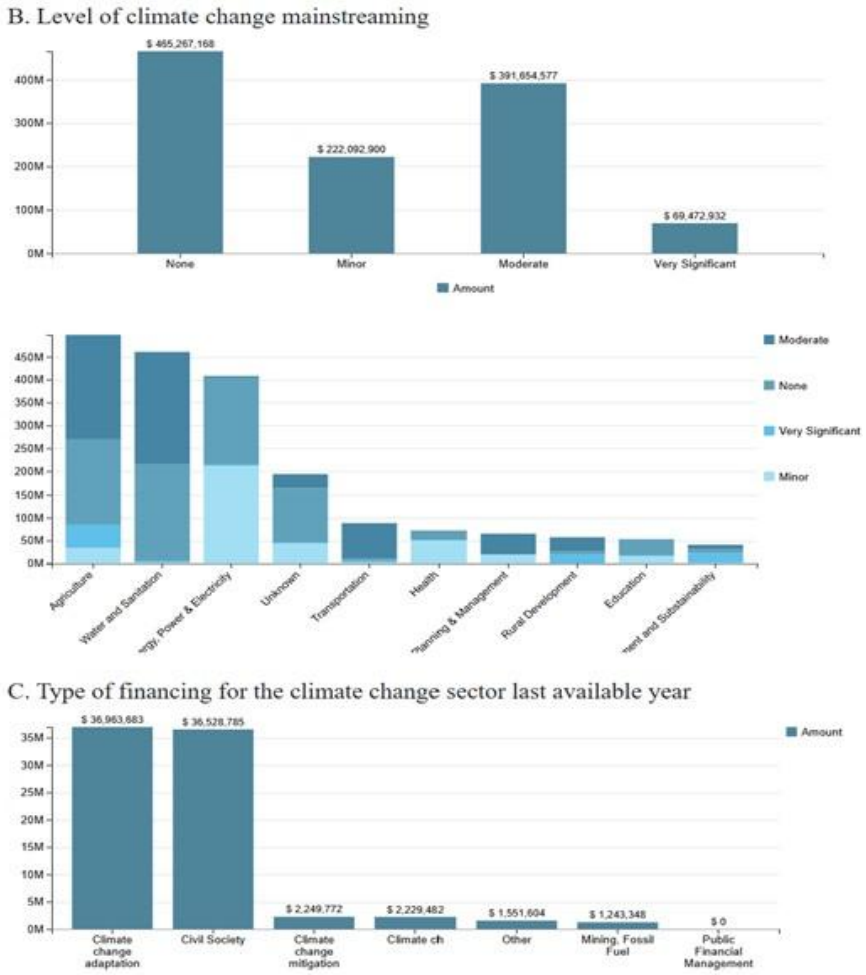
2.2.4 Financing systems and tools

The introduction of Sub-Decree 41 sets a standard operation procedure for public financial management to integrate climate finance, coming into effect for the 2024 budget, although it does not incorporate climate change spending for individual ministry budget.

Table 6: National climate financing systems in Cambodia

Tool	Details
Climate Public Expenditure and Institutional Review	Cambodia has been undertaking CPER regularly on a periodic basis. Climate finance data is published on the NCSD's website including data up to fiscal year 2021, to monitor to what extent Cambodia and its development partners are effectively supporting national climate change priorities. To date, NbS has not been considered as a category in the CPER.
Climate budget tagging (CBT)	CBT was introduced into the Cambodia ODA database as part of the CPEIR and is continuously applied as part of CPEIR preparation. Recurrent spending data is provided by MoE. Data obtained for ministerial programme budgets are grouped into detailed activities to conduct climate tagging and assessment. Detailed data for programme budget expenditures is available for 14 CCAP-aligned ministries.

[21] World Bank, 2023

Climate finance data portal (development finance)	Data presented on NCSD's climate finance portal reflects the contribution of development partners to Cambodia's climate change response through ODA. Several of the recorded projects are aligned with NbS outcomes. The portal is based on annual self-reporting by development partners, and includes details on financing sources, ongoing projects, and sectoral focus. The portal includes a built in M&E system, reflecting the impact of past and ongoing investments. **Overview of external (international) climate finance in 2022** 
Evidence base platform	Whilst there is no common database or platform on either (i) ecosystem valuation or (ii) cost-benefit analysis (CBA), various individual studies have been undertaken in Cambodia regarding both elements, including the piloting of CBA for NbS measures vs hard infrastructure solutions. The NCSD, via the CCCA project outputs, provides a repository for several relevant studies, but only those supported by the fund.

2.2.5 Innovative NbS financing mechanisms

Conventional CCA and DRR-led NbS financing committed via Cambodia's public budget provides the foundational mechanism for sustained NbS financing. Simultaneously, alternative financing mechanisms can provide complementary and diverse approaches, to unlock innovative financing opportunities across private and public actors.

Table 7 identifies five example innovative instruments that have been applied in Cambodia, and that may offer opportunities for replication and upscaling in Cambodia and across other relevant AMS. These are generally aligned with NbS-mainstreaming across Cambodia's priority sectors for CCA/DRR financing (identified in its NDC), including (i) agriculture (and fisheries), (ii) infrastructure, and (iii) water resources, and (iv) livelihoods, poverty and biodiversity.

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Table 7: Examples of different types of innovative NbS financing mechanisms in Cambodia

Financial actor	Funding instrument	NDC-aligned priority sector	NbS integration mechanism	Description	CCA and DRR-related NbS relevance	NbS innovation, upscaling and replication potential
Grant						
Financier: ADB Implementer: MoE Supported by: ICEM	Grant (2019-2022)	Infrastructure	(i) Policy	The TA 8179-CAM Mainstreaming Climate Resilience into Development Planning project, funded by ADB and coordinated by MoE, has assisted the Ministry of Public Works and Transport (MPWT) to develop a **Green Infrastructure Guide** for public works and transport sectors. This guide provides an overview of green CCA, NbS and hybrid measures as a first step towards mainstreaming climate change into ministry planning and development | Details	The guide provides a set of NbS related CCA measures appropriate for projects to be prepared for climate financing, and features NbS to be promoted and built into sector policies and design standards.	The project demonstrates how funding from partners such as ADB can support the mainstreaming of NbS into sectoral guidelines and design standards. Replication across other sectors and agencies should ensure M&E verify the alignment of projects with such guidelines.
Financier: GEF (USD 6,684,703) Implementer: MoE Supported by: UNDP	Grant (2020-2025)	Water resources	(i) Capacity building, (ii) Practical demonstration, (iii) policy	**Building resilient livelihoods through nature-based solutions in the Tonle Sap Basin and Siem Reap/Phnom Kulen landscape** is a GEF-funded project, focusing on a combined approach for the conservation and restoration of forest ecosystems across the Tonle Sap Basin, whilst building resilience of communities within the basin against the increasing impact of flood and drought. The project is also fostering innovative finance mechanisms to promote public-private-community partnership investments on NbS | Details	The project will support NbS implementation, including on-the-ground demonstration, in the Siem Reap/Phnom Kulen landscape to reduce flood impacts and improve water provisioning services.	The project is developing an upscaling strategy for replication of IWRM practices across other provinces of the Tonle Sap Basin.

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Market (results-based) mechanisms						
Financier: Various (e.g. Wildlife Alliance) *Implementer*: Various (e.g. WCS)	Public/ private	Forestry	(i) Capacity building, (ii) Practical demonstration	Cambodia has received a total of USD 11.6 million from selling carbon credits through **REDD+ projects**. The country has implemented two REDD+ projects to date, including Keo Seima REDD+ in 2010 (Mondulkiri province) and Southern Cardamom REDD+ (Koh Kong). Additional projects under discussion include Tumring REDD+ in Prey Lang Wildlife Sanctuary (Kampong Thom), REDD+ in Prey Lang Wildlife Sanctuary (Stung Treng), Central Cardamom REDD+ in Central Cardamom National Park and Northern Plains REDD+ (ACB, 2023) | Details	REDD+ is primarily a CCM-led initiative yet also aligns with NbS for CCA and DRR. It supports alternative livelihoods, including community-led watershed forest restoration for flood and drought resilience and the rehabilitation of degraded landscapes.	REDD+ initiatives in Cambodia have helped with community-led forest conservation and sustainable management. Future REDD+ efforts need to consider land tenure, improved benefit-sharing mechanisms, MRV transparency, institutional capacity and financial sustainability.
Financier: USAID, WCS, Critical Ecosystem Partnership Fund (CEPF), Mekong Strategic Partners *Implementer*: Ibis Rice Conservation Co. Ltd (IRCC)	Conservation finance (PES, micro-loans, insurance)	Agriculture		**Ibis Rice** is a market-based conservation finance mechanism that integrates sustainable agriculture, certification schemes, and premium market access to incentivise conservation, reduce deforestation and protect threatened species. It was founded by WCS and operates primarily as a results-based PES model, incentivising and rewarding farmers for adhering to biodiversity-friendly practices. Farmers are paid a guaranteed premium for their crops, with rice purchased and sold to national and international markets via the Wildlife Conservation Association. To protect against extreme events, a crop insurance scheme is being piloted to support farmers in case of crop failure. Schemes have been implemented around forest regions and protected area buffers across Stung Treng, Ratanakiri and Mondulkiri provinces | Details	Ibis Rice has helped preserve over 500,000 Ha of forest, reducing deforestation by 75%, and supported over 2,000 wildlife-friendly farmers. The initiative delivers climate-resilient NbS measures, such as constructing wildlife-friendly ponds, implementing cover crops, and community composting.	Ibis Rice is continually expanding to new areas, involving new farmers and upscaled financing mechanisms. The model presents an opportunity for establishing similar initiatives across the Mekong region in particular

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Blended finance						
Financier: Various (CEPF, USAID) *Implementer*: Rising Phoenix (supported by BirdLife International and MoE)	Blended finance (2015- / under develop.)	Biodiversity	(i) Capacity building, (ii) Practical demonstration	**Rising Phoenix Co. Ltd.** Is managed as a social enterprise and aims to conserve and restore Siem Pang Wildlife Sanctuary, using business principles through partnerships. The company sets out to combine the traditional donor approach with a private sector business model to secure the long-term conservation of Siem Pang. Rising Phoenix aims to provide up to USD 500,000 annually, either directly or via a trust fund, for exclusive management of the Wildlife Sanctuary. Recently, through a CEPF grant and support from USAID Morodok Baitang, Rising Phoenix is working on the creation of demonstration sites within the sanctuary. In addition, a study for the implementation of a REDD+ project is currently underway, covering approximately 100,000 Ha of the 130,000 Ha within the sanctuary, following MoE's approval for development by Rising Phoenix in 2023. The company is also exploring opportunities for ecotourism to generate revenue while promoting conservation | Details	Rising Phoenix aims to reverse forest decline at Siem Pang through rewilding efforts to ensure a healthy ecosystem. On the ground demonstration efforts include the community-led restoration of seasonal wetlands (trapeangs) and forests (dry dipterocarp) for biodiversity conservation and drought resilience.	Rising Phoenix is cultivating an innovative blended finance model, including grants, REDD+, ecotourism and private investments, for nature conservation and climate resilience.

2.3 Barriers and challenges for NbS finance

There are a range of challenges with the integration of NbS principles and approaches into international and national financing mechanisms in Cambodia. Key barriers for both the private and public sector are outlined below.

Figure 13: Public and private sector NbS financing barriers in Cambodia

Despite the identified barriers, there are several key enablers and successes that provide the foundation for increased NbS mainstreaming into the Cambodia finance landscape.

Figure 14: Enablers and opportunities for NbS financing in Cambodia

1. National financing facility and access to NbS funds (public)

The CCCA provides a strong national platform and facility to support the funding of priority studies, pilot projects and knowledge sharing products

2. Interest in new inovative NbS financing mechanisms (public/private)

There is clear interest from national line agencies - such as the DCC - in increasing NbS financing, provides an opportunties to generate an enabling landscape for public and private sector investment. Table 3 has presented examples of the growing innovation financing landscapes in Cambodia, across agricultural, water resources and biodiversity sectors.

3. NbS financing mechanisms on PES, ecotourism, agriculture and carbon markets (public/private)

Cambodia already has a well establishment carbon market, PES, CBET and ecological agriculture mechanisms, that provide for options for advancing both traditional and alternative NbS financing approaches

2.4 Opportunities for NbS Financing

1. Continuation of the national financing facility and access to NbS funds (public)

With current uncertainty over the long-term future of the CCCA post phase 3 (CCCA 3), an opportunity exists for Cambodia to establish their own national financing facility. More guidance can also be provided to applicants on opportunities to access NbS project funds.

2. Develop new innovative NbS financing mechanisms (public/private)

Going forward, opportunities for blended finance models that engage the private sector across low hanging fruit sectors should be explored, such as agriculture, coastal and tourism sectors. Options should be scope aligned with key priorities.

3. NbS financing mechanisms on PES, ecotourism, agriculture and carbon markets (public/private)

Cambodia already has a well-established carbon market, PES, CBET and ecological agriculture schemes. These areas will continue to offer important sources of finance for NbS and provide opportunities to expand further.

4. Build on NbS evidence base and cost norms (public/private)

There is a big opportunity in Cambodia to establish a database of NbS projects, cost-benefit analysis, and also establish cost norms for practical NbS interventions going forward, through pilot projects and programmes (e.g. urban greening, river basin planning).

5. Integration of NbS into national and sectoral frameworks, budgets and M&E (public)

There is an opportunity to enhance Cambodia's Standard Operating Procedure to encompass climate change and NbS expenditures within individual ministry budgets, including NbS climate-biodiversity tagging through a refined M&E system.

2.5 AMS NbS financing summary

Criteria	Description	Criteria	Description
Priority sectors for adaptation finance	(i) agriculture, (ii) infrastructure (and urban), (iii) water resources (iv) livelihoods/biodiversity, (v) coastal	*Focus sectors for resilience-led NbS financing (based on review to date)*	(i) water resources, (ii) livelihoods/biodiversity, (iii) agriculture
Key NbS financing actors (national, international, private sector)	International – dominated by international financed programmes and projects	*Key NbS financing instruments (public, donors, development partners, private)*	Largely grants from multi-donor funds and bilateral financing
Key NbS financing sources	National: (i) MoE, (ii) CCCA	*Examples of NbS financing innovation/ successes*	Ibis rice agricultural initiative

3 Indonesia National Finance Profile

3.1 Climate and disaster risk, and ecosystem resilience financing landscape

According to UNESCA, Indonesia is annually losing USD 31.2 billion from disasters, of which USD 23.3 billion is due to drought-related impacts (water scarcity). Climate change will continue to significantly impact the country's at-risk sectors, with projected economic losses of up to 3.45% of GDP by 2050.[22]

The ocean, or blue economy, is a key driver of economic growth and ongoing innovation, with coral reef tourism alone worth USD 3 billion. Indonesia is the world's most mangrove-rich country and mangrove-based adaptation-related ecosystem services (i.e. excluding carbon) contribute at least USD 1.5 billion annually to the economy, estimated at USD 15,000-50,000 per Ha, with almost 50% of this value attributed to their role in protecting coastlines, as well as their importance for fish species and coastal erosion. Studies carried out in North Sumatra have found that one Ha of mangrove forest can prevent 14 m^2 of coastal erosion per year with an annual value of USD 310 (IDR 5 million) per Ha.[23]

On land, forests and peatland contribute extensively to economic development and national climate targets, contributing about 40% of total emissions and building resilience. Yet, they receive only USD 128 million (IDR 2 trillion) from various low-carbon initiatives, compared to USD 893 million (IDR 14 trillion) and USD 383 million (IDR 6 trillion) for the transport and power sector respectively.[24] Several studies, including by McKinsey (2023), have also identified NbS-related mitigation opportunities for Indonesia of up to 1.4 GT CO2eq per year, which equates to around USD 7.1 billion (IDR 112.5 trillion).

Indonesia's NDC and NAP (2019) highlight four priority adaptation sectors, namely (i) coastal and marine, (ii) agriculture, (iii) water, and (iv) health. Indonesia's BTR also extends this to include (v) ecosystems. To meet NDC targets by 2030, the estimated adaptation financing need is USD 817 million (IDR 12.84 trillion), as outlined in the NDC Adaptation roadmap.

3.2 NbS financing approaches

3.2.1 Domestic public financing

Finance policy: The MoF plays a crucial role in regulating climate change financing policy and is responsible for ensuring that climate, disaster and ecosystem priorities are reflected in budgets, pricing policies, and financial market regulation.[25]. MoF has incorporated an environmental performance-based budgeting policy or *Transfer Anggaran Provinsi berbasis Ekologi (TAPE)*. TAPE is an incentive mechanism in the form of budget transfer from the national government to provincial governments whose budgets are determined by how well the provincial government is performing in managing its natural resources.[26]

The blue economy is a priority sector for Indonesia. BAPPENAS formulated the Blue Economy Development Framework for Indonesia's Economic Transformation (2021) and the Blue Economy Roadmap 2023-2045 (2023), which covers strategies for Indonesia to maximise blue carbon financing opportunities, including via mangroves, seagrasses, and tidal marshes.

For carbon finance and the compliance market (Article 6) the emission reduction must be issued as a SPE-GRK, validated and verified by an independent entity accredited by the Komite Akreditasi Nasional (KAN), and registered in the SRN for quality control and transparency.[27]

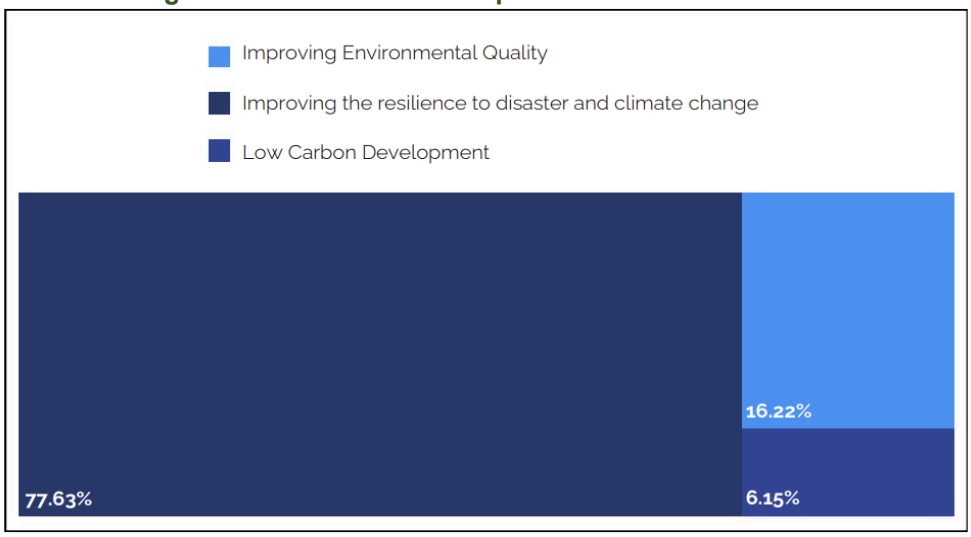
[22] ESCAP, N.D.; Bappenas, 2024
[23] BAPPENAS, 2023; Earth Security, 2024
[24] Mongabay, 2022
[25] Suroso et al., 2021
[26] ASEAN, 2021
[27] Neyen, 2024

For the finance sector, Indonesia Sustainable Finance Roadmap Phase II (2021-2025) (OJK, 2021) provides a vision for natural resource, biodiversity and climate financing, as well as managing climate-related risk in the financial sector in the coming years.

Public budget: Public funding originating from domestic sources mainly comes from state budget (APBN) allocations, to achieve and actualise programmes in the RPJMN, as well as to achieve Indonesia's NDC and NBSAP targets. At the local level, climate-related activities through the government-led Regional Incentive Funds, Special Autonomy Funds, Village Funds often focus on infrastructure as a priority component of the fund, rather than NbS-related actions. The Ecological Fiscal Transfer mechanism is also being designed to allocate funds from the central government to regional authorities, and from provincial to city or regency governments, using ecological indicators as the basis for distribution.[28]

Programs relating to climate action receive around 3.9% of the APBN state budget each year.[29] According to FPA and budget tagging data (2020), the total climate change budget allocation from 2018-2020 reached IDR 307.84 trillion, with mitigation accounting for 61% and adaptation 39% (up to a ratio of 82:18 in 2022). Of this, MoEF allocated around USD 277 million (IDR 4.52 trillion) for climate mitigation and only USD 73 million (IDR 1.2 trillion) for adaptation purposes (FPA, 2019).[30] For NbS-related funding, the state budget is by far the largest source of ecosystem/biodiversity finance.

Table 8: Budget allocation of the three pillars of climate finance in Indonesia



Source: MoF (2022)

National funds: There are three national funds that can mobilise financing for NbS activities.

Table 9: National funds in Indonesia

Tool	Details
Indonesia Climate Change Trust Fund (ICCTF)	The ICCTF was established in 2009 under BAPPENAS, designed to raise national and international funds for climate change across four priority sectors: land-based mitigation, energy, adaptation and resilience, and marine-based initiatives. As ICCTF is under the BAPPENAS coordination, BAPPENAS has flexibility in making decisions about the resource distribution for adaptation projects. In 2017, ICCTF allocated IDR 58.3 billion for climate-related activities, including IDR 15.98 billion for mitigation, IDR 4.74 billion for adaptation and resilience, IDR 11.96 billion for forest and peatland, and IDR 6.16 billion for fire prevention (ICCTF, 2018; FPA, 2019). Since 2020, ICCTF has shifted its focus toward the coastal marine and blue economy.[31]
Indonesia Environment Fund (IEF)	The Environmental Fund Management Agency (BPDLH), now called the IEF, was established in 2019 in coordination between MoF, MoEF and MfEA. It is a designated public service agency under MoF, mandated to manage and mobilise

[28] Wetlands International, 2021; Saputra et al., 2022
[29] Bappenas, 2024
[30] UCLG ASPAC, 2024
[31] Suroso et al., 2021; Bappenas, 2024

	domestic and international environmental funds for environmental protection, including CCM, CCA, DRR and NbS-related activities. IEF acknowledge that their portfolio is largely mitigation focused, with challenges in unlocking adaptation related activities and processes (see Box 4). Various international institutions have pledged REDD+ allocations through the IEF, including a GCF committed USD 103.78 million, USD 56 million from the Norwegian Government, and up to USD 110 million through the World Bank Forest Carbon Partnership Facility.[32]
Indonesia International Development Cooperation Fund/ Indonesian AID	Indonesian AID was established in 2019 under MoF, the Directorate of International Development Cooperation, and the Ministry of Foreign Affairs, who have been responsible for mobilising financial and capacity building support through South-South Cooperation – which has recently evolved into Indonesian AID. The new fund will aim to enhance cooperation with foreign governments international partners and is expected to expedite grant processes and enable self-financing. Since 2021-2022, the Indonesian government has supported USD 3.2 million of funded projects to recipient countries across Africa, Asia and the Pacific, with a focus on CCA and DRR.

Box 10: Indonesian national funds and opportunities for upscaling NbS financing

As of the end of 2023, USD 1.8 billion has been allocated for climate-related activities through the IEF, ICCTF and SIO, as well as the GCF, GEF and AF, of which 68% were from loans and under 30% is allocated for CCA goals. 93% of identified fund allocations are from international sources.

A search of 158 registered projects on the Climate Finance Focal Points Dashboard, almost half of which are ICCFT-led, has identified a number of NbS/EbA-led projects, including *Support for Ecosystem-based Resource Management Plans and Sustainable Marine-based Livelihoods Nusa Penida* (ICCTF, grant, 2021-2022); *Community Adaptation for Forest-Food Based Management in Saddang Watershed Ecosystem* (AF, grant, 2020-2022); and *Mangrove for Coastal Resilience (M4CR)* (BPDLH, grant/loan, 2022-2027).

3.2.2 Private sector financing

Indonesia currently has the most developed private NbS finance landscape – largely focused on carbon – both in terms of international impact investment and a domestic enabling environment[33]. Traditional and alternative private investments are critical to close the gap presented by the shortfalls in domestic spending. Climate-aligned investments from Indonesia's financial sector accounts for 15% of the country's climate finance, with both public and private institutions contributing nearly equal shares. Private sector investments average USD 3.4 billion annually, representing only 3% of total investments. These flows are primarily directed towards the energy and AFOLU sector, and largely sustainable palm oil, with minimal spending on NbS.[34] Bonds, including Green Bonds and Green Sukuk, play a key role in efforts to finance climate action and address environmental challenges, although again, these have not reslly explored NbS opportunities. Blended finance schemes are also emerging as potential innovative financing mechanisms (see Table 11 for examples).

Regional private impact funds, including ADM Capital's Asia Climate-Smart Landscape Fund and Tropical Landscapes Finance Facility, primarily target projects in Indonesia. Similarly, innovative financiers like Terratai–Asia's first venture builder for nature–have initially concentrated on Indonesia, with plans for potential expansion across Southeast Asia.[35]

Terrestrial and marine ecotourism initiatives also offer significant government, commercial and community-led NbS financing in Indonesia. In Komodo National Park, the development of marine-based ecotourism is a core strategy to support self-financing and generate sufficient revenue for protection and restoration activities, through entrance fees and tourism licenses. CBET activities across Raja Ampat and Ujung Kulon National Parks, also significantly contribute to conservation incentives, alternative livelihoods and ecosystem resilience.

[32] UCLG ASPAC, 2024
[33] WWF, 2024
[34] CPI, 2023
[35] WWF, 2024

3.2.3 International development financing

In 2020, public budget allocations accounted for 13% of the NDC Mitigation Roadmap climate financing needs, stressing the key role of international finance in bridging the funding gap.[36]

Multi-donor funds: Indonesia still receives a significant proportion of its NbS-linked financing through donor funds, in particular the Adaptation Fund (AF), GEF and GCF.[37] Most GCF and GEF related projects have been directed towards mitigation actions to date, rather than NbS activities, although they have also provided co-benefits in promoting sustainable forest management, peatland restoration, biodiversity and marine protection, and sustainable agricultural practices. The AF has supported five projects in Indonesia, including a grant for the *Community Adaptation for Forest-Food Based Management in Saddang Watershed Ecosystem* project (2020-2022), implemented in four regencies in South Sulawesi Province. The project focused on EbA-led efforts to restore ecosystems and increase community resilience, including through mangrove planting and agro-silvopasture development.

Multilateral and bilateral development finance: Multilateral and bilateral partnerships and projects remain a key part of Indonesia's climate and NbS financing landscape. Indonesia received a total of approximately USD 1,782 million in financial support across climate and cross-cutting sectors between 2021-2022. Loans constituted the main financial instrument, accounting for 95%, with grants only 5%. Bilateral support totalled USD 200 million, multilateral support USD 1,505 million and commercial banks at USD 77 million. Only 46% of the USD 1,782 million funding was *significantly* aligned with the country's Enhanced NDC (89% for adaptation funds totalling USD 732 million, largely for agriculture initiatives of USD 513 million, followed by integrated watershed management of USD 167 million). The largest donors included World Bank (752 million), ADB, the Asian Infrastructure Investment Bank (AIIB), JICA Japan and KfW Germany.[38] The Ministry of Public Works and Housing received the highest proportion of ODA financing (83% of bilateral and 87% of multilateral support), with the degree to which projects incorporated NbS being unclear.

Multilateral and bilateral partnerships and projects remain a key part of Indonesia's climate and NbS financing landscape, including with the World Bank, USAID, GIZ, WRI, JICA and the Norwegian government. Many of these funds are now channelled through ICCTF and IEF.

3.2.4 Financing systems and tools

Table 10: National climate financing systems in Indonesia

Tool	Details
Climate budget tagging (CBT) KRISNA platform	In 2018, the budget tagging process expanded to include climate adaptation and mitigation. Funding for adaptation (and mitigation) is identified through CBT using the KRISNA online M&E platform, operated by BAPPENAS and MoF. Local governments also allocate budgets for climate programs in the APBD, and the national government encourages them to develop effective fiscal policies and identify adequate financial resources for climate action. Currently Indonesia is in the process of expanding the CBT to biodiversity under the Biodiversity Financing Program. In its initial phase, which focused on defining tracking criteria and boundaries, identifying stakeholders, and developing tagging mechanisms, USD 600 million was tagged as biodiversity expenditure in 2023 by 8 ministries. In the future phase, biodiversity budget tagging will be carried out by ministry planning units. [39]
Climate Financ Focal Points Dashboard	The dashboard shows the climate change funding status in Indonesia from national and international climate platforms or institutions (focal points funds). It aims to provide data and information to the public to support transparency of sustainable investments.
Debt Management and Financial	Indonesia uses two reporting systems to track and report support from development partners. Based on FPA (2019), funding from international donors must be recorded and managed via state budget (e.g. Indonesia Climate Change

[36] GCF, 2022
[37] Indonesia also has several GCF/GEF regional projects, however the MoF has identified challenges in measuring the project allocation for Indonesia, through which specific line ministries are performing activities.
[38] Bappenas, 2024. BTR
[39] BIOFIN, 2024

Analysis System (DMFAS)	Trust Fund), recorded in the state budget but channelled directly by donor agencies (e.g. UNDP), or outside of state budget through the MoEF (e.g. GCF).[40] Firstly, the management of tracking of foreign loans and grants is facilitated by the DMFAS system under MoF. This reports only government-directed climate finance, excluding non-governmental flows i.e. private sector and NGOs). The National Committee for Coordinating Foreign Assistance is a forum that brings together the Indonesian government and international donors to address development priorities via loans and grants. The country's management of foreign loans and grants follows a cyclical M&E process that MoF, Bappenas and line agencies. The second mechanism for recording international support is via IEF funding, which differs from the government regulated management of loans and grants. In addition, the National Registry System (SRN) focuses on M&E procedures and reporting on data and information.

3.2.5 Innovative NbS financing mechanisms

Conventional NbS-aligned financing committed via Indonesia's public budget provides the foundational mechanism for sustained funding. Simultaneously, alternative national and international financing mechanisms provide complementary and diverse approaches, to unlock innovative financing opportunities across private and public actors. Table 11 identifies seven example innovative instruments that have been applied in the country, and that may offer opportunities for replication and upscaling in Indonesia and across other relevant AMS. These are generally aligned with NbS-mainstreaming across Indonesia's priority sectors for climate financing (identified in its NDC), including (i) coastal and marine, (ii) agriculture, (iii) water, (iv) health, and (v) ecosystems.

[40] Suroso et al., 2021

Table 11: Examples of different types of innovative NbS financing mechanisms in Indonesia

Actors	Type	Priority sector	Output	Description of mechanism	NbS relevance/opportunities	NbS upscaling and replication potential
Loan						
ADM Capital Group	Blended finance impact fund (2022-)	Agriculture/ forestry	Funding mechanism	The **Asia Climate-Smart Landscapes Fund** (ACLF) aims to address the significant funding gap for small and medium-sized enterprises (SME) engaged in forest rehabilitation, sustainable agriculture, agroforestry and aquaculture by providing medium-term secured lending. The USD 200 million blended finance fund brings together leading blended finance proponents, impact investors and NGOs. Public institutions, such as the US International Development Finance Corporation provide partial credit guarantees | Details	Prospects to support SMEs with restoration activities, including forest-based watershed restoration, ecological agriculture and rehabilitation of agricultural landscapes	Opportunities to scale up NbS finance for SME – a historic challenges area to date in the region
Grant						
Project lead: FPA (MoF) *Supported by*: GGGI *Financial support*: GCF (USD 2.5 mil)	Grant (2022-2025)	Various	(i) institutional governance, (ii) capacity building	The **Enhancing Indonesia's Access to International Climate Finance and Private Sector Investments for Climate Actions** project aims to strengthen Indonesia's capacity to mobilise international climate finance and attract private sector investments to address the country's climate action funding gap across priority sectors | Details	The project aims to provide an enabling environment to improve funding allocations across priority sectors, including those important for NbS (e.g. coastal, ecosystems). This can facilitate the mobilisation of public, private and international funds for future NbS activities	Working with the direct project beneficiaries including the MoF, MoEF, Bappenas, IEF and other line agencies to mainstream NbS-related actions into their cross-sectoral finance strategies, plans and budgets going forward
Project lead: GIZ, partnering with BAPPENAS *Supporting Partners*: KEHATI, ICRAF, SNV *Financial support*: IKI (EUR 15 mil)	Grant (2022-2028)	Coastal/ marine	(i) institutional governance, (ii) capacity building, (iii) funding mechanism	The **Nature-based solutions for Land- and Seascapes in Indonesia** (LASSO) project aims at reducing the degradation of land and seascapes in Indonesia, increasing the resilience of ecosystems and promoting climate-resilient livelihoods | Details	Activities will support NbS financing measures in the terrestrial and marine environments	Activities include NbS mainstreaming in national policy, development of indicators for integrated planning, and innovation financing mechanisms for climate resilience and biodiversity conservation
Bonds						
Government of Indonesia	Sovereign green bond (2018-)	Various	Funding mechanism	Launched in 2018 through the MoF, Indonesia have developed a **Green Bond and Green Sukuk** – the world's first sovereign green sukuk – reaching an amount of $1.25 billion, to finance and/or	NbS activities could related to (i) sustainable management of natural resource (carbon and forest restoration, including drought/flood resistant	The Green Bon/Sukuk is scalable and relevant for other emerging ASEAN economies and Muslim-majority nations exploring

				refinance eligible green projects. Issuance is guided by the Green Bond and Green Sukuk Framework, with proceeds credits to designated line ministry for eligible project funding | Details	varieties); (ii) resilience to climate change for highly vulnerable areas and sectors/DRR (flood and drought); (iii) green buildings; and (iv) sustainable agriculture are 4 of 9 eligible sectors. More guidance is needed on nature-based opportunities	innovative financing models.
Issuer: Indonesia Government, World Bank, GEF *Implementer*: IEF (with BAPPENAS, MMAF) *Financier*: Investors (USD 10 mil), IBRD (USD 5 mil), GEF (USD 13.76), BNP Paris (USD 1.1 mil)	Green bond (2025- / under develop.)	(i) Coastal/ marine, (ii) ecosystem/ biodiversity	Funding mechanism	The **Indonesia Coral Bond**, the world's first outcome-based financing instrument for coral reef conservation, aims to enhance biodiversity in 5.3 million Ha of priority MPAs. Inspired by the World Bank's Rhino Bond, it channels bond coupon payments into conservation efforts, generating resources to improve management and biodiversity outcomes | Details	Inclusion of an ecosystem-based bond vs species-based bond offers potential for NbS protection and restoration related activities for CCA/DRR (including coral reefs, mangroves, seagrass meadows)	Pilot schemes such as this are critical to explore replication potential and buy-in from future investors. Demonstrating success will enable replication across Indonesia and other AMS (e.g. Philippines)
Insurance product						
Project Lead: UNDP *Supporting Partners*: Swiss Re *Financial Support*: The UK's Blue Planet Fund	Parametric/ hybrid insurance (2024-2025)	(i) Coastal/ marine, (ii) ecosystem/ biodiversity	Funding mechanism	UNDP's Insurance & Risk Finance Facility, in collaboration with Swiss Re, is partnering with the Indonesian government and insurance industry to develop a sustainable, long-term **reef insurance solution** for vulnerable and at-risk sites. Support is provided to local communities earning less than $15/day, relying on tourism, agriculture, seaweed cultivation, fishing, and aquaculture | Details	Supports the protection and restoration of reefs, and reef-based sustainable livelihoods, particularly in relation to their importance for CCA and DRR. It also contributes to Indonesia's vision to protect 30 per cent of its waters	As above
Market mechanisms						
Issuer: US Department of State *Implementer*: MMAF, MoF *Supporting Partners*: YKAN, YKCI, CI, TNC	Debt-for-nature (2024-)	(i) Coastal/ marine, (ii) ecosystem/ biodiversity	Funding mechanism	The USA and Indonesian Governments, alongside key implementing partners of the Global Fund for Coral Reefs, have signed a US$35 million **debt-for-nature swap** to protect Indonesia's coral reef ecosystems | Details	Coral reef protection and restoration, to support Indonesia's vision to protect 30 per cent of its waters and enhance management effectiveness of its coral reef environment	Debt-for-nature swaps have been explored in several AMS (e.g. Lao PDR) and offer a good option for nature finance, if the right debt-aligned mechanisms are in place

3.3 Barriers and challenges for NbS financing

There are several barriers and enablers to integrate NbS principles and approaches into international and national financing mechanisms in Indonesia, as outlined below.

Figure 14: Public and private sector NbS financing barriers in Indonesia

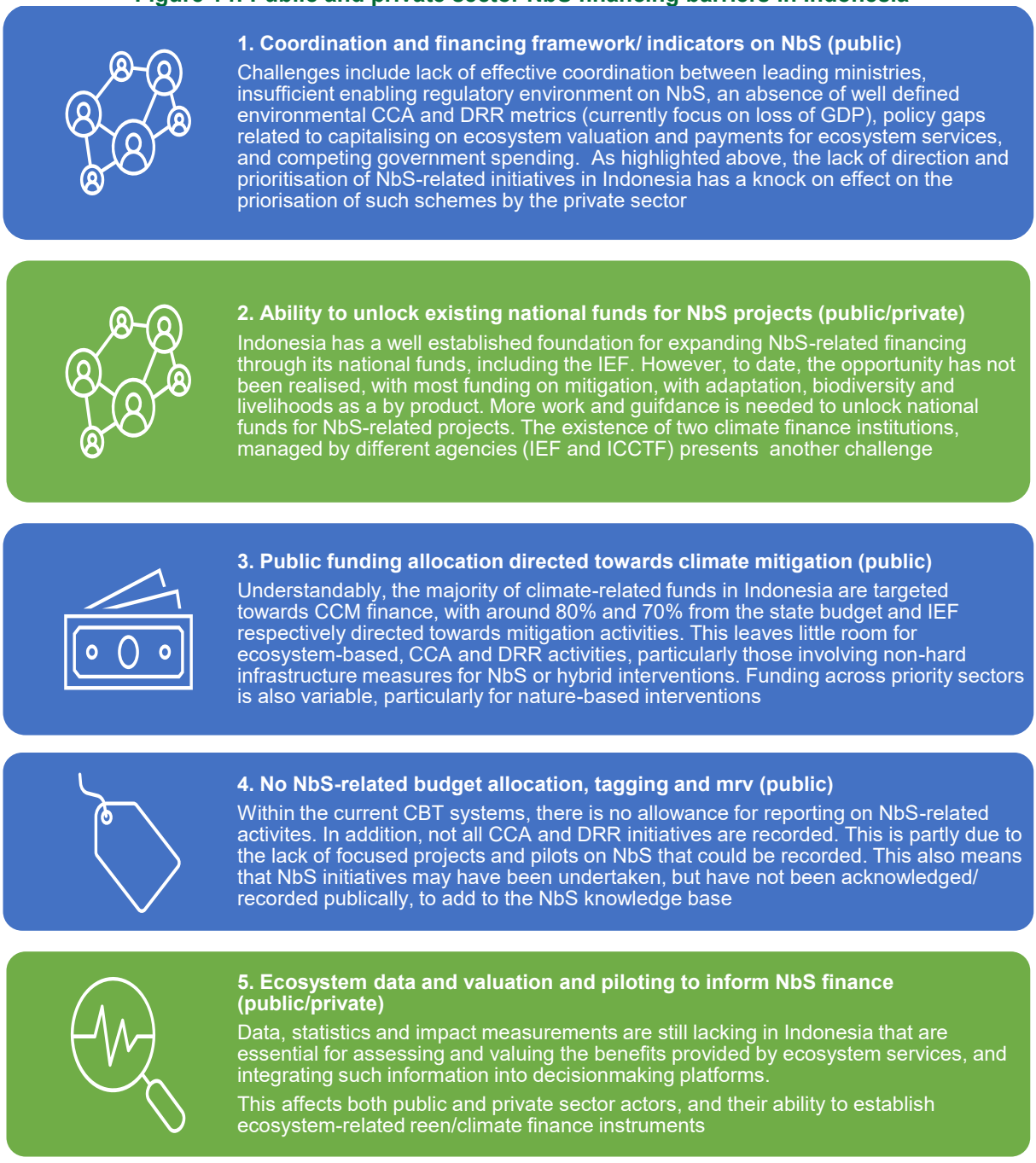
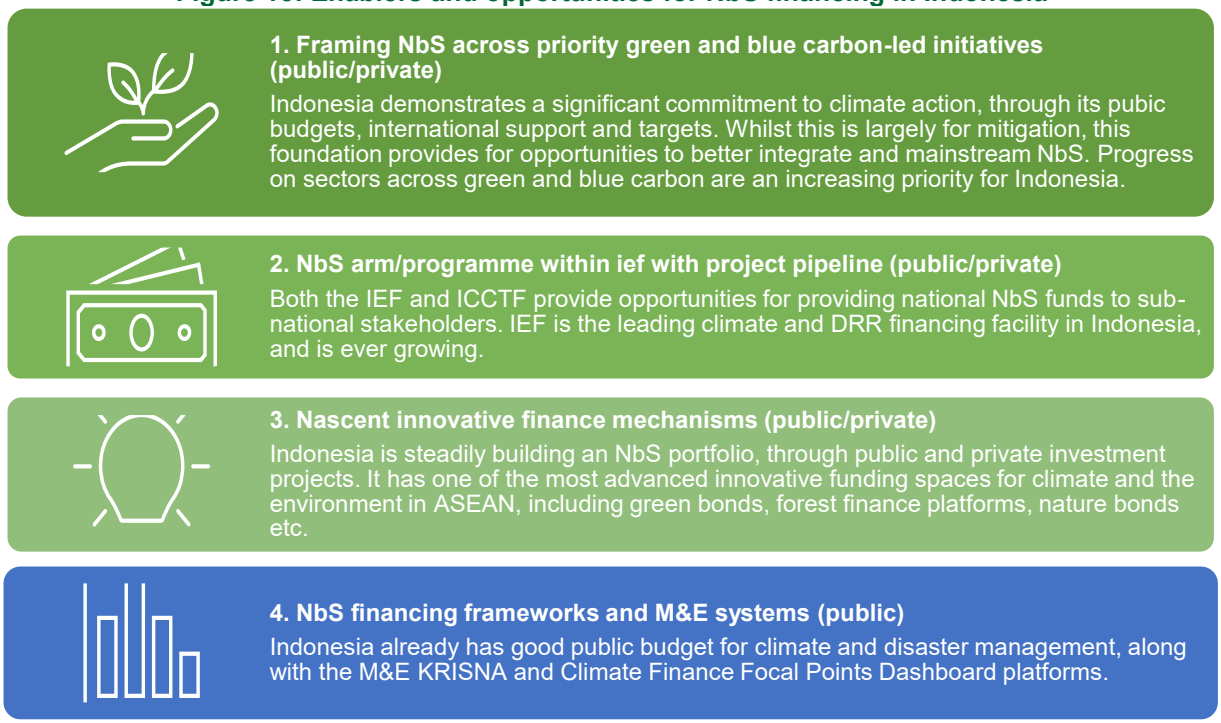


Figure 15: Enablers and opportunities for NbS financing in Indonesia



3.4 Opportunities for NbS financing

1. Framing and mainstreaming NbS across priority sectors, including green and blue carbon mitigation-led initiatives (public/private)

Whilst the focus on mitigation financing may be larger than adaptation and disaster investments, there are opportunities to leverage this situation at raise NbS concerns. This could lead to concrete support and build the portfolio, profile and importance of NbS for climate mitigation, adaptation and disaster resilience cross-cutting benefits.
The establishment of a formal NbS-related coordination mechanism between climate finance focal points is needed so the channeling of NbS funds in Indonesia can be implemented

2. NbS arm/programme within IEF with project pipeline (public/private)

Developing a more formalised NbS programme through IEF, including principles, approaches, operations and guidelines, can greatly advance the NbS financing agenda in Indonesia. This will also be attractive to international institutions looking at the IEF as a national mechanism for their funds.

3. Build on nascent approaches to advance innovative finance mechanisms (public/private)

The study has identified a range of existing traditional and alternative financing mechanisms that are already, or have the potential to, mainstreaming NbS through innovative approaches. This can provide a foundation and lessons for future expansion.

4. Demonstrate feasibility of NbS initiatives and investment potential (public/private)

There is an opportunity to invest in demonstrating the feasibility and viability of NbS approaches through more pilot projects, then sharing the experience to relevant stakeholders and potential partners - both government agencies and financial institutions - on the pilot's performance, cost-benefit evidence, technical feasibility and opportunities for replication

5. Integration of NbS into national and sectoral frameworks, budgets and M&E (public)

An overall national strategic investment plan for all climate priority sectors, incorporating NbS financing priorities, is needed to provide guidance for all relevant stakeholders, attracting both public and private finance into climate actions. Such a framework could also facilitate the establishment of an M&E approach with NbS indicators and targets.

3.5 AMS NbS financing summary

Criteria	Description	Criteria	Description
Priority sectors for adaptation finance	(i) Coastal/marine, (ii) agriculture, (iii) water, (iv) health, (v) ecosystems	*Focus sectors for resilience-led NbS financing (to date)*	(i) Coastal/marine, (ii) ecosystems
Key NbS financing actors (national, international, private sector)	National and International financed programmes and projects	*NbS financing instruments (public, donors, development partners, private)*	Largely grants and loans from national funds
Key NbS financing sources	National: (i) APBN, (ii) IEF	*Examples of NbS financing innovation/ successes*	Coral reef bonds, insurance, DfN
	International: (i) GEF, (ii) GCF, (iii) ADB, (iv) USAID		
	Private: (i) green bonds, (ii) ecotourism		

4 Lao PDR National Finance profile

4.1 Climate and disaster risk and ecosystem resilience financing landscape

Lao PDR's ecosystems and livelihoods are increasingly under threat from climate and disaster risks, being highly vulnerable to flood and drought events. Annual expected losses for flood events are as high as 3.6% of GDP, with ecosystem degradation costs exceeding USD 800 million per annum. Cities in Lao PDR are among the most vulnerable to flooding, with impacts generating 3% of GDP annual economic losses.[41]

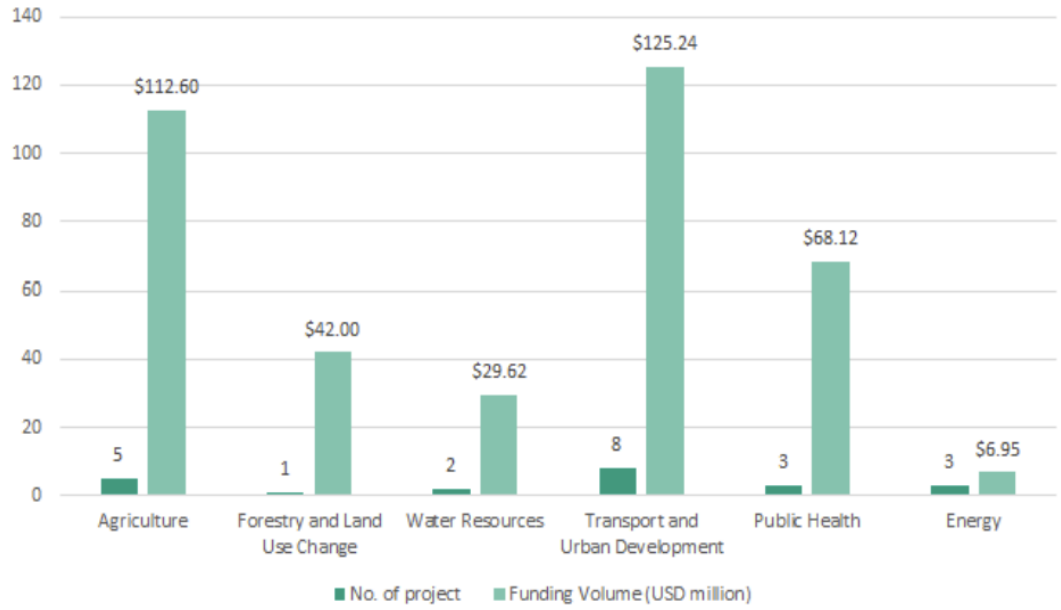
The country's economy is heavily reliant on its rich natural resource base. According to a 2020 World Bank assessment, the total value of the country's natural capital is estimated at USD 149 billion, of which 78% is from water and forest ecosystems, with an additional 22% from agriculture. In rural and peri-urban areas, income from non-timber forest products (NTFPs) is estimated at USD 510 million per year, and aquatic fauna and flora trade and consumption at USD 101 million per year. Tourism has the potential to become the leading source of foreign exchange, with nature-based tourism likely to emerge as the largest source of rural employment in the country. Despite achievements and progress for environmental protection and natural resource management, there remains a lack of public budget for the management of water and forest ecosystems, protected areas and watersheds.[42]

In recent years, the Government of Lao PDR has made significant investments in major infrastructure projects, particularly for hydropower, mining, and transport. These investments have contributed to a sizable external debt profile. Financial institutions providing loans or insurance to companies and individuals, who are being impact by climate and disaster risks, as well as ecosystem loss degradation, are likely to face higher levels of losses and claims going forward. Large hydropower companies, ecotourism operators, and smallholder farmers, are increasingly at risk of defaulting on their debt obligations. [43]

Six priority sectors for adaptation are identified in Lao PDR's NDC – (i) agriculture, (ii) forestry/ land use, (iii) water resources, (iv) transport/urban, (v) public health, (vi) energy.[44]

[41] GCF, 2021
[42] UNDP, 2024a
[43] UNDP, 2023; ADB, 2023
[44] Ecosystems and biodiversity are not directly referenced as a priority sector, but a typically cross-cutting in NDC CCA actions

Figure 16: Number of projects and amount of estimated funding needs by adaptation target area



As outlined in Lao PDR's NDC Implementation Plan (2024), over USD 380 million of funding is expected to flow towards CCA by 2030. Of this investment, 33% is anticipated for transport and urban development, followed by agriculture and health sectors, receiving 29% and 18% respectively (Figure 10). In line with historic spending, the majority is committed to infrastructure measures.[45]

4.2 NbS financing approaches

4.2.1 Domestic public financing

Finance policy: The *9th National Socioeconomic Development Plan (NSEDP) Financing Strategy 2023-2025* includes important recommendations and priority actions to enhance access to new sources of green and climate financing. This includes possible short-term innovative solutions, such as debt swaps for investing in nature conservation or climate activities, carbon credits and green bonds in the longer-term.

The *Green Growth Strategy* outlines how ecosystem-based activities with be funded mainly from the existing regular sectoral budgets. Simultaneously, to strengthen funding for green activities, the government is considering setting up a Green Growth Promotion Fund. The fund would target funds from public and international sources, including a 2% environmental tax revenue, and grants or loans from international partners. In addition, following the 2023 adoption of the new Decree on Protected Areas, a *Roadmap for National Protected Areas Management and Sustainable Financing* has been endorsed, outlining a series of intended outcomes, activities, and an estimated budget for protected areas over a three-year period.

Public budget: The Lao PDR government allocates climate change budgets across ministries, however there is no detailed tracking system on this. In addition, no climate or biodiversity PEIR has been undertaken to date. A 2016 disaster PEIR by UNDP, identified that historic disaster-related expenditure accounted for 5.6% of combined national and provincial budget. Three quarters of the spending focused on hard infrastructure. MPWT received the majority of DRR financing (~50%), followed by MAFF (18.4%), with only 2.4% for MoNRE.

[45] Figure data source: Lao PDR NDC Implementation Plan (2024)

National funds:

Table 12: National funds in Lao PDR

Tool	Details
Environmental Protection Fund (EPF)	The EPF, established in 2005, is a government fund created to mobilise domestic and foreign funds for natural resource management, biodiversity, CCM, CCA and NbS-related activities. From 2016-2020, the fund's biodiversity financing window disbursed $13.5 million to 36 recipients, for policy, capacity building and implementation projects. EPF has been identified as a potential direct-access national accredited entity, and readiness activities with GCF are underway (although accreditation is unlikely during the 9th NSEDP cycle).
Forest Protection Fund (FPF)	The revised 2021 Forestry Law designates the FPF as a state fund established to collect and mobilise funds from forest-related activities and investments. The fund draws revenue from various sources, including state budget, private sector contributions, international partners, ecotourism leases, and payment for forest-based ecosystem services. Additionally, the FPF is tasked with managing forest carbon revenue from both domestic and international sources and distributing results-based payments to a range of beneficiaries.[46]

4.2.2 Private sector financing

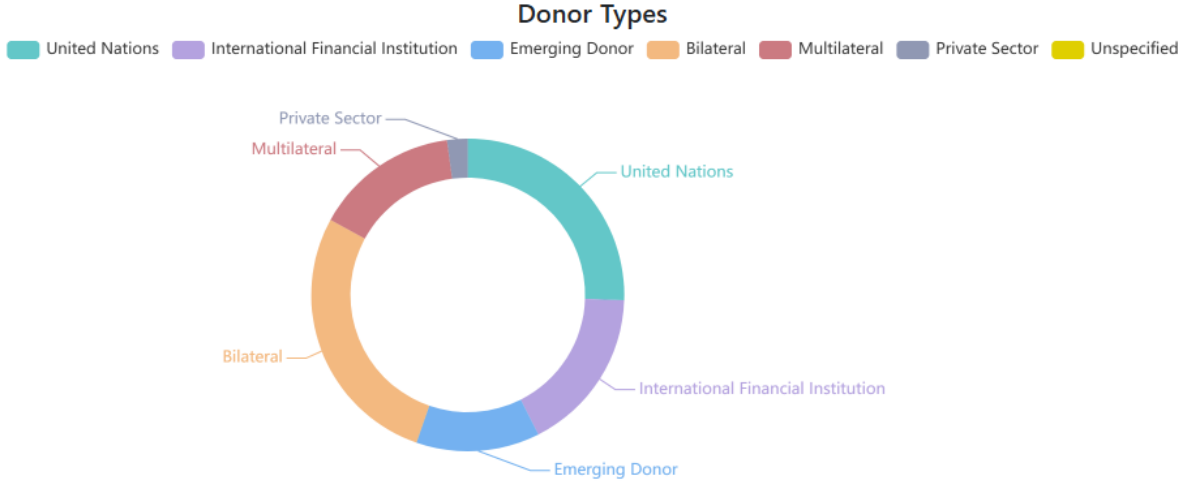
The Law on Investment Promotion outlines specific social and environmental responsibilities for investors in Lao PDR, with Article 73 focusing on social obligations and Article 74 addressing environmental commitments.

As in neighbouring Cambodia, private sector led NbS-financing initiatives are particularly focused around PES, supported by large agriculture, forestry and hydropower companies. Ecotourism companies have also supported protected area management and NbS-related activities, although are still in their infancy. The NSEDP emphasises the importance of ecotourism for nature conservation and ecosystem restoration financing (particularly for water source forests and biodiversity protection areas), highlighting Yorla Pa as a model to follow (see Table 11). Other examples include the Public Private Partnership Green Discovery project involves over 80 community members Dong Hua Sao National Protected Area in Champasak Province.[47]

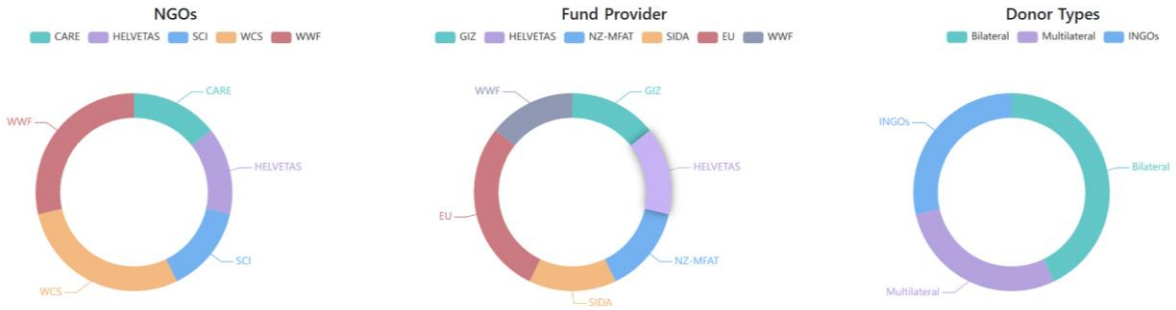
4.2.3 International development financing

Climate financing in Lao PDR is largely dominated by international financing programmes and projects, with largely bilateral and IFI recorded donor projects registered on the ODA Management Information System (ODA-MIS) portal. It is unclear what proportion of climate financing is allocated for NbS-related activities.

Figure 17: Recorded sources of climate donor financing in Lao PDR



[46] UNDP, 2023
[47] UNDP, 2022b.



Source: ODA-MIS (2025)

Multi-donor funds: A large proportion of Lao PDR's NbS financing is sourced from funds such as GEF and GCF. To access such funds, the government relies on bilateral and multilateral institutions, and development partners who are accredited by donors, as government agencies do not yet to meet the eligibility criteria set by the funds.[48]

Multilateral and bilateral development finance: Climate-related development finance reported data from OECD illustrates that approximately USD 987 million of climate finance was committed to Lao PDR between 2015-2019, with adaptation comprising 71% of the total flow during this period (19% mitigation, 10% cross-cutting): up to 80% in 2019. World Bank, ADB and GCF were the top contributors.

In 2018 and 2019, grants accounted for 59% and 49% of the total adaptation finance flows (27% loan, 4% equity and 51% loan, 0% equity), respectively. This contrasts sharply with global climate finance trends, where climate-related grants represented only 5% of the total in 2017/2018. Given Laos's high debt-to-GDP ratio[49], grants remain a key priority for climate finance mobilisation going forward.

Current NbS efforts in the country are supported and implemented by (i) multi-donor funds, such as GCF, GEF and GAF; and (ii) multilateral and bilateral agencies and partners such as UNDP, WWF, GIZ, EU, SIDA, and New Zealand MFAT. NbS implementation to date has typically been project led – largely focused on ecosystem-based adaptation – funded by international donors and development partners. A priority to date has been flood-related NbS interventions in river basins, urban areas and wetlands, as presented in Table 14.

4.2.4 Financing systems and tools

Table 13: National climate financing systems in Lao PDR

Tool	Details
ODA Management Information System (ODA-MIS)	Launched in 2018 by the Ministry of Planning and Investment (MPI), the ODA-MIS provides a centralised climate knowledge base and development aid management system. Climate-related projects, funding budgets and sources, and implementing agencies are recorded in the system, although not all projects are registered yet. For example, despite the implementation of the projects listed in Table 11, only six are currently recorded on the ODA-MIS related to CCM, CCA, DRR, forests and natural resource management priority sectors. Four of these are implemented by MAF, with none by MoNRE, suggesting an absence in recording of the MoNRE-implemented NbS projects outlined in Table 14.

[48] UN DESA, 2021

[49] As outlined in the NSEDP Financing Strategy (2024), China is the largest single creditor, accounting for 57% of all concessional debt and 47% of total debt. Other creditors, including the ADB, International Development Association, Thailand, Korea, and Japan, each hold less than 10% of the debt

4.2.5 Innovative NbS financing mechanisms

Conventional adaptation, disaster and biodiversity-led NbS financing committed via Lao PDR's public budget provides the foundational mechanism for sustained NbS financing. Simultaneously, alternative national and international financing mechanisms provide a diverse range of complementary approaches to unlock innovative private and public financing opportunities.

Table 11 identifies six example innovative instruments that have been applied (or considered) in the country, and that may offer opportunities for replication and upscaling in Lao PDR and across other relevant AMS. These are generally aligned with NbS-mainstreaming across Lao PDR's NDC priority sectors for adaptation financing (i) agriculture, (ii) forestry and land use, (iii) water resources, (iv) transport and urban development, (v) public health, and (vi) energy.

Table 14: Examples of different types of innovative NbS financing mechanisms in Lao PDR

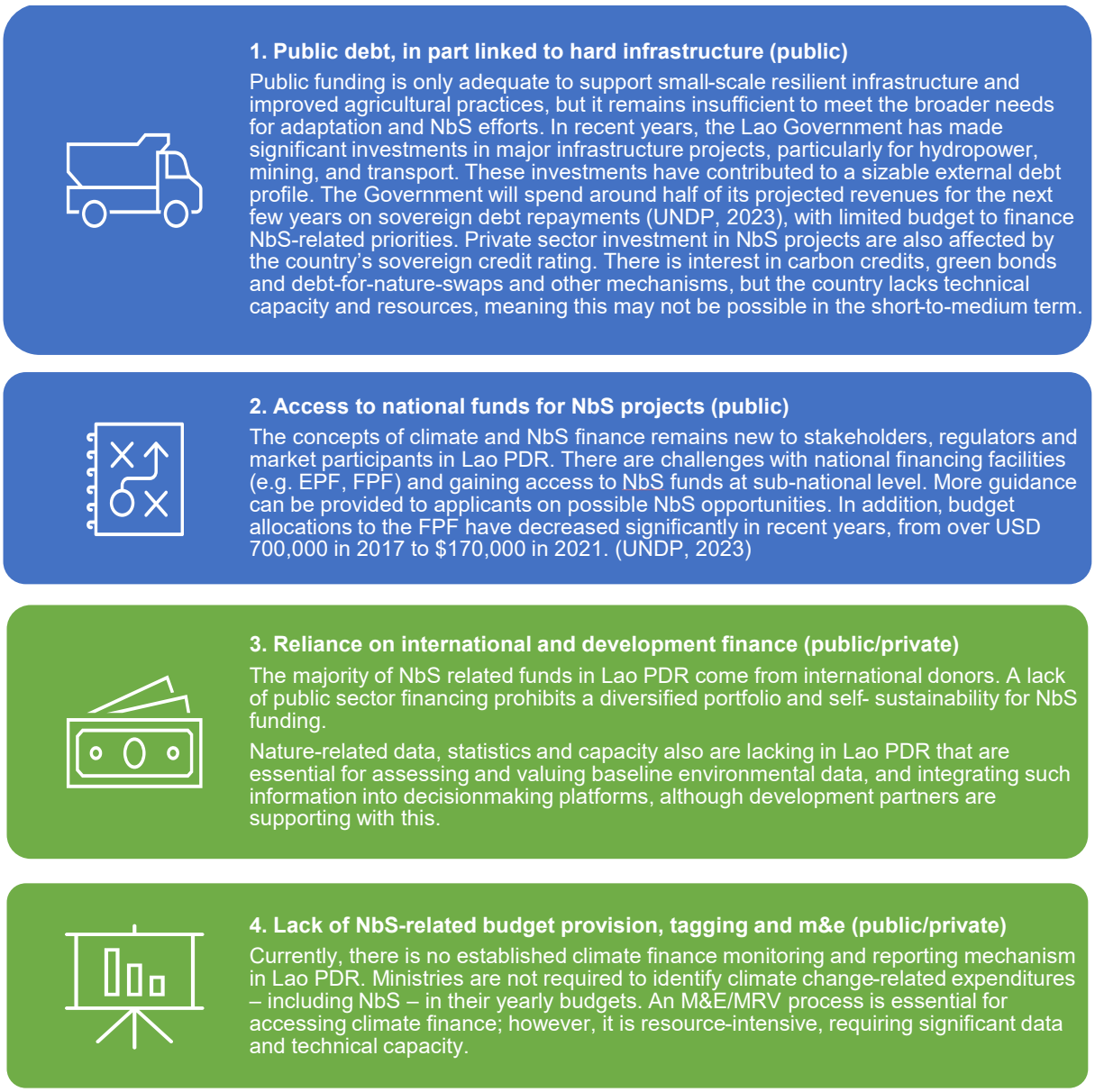
Financial actor	Funding instrument	NDC-aligned priority sector	NbS integration mechanism	Description	CCA and DRR-related NbS relevance	NbS innovation, upscaling and replication potential
Grant						
Donor: GCF (USD 11.5 million) *Lead agency*: MoNRE *Supported by*: UNEP	Grant (2020-2025)	Urban development (flooding)	(i) capacity building, (ii) policy, (iii) piloting technical interventions	The **Building resilience of urban populations with ecosystem-based solutions in Lao PDR** project aims to build climate resilience of local communities in the cities of Vientiane, Paksan, Savannakhet and Pakse, through the implementation of an integrated approach to flood management and EbA solutions to reduce impacts of urban flooding and help manage climate induced floods in the long-term | Details	Under the project, MoNRE has signed partnership agreements with the NUoL to establish an EbA Knowledge Hub. The project will also develop a national urban EbA guidelines for flood reduction in Lao PDR and support capacity building, develop a report on economic valuation of ecosystem services for wetlands and urban streams, and design and install permeable paving solutions, and rehabilitate 1500 Ha of wetlands and streams across Vientiane, Paksan, Savannakhet and Pakse.	The project aims to test an alternative approach to urban flood control in Lao PDR, moving away from traditional grey infrastructure, towards mainstreamed EbA. This represents one of the first such large-scale examples in ASEAN and could serve as a model for other AMS facing similar climate challenges. The establishment of an NbS hub and urban EbA guidelines is critical for guiding future policies and projects in Lao PDR going forward.
Donor: GEF (USD 6,192,694 mil) *Lead agency*: DWR, MoNRE *Supported by*: UNDP	Grant (2024-)	Water resources (river basin planning)	(i) capacity building, (ii) policy, (iii) piloting technical interventions	The **Promoting climate-resilience through ecosystem-based adaptation (EbA) solutions in the Northern Lao PDR** project aims to enhance resilience and sustainable livelihoods in the watershed areas of the Northern Lao PDR (Nam Phark River basin, Nam Ou River basin, Nam Kor Catchment and Ngeum River) by accelerating the integration of EbA solutions at the national and subnational levels | Details	The project is aiming to develop a national EbA tool to improve decision-making capacities for EbA, and will also facilitate the adoption of EbA plans and financial roadmaps in the three target provinces. Community-led interventions on the ground will focus on watershed rehabilitation	The project is dedicated to promoting innovation through gender-responsive and co-developed EbA for watershed restoration, supporting knowledge sharing and M&E for future upscaling and replication across Lao PDR.
Donor: GEF (USD 6,772,477 mil) *Lead agency*: MoNRE *Supported by*: WWF	Grant (2024-)	Water resources (river basin planning)	(i) capacity building, (ii) policy, (iii) piloting technical interventions	The **Enhancing Integrated Watershed Management and Climate Resilience for Vulnerable Communities in the Nam-Poui, Nam-Poun, Nam-Lay and Nam-Houng Basins in Lao PDR** project aims to enhance the adaptive capacity of agriculture-dependent communities to floods, droughts, seasonal variations, and unequal access to freshwater in key river basins in Sayaboury province, including through NbS interventions | Details	The project will support provincial IWRM and river basin management plans that incorporate community-driven NbS and hybrid measures. Small-scale flood and drought NbS will be piloted across rural, forest and agricultural landscapes.	As above, the project will support the co-development of low cost, community-led NbS interventions, that use local knowledge and can be widely replicated by similar on the ground initiatives.

Donor: GEF (USD 5,329,452), UNDP (USD 250,000) *Lead agency*: DRW, MoNRE *Supported by*: UNDP	Grant (2022-2026)	Water resources/ Urban development (flooding)	(i) Capacity building, (ii) policy, (iii) piloting technical interventions	The **Integrated Water Resource Management and Ecosystem-Based Adaptation in Xe Bang Hieng River Basin and Luang Prabang City** project aims to strengthen the climate resilience of communities in two particularly vulnerable areas of Lao PDR – Savannakhet Province and Luang Prabang City – particularly focusing on building resilience to flood and drought impacts through EbA measures | Details	The project will support integrated urban and rural EbA interventions	The project is building in knowledge management and M&E, which will inform future projects in the region
Market-based mechanisms						
Operator: Yorla Pa	Equity/ eco-tourism (2015-)	Ecosystem/ biodiversity	Finance mechanism	**Yorla Pa** is a **private ecotourism** initiative operating two sites within protected forest areas through conservation concessions. The core ethos of the company is for conservation gains, with ecotourism the sustainable investment mechanism focused on long-term economic returns. One of the sites, Nam Pien Yorla Pa, operates as a 5000 Ha ecotourism site covering 2% of the Phou Khao Khouay NBCA, with plans to expand further into the future. The initiative employs local community members, and the area is co-managed as a management board between Yorla Pa, the NBCA, Vientiane authorities and local community representatives | Details	The ecotourism initiative provides a source of conservation finance for community-based livelihoods (for those previously engaged in harmful activities) and the protection of an important water source forest. The organisation also supports restoration activities within targeted degraded areas, monitoring and patrolling within wider protected areas, and wildlife education.	Nature-based tourism has the potential to become the largest rural employer, yet barriers including a lack of enabling landscape, limit its expansion. The Yorla Pa ecotourism model is promoted by the 9th NSEDP for replication across Lao PDR. Support with planning and nature-positive tourism concessions in protected areas and OECMs may provide NbS financing opportunities.
Financier: unknown (various) *Implementer:* Lao PDR Government *Supported by:* unknown (various)	Debt-for-nature swap	Ecosystem/ biodiversity	Finance mechanism	Lao PDR may be suitable for debt restructuring due to its globally significant natural resources, high debt-to-GDP ratio, and high debt servicing obligations. Since 2021, the government, with UNDP support, has explored **debt-for-nature** (DfN) options to create fiscal space, aligned with the objectives of the 9th NSEDP and the National Green Growth Strategy. A cross-ministry DfN Technical Working Group has been established to provide inputs to a DfN proposal. It is understood that MAF and MoF are supportive of the DfN concept, yet financing limitations remain | Details	DfN investments have been demonstrated across ASEAN, including most recently for coral reef ecosystem resilience in Indonesia. In Lao PDR, DfN options could support protected area conservation and restoration activities, including NbS for CCA and DRR (e.g. forest restoration, wetland rehabilitation, wildlife corridors, vegetative erosion control).	In 2021, nearly 50% of external public debt was held by China, followed by ADB and WB. Any DfN proposal will need to develop robust mechanisms to deliver funding that can be effectively monitored and verified according to creditors' requirements, via standard budgetary processes, or leveraging the EPF.

4.3 Barriers and challenges for NbS financing

Integrating NbS principles and approaches into international and national financing mechanisms is a challenge for both the private and public sector in Lao PDR, outlined below.

Figure 18: Public and private sector NbS financing barriers in Lao DPR



Despite the identified barriers, there are several key enablers and successes that provide the foundation for increased NbS mainstreaming into the Lao PDR finance landscape.

Figure 19: Enablers and opportunities for NbS financing in Lao DPR

4.4 Opportunities for NbS financing

1. Robust national financing facility to provide access to NbS funds (public/private)

National climate and environment funds, led by the EPF, provide a good opportunity and enabling platform for NbS funding to support the implementation of sub-national projects. The Lao PDR government should work with development partners to foster increased funds for NbS-related activities, as well as local agencies on establishing proposals for submission.

2. Platform for ecosystem datasets, evidence-base and cost norms to support financing (public)

There is a big opportunity in Lao PDR to establish a database of ecosystem data, NbS projects, CBA findings, and establish cost norms for practical NbS interventions and informed financing going forward. This could be linked via MoNRE or the proposed national NbS Hub. An OECD study (2024) has also suggested establishing the Department of Environment and Stability Statistics in the Lao Statistics Bureau, to help to create a robust institutional framework and enabling information environment, including for NbS financing.

3. NbS sectoral focus and development partner projects (public/private)

As demonstrated, urban resilience is one of the most advanced areas for international NbS financing in Lao PDR. This flagship approach - spearheaded by MoNRE and MPWT - can provide help to unlock further financing in this area, as well as providing demonstrable evidence for other priority sectors to follow.

Lao PDR could also look to additional grant instruments, such as via the Global EbA Fund.

4. Opportunities for innovative finance mechanisms, involving the private sector (public/private)

Carbon-related NbS finance stands out as the most immediate opportunity for Lao PDR, considering the national importance of protected area financing. Existing nascent conservation financing mechanisms such as PES and ecotourism should also be further explored and piloted, as well as alternative innovative financing mechanisms, include green bonds and DfN swaps, in the mid-to-longer term.

4.5 AMS NbS financing summary

Criteria	Description	Criteria	Description
Priority sectors for adaptation finance	(i) agriculture, (ii) forestry/ land use, (iii) water resources, (iv) transport/urban, (v) public health, (vi) energy	*Focus sectors for resilience-led NbS financing (based on review to date)*	(i) water resources, (ii) urban, (iii) ecosystems/biodiversity
Key NbS financing actors (national, international, private sector)	International – dominated by international financed programmes and projects	*Key NbS financing instruments (public, donors, development partners, private)*	Largely grants from multi-donor funds and bilateral partners
Key NbS financing sources	National: (i) EPF, (ii) FPF	*Examples of NbS financing innovation/ successes*	GEF and GCF NbS projects focusing on urban resilience and IWRM
	International: (i) GEF, (ii) GCF, (iii) UNDP		
	Private: (i) PES, (ii) ecotourism		

5 Philippines National Finance profile

5.1 Climate and disaster risk and ecosystem resilience financing landscape

The Philippines incurred damages of over USD 8 billion from disasters between 2011-2018, where the cost of recovery reached USD 11.53 billion. Climate change impacts could increase to 7.6% of the national GDP by 2030 and 13.6% by 2040 (PHP 1.4 trillion). Yet, the cost of inaction will further impact business disruptions (up to PHP 527 billion), productivity losses due to extreme heat (up to PHP 466 billion), infrastructure damage from climate-related disasters (up to PHP 365 billion), and of relocating displaced communities (up to PHP 8.9 billion). These impacts are expected to worsen by 2050, potentially accounting for 18-25% of GDP.[50]

Natural ecosystems are critical to building resilience to climate-related hazards. Annually, forests (~200k PHP/Ha), mangroves (~200k PHP/Ha) and coral reefs (~70k PHP/Ha), are estimated to generate billions of PHP in ecosystem services. Coastal ecosystems have been found to reduce annual damages to property from extreme weather in the Philippines by 30%, saving up to USD 1 billion each year. Studies have identified that protecting mangroves, and coral reefs could be up to 50 times more cost-effective at resisting storms over a 15-year investment period, versus constructing a concrete seawall.[51]

Financing initiatives to build resilience is an increasing priority in the Philippines. The 2024 NAP identifies adaptation finance priorities based on six key factors, including (i) co-benefit approach, (ii) mainstreaming adaptation into public finance, (iii) enabling private sector investment in adaptation, (iv) leveraging innovative funding instruments, (v) engagement with local communities and public sector, and (vi) establishing strategic partner networks. The country's NAP also identifies eight key sectors as the focal points for adaptation action: (i) agriculture, fisheries, and food security, (ii) water resources, (iii) health, (iv) ecosystems and biodiversity, (v) cultural heritage, population displacement, and migration, (vi) land use and human settlements, (vii) livelihoods and industries, (viii) energy, transport, and communications.

5.2 NbS financing approaches

5.2.1 Domestic public financing

Finance policy: The NAP identifies resilience policy and finance priorities for the country. The DBM initiated the Program Convergence Budgeting framework to enhance strategic budgeting, cross-sectoral collaboration, and prioritisation. Under the PCB, the Climate Change Adaptation, Mitigation, and Disaster Risk Reduction (CCAM-DRR) cabinet cluster is led by DENR and supports the integration of CCAM-DRR priorities, including NbS into public finance.

The Interagency Technical Working Group on Sustainable Finance (ITSF) serves as the platform for coordination on NDC and green financing, including for NbS eligible projects. NbS is highlighted as a guiding principle in several key national financing documents, including the ITSF-led Philippine Sustainable Finance Guiding Principles. [52]

The Roadmap to Institutionalize Natural Capital Accounting (NCA, 2022), developed by NEDA, the Philippine Statistics Authority, and DENR, outlines strategies for implementing NCA from 2022-2040. It provides a tool to measure natural capital changes, develop NCA indicators, integrate NCA into policy and planning, incorporate ecosystem valuation into accounting and reporting systems, and develop natural financing instruments.[53]

State budget: Biodiversity, climate, and disaster resilience measures have historically been key components of public spending. Between 2016-2022, the Philippines allocated PHP 1.59 trillion towards climate action, representing 5.8% of total national spending, with 94.5% of this budget allocated for adaptation. Of overall climate allocations, 6.1% was for DENR, 77% to Department of Public Works and Highways (DPWH) and 10% to the Department of Agriculture (DA). In 2023, DBM

[50] NAP, 2024
[51] Earth Security, 2022
[52] CCC and DENR, 2023
[53] NEDA, 2022

identified PHP 453.11 billion of climate-related tagging, as well as PHP 291 billion tagged under the risk resiliency programme. Again, most of the adaptation related sectoral funding was directed towards climate-resilient agriculture (DA) and flood mitigation infrastructure measures (DPWH), rather than core NbS actions. Examples include the Flood Management Program of the DPWH, with a budget allocation of PHP 168.9 billion for the construction and rehabilitation of flood-mitigation structures and drainage systems.[54]

Only a fraction of climate-tagged budget expenditure supports the implementation of NDC actions. Between 2020-2023, the Philippines invested USD 1.1 billion in NDC-related projects; only 9.75% of the total climate-tagged expenditure over this period. 94% of this NDC-tagged funding was allocated to rail projects. In 2021, only 5.7% of the total budget was for the NbS-linked NCCAP Thematic Priority of Ecosystem and Environmental Sustainability (EES).[55]

NbS-related public spending can partially be identified through the NICCDIES system (outlined below), which allows for EES-related climate budget tagging for CCM and CCA mechanisms. Almost all of this is reported on by DENR. In 2022, this included several climate projects with NbS components, including the *Manila Bay Coastal Management Strategy*. In 2023, DBM allocated PHP 2.49 billion for the DENR *National Greening Program* supporting the reforestation of 11,631 Ha (6.18 million seedlings). Further tagged programmes included the *Protected Areas Development and Management Program*, and the *Management of Coastal and Marine Areas*. Other national NbS-related programmes have also received significant support, such as the DBM-led *Green, Green, Green* assistance program, launched in 2018 to increase public green space, and allocated a national budget of PHP 1.055 billion in 2024. DENR also initiated the Risk Resiliency Program and Convergence Budget to identify climate-responsive investments, with PHP 291 billion worth of programs/projects tagged and funded in 2023.

Relevant national funds: The Philippines has several funds that may qualify for NbS financing.

Table 15: National funds in the Philippines

Tool	Details
People's Survival Fund (PSF)	PSF is an annual national-budget sourced fund, managed by the PSF Board (DoF, CCC, DBM, NEDA). The fund allocation can be augmented by mobilising external funding sources. It intended for local government and accredited local organisations to implement CCA projects. *The CCC, supported by development partners, has been working to build the capacity of local government to submit proposals for NbS project funding* (Box 5).
Integrated Protected Area Fund (IPAF)	IPAF is the main protected area financing mechanism provided under NIPAS. Budget for the fund is largely sourced from income of protected areas (e.g. entrance fees, resource user fee, concession fees, development fees), as well as grants and government allocations. *IPAF has financed various protected area management and restoration activities to build climate and disaster resilience.*
Local Government Support Fund (LGSF)	The LGSF is a program that provinces financial assistant to local governments, including agriculture-related programs, disaster response PPAs, rehabilitation and recovery, and social programs. The has recently established a M&E dashboard. The majority of funds have supported local infrastructure rehabilitation projects, although *several NbS-related programmes have been backed, including the Green, Green, Green assistance program*.
National Disaster Risk Reduction and Management Fund (NDRRMF)	The NDRRMF is used to address the effects of natural and human-caused disasters, including pre-and post-disaster activities, funded annually through the General Appropriations Act. Projects incorporating NbS may qualify for funding if they demonstrate potential for DRR or enhance recovery and resilience against natural hazards.
Special Purpose Fund (SPF)	The SPF comprises budgetary allocation by the DBM for specific uses, including projects not yet identified during budget preparation and legislation. The fund provides additional resources to line agencies (including local government), on top of their allocated national budget. The NDRRMF also receives allocations from the SPF. The SPF has previously supported NbS-linked projects.

[54] NAP, 2024
[55] CCC and DENR, 2023

Box 11: Building awareness on NbS and EbA opportunities through the PSF

Context and rationale: While investing in adaptation measures is crucial in the Philippine context, local governments often struggle with limited resources and insufficient information to meet the PSF criteria.

Attempts to build NbS project base through the PSF: To address these challenges, the CCC is enhancing awareness and has previously trained institutional resource persons – mainly from universities – to support local governments with developing PSF proposals. The Philippine EbA Core Group, with support from BMUB-IKI and GIZ projects, secured EUR 120,000 from DENR to generate project ideas and proposals on EbA, resulting in 44 project concepts and the development of concrete proposals.

Outlook: The PSF continues to provide opportunities for national NbS financing, with PHP 539 million-worth of new CCA projects approved in 2023. Example NbS funded projects include a *mangrove rehabilitation project in Catanauan, Quezon* (PHP 2.63 million) and the *installation of embankment infrastructure and reforestation for enhanced flood control of Lo-om River in Borongan City, Eastern Samar* (PHP 118 million).

5.2.2 Private Sector Financing

The private sector plays an active role in climate, disaster and natural resource investment in the Philippines, such as via lending instruments, green bonds, carbon markets, public-private partnerships and blended finance to make semi-bankable projects viable. The country has a well-developed finance landscape for smallholder agriculture, blue carbon and sustainable coastal management projects, yet receives less private attention for terrestrial sustainable forestry, commercial agriculture, and restoration and conservation activities.[56]

As of 2021, the Philippines had USD 4.2 billion in outstanding green and sustainability-focused bonds issued by the private sector. The BSP estimated that in 2019, approximately 10.6% of total loan portfolios were allocated to green projects. However, NbS projects are not explicitly listed as eligible for green loans. Borrowers must justify NbS initiatives, such as demonstrating how mangroves enhance climate resilience, to align them with accepted project criteria. [57]

The NAP identifies the importance of encouraging local community ownership and sustainable natural resource use, including through PES programs, ecotourism development and biodiversity-friendly enterprises. The NAP also highlights an aim to *create formal incentive platforms supported by strengthened policies and simplified mechanisms for private sector access, to encourage adoption of nature-based adaptation solutions*.

5.2.3 International Development Financing

Multi-donor funds: The main global climate change funding instruments supporting NbS activities in the Philippines comprise the GCF, GEF, AF and CIF. The Philippines has faced historic challenges in securing GCF projects, despite its high vulnerability to climate change.

Multi-lateral and bilateral financing: According to a recent adaptation finance tracking report[58], between 2013-2017, the Philippines received a total climate finance commitment of USD 4.3 billion from international sources – up to almost double at USD 9.2 billion in 2022[59] –, predominantly from Japan and the World Bank, who provided 49% and 25% of all financial flows, respectively. Between 2013-2017, 44% of commitments were directed towards adaptation finance commitments, primarily in the form of loans, which comprise 93% of assessed climate commitments. The study identified that much of the reporting financial flows for adaptation may be over-reported (i.e. not fully aligned with national or global adaptation targets). In addition, 94% of the adaptation finance commitments did not identify/target gender equality; a historic gap in adaptation finance in the Philippines.

The 2023 ODA Portfolio Review Report published by NEDA identified a total of 73 programs and projects (supported by 35 loans and 38 grants), with total cost of PHP 232.95 billion were identified with CCA, CCM and DRR-related components. This included limited NbS-led projects implemented by DENR, notably the JICA-loan financed Forestland Management Project (USD 62.57, 2012-2024), which aims to support community-based forest and river basin management through the restoration of 71,300 Ha, and the USAID grant-funded SIBOL – Sustainable Interventions for

[56] WWF, 2024
[57] GIZ, 2024; Zafra et al., 2022
[58] ICSC, ACCORD Inc. and CARE, 2020
[59] DBM, 2023

Biodiversity, Oceans and Landscapes (USD 25.30 million, 2022-2025), supporting the improvement of 329,912 Ha of biologically significant areas for natural resource management within NIPAS.

5.2.4 Financing Systems and Tools

The Philippine government applies indicators, tools, and methodologies to assess sustainable natural resource use and support development planning, as outlined in the PDP and the National Climate Change Action Plan.

Table 16: National climate financing systems and tools in the Philippines

Tool	Details
Climate Change Expenditure Tagging (CCET)	The DBM and CCC-led CCET aims to mainstream climate budget tagging in the government budget cycle and requires the government to keep track of CCM and CCA actions across all levels of budgeting and expenditure. The CCET applies a standardised policy-based climate change typology and coding structure, based on the NCCAP. Datasets can provide a stocktake on tagged climate change initiatives and their characteristics. This also includes Local Climate Change Expenditure Tagging, providing a mandate for local governments to tag mitigation and adaptation programmes in their annual investment plans.
National Integrated Climate Change Database and Information Exchange System (NICCDIES)	NICCDIES is the primary enabling platform of the CCC to consolidate and monitor data and information on mitigation, adaptation and climate action.
Public Investment Program Online (PIPOL) System	The PIPOL system manages data entry and updates on priority programs and projects under the Public Investment Program, including for climate, disaster and environmental priorities.
Philippines' Official Development Assistance (ODA) Portfolio Review	The ODA Review is an annual report that assesses the status of the country's ODA loans and grants, including for projects and programmes across priority sectors.

Box 12: Philippines NICCDIES CCET approach for integrating NbS into public budget and expenditure

The CCET includes a number of typology codes under the adaptation pillar (policy and governance) focused on NbS, as outlined below, including innovative NbS financing mechanisms.

TYPOLOGY CODE	ADAPTATION	TYPOLOGY CODE	MITIGATION
POLICY AND GOVERNANCE			
A311-01	Design payments for ecosystem services (PES) and other innovative conservation financing mechanisms to support ecosystem-based adaptation and mitigation		
A311-02	Establish zoning guidelines for different ecosystems based on the vulnerability and risk assessment results		
A311-03	Design and develop integrated ecosystem management approaches for watersheds and wetlands to reduce vulnerability to climate change variability		
A311-04	Review PEENRA policy and implement greening of the national income accounts		
RESEARCH AND DEVELOPMENT			
A312-01	Conduct ecosystems vulnerability and risk assessment		
A312-02	Update status of Protected Areas and Key Biodiversity Areas from results from the vulnerability and risk assessment		
A312-03	Study, design and implement financing mechanisms for IWRM and climate change adaptation implementation in critical watersheds and river basins		
A312-04	Study and design financing mechanisms for IWRM and climate change adaptation implementation in critical watersheds and river basins		
KNOWLEDGE AND CAPACITY BUILDING & TRAINING			
A313-01	Training on vulnerability and risk assessments		
A313-02	Establish management information system for different ecosystems that link various data sources		
A313-03	Document and disseminate best practices, including climate change responsive indigenous practices		
A313-04	Implement training program on wealth accounting or ENRA		
ACTION DELIVERY			
A314-01	Retain or re-establish mangrove forests, wetlands, and other ecosystems considerations to as protection against floods risks	M314-01	Implement and monitor progress of REDD+ related policies
A314-02	Conserve and protect existing watershed and protected areas	M314-02	Re-forestation and afforestation that increases vegetative cover or sequesters carbon
A314-03	Delineate "ridge-to-reef' ecosystem-based management zones for the ecotowns through multi stakeholder process	M314-03	Sustainable peat land/ wetland/forest management and protection
		M314-04	Avoided deforestation

5.2.5 Innovative NbS financing mechanisms

Restricted government budget allocation towards NbS demonstrates the need to rethink financing strategies aimed at boosting resources and fostering innovation. The NAP identifies how funding mobilisation should consider inputs from private sector, capturing innovative approaches to climate finance, while leveraging public sector investment. This should consider the PSF, other resilience-led funding mechanisms and development assistance facilities.

Table 17 identifies six example innovative instruments that have been applied in the Philippines. These are generally aligned with NbS-mainstreaming across the country's priority sectors for (i) agriculture, fisheries, and food security, (ii) water resources, (iii) health, (iv) ecosystems and biodiversity, (v) cultural heritage, population displacement, and migration, (vi) land use and human settlements, (vii) livelihoods and industries, and (viii) energy, transport, and communications.

Table 17: Examples of different types innovative NbS financing mechanisms in the Philippines

Actors	Type	Sector	Mechanism	Description	NbS relevance/ opportunities	NbS upscaling
Grants						
Financier: IKI (USD 8 mil) *Implementer:* DENR and RBCOs *Supported by:* GIZ	Grant (2019-2024)	Water resources	(i) Capacity building, (ii) policy, (iii) piloting technical interventions	GIZ supported DENR under the **Ecosystem-based management and ecosystem services valuation in two river basins in the Philippines project**, applying networks of EbA measures and ecosystem service valuation in Visayas and Mindanao regions | Details	EbA interventions include riverbank restoration, as well as the establishment of urban/agricultural buffer zones linked to protected areas, to combat flood and drought risk, forest loss and sedimentation of streams and reservoirs.	Along with ADB-led programmes in the country, GIZ's river basin planning project has supported the demonstration of IWRM and NbS measures that can be scaled up and replicated across the country.
Financier: Government of Canada (CAD 8 mil) *Implementer:* Pending (various) *Supported by:* Forest Foundation Philippines (FFP)	Grant (2024-2028)	Cross-cutting	(i) Capacity building, (ii) policy, (iii) piloting technical interventions, (iv) finance mechanism	The **Philippines-Canada Partnership on Nature-based Solutions (NbS) for Climate Adaptation (PCP4NbS)** aims strengthen the climate resilience of communities, particularly rural and indigenous women, and ensure co-benefits from, and for ecosystems. To support participatory development, implementation, and enhancement of NbS for CCA, a Special Fund has been established under the program, to provide grants for local projects | Details	Grounded in the guiding principles of the IUCN Global Standard for NbS, the programme will target three wins: biodiversity conservation, climate adaptation, and ensuring gender equality in natural-resource management.	The Special Fund supports three types of grants over the Program lifetime: (1) site-based grants to implement NbS; (2) thematic grants to demonstrate NbS; and (3) grants to sustain public support for NbS. It will support participatory and coordinated projects on a large scale, to meet local needs, while contributing to national commitments and targets.
Loan						
Financier: ADB *Implementer:* DPWH (various)	Grant and Loan	Water resources	(i) Capacity building, (ii) policy, (iii) piloting technical interventions	The regional TA on **Protecting and Investing in Natural Capital in Asia and the Pacific** provided expertise in integrating NbS investment options into the proposed FRM master plans for the Abra, Buayan–Malungon, and Tagum–Libuganon river basins. ADB are supporting DPWH to develop comprehensive basin-level flood risk management master plans that integrate NbS approaches to through natural river	In river systems, NbS are green and inclusive interventions that respect river dynamics and ecosystem functions. These interventions are grouped by function with related actions for flood conveyance (e.g. reviving old channels), water retention and detention (e.g. wetland restoration), bank erosion control (e.g.	The project developed a guidance brief – *Nature-Based Solutions for Flood Risk Management Revitalising Philippine Rivers to Boost Climate Resilience and Enhance Environmental Sustainability*, highlighting the natural river management approach and lessons from the Philippines on how NbS can be scaled up to strengthen cost-effective flood risk management. The project

				management, with short, medium, and long-term strategies, as well as feasibility studies and detailed designs of priority NbS and hybrid infrastructure | Details	meander restoration), flood impact reduction (e.g. zonation)	also applied an NbS selection process using multicriteria analysis (MCA) and CBA.
Insurance product						
Implementers: Philippine Government and the World Bank	Catastrophe bond	Cross-cutting	(i) Finance mechanism	In 2019, the Philippines, with the World Bank, launched a 3-year $225 million **cat-bond** for earthquake, typhoon and rainfall protection. Listed on the Singapore Stock Exchange, bonds were bought by international reinsurers and provided a $52.5 million payout in 2022 due to Typhoon Odette, demonstrating its value in funding recovery efforts | Details	The cat-bond can support efforts to protect and support NbS, including watershed forests, mangroves, seagrasses and coral reefs, linked to disaster events	The cat-bond marked a disaster insurance milestone. There may be opportunities to launch similar cat-bond initiatives to protect and support watershed forests, mangroves, seagrasses and coral reefs, linked to disaster events
Market (results-based) mechanism						
Implementers: Cagayan de Oro River Basin Management Council (CDORBMC) and Wetlands International Philippines	Payment for ecosystem services (PES)	Water resources	(i) Finance mechanism	CDORBMC and Wetlands International partnered for watershed rehabilitation in Cagayan de Oro Basin. Funding from **Cagayan de Oro** Bulk Water Inc. and Unified Communications One Foundation, has supported NbS at the PES sites. Green investors can contribute to restoration activities | Details	The efforts have supported riparian buffer restoration, reforestation and river basin management at the sites.	Green investors can support local community groups engaged in the protection and restoration of the river basin and PES sites, managed via the CDORMC. These may include operators and beneficiaries of restoration activities the basin, or other institutions.
Blended finance						
Implementer: Hijo Resources Corporation (HRC)	Sustainability linked loan and blended finance	Land use/ Industry	(i) Finance mechanism	**HRC** is a tourism, agribusiness, property and port operations corporation, based on a 760 Ha site in Davao del Norte. The site is faced with challenges from sedimentation due to deforestation upstream, and coastal erosion downstream, resulting in a loss of mangrove, sea grass, coral habitats | Details	The Trinity Project employs a three-pronged EbA strategy to restore HRC's coastal ecosystem, aiming to establish 20 Ha of mangrove forest, cultivate 80 Ha of seagrass meadows, and develop a fringing artificial coral reef habitat.	The case demonstrates how the Trinity Project's revenue model can be incorporated into the company's cash flow, enabling it to apply for a sustainability-linked loan. Additionally, the company can consider a blended finance approach with the local government to extend the project to public coastal areas.

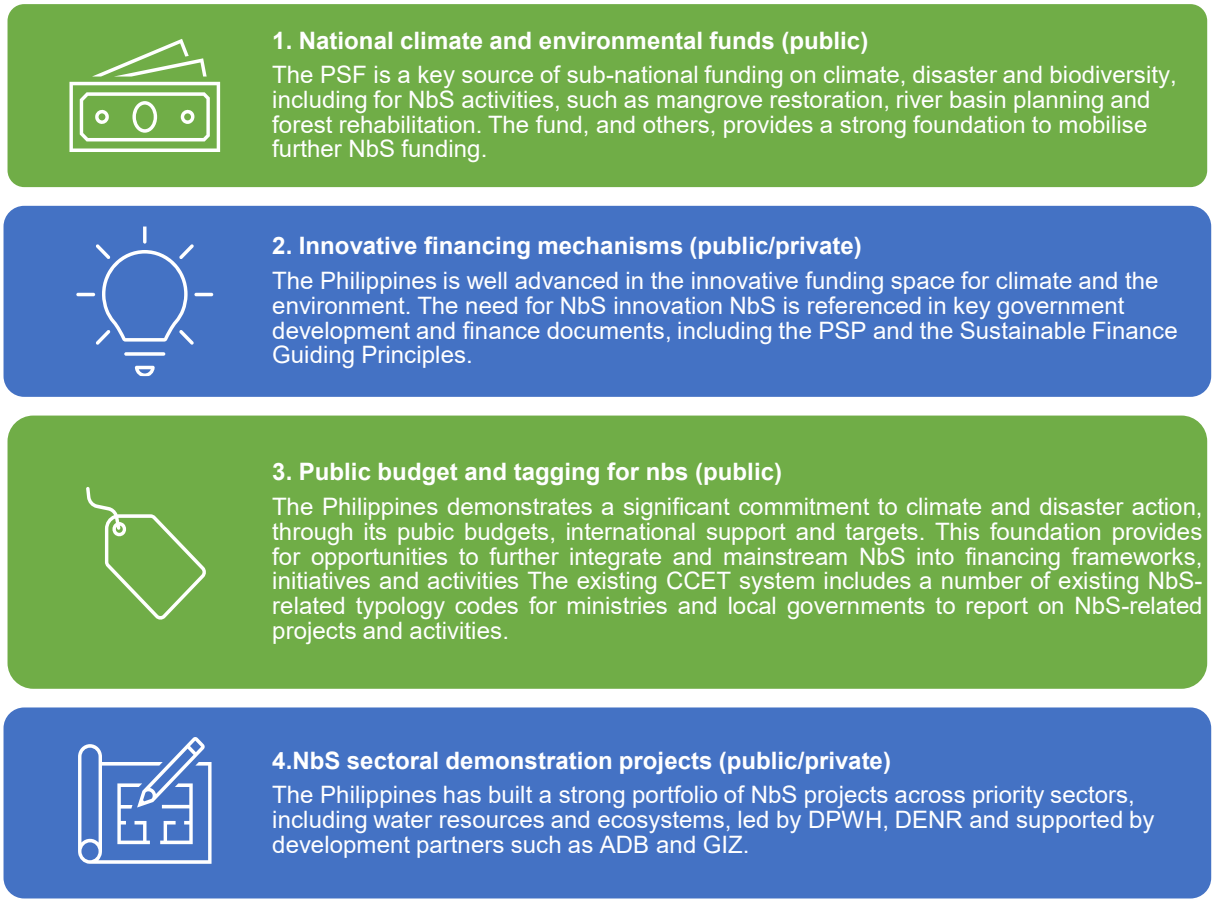
5.3 Barriers and enablers for NbS finance

The Philippines NAP identifies five key barriers for adaptation financing, and many of these are well-aligned with the similar NbS financing challenges outlined below.

Figure 21: Public and private sector NbS financing barriers in the Philippines

Several key enablers have facilitated and paved the foundations for NbS-related financing and mainstreaming in the Philippines.

Figure 22: Enablers of NbS financing in the Philippines



5.4 Opportunities for NbS financing

1. National climate and environmental funds (public)

There are a number of national funds, particularly the PSF, that provide opportunities for NbS financing initiatives. Developing formalised NbS guidelines for national and sub-national agencies on how to access these funds for NbS can greatly advance the domestic-led NbS financing agenda in the Philippines

2. Innovative financing mechanisms (public/private)

As highlighted in the NAP, there is a need to develop networks, mechanisms and create an enabling landscape for private sector investment in NbS. Table 12 has identified a range of existing financing mechanisms that are already, or have the potential to, mainstreaming NbS through innovative approaches

3. Public framework, budget and tagging for NbS (public)

As outlined in the NAP, there is a need to integrate CCA and NbS considerations into budgeting and financial planning processes to ensure sufficient funding is directed towards NbS interventions. Reporting on NbS typology codes also needs strengthening. There is a need to confirm a centralised government entity for all NbS-related finance and projects. The entity can map available funding opportunities, sources and requirements, monitor funds, and report on their success. This is aligned with the need identified in the NAP to institutionalise a focal entity for CCA finance

4. NbS sectoral focus, demonstration projects, evidence base (public/private)

The government and development partners should continue to invest in demonstrating the feasibility and viability of NbS approaches through more pilot projects and sharing experience with relevant stakeholders on the pilot's performance, cost-benefit evidence, technical feasibility and opportunities for replication. In time this will increase the bankability of NbS initiatives.

5.5 AMS NbS financing summary

Criteria	Description	Criteria	Description
Priority sectors for adaptation finance	(i) agriculture, (ii) water, (iii) health, (iv) ecosystems/ biodiversity, (v) cultural heritage, (vi) land use/ settlements, (vii) livelihoods, (viii) energy/transport	*Focus sectors for resilience-led NbS financing (based on review to date)*	(i) water resources, (ii) urban, (iii) ecosystems/biodiversity
Key NbS financing actors (national, international, private sector)	National programmes and international financed projects	*Key NbS financing instruments (public, donors, development partners, private)*	Largely grants from multi-donor funds and bilateral partners
Key NbS financing sources	National: (i) DENR, (ii) PSF	*Examples of NbS financing innovation/ successes*	National funds (PCP4NbS and PSF) supporting local NbS projects
	International: (i) GEF, (ii) ADB, (iii) USAID, (iv) Japan		
	Private: (i) blue carbon, (ii) PES, (iii) ecotourism		

6 Thailand National Finance Profile

6.1 Climate and disaster risk and ecosystem resilience financing landscape

For the past 20-year period, Thailand reported the highest loss of GDP from extreme weather-related events (0.87% of GDP). The most devastating and costly natural disasters in Thailand are floods. For example, the great flood of 2011 alone caused USD 46.5 billion (THB 1.44 trillion) in total losses and damages, equalling 87% of the past total damages. In parallel, the country also faces uncertain, continuous and intensifying droughts. In 2019, damages from droughts amounted to THB 797.7 million.[60] In the agricultural sector, production losses could reach between USD 2.9-5.4 billion, whilst USD 26.2 of fisheries production value is at risk.

Eliminating forest loss, promoting reforestation and restoring ecosystem services, such as water regulation for flood risk management, is critical for climate and disaster resilience, as without action, the country could face up to USD 553 billion in GDP losses by 2050.[61]

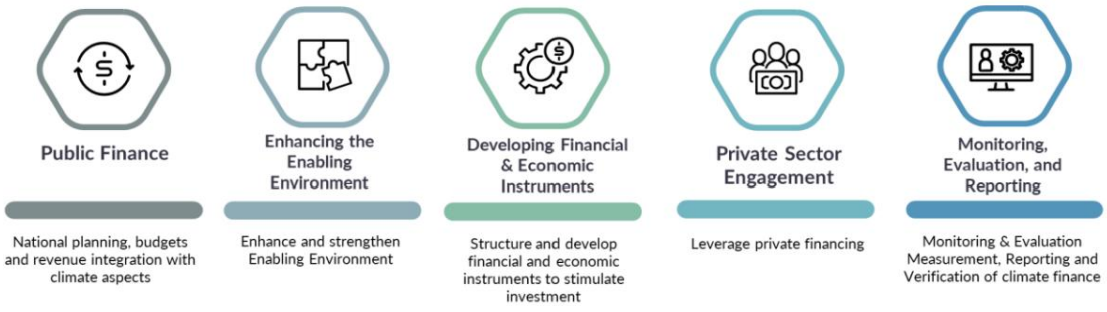
Thailand's NAP emphasises long-term action across six priority sectors, including (i) water resource management, (ii) agriculture and food security, (iii) tourism, (iv) public health, (v) natural resource management, (vi) human settlements and security.

6.2 NbS financing approaches

6.2.1 Domestic public financing

Finance policy: Thailand is drafting its first Climate Change Act to establish regulatory instruments for carbon-based activities, such as carbon tax, carbon credits and supporting a new National Climate Change Fund, the outcomes of which will be important for informing NbS-related financing. Thailand's 2030 Climate Finance Strategy is a strategic conceptual framework and serves as a blueprint to guide the allocation and distribution of financial resources towards priority climate actions, programmes and projects. This includes public and private climate finance from both domestic and international sources.[62]

Figure 20: The building blocks for climate finance strategy



Source: CFS 2030 (2024)

Through the Disaster Risk Financing and Insurance Framework, Thailand also employs a risk retention strategy, utilising budget reserves, reallocations, and contingency funds to cover disaster-related expenditures. This therefore typically does not support significant NbS funds.

Biodiversity budgeting is also an increasing priority, outline in the NBSAP and Thailand's Biodiversity Finance Plan (2023-2027) developed by ONEP. It is understood that the central government and Department for Local Administrative are developing policy guidelines for local biodiversity budgeting.

[60] ADB, 2023b; ONESDC, 2023; NAP, 2024
[61] World Bank, 2024
[62] DCCE, 2024

Public budget: Between 2017-2019, Thailand spent an average of 0.4% of the total national budget on climate-related expenditure.[63] Climate Finance Network Thailand compiled publicly disclosed data from different sources and found that the total adaptation financing in Thailand between 2018-2024 amounted to only THB 14 billion, most of which was spent by the government in various conservation projects (reduce climate change impacts on ecosystems), flood diversion canals, and disaster risk reduction programmes.[64] Specific allocations for NbS within the national budget are not explicitly detailed. The government has initiated various projects that incorporate NbS principles, such as the *Chao Phraya 9 Plans* program, which aims to enhance flood resilience and IWRM an estimated investment of USD 9.4 billion.[65] Without clear foundations and strong interest in NbS integration into these projects, they often end of being misrepresented (i.e. not true NbS) or weakened (i.e. end up as hard infrastructure).

A BER conducted by BIOFIN identified that the primary source of nature-related funds in Thailand is from government budget, with the private sector, NGOs and international institutions playing some role. In 2023, allocations from the public budget for biodiversity as a proportion of total expenditure was 0.30% and Thailand has included a target in its NBSAP for the biodiversity budget to not fall below this figure. Total expenditures from 2022-2024 was THB 20.8 billion, predominantly allocated to core environment agencies, with MoNRE departments receiving between 62-87% of the budget across this period. Most activities are for protected area management, with a smaller allocation for restoration, nature-based development planning and sustainable use activities.[66]

Targeted and preventative disaster risk interventions are not yet systematically accounted for in the public budget formulation, aside from the established practice of allocating 2.5-3% of the total annual government budget for post-event disaster management and response.[67]

National funds:

Table 18: National funds in Thailand

Tool	Details
National Environmental Fund (NEF)	The NEF, administered by MNRE, was established under the 1992 National Environmental Promotion and Conservation Act to promote environmental protection, guided by the Polluter Pays Principle, and using financial measures including subsidies and low-interest loans. It is now developing the Thailand Climate Initiative (ThaiCL) with an initial THB 214 million IKI funding (Box 9).[68]
Thailand Biodiversity Fund	Established in 2009, Thailand's Biodiversity Fund aims to allocate and manage financial resources for biodiversity-related projects, including protection and restoration activities. The mechanism is largely government-funded, however also encourages contributions from the private sector and international partners
Climate Change Fund	The proposed Climate Change Fund, under the new Climate Change Act, will serve as a financial mechanism to mobilise climate-related projects in Thailand. Funded by the government budget, carbon pricing revenues, and other schemes, it aims to assist projects that may face financial challenges, practical concerns, or where there are climate-related vulnerabilities that need supporting.

6.2.2 Private sector financing

Private sector: The private sector in Thailand is progressively recognising the value of investing in NbS to contribute to environmental sustainability and aligning with global climate goals. ADB is working with DCCE through the *Accelerating Climate Finance in Thailand* program, to mobilise finance from public and private sectors to achieve net-zero targets. The programme is focusing on innovative financial tools, such as national derisking finance mechanisms and sustainability linked incentive bonds, and developing bankable blended NbS projects in sectors including transport, biodiversity and resilient cities.[69]

[63] ADB, 2023b
[64] CFNT, 2025
[65] World Bank, 2023
[66] BIOFIN, 2024
[67] UNDP, 2023b
[68] UNDP, 2024b
[69] ADB, 2024

For commercial NbS, whilst PES is not as widespread as neighbouring Mekong countries, both government and community-led ecotourism in Thailand, across national parks and marine environments, is a key NbS-aligned sector and is experiencing notable growth. Collaborations with institutions such as KrungThai, has supported NbS finance via crowdfunding platform to support marine protection and restoration activities on Koh Tao Island (see Table 20). In 2024, the sustainable tourism market is projected to be valued at approximately USD 33.2 million, with expectations to reach USD 143.9 million by 2034.[70]

In the investment market, Thailand's green bond market has grown significantly since issuing its first Green Bond in 2018. By 2020, ESG bond issuances reached THB 86.4 billion, with purchases by MoF and state enterprises such as the Bank for Agriculture and Agricultural Cooperatives (BAAC). With a well-developed bond market, Thailand is well-positioned to attract capital for green infrastructure investments.[71]

6.2.3 International development financing

Multi-donor funds: Thailand has received donor financing on NbS in both grant and loan form from global funds such as GCF and GEF for institutional, policy and implementation outcomes. For example, the GCF has provided a grant of USD 3 million to support the formulation and implementation of Thailand's NAP and a USD 17.5 million grant for the *Enhancing Climate Resilience in Thailand through Effective Water Management and Sustainable Agriculture* project.

Multi-lateral and bilateral financing: International ODA funding is an important source for climate, disaster and nature-related finance in Thailand. According to Thailand's fourth BTR, the country received over USD 83.53 million in climate-related funding across 34 projects between 2020-2022, including 10 adaptation projects worth over half of these funds at USD 48.67 million, with significant amounts from multi and bilateral funding sources.[72] IKI, IUCN and UNDP, amongst others, are supporting several NbS projects across water, urban and tourism sectors in the country (Table 20 for examples).

6.2.4 Financing systems and tools

Table 19: National climate financing systems and tools in Thailand

Tool	Details
Climate Change Financing Framework (CCFF)	The CCFF aims to promote systematic operations concerning climate change by integrating the policy frameworks and plans into the country's budgeting process to ensure efficiency, effectiveness, and transparency for allocation and utilisation of the public sector's funds. The working group responsible for the fiscal framework, which conducted the Thailand CPEIR
Climate Change Tagging System (CCTS)	The CCTS is an important tool used by the Thai government to ensure that climate-related finance is appropriately tracked, aligned with national and international goals, and transparently reported. It plays a critical role in enhancing the accountability of public financial management and supporting Thailand's climate action efforts
Electronic Monitoring and Evaluation System of National Strategy and Country Reform (eMENSCR)	The eMENSCR platform functions as the main means of monitoring and evaluation of progress on strategies and plans at all levels, including for climate, disasters and ecosystem-related program and project financing across different sectors.[73]

6.2.5 Innovative NbS financing mechanism

Table 17 identifies five example innovative instruments that have been applied in the country, and that may offer opportunities for replication and upscaling in Thailand and across other relevant AMS. These are generally aligned with NbS-mainstreaming across the six priority sectors emphasised for long-term action in Thailand's NAP, including (i) water resource management, (ii) agriculture and food security, (iii) tourism, (iv) public health, (v) natural resource management, (vi) human settlements and security.

[70] FutureMarketInsights, 2024
[71] UNDP, 2024b
[72] DCCE, 2024
[73] MfA, 2021

Table 20: Examples of different types of innovative NbS financing mechanisms in Thailand

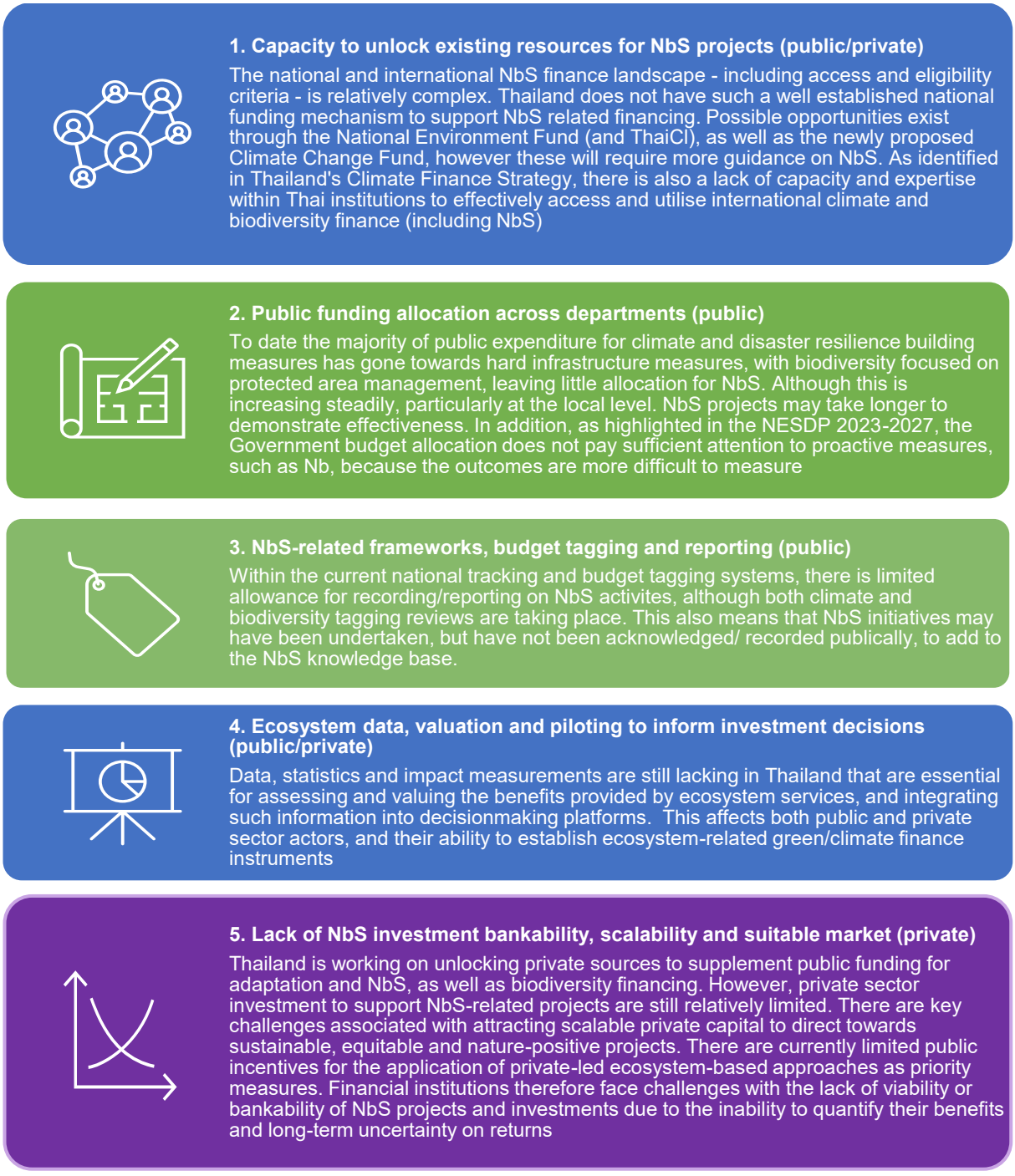
Financial actor	Funding instrument	NDC-aligned priority sector	NbS integration mechanism	Description	CCA and DRR-related NbS relevance	NbS innovation, upscaling and replication potential
Grant						
Financier: GCF *Implementer*: RID, MoAC (DWR) *Supported by*: UNDP	Grant (USD 17.5 million) 2022-2027	Water resources/ agriculture	(i) Capacity building, (ii) policy, (iii) piloting technical interventions,	GCF has provided a grant for the **Enhancing climate resilience in Thailand through effective water management and sustainable agriculture** project in Thailand, focusing on the role of EbA and hybrid measures for flood and drought management in the Chao Phraya basin | Details	The project will improve water management by integrating EbA measures with traditional grey infrastructure for flood control and irrigation	Supports the integration of EbA into the traditional hard infrastructure-led approaches of RID and MoAC, to support a shift in RID's approach to IWRM for ongoing and future projects
Financier: GCF *Implementer*: MoNRE (DMCR) *Supported by*: UNDP	Grant (USD 3 million) 2020-2024	Natural resource management/ coastal	(i) Capacity building, (ii) policy, (iii) piloting technical interventions	The GCF-funded **Increasing Resilience to Climate Change Impacts in Marine and Coastal Areas along the Gulf of Thailand** project focuses on enhancing planning. capacity, mainstreaming CCA, and creating strategies for future financing. The initiative is working to integrate CCA into planning and budgeting for Thailand's marine and coastal areas | Details	The project will work towards improving climate-responsive natural resource management (thematic NAP area v) via an integrated NbS approach of enhancing adaptation planning and budgeting in key marine and coastal economic sectors	The project will be an important contribution to the implementation of Thailand's NAP. It will also develop financing strategies for future CCA and NbS-linked interventions for upscaling across marine and coastal areas
Financier: IKI *Implementer*: DWR *Supported by*: IUCN (ADPC, RECOFTC, TEI, UDDC)	Bilaterial grant (USD 7.34 million) 2022-2028	Human settlements (Urban)	(i) Capacity building, (ii) policy, (iii) piloting technical interventions	The IKI-funded **Urban Resilience Building and Nature** project that is targeting Chiang Rai and Surat Thani provinces, applying an NbS pilot approach to demonstrate enhanced urban resilience to climate change | Details	NbS will be piloted at target sites. The project is science-driven and evidence-based, applying climate risk models and urban nature indices, which can be used to effectively monitor ecological indicators at the sites.	The project is the first in Thailand that fully applies the IUCN Global NbS Standard to enhance urban climate resiliency
Market mechanisms						
Implementer: Department of Marine and Coastal	Blended finance (USD	Tourism/ coastal	(i) Finance mechanism	UNDP's BIOFIN is supporting **Koh Tao** municipality and DMCR to establish a tourist user	The funds are being directed towards the restoration of coral reefs.	This first-of-its-kind legal framework was announced back in 2021. Since then, this initiative

Resources (DMCR) and Koh Tao sub-district municipality *Financial supporter*: UNDP BIOFIN	290,000) 2021-2025			fee of 20 baht (about USD 0.60) to generate funding for ecosystem protection and restoration activities. Contributions have also been made by Krungthai Bank in supporting community livelihoods and conservation | Details	Krungthai Bank support has also been directed towards local communities for nature conservation on the island.	has raised over $450,000, with expectations of generating around $360,000 annually. Following the success of the Koh Tao model, there are opportunities to expand to other at-risk islands located outside of protected areas, particularly those with high tourist numbers, to fund nature-based protection and restoration activities.
Blended finance						
Financier: IKI (EUR 6.5 million initially) *Implementer*: Environment Fund		Various	(i) Capacity building, (ii) policy, (iii) piloting technical interventions, (iv) finance mechanism	The Environment Fund is in the process of developing the **Thailand Climate Initiative (ThaiCL)**, a new pilot initiative supported by IKI to foster climate action through local CCM and CCA projects. The initiative will receive initial funding of around EUR 6.5 million (THB 214 million). ThaiCl shares similarities with the IKI Small Grants, aiming to attract small-scale, local stakeholders, including government agencies, local authorities, academic institutions, NGOs, and the private sector | Details	The fund offers the potential to finance locally-led NbS-related projects	Opportunities exist for NbS-related project development through the ThaiCl. It is not yet clear how the fund will interact with the new Climate Change Fund. Going forward, it is anticipated that ThaiCl will review opportunities for partnerships with other domestic and international funds.

6.3 Barriers and enablers of NbS financing

There are several barriers to integrating NbS approaches into international and national financing mechanisms in Thailand. Key public and private sector barriers are outlined below.

Figure 21: Public and private sector NbS financing barriers in Thailand



Several key enablers have facilitated NbS-related financing and mainstreaming in Thailand, and present opportunities to continue NbS mainstreaming into the future.

Figure 25: Enablers and opportunities for NbS financing in Thailand

1. Success in securing funds for CCA and NbS (public/private)

NbS finance and investments for EbA in Thailand have been supported through existing development finance, and national funds (e.g. NEF) which have supported, and continue to support the development and implementation of EbA in Thailand.

2. Nbs policy targets, CCET and budget M&E (public)

Thailand demonstrates a strong commitment to climate and disaster action, through its pubic budgets, international support and targets. NbS principles are integrated into the NESDP and NAP, supporting the development of NbS-linked indicators. The DCCE is in the process of developing an M&E system and CCET approach.

3. Advancing innovative finance mechanisms (public/private)

The private sector in Thailand is progressively recognising the value of investing in NbS. DCCE are working to identify innovative public and private financing opportunities for adaptation, while ONEP are identifying biodiversity financing options, including through NbS.

6.4 Opportunities for NbS financing

1. National climate and environmental funds for NbS (public)

The continued expansion of the NEF, and creation if the ThaiCL fund, may provide opportunities for further nationally led NbS funds and projects, supported by national and international sources. Thailand could leverage existing national funds and better integrate NbS priorities.

2. Innovative financing mechanisms (public/private)

As highlighted in the NAP, there is a need to develop mechanisms and create an enabling landscape for private sector NbS investment. This review has identified a range of existing financing mechanisms that are already, or have the potential to, mainstreaming NbS through innovative approaches. Thailand's NAP, Climate Finance Strategy and Biodiversity Finance Strategy suggest advancing the carbon market, develop a business model in the areas of climate insurance or disaster insurance (which should include NbS), explore tiger ecosystem bonds and other areas.

3. Public framework, budget and tagging for NbS (public)

The new climate M&E system and CCET offers the potential to include NbS-related indicators. It is understood that this can also advance the use of climate and biodiversity tagging in preparing annual expenditure budgets, to inform NbS allocations.

4. NbS sectoral focus, demonstration projects, evidence base (public/private

The government and development partners can continue to invest in demonstrating the feasibility and viability of NbS approaches through more pilot projects and sharing experience with relevant stakeholders on the pilot's performance, cost-benefit evidence, technical feasibility and opportunities for replication. In time this will increase the bankability of NbS initiatives.

6.5 AMS NbS financing summary

Criteria	Description	Criteria	Description
Priority sectors for adaptation finance	(i) water resource management, (ii) agriculture/ food security, (iii) tourism, (iv) public health, (v) natural resource management, (vi) human settlements	*Focus sectors for resilience-led NbS financing (based on review to date)*	(i) water resources, (ii) urban, (iii) ecosystems/biodiversity, (iv) agriculture, (v) tourism
Key NbS financing actors (national, international, private sector)	International – dominated by international financed programmes and projects	*Key NbS financing instruments (public, donors, development partners, private)*	Largely grants from multi-donor funds and bilateral partners
Key NbS financing sources	National: (i) MONRE, (ii) NEF	*Examples of NbS financing innovation/ successes*	ThaiCL Fund / Koh Tao conservation tourist fee
	International: (i) GEF, (ii) GCF, (iii) IKI, (iv) UNDP		
	Private: (i) agriculture, (ii) ecotourism		

7 Viet Nam National Finance Profile

7.1 Climate and disaster risk and ecosystem resilience financing landscape

Viet Nam has been ranked by World Bank among the top five countries that will be worst affected by climate change. It is estimated that climate change will reduce national income by up to 3.5% by 2050. Flooding represents the largest economic risk impact, accounting for an estimated 97% of average hazard-related annual losses. Extreme events such as floods and storms are compounded by the degradation of ecosystems and their services, including forests, wetlands and mangroves, which has already put billions of dollars of Viet Nam's assets at risk.[74]

Agriculture remains a key sector in the country, providing 18.4% of GDP, employing 54% of the working population, and covering 34.7% of total land area. With coastal risks affecting both lowland deltas and other coastal regions, Viet Nam's agricultural sector is heavily exposed to the adverse impacts of climate change, compounded by human pressures. Strategic locations (e.g., Ho Chi Minh City, Mekong Delta and Hanoi, Red River Delta) and economic activities (e.g., irrigated rice, fisheries and industrial parks) are increasingly exposed to climate and disaster risks. Research suggests that without adaptation measures, a 1-in-100-year storm surge affecting the Red River Delta region in 2050 could place 9% of the national GDP at risk.[75]

Viet Nam also has a significant economic and livelihood dependence on natural resources and the ecosystem services they provide. Approximately 20 million people rely on fisheries and an additional 25 million people living in or near forests derive 20-50% of their income from harvesting NTFPs, such as medicinal plants, honey and rubber.[76]

Viet Nam's NAP identifies key priorities across all adaptation sectors, including agriculture, food security, ecosystems/biodiversity, water resources, public health, housing, and technical infrastructure.

7.2 NbS financing approaches

7.2.1 Domestic public financing

Finance policy: To date, the Vietnamese government have developed limited climate, disaster, biodiversity or NbS financing plans or roadmaps to inform and support improvement in financing allocations. In collaboration with World Bank and UNDP, MPI established the *Financing Vietnam's Response to Climate Change: Smart Investment for a Sustainable Future* back in 2015, which contributed to the implementation of Vietnam's key climate change and green growth policies and the mainstreaming of climate actions and responses based on the governments five-year Socio-Economic Development Plan (SEDP) and the GoV's state budget estimate.

Public budget: The investment budget and recurrent expenditure budget are managed separately by the Ministry of Planning and Investment (MPI) and the Ministry of Finance (MoF) respectively, along with their local departments. The public budget estimation and allocation is based on national and local priority policies (e.g. SEDS and SEDP). Public climate change expenditure is reflected in the central budget, while provincial/municipal authorities determine and manage local climate action resource spending. Both central and provincial levels are responsible for tracking and reporting their expenditures independently.

A CPEIR was conducted between 2016 and 2020. This review assessed climate change budgets across six ministries and 28 provinces, revealing that over 70% of the ministries' climate budgets and over 90% of provincial climate budgets were dedicated to adaptation efforts. MARD and MOT together received around 80% of expenditure between 2016-2020, mainly spent on irrigation and

[74] World Bank, 2021
[75] AfD, 2021; World Bank, 2021; World Bank, 2022
[76] BIOFIN, 2018

road projects. Forest development and biodiversity conservation represented 3.1% and under 1% of the annual budget respectively.

Provincial annual investment budgets prioritise projects selected by the provincial People's Council, which are included in the Medium-Term Public Investment Plan (MTPIP). These may encompass investments related to NbS. The climate budget represents a consistent share of the total provincial budget, ranging from 16-21%, with CCA accounting for over 90% of climate-related expenditures.

Financial resources explicitly for nature are limited, with environmental protection expenditure representing just 0.44% of GDP, or 1.57% of the national budget in 2015, with around a third of this for ecosystem conservation and restoration. This is compounded by limited external funding support, with 77% of total spending provided by public budget sources.[77]

National funds:

Table 21: National funds in Viet Nam

Tool	Details
Viet Nam Environment Protection Fund (VEPF)	The VEPF is located under MAE and serves as a financial mechanism to mobilise, manage, and allocate funds for environmental initiatives, including for climate, biodiversity and NbS-related activities. VEPF has the mandate to grant concessional loans, receive payments, donations, assistance and financial contributions for environmental protection, from both domestic and international sources. NbS-related initiatives have included mangrove restoration in the Mekong Delta, restoration of degraded forests in Central Highlands, and urban tree planting in Hanoi and Ho Chi Minh City.
Vietnam Forest Protection and Development Fund (VNFF)	The VNFF, established in 2008 under Decree 99/2010/ND-CP, mandates hydropower operators, water supply firms, and ecotourism companies to pay for watershed protection. It is overseen by MAE, manages the protection and development of Vietnam's forests, particularly natural forests. The funds are sourced largely from Payments for Forest Environmental Services (PFES), REDD+, and international donors. The VNFF's PFES policy compensates individuals and communities for forest conservation and restoration activities.

7.2.2 Private sector financing

Much of the recent private sector-related ambitions linked to NbS have focused on mitigation[78], including the development and piloting of domestic carbon markets. MAE are in the process of undertaking a forest carbon assessment, which will inform the development of national standards for forest-based carbon credits, establish detailed MRV regulations and create a comprehensive database and system. Recently, the World Bank has supported a REDD+ project covering 2.9 million Ha of natural forest, enabling Viet Nam to sell its first carbon credits worth USD 51.5 million via the FCPF – the largest ever payment from the FCPF.[79] Also partnering with the World Bank, MAE is working with local farmers to advance plans for 1 million Ha of high-quality low-emission rice in the Mekong Delta, which aims to generate VND 2,500 billion in carbon credit sales annually by 2030.[80]

In terms of resilience-led NbS financing, PES has been a big focus historically. Viet Nam was one of the first countries in the world, and the first in ASEAN, to institutionalise a PFES system. Since 2008, its PFES program has generated almost $400 million payments to farmers and communities from hydropower operators and water suppliers, helping to prevent deforestation and forest degradation.[81] Unlike neighbouring AMS of Cambodia, Lao PDR and Thailand, financial support from ecotourism for protected area management and ecosystem restoration is not extensive in Viet Nam, although successes include commercial ecotourism in Phong Nha-Ke Bang National Park and community-based ecotourism in Pu Luong Nature Reserve.

[77] BIOFIN, 2019
[78] As outlined in national climate change policies, investment in mitigation is not a public sector priority, and is expected to primarily be achieved through the private sector
[79] The Investor, 2024; World Bank, 2024b
[80] MoNRE, 2024a; MoNRE, 2024b
[81] World Bank, 2022

For commercial NbS financing opportunities, Viet Nam is limited in terms of volume and value of issued green bonds. Sustainability linked bonds have not yet been issued in Vietnam. ISPOAE are tasked with drafting a national green taxonomy, identifying environmental criteria and projects eligible for green credit and bond approvals.

7.2.3 International development financing

ODA spending represented approximately 20% of the national climate budget in 2019 and 2020. At the provincial level, this component increased to 46% of provincial climate budget in 2020.[82] Whilst domestic financing is the dominant climate, disaster and biodiversity funding source, most NbS-related projects (outside of forest and mangrove restoration activities, which are commonplace in national budgets), have been supported by international funding.

Multi-donor funds: Viet Nam has received support for NbS-related projects from GCF, GEF and AF. MPI is the NDA for GCF and MAE is for GEF.

Bilateral and multilateral financing: Many of the subnational NbS-related financial flows have been directed towards flood-based agriculture, riverbank restoration and mangrove restoration in the Mekong Delta. IKI and GIZ have historically been a strong supporter of EbA related projects, including its four-year *strategic mainstreaming of ecosystem-based adaptation in Viet Nam* project that was completed in 2018, and has continued this under the *implementing the Paris Agreement in Viet Nam* project phases (current phase running to 2028).

7.2.4 Financing systems and tools

Table 22: National climate financing systems and tools in Viet Nam

Tool	Details
National-level climate change adaptation monitoring and evaluation system	To systematically track and assess climate change adaptation activities, Vietnam's Prime Minister issued Decision No. 148/QD-TTg on January 28, 2022, establishing a national climate M&E system. The M&E framework outlines specific indicators and assigns responsibilities to various ministries, agencies, and provincial authorities. There are 32 M&E indicators according in the fields of agriculture, forestry, fisheries (6); environment and biodiversity (5); water resources (4); transportation (2); construction, urban (3) industry, commerce, service (3) health and community health (3) labour and society (3) culture, sports, and tourism (3). An online platform has been developed to facilitate data collection, reporting, and information sharing, ensuring a coordinated approach to CCA nationwide.[83] Many of the indicators are well aligned with NbS, including those under the group 2 *environment and biodiversity*, such as M&E indicator 2.4 *Percentage (%) of degraded important natural ecosystems restored*, and 2.5 *Number and scale of ecosystem-based climate change adaptation models deployed,* both managed by MONRE and MARD. It is understood that MARD have also developed more specific indicators within their own M&E and reporting system.
Climate budget tagging (public investment allocations for climate change and green growth)	Vietnam's climate budget tagging system is governed by Decision No. 1085/QD-BKHDT, issued by MPI in 2018. This decision establishes a methodology for identifying, classifying, and reporting public budget allocations related to climate change and green growth. The system aims to monitor and evaluate climate-related expenditures from both national and international resources, encompassing public and private sectors. The Decision has also facilitated the development of provincial public investment expenditure reviews. MARD is the first ministry to apply the budget tagging methodology, as it accounts for a large share of central climate-related budget allocations.[84]
NbS cost norms	MARD are being supported by GIZ to establish technical cost norms for NbS – standardised norms of costs for different NbS measures

[82] UNDP, 2022c
[83] DCC, 2022
[84] World Bank, 2020

7.2.5 Innovative NbS financing mechanism

Table 23 identifies four example innovative instruments that have been applied in the country, and that may offer opportunities for replication and upscaling in Viet Nam and across other relevant AMS. These are generally aligned with NbS-mainstreaming across the seven priority sectors identified in Viet Nam's NAP, including (i) agriculture, (ii) food security, (iii) ecosystems/ biodiversity, (iv) water resources, (v) public health, (vi) housing, and (vii) technical infrastructure.

Table 23: Examples of different types of innovative NbS financing mechanisms in Viet Nam

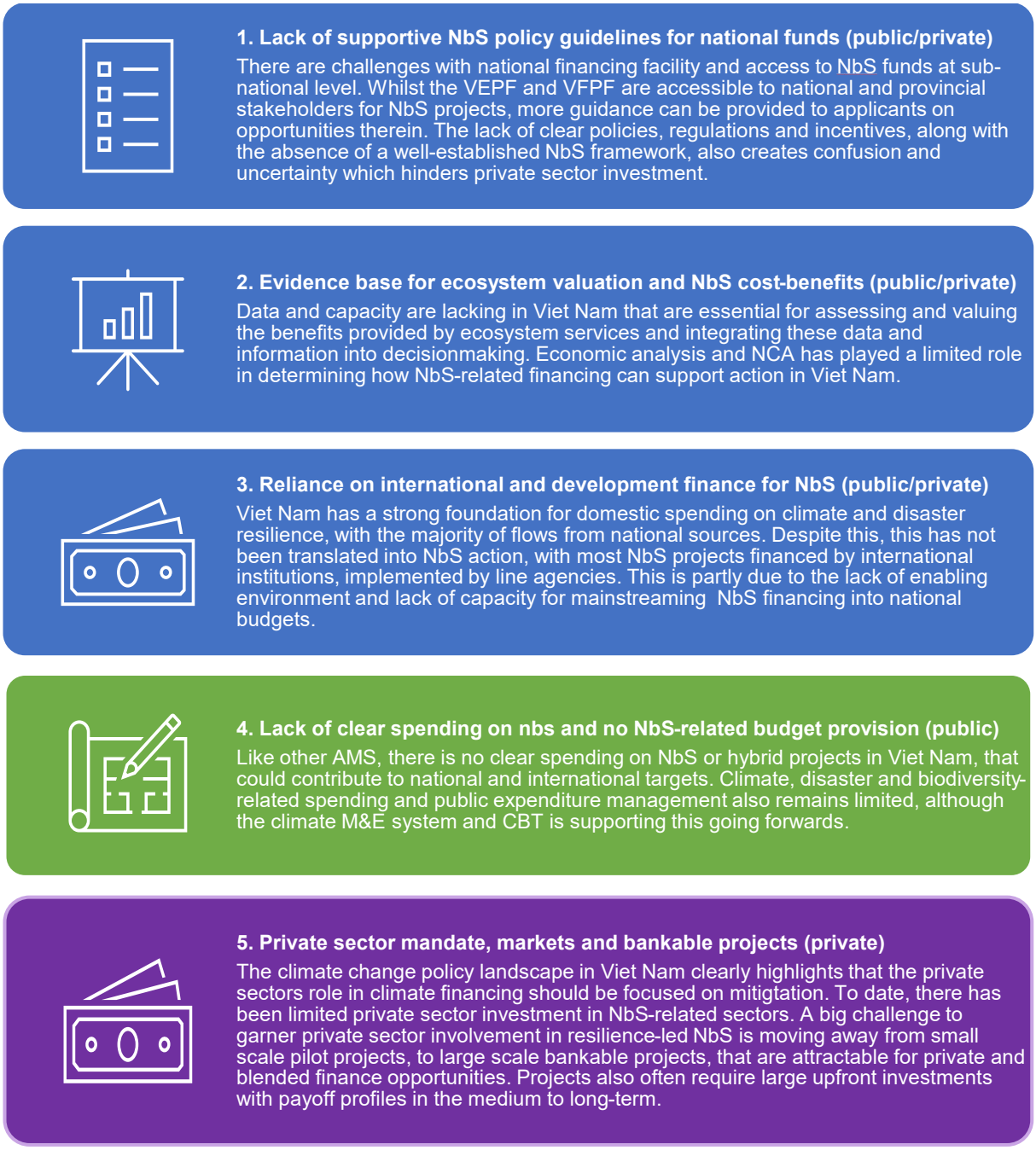
Financial actor	Funding instrument	NDC-aligned priority sector	NbS integration mechanism	Description	CCA and DRR-related NbS relevance	NbS innovation, upscaling and replication potential
Grant						
Financier: GEF USD 3.4 million) *Implementer*: MARD, ADB, UNDP *Supported by*: ICEM	Grant (2012-2017)	Water resources/ Technical infrastructure	(i) Capacity building, (ii) policy, (iii) piloting technical interventions (i) Finance mechanism	The GEF-funded **Green Infrastructure for a Climate Resilient Society Nature-Based Solutions for Erosion Control in Vietnam** project aimed to demonstrate and promote the application of bioengineering measures in road and riverbank slope protection and stabilisation, to build the resilience of local communities to climate and disaster impacts. The project also sought to build the capacity of local experts on bioengineering techniques and to support the mainstreaming of climate resilient green infrastructure development across Vietnam, through pilot projects | Details	The project illustrated that NbS can be applied to prevent erosion and increase the resilience of local communities, by demonstrating bioengineering solutions at four riverbanks and roadside slope sites	The project was one of the first NbS demonstration projects highlighting the cost-benefit of NbS measures over hard infrastructure interventions in rural Viet Nam
Financier: IKI (EUR 15 million) *Implementer*: MoNRE and MARD *Supported by*: SNV, IUCN, UNEP, ICEM	Bilaterial grant (2023-2028)	Agriculture	(i) Capacity building, (ii) policy, (iii) piloting technical interventions, (iv) finance mechanism	The IKI-funded **VN-ADAPT** project is supporting the implementation of Viet Nam's adaptation targets in its NDCs, through the application of NbS and EbA in the agriculture sector. It focuses on building public and private consensus and strengthening the legal framework for integrating climate, biodiversity, and NbS into planning. The project invests in scaling up NbS through private sector engagement and partnerships in two key climate-vulnerable production landscapes in the Mekong Delta and Central Highlands | Details	VN-ADAPT promotes nature-based agricultural systems such as flood-based agriculture in the Mekong Delta, coastal mangrove-shrimp systems, and upland agroforestry.	The project supports inclusive value chains and biodiversity conservation by partnering with companies to integrate solutions into supply chains, accelerating farmer adoption and linking production landscapes, including across OECMs for sustainable, socially inclusive and innovative market-based approaches. Such mechanism can be replicated across similar landscapes and partnership mechanisms
Market mechanisms						
Financier: Various *Implementer*: Various	Various (ecotourism)	Water resources (coastal)	(i) Capacity building, (ii) policy, (iii) piloting technical interventions, (iv) finance mechanism	The **Cat Ba National Park Eco-Tourism and Sustainable Fisheries Project** is an initiative aimed at preserving the biodiversity of Cat Ba National Park while promoting sustainable economic development for local communities. In previous years, the national park has received various	The project aims to support protected area management, restoration and integrated NbS across infrastructure measures	Cat Ba is attempting to leverage its environmental landscape and strategic planning to emerge as a leader in sustainable, carbon-neutral ecotourism.

				investment projects funded by private sector and NGOs were aimed at conservation, improved management and capacity to sustainably develop natural resources on the island district | Details		
Blended finance						
Financier: GEF and ADB (loan - USD 170 million ADB, grants - USD 12.83 million GEF, and USD 4 million ADB) *Implementer*: MoNRE, Thua Thien Hue, Vinh Phuc and Ha Giang Province PPC	Blended finance	Housing (Urban)	(i) Capacity building, (ii) policy, (iii) piloting technical interventions, (iv) finance mechanism	The **Secondary Green Cities Development Project**, co-financed by GEF and ADB, aims to demonstrate economically competitive, environmentally sustainable and socially inclusive development for the cities of Vinh Yen, Hue, and Ha Giang. The project cities' green and climate resilient development approaches will be scaled up for nationwide climate resilient development in Viet Nam | Details	Water-sensitive urban design pilot projects in the priority cities are integrating NbS by rehabilitating ponds, parks, and rivers	These efforts are incorporating green and hybrid infrastructure approaches into locals plans, and are developing new standards, supported by cost-benefit analyses comparing NbS and traditional grey infrastructure. These pilots offer opportunities for demonstration and future replication

7.3 Barriers and enablers for NbS financing

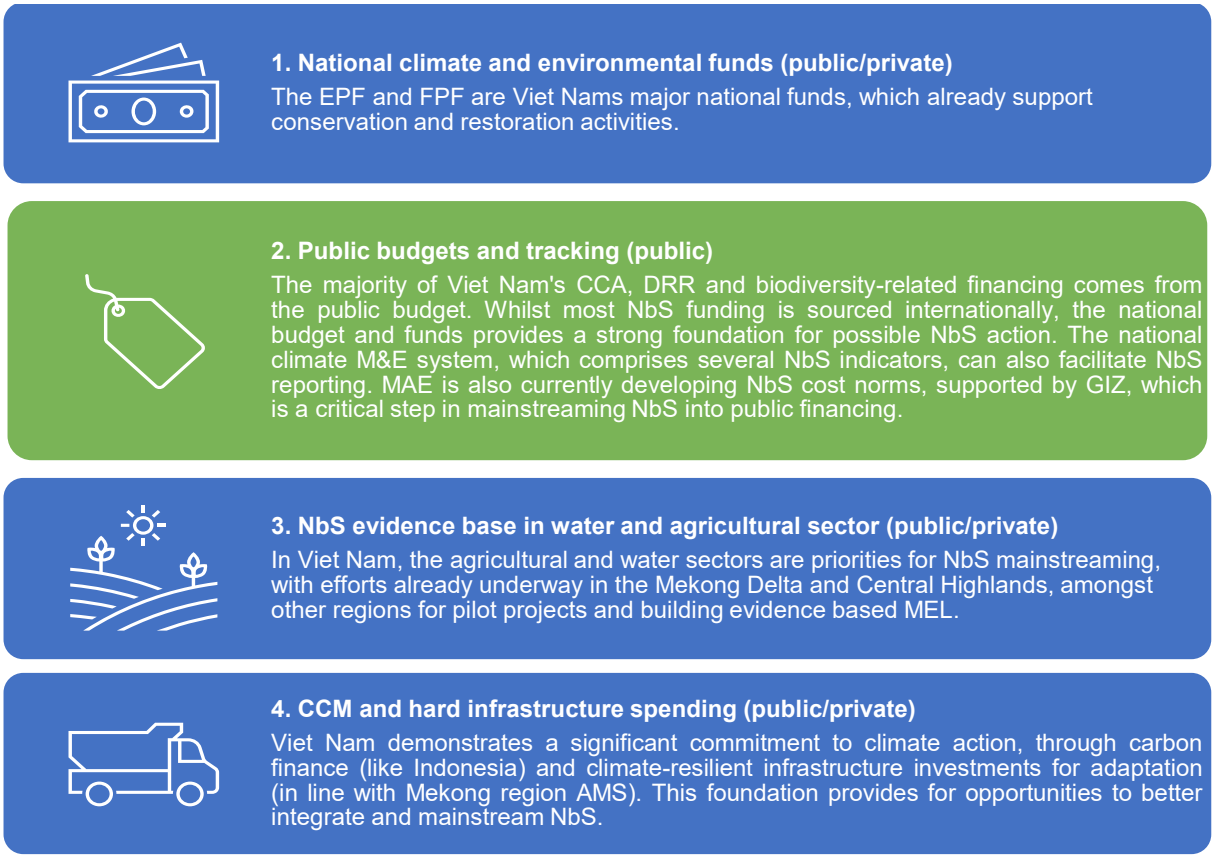
There is a lack of integration of NbS approaches into international and national financing mechanisms in Viet Nam. Key barriers for both the private and public sector are outlined below.

Figure 22: Public and private sector NbS financing barriers in Viet Nam



Despite the identified barriers, there are several key enablers and successes that provide the foundation for NbS mainstreaming into Viet Nam's finance landscape.

Figure 23: Enablers of NbS financing in Viet Nam



7.4 Opportunities for NbS financing

1. National climate and environmental funds for NbS (public)

Both the EPF and the FPF provide opportunities for scaling up national NbS funds to sub-national stakeholders. With the EPF in the process of becoming GCF accredited, it may provide a good opportunity for this. Future opportunities could examine more innovative blended finance opportunities through the EPF

2. Leverage mitigation and hard infrastructure spending (public/private)

An accessible opportunity for NbS mainstreaming in Viet Nam is likely through hybrid NbS interventions, aligned and tagged to traditional public spending/investment in grey measures. Private sector mandates for mitigation could also leverage investment of cross-cutting NbS for climate and disaster resilience co-benefits.

3. Public framework, budget and tagging for NbS (public)

With Viet Nam having strong public climate and disaster spending, NbS allocations can be better integrated into financial planning, frameworks and annual national line agency budgets (particularly priority sectors). Reporting on NbS typology codes also needs strengthening. Through the M&E system, there is also an opportunity to establish a database of NbS projects and cost norms for practical NbS interventions, through ISPOAE or MAE.

4. Increasing NbS evidence base and build on water and agricultural sector for innovation (public/private)

An important step for mainstreaming NbS is developing an evidence base across priority 'low hanging fruit' sectors, for scaling up NbS. Agricultural enterprises - from commercial enterprises the Central Highlands to local farmers in the Mekong Delta - offer a significant opportunity for climate-resilient NbS mainstreaming and innovative investment mechanisms, building on existing NbS approaches and projects.

7.5 AMS NbS financing summary

Criteria	Description	Criteria	Description
Priority sectors for adaptation finance	(i) Agriculture, (ii) food security, (iii) ecosystems/ biodiversity, (iv) water resources, (v) public health, (vi) housing, (vii) technical infrastructure	*Focus sectors for resilience-led NbS financing (based on review to date)*	(i) Water resources, (ii) urban, (iii) agriculture
Key NbS financing actors (national, international, private sector)	National programmes and funds / International financed programmes and projects	*Key NbS financing instruments (public, donors, development partners, private)*	Largely grants from multi-donor funds and bilateral partners
Key NbS financing sources	National: (i) MAE, (ii) VEPF	*Examples of NbS financing innovation/ successes*	Climate M&E system and NbS integration
	International: (i) GEF, (ii) GIZ		
	Private: (i) PES, (ii) ecotourism		

Annex 2: List of Stakeholder Consultations

Country	Stakeholders
Cambodia	• EU Tonle Sap Project stakeholders (Wildlife Conservation Society (WCS), UNDP, Oxfam) • Department of Climate Change (DCC), The National Council for Sustainable Development (NCSD), Ministry of Environment (MoE) • Fisheries Action Coalition Team (FACT) • Fisheries Administration Siem Reap • Department of Environment (DoE) Siem Reap • USAID Cambodia • Royal University of Phnom Penh (RUPP)
Indonesia	• Ministry of Environment and Forestry • GIZ (ASEAN) • Ministry of Finance • IPB University Bogor • CIFOR-ICRAF • World Resources Institute (WRI) • Asian Development Bank (ADB) • IEF (Bappenas) • Yayasan Konservasi Alam Nusantara (YKAN), Kupang • Various NNT line agencies (planning, environment, conservation, disaster), Kupang • IEF (BAPPENAS)
Lao PDR	• UNDP Lao PDR (online) • Various departments, Ministry of Natural Resources and Environment (MoNRE) • Water Resources Department, University of Lao PDR • GGGI Lao PDR • WWF Lao PDR • GIZ (GIZ-MRC)
Philippines	• Climate Change Services, DENR • ADB • UNDP Philippines • Local government office, Del Carmen • SIPLAS, Siargao
Thailand	• Office of the National Economic and Social Development Board (NESDC) • GIZ Thailand • Department of National Parks, Wildlife and Plant Conservation, Ministry of Natural Resources and Environment (MNRE) • Department of Disaster Prevention and Mitigation (DDPM), Ministry of Interior (MoI) • Department of Climate Change and Environment (DCCE), MNRE (online) • Office of the National Economic and Social Development Board (NESDC) • GIZ Thailand • Department of National Parks, Wildlife and Plant Conservation, Ministry of Natural Resources and Environment (MNRE)
Viet Nam	• Ministry of Agriculture and Rural Development (MARD) • AfD Viet Nam • WWF Viet Nam • Institute of Strategy, Policy on Natural Resources and Environment (ISPONRE), Ministry of Natural Resources and Environment (MONRE) • IUCN Viet Nam • Ministry of Planning and Investment (MPI) • ICEM • GIZ Viet Nam (online) • Southern Institute of Water Resources Research (SIWRR) (online) • Dragon Institute, Can Tho University (online)

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