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Adaptation Finance Taxonomy Playbook

Tools and strategies for financial institutions to
operationalize adaptation finance taxonomies

June 2026

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Glossary

Acute hazard: A short-term, extreme weather event such as a flood, storm, heatwave or wildfire. Acute hazards are typically sudden in onset and can cause rapid damage to infrastructure, ecosystems and economic activity. Contrast with chronic hazard.

Adaptation criteria: The rules, thresholds or process requirements that an investment or activity must meet in order to be considered as making a substantial contribution to climate adaptation under a given taxonomy. Approaches vary across taxonomies and may be quantitative, qualitative, process-based, whitelist-based or principles-based.

Adaptation finance: Investment, lending or insurance activity directed at reducing vulnerability to physical climate risks and building resilience to current and future climate impacts. Adaptation finance encompasses a wide range of sectors, asset types and financial instruments.

Adaptation taxonomy: A classification system that identifies which economic activities or investments contribute to climate adaptation objectives, providing criteria for assessment and eligibility. Adaptation taxonomies may be standalone frameworks or embedded within broader sustainable finance taxonomies as one of several sustainability objectives.

Blended finance: The strategic use of concessional or public finance such as grants, guarantees or subsidies to mobilize additional private investment into sustainable development or climate-related activities, including adaptation projects, that would not otherwise attract commercial capital.

Chronic hazard: A long-term, gradual environmental shift driven by climate change, such as sea level rise, sustained temperature increases, shifting precipitation patterns or permafrost thaw. Chronic hazards typically unfold over decades and affect the long-term viability of assets, land use and economic activities. Contrast with acute hazard.

Climate resilience: The capacity of a system, community, asset or institution to anticipate, absorb, accommodate and recover from climate-related stresses and shocks, while maintaining or transforming structures and functions. Used interchangeably with climate adaptation in this Playbook.

Climate Risk and Vulnerability Assessment (CRVA): A structured process for identifying the physical climate hazards relevant to a specific activity, asset or geography, and evaluating the degree of exposure and vulnerability. CRVAs are frequently required by adaptation taxonomies as part of qualification checks or DNSH assessments.

Concessional finance: Finance provided on more favourable terms than market rates—typically lower interest rates, longer tenors or more flexible conditions—used to support investments in developing economies or high-risk sectors where commercial finance is insufficient.

Do No Significant Harm (DNSH): A safeguard principle embedded in many sustainable finance taxonomies requiring that activities contributing to one sustainability objective do not cause significant harm to other sustainability objectives. Common objectives subject to DNSH include climate mitigation, water and marine resource management, biodiversity, pollution prevention and the circular economy. DNSH assessments are also used in some taxonomies as the primary method for determining alignment with adaptation objectives where explicit substantial contribution criteria have not yet been developed.

Greenwashing: The practice of overstating or misrepresenting the environmental credentials of a financial product, investment or activity. Sustainable finance taxonomies are designed in part to reduce greenwashing by providing clear, verifiable definitions of eligible activities.

Interoperability: The degree to which different sustainable finance taxonomies can be compared, mapped or mutually recognized, enabling financial institutions operating across multiple jurisdictions to apply consistent standards without duplicating assessment processes. Interoperability is supported by shared definitions, common sector structures and aligned DNSH approaches.

Maladaptation: Adaptation actions that inadvertently increase vulnerability, transfer risk to other groups or locations, lock in unsustainable practices, or undermine longer-term resilience. Maladaptation is a risk that financial institutions must actively screen for when assessing adaptation investments, particularly where interventions involve hard infrastructure or have long asset lifetimes.

Minimum Social Safeguards: Requirements embedded in some sustainable finance taxonomies—notably the EU Taxonomy that ensure activities are conducted in line with internationally recognized labour rights, human rights and governance standards, regardless of their environmental credentials.

Nature-based solutions (NbS): Actions that protect, sustainably manage or restore natural ecosystems in ways that address societal challenges, including climate adaptation, while also providing biodiversity and human wellbeing benefits. Examples include mangrove restoration for coastal flood protection and urban greening for heat mitigation. NbS are not fully captured within standard ISIC sector classifications and may require additional assessment when applying the Climate Adaptation Sector Mapper.

Parametric insurance: An insurance product that pays out a predetermined amount when a specified physical trigger such as wind speed, rainfall level or earthquake magnitude is reached, rather than requiring a loss assessment. Parametric insurance is increasingly used in climate adaptation finance as a tool for managing disaster risk exposure.

Physical climate risk: The financial risk arising from the physical impacts of climate change, including both acute hazards (such as floods or storms) and chronic shifts (such as temperature rise or sea level change). Physical climate risk is distinct from transition risk, which relates to the financial impacts of moving to a lower-carbon economy.

Principles-based approach: A taxonomy qualification method in which eligibility is assessed against high-level guiding questions or principles rather than predefined thresholds or technical criteria. Principles-based approaches offer flexibility but can reduce comparability across institutions and jurisdictions.

Process-based criteria: A taxonomy qualification method that evaluates the quality of an organization's climate risk assessment, adaptation planning and risk management processes, rather than measuring specific outcomes. Process-based criteria are flexible across sectors but can be harder to verify consistently.

Resilience-linked instrument: A financial product, such as a bond or loan, whose terms are tied to predefined adaptation or resilience-related performance targets. These instruments provide incentives for borrowers to improve climate resilience outcomes and are assessed against adaptation taxonomy frameworks to establish credibility.

Substantial contribution (SC): The standard used in many sustainable finance taxonomies to determine whether an activity meaningfully advances a specific sustainability objective. For climate adaptation, substantial contribution typically requires demonstrating that the activity reduces material physical climate risk exposure or improves resilience, verified through qualification checks appropriate to the taxonomy.

Sustainable finance taxonomy: A classification system that defines which economic activities qualify as environmentally sustainable, providing a common language for investors, lenders, regulators and companies. Taxonomies typically include sustainability objectives, sector classifications, qualification checks and alignment safeguards such as DNSH and MSS.

Use-of-proceeds: A financing structure in which funds raised through a bond or loan are ring-fenced and allocated to specific eligible projects or activities. Use-of-proceeds instruments such as green bonds and green loans, are a common vehicle for adaptation finance and are assessed against taxonomy criteria to ensure credibility.

Whitelist: A predefined list of technologies, measures or activities that a taxonomy considers automatically eligible without requiring a full qualification assessment. Whitelists simplify implementation but require regular updates to remain current and may not capture emerging adaptation solutions.



Acronyms and abbreviations

APLMA	Asia Pacific Loan Market Association
ASEAN	Association of Southeast Asian Nations
CCAP	Center for Clean Air Policy
CCSBSO	Central American Council of Banking Supervisors
CRVA	Climate Risk and Vulnerability Assessment
DFI	Development Finance Institution
DNSH	Do No Significant Harm
EIA	Environmental Impact Assessment
EU	European Union
GHG	Greenhouse Gas
GLP	Green Loan Principles
ICMA	International Capital Markets Association
ISIC	International Standard Industrial Classification of All Economic Activities
LAC	Latin America and the Caribbean
LMA	Loan Market Association
MDB	Multilateral Development Bank
MSS	Minimum Social Safeguards
NACE	Statistical Classification of Economic Activities in the European Community
NAICS	North American Industry Classification System
NAP	National Adaptation Plan
NDC	Nationally Determined Contribution
SC	Substantial Contribution
UNDRR	United Nations Office for Disaster Risk Reduction
UNEP FI	United Nations Environment Programme Finance Initiative
WMO	World Meteorological Organization

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How to navigate this document

If you need to...	Start at...	What you will find
Understand why this Playbook was developed	Introduction	■ The case for adaptation finance ■ The role of sustainable finance taxonomies ■ How this Playbook was built.
Understand the Global Taxonomy Landscape	Global taxonomy landscape for adaptation	A comparative overview of how national and regional taxonomies treat adaptation, including emerging good practices, common gaps, and implementation challenges.
Discover the Core Principles of the Playbook	Core principles for the application of adaptation taxonomies by financial institutions	Five guiding principles for consistent, credible application of adaptation taxonomies across jurisdictions and institution types.
Understand how to use the tools in this Playbook through worked examples	Practical tools for applying adaptation taxonomies	Five modular tools with guidance on when and how to use each, alongside worked scenarios showing how different institution types can apply the tools in combination across real investment contexts.

The five tools at a glance



TOOL 1

Climate Adaptation Sector Mapper

Links ISIC sector classifications to climate adaptation themes

Use this tool if you need to:

Identify which sectors in your portfolio are relevant to climate adaptation, or find where adaptation investment opportunities may sit



TOOL 2

Climate Hazard Dashboard

Structured reference of acute and chronic hazards with dataset links

Use this tool if you need to:

Understand which physical climate hazards are most relevant to specific sectors, assets or geographies in your portfolio



TOOL 3

Taxonomy Criteria Checker

Visual overview of qualification approaches across national, regional and international taxonomies

Use this tool if you need to:

Determine what type of eligibility assessment a taxonomy requires, or compare qualification approaches across different taxonomies or jurisdictions



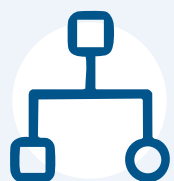
TOOL 4A

DNSH Compliance Tracker

Structured framework for recording DNSH assessments across sustainability objectives

Use this tool if you need to:

Document and track whether an adaptation investment complies with Do No Significant Harm requirements for climate mitigation and other sustainability objectives



TOOL 4B

DNSH to Adaptation Decision Tree

Guided evaluation of adaptation alignment where SC criteria are absent or incomplete

Use this tool if you need to:

Assess whether an investment is aligned with adaptation objectives in taxonomies that rely on DNSH rather than explicit substantial contribution criteria



TOOL 5

Maladaptation Screening Checklist

A structured checklist of eight questions to identify and manage maladaptation risks before, during or after investment assessment

Use this tool if you need to:

Assess whether an adaptation investment could unintentionally increase vulnerability, shift climate risks onto other groups or systems, or undermine long-term resilience outcomes



Introduction

Physical climate risks are rising up the agenda for a wide range of financial institutions, alongside growing awareness of the needs and opportunities associated with financing climate adaptation.¹ Climate change impacts are expected to intensify by 2030, with a 70% chance that the five-year average global warming will exceed the Paris Agreement target of 1.5°C above pre-industrial levels, according to the [World Meteorological Organisation \(WMO\)](#). Despite the growing prominence of several global risks including inequality, armed conflict and adverse outcomes to AI technologies, the [World Economic Forum](#) in its 2026 report highlights extreme weather events as the most significant global risk over the long-term, ten-year horizon.

At the same time, this growing awareness of the materiality of physical climate risks is driving growing financial institution interest in the need for investment in climate adaptation. The investment costs of bridging the climate adaptation gap between developed economies and developing are estimated by [McKinsey](#) to be at least US\$ 1.2 trillion annually by 2050, while the [2025 UNEP Adaptation Gap Report](#) indicates that developing countries alone will need between US\$ 310–365 billion annually by 2035. This is expected to create a [multi-billion dollar](#) opportunity for private financial institutions—banks, investors, insurers—to finance the expanding climate adaptation needs of companies, sovereign and sub-sovereign entities.

However, the ability of financial institutions to take action on climate adaptation is constrained by the challenges associated with the consistent identification of adaptation investments. Climate adaptation remains a relatively new and unfamiliar topic for many financial institutions. Clear and comparable definitions of climate adaptation investments are not widely available or understood across the financial sector. This highlights the potentially important role of sustainable finance taxonomies in providing clear and consistent definitions of adaptation investments that financial institutions can apply in their operations.

While climate adaptation increasingly features as a sustainability objective in many national and regional sustainable finance taxonomies, the use and application of such taxonomies by financial institutions for the purposes of adaptation financing remains uneven and complex. To date, sustainable finance taxonomies have tended to prioritize mitigation objectives. Adaptation considerations have typically been introduced later, have remained less developed, or have proven difficult to operationalize in practice. Furthermore, there are multiple challenges around consistency, comparability, and interoperability when trying to apply taxonomies in multiple jurisdictions where frameworks differ.

¹ This report uses the terms 'climate adaptation' and 'climate resilience' interchangeably.

In response, UNEP FI has developed this **Adaptation Finance Taxonomy Playbook** to help financial institutions to address these challenges. It aims to address the practical needs of financial institutions in applying these taxonomies and frameworks in real-world investment and lending decisions related to climate adaptation. In particular, the Playbook translates existing adaptation taxonomy approaches and related guidance into practical, decision-useful tools that can support a range of financial institutions operating across different jurisdictions. It also includes a number of practical case studies and tools that can support financial institutions to use adaptation taxonomies by:

- Mapping adaptation investments across sector-based and thematic taxonomy structures;
- Identifying investment-relevant physical climate risks and accessing related sources of information for the assessment of investments;
- Determining the kinds of eligibility checks that a taxonomy requires and the kinds of information needed; and
- Navigating taxonomy requirements for environmental and social standards (Do No Significant Harm).

The development of this Playbook has been informed by a multifaceted process combining landscape analysis, practitioner engagement, tool development, and consultation. This has included:

- A comparative analysis of existing national and regional sustainable finance taxonomies and how they incorporate adaptation;
- A review of complementary frameworks such as international and institutional adaptation taxonomies, market guidance from authoritative bodies and emerging taxonomy interoperability principles; and
- An assessment of key gaps, common implementation challenges and how taxonomies are being applied to support adaptation financing, informed by structured engagement with a small sample of institutions within the UNEP FI network.

The guidance presented in this Playbook is grounded in real-world taxonomy approaches and reflects common challenges faced by financial institutions when applying adaptation taxonomies and their definitions and criteria in practice. These insights have informed the development of practical guidance, tools, and strategies aimed at supporting more consistent, scalable, and credible mobilization of finance for climate adaptation.

The Playbook sits within the broader ecosystem of UNEP FI's efforts to strengthen coherence and catalyze the integration of sustainability into financial markets. This work includes support to governments in the development and refinement of national sustainable finance taxonomies, engagement with standard setters to promote convergence in definitions, safeguards and disclosure expectations, and the development of methodologies and guidance, including under the [Principles for Responsible Banking](#) and the [Principles for Sustainable Insurance](#).

Within this context, the Playbook is designed to bridge policy development and market practice. It supports financial institutions in applying adaptation taxonomies more efficiently and consistently, strengthening transparency, comparability and interoperability across jurisdictions and throughout the financial system.

Why financial institutions use adaptation taxonomies

Adaptation taxonomies can provide a systematic framework that helps financial institutions to identify, assess and classify investments that contribute to climate resilience.

Financial institutions, including commercial banks, asset managers and institutional investors, insurers, multilateral development banks (MDBs), and development finance institutions (DFIs), may apply adaptation taxonomies across several stages of the investment and financing process. This can provide greater consistency in how adaptation investments are screened and evaluated and help financial institutions to assess the credibility of adaptation-related investment opportunities and integrate adaptation considerations into their investment decision-making processes.

In practice, financial institutions can use adaptation taxonomies to support several operational and strategic functions. These use cases may include:

- **Investment screening and due diligence:** Assessing whether projects or activities meet defined adaptation criteria.
- **Product development and labelling:** Supporting the design of adaptation-aligned financial products such as loans, bonds or investment funds and insurance solutions such as parametric or resilience-linked insurance.
- **Assessment of resilience-linked debt instruments:** Providing a reference framework for evaluating the credibility of resilience-related bond or loan issuances.
- **Portfolio analysis and tracking:** Identifying and monitoring adaptation-related exposures within investment, lending or underwriting portfolios.
- **Identification of investment opportunities:** Helping institutions identify projects suitable for adaptation-focused financing, concessional finance or blended finance structures.

Case study: Structuring a sovereign green bond using adaptation taxonomy alignment

In May 2026, the Hong Kong, China Government issued a EUR 750 million, 8-year green tranche as part of its sovereign bond programme financing major infrastructure works, including the Northern Metropolis. The issuance secured the participation of a wider range of investors including commercial banks, central banks, sovereign wealth funds, fund managers, insurance companies and others.

The Green Bond Framework (2022) reflects Hong Kong, China's growing focus on water security and recognizes climate adaptation both as a standalone category and within the water and wastewater sector. This aligns closely with the [Taxonomy for Sustainable Finance \(Phase 2A\)](#) released by HKMA, which introduced whitelisted adaptation measures for the water sector in response to local climate and water resilience priorities.

Eligible water-related investments under the framework mirror these taxonomy-defined adaptation measures, including:

- Installing water metering
- Implementation of automated water control systems
- Implementation of stormwater separation
- Installing water resource monitoring equipment

The framework also includes standalone adaptation investments such as climate-resilient infrastructure and early warning systems for extreme weather events.

By aligning the Green Bond Framework with taxonomy-defined adaptation measures, the issuance strengthened the clarity and consistency of eligible use-of-proceeds, particularly in relation to water-related resilience investments, and enhanced the overall transparency and credibility of the green tranche.

By supporting these functions, adaptation taxonomies can help financial institutions reduce ambiguity around adaptation investments, strengthen internal investment processes and contribute to building a more transparent and credible market for adaptation finance.

Note on adaptation taxonomies

Since dedicated adaptation taxonomies remain relatively limited, this playbook draws on both adaptation-specific taxonomies and broader sustainable finance taxonomies that include adaptation as a sustainability objective.

Throughout the playbook, examples and tools may therefore reference sustainable finance taxonomies where they provide relevant approaches for identifying, assessing and financing climate adaptation activities.

Background to the development of sustainable finance taxonomies

Sustainable finance taxonomies have emerged as a key technical and in some cases, policy tool to provide clarity on what constitutes an environmentally sustainable economic activity and to guide the allocation of capital towards priority sustainability objectives, including climate change. Early taxonomy development was driven primarily by the need to support climate mitigation and green investment at scale, with the [Climate Bonds Mitigation Taxonomy](#) published in 2012 representing one of the earliest classification systems for green finance.

This was followed in 2015 by the [People's Bank of China's Green Bond Endorsed Project Catalogue](#) and later in 2020 by the [European Union \(EU\) Taxonomy for Sustainable Activities](#), which notably accelerated global uptake by embedding taxonomy alignment into regulatory and disclosure frameworks. Since then, taxonomy development has expanded rapidly across a wide range of jurisdictions (see section 1), reflecting growing international recognition of the role that sustainable finance taxonomies can play in improving transparency, reducing greenwashing and supporting sustainable finance markets.

While early sustainable finance taxonomies focused predominantly on mitigation, there is now a shift towards the inclusion of a broader range of sustainability objectives, including climate change adaptation. This is particularly evident in countries and regions that are highly exposed to physical climate risks (see Table 2). As a result, the global sustainable finance taxonomy landscape has become increasingly diverse, with national and regional taxonomies differing in scope, structure and level of maturity, while still sharing a number of common design features.

Core structural pillars of sustainable finance taxonomies

Despite differences in scope, maturity and policy context, most national and regional sustainable finance taxonomies are built around a common set of structural pillars. These pillars shape how sustainability objectives, including climate change adaptation, are defined and implemented. Table 1 provides an overview of the core structural elements typically found across sustainable finance taxonomies.

Table 1: Core structural pillars of sustainable finance taxonomies

Structural pillar	Description
Sustainability objectives	Environmental and social goals, where the most common are climate mitigation, climate adaptation, biodiversity protection, water and marine resource management, pollution prevention and control, and circular economy
Sector classification	Economic activities are typically organized using international or national classification systems (e.g. ISIC, NACE, NAICS, etc.)
Qualification checks	■ Rules or thresholds used to assess whether investments make a substantial contribution to at least one sustainability objective ■ These may either be criteria-based (quantitative, qualitative or process-based), principles-based, or alternatively based on ‘whitelists’ of automatically eligible investments ■ An explanation of the advantages and limitations of these approaches are expanded upon in section 3 of this Playbook.
Alignment safeguards	Requirements to ensure activities do not undermine other sustainability objectives, including Do No Significant Harm (DNSH) to any other sustainability objectives and Minimum Social Safeguards (MSS)

These structural pillars provide a useful lens for understanding how different taxonomies define and treat climate change adaptation and form the basis for the comparative analysis presented in this Playbook.



1. Global taxonomy landscape for adaptation

The development of sustainable finance taxonomies has accelerated rapidly over the past decade. According to the [Center for Clean Air Policy's \(CCAP\) Global Taxonomy Map and Dashboard](#), 59 sustainable finance taxonomies have been developed or are underway, with 39 published and implemented and 20 still under development.²

1.1 Comparative overview of how taxonomies treat adaptation

Inclusion of climate change adaptation as a sustainability objective

A review of sustainable finance taxonomies conducted as part of the development of this Playbook revealed that climate change adaptation is increasingly recognized as a sustainability objective in a growing number of taxonomies. The majority of taxonomies that have been published (or are being implemented) explicitly include climate adaptation alongside climate change mitigation and other sustainability objectives.

However, the treatment of adaptation varies considerably across taxonomies depending on the stage of development. This Playbook categorizes taxonomies according to their stage of development and how they address adaptation, as shown in Table 2:

- Adaptation in scope with published SC criteria:³ Adaptation is fully recognized, with criteria for assessing substantial contribution.
- Adaptation in scope but no published SC criteria: Adaptation is recognized, but SC assessment criteria are not yet published.
- Not in scope: Adaptation is not specified as a sustainability objective.
- Uncertain: Adaptation is not mentioned; taxonomy may be under development or status unclear.

² [CCAP Global Taxonomy Map & Dashboard](#)

³ SC or equivalent concept

Table 2: Inclusion of climate change adaptation as a sustainability objective in national taxonomies (February 2026)

Adaptation sustainability objective	Status of taxonomy development	
	Published and being implemented	Under development
Adaptation in scope with published Substantial Contribution criteria	Bangladesh, Costa Rica, *European Union, ⁴ Ghana, Hong Kong (China), Indonesia, Kenya, Mexico, Pakistan, Panama, Rwanda, South Africa, Uganda, Zambia [40 countries⁵]	-
Adaptation in scope but no published Substantial Contribution criteria	Australia, Azerbaijan, Brazil, Chile, China, Colombia, Dominican Republic, Georgia, Honduras, Kyrgyzstan, Malaysia, Mongolia, Nepal, New Zealand, Paraguay, Philippines, Singapore, Republic of Korea, Sri Lanka, Thailand, Vietnam [21 countries]	Albania, India, Jordan, Peru, Senegal [5 countries]
Not in scope	Fiji, Kazakhstan, Russia [3 countries]	-
Not specified	Uzbekistan [1 country]	Armenia, Cambodia, Canada, Ecuador, Eswatini, Ethiopia, Lao People's Democratic Republic, Madagascar, Malawi, Morocco, Papua New Guinea, Serbia, Türkiye, Turkmenistan, the United Arab Emirates [15 countries]

While adaptation is widely recognized as a sustainability objective across many taxonomies, the development of detailed qualification checks is ongoing, reflecting the phased nature of taxonomy development where mitigation is typically prioritized in early stages and adaptation criteria are introduced later.

As a result, not all taxonomies (even those already published) that include adaptation as one of their environmental objectives have developed criteria for determining whether investments make a substantial contribution to adaptation (or to climate resilience). In several cases, adaptation is addressed principally through DNSH to adaptation requirements that are applied to mitigation-focused investments, while focused qualification checks for whether in investment makes a substantial contribution to adaptation are planned but not yet operationalized. In some cases where such adaptation checks have been developed, their coverage remains partial. For example, the [Hong Kong, Taxonomy for Sustainable Finance](#) has defined adaptation-related criteria only for selected economic activities within the water sector.

⁴ *NB: While the EU Taxonomy is a regional framework, it has been formally adopted and implemented across all 27 EU member states. For the purposes of this Playbook, the EU Taxonomy is counted as a single taxonomy, but each member state is counted as an individual country. Non-EU Member State EEA countries applying the EU Taxonomy are excluded.

⁵ Including EU Member States, but excluding non-EU Member State EEA countries

Alongside national initiatives, several regional taxonomies have also emerged, some of which are still being developed and refined. These often serve as important reference points for countries developing their own taxonomies, particularly in regions facing shared climate risks or capacity constraints. Table 3 provides examples of regional sustainable finance taxonomies, highlighting the inclusion of climate change adaptation.

Table 3: Inclusion of climate change adaptation as a sustainability objective in regional taxonomies (February 2026)

Taxonomy name	Adaptation in scope with published Substantial Contribution criteria	Under development
<u>EU Taxonomy</u>	✓	-
<u>Association of Southeast Asian Nations (ASEAN) Taxonomy for Sustainable Finance</u>	✓	-
<u>African Sustainable Finance Taxonomy</u>	-	✓
<u>Common Framework of Sustainable Finance Taxonomies for Latin America and the Caribbean</u>	N/A	-
<u>CCSBSO Central America Taxonomy</u>	-	✓

Although these regional frameworks differ in legal status, scope and level of detail, they play an important role in shaping national taxonomy design choices. In practice, they often influence sector classifications, qualification checks and approaches to incorporating climate change adaptation.

1.2 Emerging voluntary landscape supporting adaptation finance taxonomies

Voluntary guidance and principles that support the practical implementation of adaptation finance taxonomies also form an important part of the broader sustainable finance landscape. This includes international adaptation taxonomies and classification frameworks, financial institution-led and market guidance frameworks, supporting standards and interoperability principles. Together, these provide useful reference points for aligning definitions, criteria and safeguards across jurisdictions and financial market participants.

Individually, these frameworks serve different functions including providing technical classification structures and setting out principles for alignment with adaptation objectives. Collectively, however, they strengthen the credibility and usability of adaptation finance taxonomies by supporting their consistent application across jurisdictions and market contexts.

International classification frameworks

International classification frameworks can play a key role in providing common technical foundations that can be adapted to national or institutional contexts. These frameworks help translate adaptation concepts into investable activities, offering structured approaches to classification, assessment and reporting that can support greater consistency across markets.

This section provides examples of four existing international frameworks serve as useful reference points for screening, mapping and reporting adaptation investments.

ASAP Adaptation Solutions Taxonomy

- Developed in 2020 under the [Adaptation SME Accelerator Program \(ASAP\)](#) in partnership with the IDB, IDB Lab, and the Global Environment Facility (GEF) to identify, engage and support SMEs providing climate adaptation solutions in developing countries.
- Provides a methodical and transparent approach to identifying 'Adaptation SMEs' based on the technologies, products and services they offer, while highlighting areas where targeted support may be needed.⁶
- Comprises four core elements: i) a definition of 'Adaptation SMEs,' ii) eligibility criteria, iii) a classification system, and iv) a results framework to track and report adaptation outcomes.
- Designed to be dynamic, inclusive and applicable across sectors, and intended for use by SMEs, investors, lenders, incubators and accelerators, governments and other stakeholders.
- This was further developed through the 2024 [Climate Resilience Investment in Solutions Principles \(CRISP\) framework](#).⁷

UNEP Copenhagen Climate Centre Taxonomy of Climate Change Adaptation Technology

- Developed in 2021 by the [UNEP Copenhagen Climate Centre](#), a leading international advisory institution on energy, climate and sustainable development.
- Provides a methodical classification framework for adaptation technologies identified through the Technology Needs Assessment (TNA)⁸ process.
- Organized around **sectoral demand for adaptation technologies**, linking country priorities with finance and industry perspectives.
- Makes adaptation technology needs **more visible and comparable across countries**, supporting clearer communication and alignment between development, industry, and finance actors.
- Supports financial institutions in identifying adaptation technology investment opportunities across sectors that are tailored to country priorities and relevant local contexts.

The Climate Bonds Resilience Taxonomy (CBRT)

- Launched by the [Climate Bonds](#) Initiative in 2024, an investor-focused not-for-profit organization that focuses on the mobilization of global capital for climate action.

6 [ASAP Adaptation Solutions Taxonomy](#)

7 Developed by the Lightsmith Group together with MSCI Sustainability Institute, Bezos Earth Fund, ClimateWorks Foundation, and the Global Adaptation and Resilience Investment Group (GARI)

8 [Taxonomy of Climate Change Adaptation Technology](#)

- Breaks down resilience investments into themes,⁹ sectors, and sub-sectors, providing **granular and comparable classification** across hazards and geographies.
- Combines technical screening criteria, process-based assessments, and whitelists, which are particularly helpful for financial institutions as **pragmatic entry points** into taxonomy application.

The Tailwind Taxonomy for Climate Adaptation and Resilience

- Developed in 2024 by [Tailwind Futures](#), an investment firm and ecosystem builder focused on advancing global climate resilience through entrepreneurship, innovation, and strategic advisory.
- Offers a streamlined, theme- and sector-based classification framework for adaptation investments, designed for philanthropic, public, and early-stage private investors.¹⁰
- Functions primarily as a classification and exploration tool, with principles-based guidance rather than embedded qualification checks.
- Supports consistent identification and reporting by providing a shared vocabulary and structure, even when formal taxonomies differ.

Internal frameworks and market guidance

Alongside public taxonomy development, some financial institutions have developed internal frameworks to track and classify adaptation investments in their portfolios. These frameworks bridge the gap between high-level taxonomies and the day-to-day investment decisions that financial institutions make.

They also tend to prioritize usability, scalability and alignment with risk, credit and product development processes, often drawing on external references to ensure technical credibility. However, approaches may vary significantly depending on mandate, geography and regulatory context.

9 Resilience Agri-Food Systems, Resilient Cities, Resilient Health, Resilient Industry & Commerce, Resilient Infrastructure, Resilient Natural Systems, Resilient Social Systems

10 [Tailwind Taxonomy Companion Deck \(May 2024\)](#)

Case study: Guide for Adaptation and Resilience Finance (GARF)

Standard Chartered, KPMG, and the United Nations Office for Disaster Risk Reduction (UNDRR), together with contributions from more than 20 additional organizations, collaborated to develop the Guide for Adaptation and Resilience Finance (GARF). The Guide provides a practical roadmap for financing adaptation and resilience, including over 100 investable activities such as climate-resilient crops, public hospital infrastructure investment, and mangrove conservation and replanting.

The GARF sets out a non-exhaustive list of indicative activities and clarifies that each investment should be assessed for substantial contribution, potential maladaptation, and any significant harm to other sustainability objectives, as well as alignment with nationally defined adaptation and resilience strategies. All activities are considered to contribute to adaptation and resilience objectives as defined by the Guide. The term “Climate Change Adaptation” aligns with the definitions set out in the environmental objectives of ICMA, LMA, APLMA, and LSTA principles, ensuring consistency with recognized green project categories.

Building on this foundation, Standard Chartered Bank (SCB) has developed an internal process to assess and identify adaptation-related Key Performance Indicators (KPIs) and Sustainability Performance Targets (SPTs) and their materiality, aligned with relevant principles and frameworks and informed by the GARF. This toolkit recognizes both core and secondary KPIs or SPTs that directly or indirectly impact a company’s operations. It has been applied across a wide range of KPIs—including decarbonization, social, and governance metrics—and overlaid with GARF activities and metrics to assess how physical climate risks affect operations and how resilience improvements can serve as practical incentives within a broader adaptation and resilience strategy.

A key challenge has been shifting from a traditional use-of-proceeds financing model toward a KPI-based approach, where resilience is embedded in performance metrics rather than directly financed activities. This required significant effort to map SLL datasets to GARF activities and demonstrate how operational metrics can be linked to resilience outcomes.

Another challenge lies in quantifying the impact of different KPIs on resilience, particularly for social-linked metrics where long-term benefits are less tangible than financial or damage-related indicators. Establishing clear, measurable links between KPIs and resilience outcomes remains complex and context-specific.

To scale this approach, clearer guidance on methodologies for measuring the impact and benefits of KPIs will be essential. Strengthening methodologies would support the use SLLs as tools to enhance resilience, while helping organizations translate materiality assessments into measurable adaptation outcomes and reducing greenwashing risks.

Case study: Defining an adaptation investment universe

As a specialist investor focused on the transition to a more sustainable economy, IMPAX Asset Management needed a clear way to define its adaptation investment universe and assess how revenues align with climate solutions. With physical climate risks already affecting companies today, it was important to have a framework that clearly distinguishes adaptation from mitigation.

To respond to this need, IMPAX developed a proprietary Climate Opportunities Taxonomy with a dedicated Adaptation pillar. The pillar also introduces an adaptation lifecycle that groups activities into three stages: prepare, respond, and recover. These groupings cover adaptation investments aimed at reducing future damages from climate risks, maintaining system functionality during shocks and rebuilding and strengthening systems.

IMPAX's taxonomy now spans 15 subsectors across seven sectors, including energy, water, agriculture and forestry, infrastructure, information communications, financial services and healthcare. It is regularly updated and benchmarked against other frameworks, providing a consistent and transparent basis for identifying, classifying and comparing adaptation revenues across listed companies.

[ICMA Green Bond](#) and [LMA Green Loan Principles](#)

Market standards such as the International Capital Market Association's (ICMA) [Green Bond Principles](#) and the Loan Market Association's (LMA) [Green Loan Principles](#) also play an important role in supporting the practical application of sustainable finance taxonomies, particularly where coverage is incomplete or still evolving. They are widely used across jurisdictions and provide high-level guidance on eligible green project categories, including climate change adaptation.

Although the Green Bonds Principles and Green Loan Principles do not define detailed eligibility qualification checks, they explicitly recognize adaptation investments and are intended for broad market use. They may be used to guide issuers in structuring credible Green Bonds and Loans that finance adaptation projects and help investors access the information needed to evaluate investments on the grounds of their contributions towards adaptation objectives.

The Green Bond Principles and Green Loan Principles comprise four principles to promote transparency and consistency across sustainable bond and loan markets, which entail providing clarity on: i) use-of-proceeds, ii) process for project evaluation and selection, iii) management of proceeds, and iv) reporting. In the context of adaptation-related transactions, taxonomies can complement the GBP by providing detailed and consistent guidance for identification of adaptation-related use-of-proceeds (Principle I).

[MDB Joint Methodology for Tracking Climate Change Adaptation Finance](#)

A further example of a framework—although not necessarily a taxonomy—for defining adaptation finance is the [MDB Joint Methodology for Tracking Climate Change Adap-](#)

[tation Finance](#), which takes a process-based approach to defining adaptation finance amounts within projects:

- Projects must clearly define the climate vulnerability context, state the intent to reduce vulnerability, and link specific activities to that context.
- Only activities meeting these criteria are reported as adaptation finance, to avoid mislabelling development finance as adaptation finance.
- Activities may address current drivers of vulnerability, build resilience to present and future risks, or enable systemic adaptation through capacity, knowledge, or infrastructure improvements.
- Activities must not increase vulnerability or expose assets and communities to harm.

This approach demonstrates how process-based frameworks allow MDBs to apply adaptation criteria consistently, while accounting for local context and project-specific risks.

At the same time, however, financial institutions often rely on a combination of taxonomies and guidance frameworks depending on the investment context, which can limit comparability across approaches.

Supporting interoperability principles and initiatives

The proliferation of sustainable taxonomies in recent years has created a situation in which financial institutions have to navigate a diverse landscape of sustainable finance taxonomies, at national, regional and international levels. This poses a particular challenge for financial institutions that operate across multiple jurisdictions and may need to relate different sustainable finance taxonomies to each other or apply different sustainable finance taxonomies to the same or similar products. This has led to growing awareness of the need for interoperability between different taxonomies.

In response to these interoperability challenges, there is increasing focus on developing interoperability principles and practical roadmaps that support alignment across sustainable finance taxonomies. It is also important for these approaches to be applied in the context of adaptation taxonomies. This typically entails emphasizing shared definitions of adaptation, the consistent use of core concepts such as activities and measures, transparency in qualification checks and recognition of credible assessment approaches.

[The Taxonomy Roadmap Initiative](#)

Emerging initiatives such as the [Roadmap for Advancing Interoperability and Comparability of Sustainable Finance Taxonomies \(Taxonomy Roadmap Initiative\)](#) provide practical guidance on improving interoperability across national and regional taxonomies. These include:¹¹

- Defining core taxonomy activities relevant to emerging markets and developing economies;
- Developing consistent technical approaches for alignment across sustainability objectives;
- Supporting transition finance in high-emission sectors.

¹¹ [Principles for Taxonomy Interoperability](#)

One of the first outputs of the Taxonomy Roadmap Initiative was to publish the [Principles for Taxonomy Interoperability](#). Rather than prescribing uniform criteria, these principles encourage the use of shared building blocks, such as common sector structures, consistent application of concepts (e.g. DNSH), and recognition of credible external assessment methodologies. This Playbook explores how these principles may be applied in the context of adaptation taxonomies, and how this may support financial institutions in the effective application of different adaptation taxonomies in their operations.

Case study: Supporting taxonomy interoperability across the globe

Despite growing uptake globally, the development of sustainable finance taxonomies is resource intensive and time consuming, often taking two to three years to establish foundational legal frameworks and agree qualification checks. This process requires significant coordination across governments, regulators and market stakeholders, creating challenges for timely access to comparable information. Without a single place to view taxonomy developments across regions, it is often difficult for financial institutions and policymakers to compare approaches or understand differences in how activities are classified.

To address this, the [Sustainable Finance Taxonomy Mapper](#) has been developed by a consortium of academic and sustainable finance research partners, including UNEP FI. It builds on growing efforts in regions such as the EU, LAC and ASEAN to define which economic activities substantially contribute to sustainability objectives. Given how complex and time-consuming taxonomy development is, the Mapper brings this information together in one place for policymakers, financial institutions, and other users.

The tool provides a view of governance structures, sector classifications and qualification checks across several taxonomies, allowing users to compare how economic activities are defined and assessed across different jurisdictions. By bringing this information together, the Mapper improves clarity, comparability, and ease of use.

[UNEP FI Impact Centre and Impact Management Platform](#)

Through its [Impact Centre](#) and the [Impact Management Platform \(IMP\)](#), UNEP FI is also working to strengthen interoperability across sustainability frameworks, policies and standards. This complements the implementation of adaptation finance taxonomies by supporting more consistent use of sector classifications, definitions and impact concepts across systems and jurisdictions.

Key areas of work include:

- Sector classification research to improve alignment between different frameworks
- Topic and impact definitions to support consistent interpretation
- Mapping tools such as [Sectors Mapping](#), [Needs Mapping](#) and [Interlinkages Mapping](#)

Together, these efforts help contribute to a more coherent sustainable finance landscape that supports the practical and consistent implementation of adaptation finance taxonomies within a broader aligned framework.

1.3 Common gaps and limitations

Adaptation finance taxonomy engagement and uptake

Even as the use of adaptation finance taxonomies has expanded, financial institutions face ongoing challenges in applying them consistently. These challenges are shaped not only by the taxonomies themselves but also by the type of financial institution and its role in the market. Understanding these patterns can help financial institutions to anticipate barriers and design practical approaches for implementation.

As part of the development of this Playbook, a survey¹² was conducted across seventeen financial institutions, including development banks, commercial banks, asset managers and institutional investors, re/insurance companies, impact investors and private equity/venture capital firms, financial regulators and supervisors, international NGOs, and industry associations. While this is not a representative sample of the sector, it provides insights from practitioners to inform the development of the Playbook.

Respondents to the survey reported varying degrees of engagement with adaptation taxonomies. Development banks, regulators, asset managers, and international organizations indicated more systematic use of adaptation taxonomies, while commercial banks and impact investors reported more selective use, and re/insurance companies show mixed engagement. Survey respondents from financial sector industry associations noted that while they are not currently applying taxonomies operationally, they would consider doing so if supported by clearer guidance, better data, training, regulatory requirements, or client demand.

This variation shapes the kinds of challenges that financial institutions face. Financial institutions that rely heavily on taxonomies for investment screening often encounter **data gaps or unclear criteria**, whereas those focused on reporting or strategic alignment may be more affected by **interoperability issues or limited sector coverage**.

Key implementation challenges

Despite the rapid growth in sustainable finance taxonomies that include, or plan to include, climate adaptation as a sustainability objective, there remain several barriers for financial institutions that wish to use adaptation taxonomies. Financial institutions often encounter practical barriers that arise from gaps in data, uneven sector coverage, evolving criteria and differences between taxonomies across different jurisdictions. Understanding these challenges and how they may vary can help financial institutions to anticipate challenges and adopt strategies to use adaptation taxonomies more consistently and effectively.

¹² The survey was conducted by UNEP FI in February 2026 across its network of financial institutions in Latin America and Caribbean, Africa and Middle East, Asia Pacific, Central Asia, and Europe.

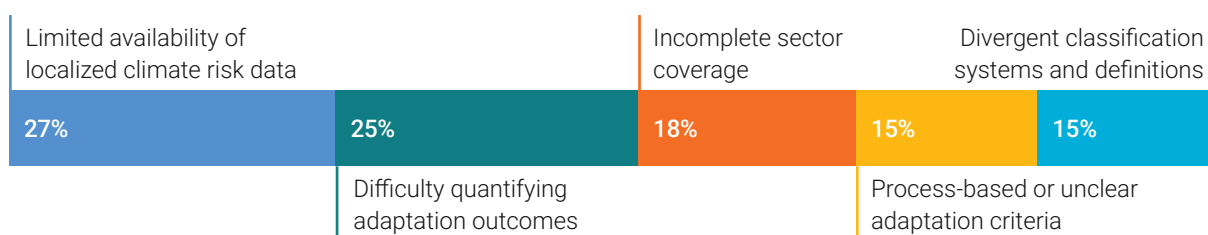


Figure 1: Most frequently cited barriers to the use of adaptation taxonomies by financial institutions surveyed

- **Data availability:** Adaptation taxonomies often rely on process-based assessments, requiring context-specific information about climate risks, exposure, and adaptation outcomes. This information is often incomplete or inconsistent, making it difficult for financial institutions to apply adaptation taxonomies consistently and demonstrate credible adaptation outcomes. Another challenge arises in “taxonomic deserts,” i.e. countries or jurisdictions where no formal taxonomy or classification guidance exists, leaving financial institutions without a common reference point for defining or assessing adaptation investments, other than using internationally defined references that may not be appropriately customized for specific country contexts.
- **Sector coverage:** Many sustainable finance taxonomies tend to prioritize mitigation, leaving adaptation criteria concentrated in a few sectors, such as agriculture and water. For financial institutions wishing to use adaptation taxonomies, this can constrain portfolio-level assessments and complicate application across geographies and asset types, particularly for financial institutions seeking economy-wide or cross-sector alignment.
- **Adaptation criteria:** Some adaptation taxonomies rely heavily on process-based approaches or indirect DNSH guidance for adaptation. While these are highly flexible, focusing on the quality of climate risk assessment and adaptation planning, they can increase interpretation complexity and reduce comparability. Conversely, more prescriptive criteria offer clarity, comparability and easier implementation for financial institutions but may overlook local climate risks or constrain context-specific solutions. In some taxonomies, adaptation criteria are still interim or phased for future updates, which can delay their uptake and use by financial institutions for identifying and adaptation-focused investments.
- **Interoperability and comparability:** Differences in taxonomy design, classification systems, and evidence requirements across jurisdictions can make mapping and alignment more complex for financial institutions, especially for those that operate across multiple jurisdictions. Variation in DNSH application and levels of prescriptiveness further increases operational burden. Full harmonization is not always appropriate, as adaptation must remain sensitive to local risk profiles and context-specific needs.



2. Core principles for the application of adaptation taxonomies by financial institutions

Financial institutions face practical challenges in translating high-level taxonomy frameworks into operational decision-making processes and applying adaptation criteria consistently across different taxonomies, asset classes, and jurisdictions. This includes identifying relevant climate hazards, interpreting qualification criteria, determining data and documentation needs, and ensuring investments do not cause unintended harm.

Variations in taxonomy structures, methodologies and levels of detail further complicate implementation, creating uncertainty for investment teams seeking to identify and finance credible adaptation investment. Addressing these challenges requires a consistent, transparent, and flexible approach to applying adaptation taxonomies.

The following guiding principles provide a **practical foundation for financial institutions** to understand and apply adaptation finance taxonomies effectively, supporting consistent, credible and impact-focused financial decisions:

2.1 Principle 1: Sector prioritization

Financial institutions should use climate vulnerability, portfolio materiality and national adaptation priorities to guide sector prioritization, focusing taxonomy assessment resources on areas where adaptation relevance is highest, where credible evidence can be assembled, and where activities are more relevant to their core business.

Effective taxonomy application begins with identifying which sectors in a portfolio are most relevant to climate adaptation. Not all sectors carry equal adaptation significance. Vulnerability varies by geography, asset type and climate hazard exposure, and adaptation taxonomies differ in their sectoral scope and depth of coverage. Without structured prioritization, institutions risk misallocating assessment resources or overlooking material adaptation opportunities.

In practice, sector prioritization requires financial institutions to:

- **Assess physical climate risk exposure by sector.** Using recognized climate risk datasets and hazard classifications (see Tool 2: Climate Hazard Dashboard), institutions should identify which sectors in their portfolio face the highest exposure to acute and chronic climate hazards under current and projected future climate conditions. Sectors such as agriculture and food systems, water infrastructure, coastal real estate, energy and transport are typically among the most exposed, but priority sectors will vary by geography.
- **Cross-reference national adaptation priorities.** Nationally determined contributions (NDCs), National adaptation plans (NAPs) and country-specific adaptation taxonomies identify the sectors that governments have designated as climate-vulnerable and adaptation-critical. These documents provide authoritative, jurisdiction-specific signals for where adaptation investment is most needed and where regulatory expectations may emerge.
- **Apply a portfolio materiality lens.** Institutions should assess which sectors represent significant financial exposures, revenue concentrations or credit risk concentrations, and then determine where the intersection of climate vulnerability and portfolio materiality is greatest. Sectors that are both highly exposed and financially material warrant priority taxonomy assessment effort.
- **Account for gaps in ISIC-based classification systems.** Standard sector classification systems such as ISIC do not fully capture all adaptation-relevant activities, particularly those related to nature-based solutions, ecosystem restoration and cross-cutting resilience infrastructure. Institutions should supplement standard sector screening with thematic adaptation lenses to avoid missing material opportunities. The Climate Adaptation Sector Mapper (Tool 1) supports this process by linking ISIC-based sector classifications to climate adaptation themes used in international adaptation frameworks.

Importantly, sector prioritization should not be used to exclude sectors from adaptation assessment on an a priori basis. Many sectors with limited adaptation labelling in current taxonomies (including manufacturing, ICT and financial services) may carry significant embedded adaptation value that a structured assessment process can identify.

2.2 Principle 2: Climate risk assessment

Financial institutions should ensure that investment decisions are informed by and linked to a robust assessment of physical climate risks, taking into account where climate vulnerabilities are most significant within their operating context, to ensure that investments target genuine adaptation needs.

A Climate Risk and Vulnerability Assessment (CRVA) is a structured process for identifying and evaluating the physical climate hazards, both acute and chronic, that are relevant to a specific activity, asset or geographic location, and for assessing the degree of exposure and vulnerability of that activity to those hazards. CRVAs are a foundational requirement in many adaptation taxonomies, including the EU Taxonomy, the Rwanda Green Taxonomy and the ASEAN Taxonomy for Sustainable Finance, and are increasingly expected as a condition of qualification checks and DNSH assessments.

A credible CRVA for taxonomy purposes should:

- **Identify relevant acute and chronic hazards** for the specific asset, activity and geography, drawing on recognized climate hazard classification frameworks (such as those set out in the EU Taxonomy's climate hazard matrix, which has been widely adopted as a reference structure across national and regional taxonomies). The Climate Hazard Dashboard (Tool 2) provides a structured reference for identifying hazards by category, type and geographic context.
- **Apply recognized climate scenarios and time horizons.** At a minimum, a CRVA should consider at least two warming scenarios, such as a moderate pathway (e.g. SSP2–4.5) and a high-emissions pathway (e.g. SSP5–8.5) and cover the expected use life of the asset. For long-lived assets such as infrastructure and real estate, end-of-century projections should also be considered.
- **Assess both exposure and vulnerability.** Exposure refers to the degree to which an asset or activity is subject to climate hazards. Vulnerability refers to the susceptibility of that asset or activity to harm from those hazards, taking into account adaptive capacity, socioeconomic factors and ecosystem dependencies. Both dimensions are necessary for a complete CRVA.
- **Link hazard findings to investment decisions.** A CRVA is not a standalone risk report; it should directly inform qualification checks, DNSH assessments and investment structuring. Institutions should document the connection between CRVA findings and taxonomy alignment determinations explicitly.

Where a full CRVA cannot be completed; for example, due to data limitations or early-stage screening, institutions should apply conservative hazard screening using available datasets, document the limitation transparently, and flag the need for a more detailed assessment at a later stage of the investment process. The Climate Hazard Dashboard (Tool 2) and accompanying dataset references support preliminary hazard identification in the absence of a full CRVA.

2.3 Principle 3: Adaptation criteria application

Financial institutions should apply adaptation-related qualification checks consistently, while allowing for flexibility to accommodate differences in taxonomy structures and reporting requirements. This enables financial institutions to ensure comparability across portfolios and jurisdictions while allowing practical implementation and integration into internal processes.

Adaptation taxonomies employ a range of qualification approaches—quantitative and qualitative criteria, process-based assessments, whitelists of pre-approved activities, and principles-based frameworks which are described in detail in section 3.3 and the Taxonomy Criteria Checker (Tool 3). The diversity of these approaches reflects legitimate differences in context, sector and available evidence, but it creates a risk of inconsistent application, particularly for institutions assessing investments against multiple taxonomies simultaneously.

Consistent application requires institutions to:

- **Distinguish eligibility from alignment at each assessment stage.** Eligibility (whether an activity falls within the taxonomy's scope) should be determined first, based on sector classification and the taxonomy's stated sustainability objectives. Alignment (whether the activity meets the substantive qualification criteria) is a separate, subsequent determination that requires evidence specific to the activity and its climate context. Conflating these steps introduces errors that are difficult to detect and audit.
- **Identify the qualification approach used by each taxonomy.** Before applying a taxonomy, institutions should determine whether it relies primarily on quantitative thresholds, process-based criteria, whitelists, principles-based guidance or a hybrid approach, and identify what evidence is required to satisfy each. The Taxonomy Criteria Checker (Tool 3) provides a structured visual overview of qualification approaches across major national, regional and international taxonomies.
- **Apply the most relevant and rigorous standard where taxonomies overlap.** When an investment must satisfy multiple taxonomies; for example, an infrastructure project financed in a jurisdiction with both a national taxonomy and a regional framework such as the ASEAN Taxonomy, institutions should identify the most demanding applicable criteria and use them as the primary reference, documenting the rationale for this choice. However, it is important to consider whether the national taxonomy is legally binding, in which case, it supersedes any voluntary framework.
- **Maintain consistent internal documentation standards.** Regardless of which taxonomy is applied, institutions should document the following for each adaptation taxonomy assessment: the taxonomy applied; the eligibility determination and its basis; the qualification criteria assessed; the evidence sources used; the alignment determination; and any material limitations or uncertainties. This documentation supports internal governance, external reporting and third-party verification.

- **Apply professional judgement transparently.** Many adaptation qualification approaches, particularly process-based and principles-based criteria, require expert judgement rather than mechanical application of thresholds. Where judgement is exercised, it should be documented, attributed to qualified personnel and subject to appropriate governance review.

2.4 Principle 4: Do No Significant Harm (DNSH)

Financial institutions must ensure that adaptation investments avoid causing significant harm to other sustainability objectives. Integrating DNSH considerations ensures that investments strengthen resilience without creating unintended negative impacts, maintaining alignment with broader sustainability goals.

DNSH requirements are a structural feature of most major adaptation taxonomies and serve two distinct functions in the adaptation context, which financial institutions must understand and apply separately.

DNSH to other sustainability objectives requires that an activity contributing to climate adaptation does not significantly harm other sustainability objectives covered by the taxonomy, typically climate change mitigation, water and marine resource management, biodiversity and ecosystem protection, pollution prevention and control, and the circular economy. For example, a coastal flood defense structure that contributes to climate adaptation must also be assessed for its impacts on marine ecosystems and sediment flows.

In practice, satisfying DNSH to other sustainability objectives requires institutions to:

- Review the specific DNSH criteria set out in the applicable taxonomy for each relevant sustainability objective. These criteria vary significantly across taxonomies in specificity and approach.
- Assemble evidence that the activity complies with relevant sustainability standards and regulatory requirements, including Environmental Impact Assessments (EIAs) where applicable.
- Document evidence sources and compliance determinations consistently. The DNSH Compliance Tracker (Tool 4a) provides a template for recording DNSH assessments across multiple sustainability objectives and taxonomies.

DNSH to climate change adaptation applied to activities that contribute primarily to other sustainability objectives, such as climate mitigation, requires that those activities do not significantly increase the vulnerability of people, assets or systems to physical climate impacts. Importantly, in a number of published taxonomies where explicit substantial contribution criteria for adaptation have not yet been developed, DNSH to adaptation assessments serve a more central role: they function as a proxy measure for determining whether an investment is broadly aligned with adaptation objectives. In this context, a well-structured DNSH to adaptation assessment becomes the primary means by which institutions can demonstrate that an investment is not misaligned with climate adaptation goals.

2.5 Principle 5: Maladaptation screening

Financial institutions should ensure adaptation investments do not result in maladaptation by transferring risk, increasing vulnerability, or causing unintended negative impacts, so that investments meaningfully contribute to resilience.

Maladaptation is among the most consequential risks in adaptation finance and one of the least systematically addressed in current taxonomy frameworks. The IPCC Sixth Assessment Report (AR6, WGII) identifies maladaptation as a significant and growing concern across sectors. Noting that poorly designed adaptation interventions can reinforce existing inequities, create path dependencies that constrain future action, and impose costs on communities or ecosystems that bear no responsibility for the original risk.

For financial institutions, maladaptation risk is particularly acute in the following circumstances:

- **Hard infrastructure investments with long asset lifetimes**, such as coastal defenses, flood barriers and irrigation systems, which are designed for historical climate conditions and may become inadequate or actively harmful under projected future climate scenarios.
- **Interventions that address symptoms rather than causes of vulnerability**, such as air conditioning systems that increase energy demand and GHG emissions while reducing heat exposure for a specific group.
- **Activities that shift climate risk spatially or socially**, such as upstream flood management measures that redirect water flows to downstream communities, or agricultural irrigation that reduces drought risk for one group of farmers while depleting shared groundwater resources.
- **Investments that create economic or regulatory lock-in**, such as large-scale desalination infrastructure that may crowd out investment in more sustainable long-term water management alternatives.
- **Maladaptation in financial products**, such as insurance products that enable development in high-risk zones or loans that facilitate coastal development.

Applying the principles in practice

The five principles outlined above are mutually reinforcing and should be applied as an integrated framework rather than as a sequential checklist. Sector prioritization determines where to focus adaptation assessment effort; climate risk assessment provides the evidence base for qualification and DNSH determinations; consistent criteria application ensures comparability and auditability; DNSH safeguards prevent unintended harm; and maladaptation screening ensures that adaptation outcomes are genuine and durable.

Taken together, these principles provide financial institutions with a structured and defensible approach to applying adaptation taxonomies across diverse portfolios, jurisdictions and asset classes. They support credible, consistent and impact-focused investment decisions, reduce the risk of greenwashing or mislabelling of ordinary development investments as adaptation finance, and contribute to building the market integrity and transparency that the broader adaptation finance ecosystem requires.

Note on applying Playbook principles in markets without a national taxonomy

Financial institutions operating in jurisdictions without a national taxonomy may need to develop their own internal approaches for identifying, assessing, and allocating capital to adaptation investments. As no single framework is likely to fully reflect a specific market context, institutions may need to draw on a combination of voluntary guidance and frameworks, including those referenced throughout this Playbook.

In practice, financial institutions can still apply the principles in this Playbook through a systematic process:

- Prioritize sectors and activities most relevant to climate vulnerability, national context, portfolio materiality and core business
- Assess physical climate risks affecting sectors, assets and geographies
- Apply adaptation qualification checks using available international adaptation finance taxonomies and market guidance as reference points
- Assess DNSH and safeguard requirements to identify potential harm to sustainability objectives
- Screen for maladaptation risks to ensure investments do not increase vulnerability or shift risks elsewhere.

Together, these steps can support more transparent, and credible approaches to adaptation finance in markets where formal taxonomy guidance is limited or unavailable.

The practical tools presented in section 3 are designed to operationalize these principles at each stage of the investment and taxonomy assessment workflow.

Case study: Deploying adaptation finance in emerging markets

The Grameen Crédit Agricole (GCA) Foundation is launching the Women Empowerment for Climate (WEC) Fund to strengthen women's resilience to climate change across Southeast Asia and Africa. Through KPI-linked financing and technical assistance, the Fund will support financial service providers and SMEs delivering climate adaptation products and services tailored to women's needs in three key sectors: clean water, clean energy, and sustainable agriculture.

However, deploying adaptation finance across multiple countries, sectors and emerging market contexts requires a practical approach to identifying climate risks, assessing investee readiness, and defining credible adaptation outcomes.

To address this, the Fund developed an Impact Measurement and Management (IMM) framework supported by a detailed investment methodology. The approach combines country-level climate hazard and sector screening using sources such as National Adaptation Plans (NAPs), Nationally Determined Contributions (NDCs), World Bank Climate Risk Country Profiles and others, alongside climate and gender due diligence for investees. The Fund also adapts its approach to different investee profiles by assessing climate maturity and capacity, allowing for more tailored engagement, technical assistance and KPIs designed to meet different needs and levels of readiness.

The WEC Fund demonstrates how financial institutions can integrate sector prioritization and climate risk assessment into adaptation finance decision-making. It also highlights the importance of tailored methodologies and flexible adaptation criteria application in emerging, where data gaps and varying levels of capacity are common.

3. Practical tools for applying adaptation taxonomies

This section presents a set of practical modules designed to support financial institutions in navigating these challenges. The tools and guidance address several core steps commonly encountered when applying adaptation taxonomies, including sector identification and prioritization, climate hazard mapping, interpretation of taxonomy qualification checks and the application of DNSH safeguards. Together, these modules are designed to help financial institutions translate high-level taxonomy frameworks into practical approaches for portfolio screening, risk assessment and investment decision-making.

The modules are designed to be used independently, allowing users to select the tools most relevant to their specific needs and context. For example, those seeking to identify climate adaptation opportunities, translate sector classifications or support portfolio screening may turn to the Climate Adaptation Sector Mapper (Tool 1), while users focused on climate risk screening and hazard identification can use the Climate Hazard Dashboard (Tool 2). The Taxonomy Criteria Checker (Tool 3) supports comparison and interpretation of qualification approaches across taxonomies and the DNSH tools (Tools 4a and 4b) provide structured approaches for documenting, comparing and consistently applying Do No Significant Harm assessments, while the Maladaptation Screening Checklist (Tool 5) helps ensure that projects do not unintentionally increase vulnerability, lock in long-term climate risk, or shift risks onto other systems, communities or locations.

While the tools are not intended to replace detailed taxonomy guidance, they aim to provide practical support for translating taxonomy frameworks into operational workflows. In doing so, they can help financial institutions better identify adaptation opportunities, assess climate-related risks and improve alignment between investment activities and climate adaptation objectives.

To support practical application, this section also includes a set of worked examples that help users understand the process of applying the tools across different use cases. These examples illustrate how the individual tools can be used in combination or on a stand-alone basis, depending on the needs of the institution and the specific characteristics of the investment being assessed. This approach reflects the modular design of the tools, recognizing that financial institutions may not need to apply all components in every case.

3.1 Sector identification and prioritization

A recent [report from the Taxonomy Roadmap Initiative](#),¹³ indicates that many national-level sustainable finance taxonomies, such as the [Ghana Green Taxonomy](#) and the [Panama Sustainable Finance Taxonomy](#), organize sectors in line with the [International Standard Industrial Classification](#) (ISIC) structure or regional and national variants derived from it. These standardized sector classifications support interoperability and facilitate portfolio comparisons across jurisdictions.

Some international adaptation taxonomies adopt alternative approaches to ISIC, entailing a bespoke or thematic structure that organizes activities around resilience outcomes (e.g., resilient infrastructure, resilient industry and commerce) rather than formal industry codes.

ISIC, by contrast, is designed for statistical analysis, classifying productive activities by inputs such as labour, energy and materials. Its high granularity and focus on outputs make it less well suited to adaptation investments, which some international adaptation taxonomies define in terms of activities and measures that substantially contribute to climate resilience.

Notable international adaptation taxonomies that follow a thematic or bespoke approach include the Tailwind Taxonomy and the Standard Chartered Guide for Adaptation & Resilience Finance.

Sixty four per cent of all published and implemented sustainable finance taxonomies (as of September 2025) use ISIC-based classification systems (including national and regional derivatives such as NACE and NAICS) and 11% apply non-ISIC based classification approaches.¹⁴

When prioritizing sectors, institutions face several challenges. Differences between ISIC-based and thematic classifications can make it difficult to map activities directly, while variations in how activities are defined across taxonomies may limit comparability across jurisdictions. As a result, prioritizing sectors requires careful judgement about which economic activities meaningfully contribute to climate adaptation outcomes.

Implications for financial institutions

These challenges have direct implications for financial institutions wanting to implement or develop internal adaptation taxonomies. Financial institutions therefore need to:

- Interpret thematic or bespoke classifications carefully and map them to standardized classification systems in order to support comparison across jurisdictions
- Assess which sectors and activities meaningfully contribute to climate adaptation
- Consider how sector prioritization informs broader decision-making, including investment allocation, risk management and strategic alignment with adaptation objectives.
- Identify adaptation investment priorities that may sit outside the standard ISIC sector classification systems—a notable example is nature, which does not feature in the

¹³ [Advancing Sustainable Finance Taxonomies and Interoperability \(2025\)](#)

¹⁴ Source: [Advancing Sustainable Finance Taxonomies and Interoperability \(2025\)](#)

ISIC structure despite the nature-resilience nexus and nature-based solutions playing a prominent role on the adaptation agenda.

These considerations highlight the need for practical tools that help translate standard sector classifications into adaptation-relevant insights.

Tool 1: Climate Adaptation Sector Mapper

Why the tool is needed

Differences in sector classification systems and taxonomy structures can create practical challenges for financial institutions seeking to identify and prioritize adaptation-relevant sectors and activities. These challenges can make it difficult to translate between sector classifications, compare activities across taxonomies and consistently identify where climate adaptation investments may occur. The [UNEP FI Impact Centre's Sectors Mapping](#) resource also helps address this challenge by analyzing sector impacts across the three pillars of sustainable development.¹⁵

Building on this foundation, the Climate Adaptation Sector Mapper provides a structured way to link ISIC sector classifications with climate adaptation themes commonly used in international adaptation taxonomies. This helps institutions identify where adaptation activities may occur within traditional economic sectors and supports more consistent application of adaptation taxonomies.

Purpose

The Climate Adaptation Sector Mapper links internationally recognized sector classifications with climate adaptation themes. Specifically, the tool maps ISIC sections and divisions to primary and secondary adaptation themes, helping users identify where adaptation activities may occur within traditional economic sectors.

Use cases

Financial institutions can use the Climate Adaptation Sector Mapper to:

- Overcome fragmented sector data by identifying potential climate adaptation opportunities within existing portfolios;
- Resolve inconsistencies between classification systems by translating sector classifications into adaptation themes used in adaptation strategies or taxonomies;
- Ensure consistent application of taxonomies by supporting portfolio screening, analysis and adaptation-related reporting; and
- Identify investments with the greatest climate adaptation impact, providing a starting point for strategic planning and investment prioritization.

¹⁵ Updated guidance will be published in 2026.

Important note

Coverage of natural systems is limited since ISIC does not fully capture ecosystem-related activities (e.g., restoration, conservation or broader nature-based solutions). As a result, investments related to natural systems may require additional context-specific assessment beyond sector-based mapping.

How to use the tool

The mapper is organized into four columns:

1. **ISIC Section**—High-level economic sector category
2. **ISIC Division**—Detailed sub-sector classification
3. **Primary Resilience Theme**—The resilience theme most directly associated with the sector or activity
4. **Secondary Resilience Theme(s)**—Additional resilience themes that may also be relevant

Users select the ISIC section of interest to view the climate resilience themes most closely associated with that sector.

ISIC Section	C - Manufacturing		
ISIC Section	ISIC Division	Primary Resilience Theme	Secondary Resilience Theme(s)
C - Manufacturing	10 - Manufacture of food products	Resilient Agrifood Systems	Resilient Industry & Commerce
C - Manufacturing	11 - Manufacture of beverages	Resilient Agrifood Systems	Resilient Industry & Commerce
C - Manufacturing	20 - Manufacture of chemicals and chemical products	Resilient Industry & Commerce	-
C - Manufacturing	21 - Manufacture of pharmaceuticals, medicinal chemical and botanical products	Resilient Industry & Commerce	Resilient Health Systems
C - Manufacturing	23 - Manufacture of other non-metallic mineral products	Resilient Industry & Commerce	Resilient Cities & Settlements
C - Manufacturing	25 - Manufacture of fabricated metal products, except machinery and equipment	Resilient Industry & Commerce	Resilient Cities & Settlements
C - Manufacturing	26 - Manufacture of computer, electronic and optical products	Resilient Industry & Commerce	Resilient Infrastructure
C - Manufacturing	27 - Manufacture of electrical equipment	Resilient Industry & Commerce	Resilient Infrastructure; Resilient Cities & Settlements
C - Manufacturing	28 - Manufacture of machinery and equipment n.e.c	Resilient Industry & Commerce	-
C - Manufacturing	29 - Manufacture of motor vehicles, trailer and semi-trailers	Resilient Industry & Commerce	-
C - Manufacturing	30 - Manufacture of other transport equipment	Resilient Industry & Commerce	Resilient Social Systems
C - Manufacturing	32 - Other manufacturing	Resilient Industry & Commerce	Resilient Cities & Settlements
Note: Coverage of natural systems ISIC has no dedicated classification for natural systems. While some nature-based investments may align with Section A (Agriculture, Forestry and Fishing) or Section M (Professional, Scientific and Technical Activities), many ecosystem-related measures are unable to be mapped directly.			

A full version of the Climate Adaptation Sector Mapper tool can be found in the accompanying spreadsheet.

Worked example 1: Screening for adaptation opportunities in the agriculture, forestry and fishing using the Climate Adaptation Sector Mapper

Objective

A commercial bank operating in a climate-vulnerable country wishes to identify adaptation-relevant investment opportunities within the agriculture, forestry and fisheries sector.

How the tool is used

The bank begins by selecting the relevant ISIC sector category for agriculture, forestry and fisheries within the **Climate Adaptation Sector Mapper**.

ISIC Section	A - Agriculture forestry and fishing		
ISIC Section	ISIC Division	Primary Resilience Theme	Secondary Resilience Theme(s)
A - Agriculture forestry and fishing	01 - Crop and animal production, hunting and related service activities	Resilient Agrifood Systems	Resilient Industry & Commerce
A - Agriculture forestry and fishing	02 - Forestry and logging	Resilient Agrifood Systems	Resilient Natural Systems
A - Agriculture forestry and fishing	03 - Fishing and aquaculture	Resilient Agrifood Systems	Resilient Industry & Commerce
Note: Coverage of natural systems			
ISIC has no dedicated classification for natural systems. While some nature-based investments may align with Section A (Agriculture, Forestry and Fishing) or Section M (Professional, Scientific and Technical Activities), many ecosystem-related measures are unable to be mapped directly.			

The tool produces a mapping of ISIC sector divisions to primary and secondary climate resilience themes commonly used in international adaptation finance taxonomies. This supports the consistent identification of how different 'divisions' under the Agriculture, Forestry and Fishing sector relate to resilience themes.

The bank now uses this mapping to develop and support its sector prioritization process by:

- Screening and translating sector classifications into resilience themes used in international adaptation taxonomies
- Identifying potential adaptation opportunity gaps
- Improving and ensuring consistent classification of sectors across clients and markets

ISIC Section	ISIC Division	Primary Resilience Theme	Secondary Resilience Themes
A - Agriculture forestry and fishing	01 - Crop and animal production, hunting and related service activities	Resilient Agrifood Systems	Resilient Industry & Commerce
A - Agriculture forestry and fishing	02 - Forestry and logging	Resilient Agrifood Systems	Resilient Natural Systems
A - Agriculture forestry and fishing	03 - Fishing and aquaculture	Resilient Agrifood Systems	Resilient Industry & Commerce
B - Mining and quarrying	09 - Mining support service activities	Resilient Industry & Commerce	-
C - Manufacturing	10 - Manufacture of food products	Resilient Agrifood Systems	Resilient Industry & Commerce
C - Manufacturing	11 - Manufacture of beverages	Resilient Agrifood Systems	Resilient Industry & Commerce
C - Manufacturing	20 - Manufacture of chemicals and chemical products	Resilient Industry & Commerce	-

Outcome

The bank is able to systematically screen agriculture, forestry and fisheries activities for alignment with resilience themes and strengthen its ability to identify adaptation investment opportunities in the sector.

3.2 Climate hazard identification and risk screening in adaptation taxonomies

Understanding the climate hazards that may affect economic activities is a critical step in applying adaptation taxonomies and integrating climate adaptation considerations into financial decision-making. Financial institutions need to identify which climate hazards are most material to the sectors, assets and geographies within their portfolios in order to assess exposure, evaluate risks and identify potential adaptation investment opportunities.

Most adaptation finance frameworks and climate risk methodologies distinguish between **acute hazards** (i.e. short-term extreme weather events such as floods, storms or heat-waves) and **chronic hazards** (i.e. longer-term environmental shifts such as sea level rise, sustained temperature increases or changing precipitation patterns). These hazards can affect economic activities in different ways, including damage to physical infrastructure, disruption to supply chains, reduced productivity or increased operational costs.

While many financial institutions are increasingly conducting physical climate risk assessments, translating hazard information into investment and portfolio decisions can be challenging. Climate hazards are often defined differently across frameworks, datasets and taxonomies and linking hazard exposure to specific sectors or assets requires combining multiple sources of information.

In addition, the level of detail provided by hazard datasets can vary significantly. Some frameworks focus on broad categories of risk, while others provide more granular hazard classifications. This can make it difficult for institutions to determine which hazards should be considered most relevant when assessing climate risks across portfolios.

The EU Taxonomy, for example, provides a relatively detailed breakdown of climate hazards and distinguishes between a wide range of acute and chronic risks. This structure has been widely referenced in sustainable finance frameworks and has influenced the design of several national taxonomies, including [the Indonesia Taxonomy for Sustainable Finance \(version 2\)](#), [Rwanda Green Taxonomy](#), [South Africa Green Finance Taxonomy](#) and [Mexico Sustainable Taxonomy](#).

By contrast, some international frameworks group hazards into broader categories. Rather than relying on highly detailed hazard classifications, these frameworks emphasize climate hazard consequences that may affect investments across a wide range of contexts, e.g. heat stress, flood damage, etc. This approach provides a practical and widely applicable structure that remains flexible across sectors and geographies.

As a result, financial institutions seeking to apply adaptation taxonomies may need to translate between different hazard classifications when conducting climate risk screening or identifying adaptation-relevant investments.

Climate hazards in adaptation taxonomies

Climate adaptation taxonomies frequently reference physical climate hazards when defining activities that substantially contribute to climate adaptation. These hazards are

used to demonstrate that an activity either addresses a specific climate risk or improves resilience to climate-related impacts.

Practical challenges for financial institutions

Several practical challenges arise when financial institutions attempt to incorporate climate hazard information into risk management and investment decision-making:

- **Inconsistent hazard classifications across frameworks:** Different taxonomies and climate risk tools group hazards differently, making it difficult to compare results across methodologies.
- **Data availability and quality:** Climate hazard datasets vary significantly in coverage, resulting in the need for financial institutions to combine multiple datasets to obtain meaningful insights.
- **Integrating hazards into financial decision-making:** Even when hazards are identified, it can be difficult to determine how this information should influence portfolio screening, sector prioritization or investment strategies.

These challenges highlight the need for structured tools that help financial institutions identify relevant hazards, interpret climate risk information and integrate it into portfolio analysis.

Tool 2: Climate Hazard Dashboard

Why the tool is needed

Financial institutions often rely on a wide range of climate risk datasets, assessment frameworks and guidance when analyzing physical climate risks, such as [UNEP FI's Needs Mapping](#) resource, alongside other tools and approaches. However, hazard definitions and classifications can vary significantly across these sources, creating uncertainty when attempting to identify the most relevant hazards.

The Climate Hazard Dashboard has been developed to address this challenge by providing a structured overview of major climate hazards and their potential impacts. By consolidating hazard definitions and linking them to relevant datasets, the tool helps users identify and interpret climate hazards that may affect different sectors, assets and regions.

Purpose

The Climate Hazard Dashboard provides a structured reference of key climate hazards to support climate risk screening and analysis. It consolidates major hazards, their drivers and typical impacts to help users understand how climate change may affect assets, sectors and geographies.

The hazard breakdown broadly reflects the widely referenced climate hazard matrix structure used in the EU Taxonomy and reflected in sustainable finance frameworks across the globe in regions including Latin America and Caribbean, Africa and Asia Pacific. Most taxonomies that publish substantial contribution criteria align with this structure. Some international and financial institution frameworks use a less granular categorization of hazards and group multiple risks into broader categories.

Use cases

The dashboard can support several use cases, including:

- Climate risk screening for projects, sectors or portfolios
- Identification of relevant hazards during physical climate risk assessment
- Supporting taxonomy or sustainable finance analysis where climate hazards need to be mapped to activities or assets
- Preliminary risk identification before undertaking detailed exposure, vulnerability or scenario analysis

How to use the tool

The dashboard lists a set of climate hazards with a description, hazard type and examples of typical impacts. Each entry includes:

- **Hazard**—the specific climate hazard
- **Description**—a short explanation of the hazard and its primary climate driver
- **Type**—whether the hazard is acute (short-term extreme events) or chronic (long-term environmental shifts)
- **Typical impact**—examples of potential impacts on infrastructure, ecosystems, economic activity or supply chains
- **Dataset**—suggested sources that can support country or regional climate risk analysis

Climate Hazard Dashboard						
		Hazard	Description	Type	Typical Impact	Dataset
Category Solid mass-related Temperature-related Water-related Wind-related Type Acute Chronic Hazard Grouping Changes to marine conditions Cold stress Flood damage Heat stress Mass movement damage Storm damage	Temperature changes (air, freshwater, seawater)	Long-term shifts in average atmospheric and aquatic temperatures driven by global warming	Chronic	Ecosystem shifts, increased cooling demand, reduced agricultural productivity	Copernicus Climate DataNOAA Climate Data PortalWorld Bank Climate Change Knowledge Portal	
	Temperature variability	Increased fluctuations between temperature extremes due to climate system instability	Chronic	Crop stress, infrastructure fatigue, operational disruption	Copernicus Climate DataNOAA Climate Data PortalWorld Bank Climate Change Knowledge Portal	
	Permafrost thaw	Gradual thawing of permanently frozen ground caused by rising ground temperatures	Chronic	Structural instability of buildings, pipelines and transport networks	NASA EarthData LandslidesNASA Global PrecipitationCopernicus Land Services	
	Heatwaves	Periods of extreme heat above historical norms driven by rising average temperatures	Acute	Worker productivity loss, increased electricity demand, infrastructure overheating	Copernicus Climate DataNOAA Climate Data PortalWorld Bank Climate Change Knowledge Portal	
	Cold snap / frost	Sudden extreme drops in temperature due to increased climate variability	Acute	Crop damage, frozen infrastructure, transport disruption	Copernicus Climate DataNOAA Climate Data Portal	
	Forest fire	Fires in forested landscapes driven by heat, drought and dry conditions	Acute	Loss of forests and assets, air pollution, damage to transmission infrastructure	Global Forest Watch Fires	
	Wildfire	Rapidly spreading vegetation fires driven by extreme heat and prolonged drought conditions	Acute	Property destruction, infrastructure damage, service disruption	Global Forest Watch Fires	
	Changes in wind patterns	Long-term shifts in wind intensity, direction or frequency due to changes in atmospheric circulation	Chronic	Changes in wind energy potential, operational impacts for aviation and maritime transport	EM-DAT International Disaster Database	
	Cyclones / storms / typhoons / hurricanes	Large-scale storm systems with extreme winds, rainfall and storm surge driven by warmer oceans and atmosphere	Acute	Physical damage to infrastructure, power outages, supply chain disruption	EM-DAT International Disaster Database	

Interactive filters allow users to explore hazards by hazard category, hazard grouping and hazard type. This allows users to quickly identify relevant hazards, such as acute water-related hazards, hazards associated with flood damage, or chronic climate pressures affecting specific sectors. A full version of the Climate Hazard Dashboard and associated datasets can be found in the accompanying spreadsheet.

Worked example 3: Using the Climate Hazard Dashboard to design climate-linked insurance products

Objective

An insurance company operating in Pakistan is developing new agricultural insurance products and wants to ensure they reflect the most relevant and material climate hazards affecting farmers across the country.

How the tool is used

The insurer uses the Climate Hazard Dashboard to understand the key climate hazards affecting agricultural systems in Pakistan and to inform product design considerations.

Using the dashboard, the insurer:

- Filters for climate hazards specific to the Pakistan context
- Reviews acute hazards such as heatwaves, flooding and extreme precipitation
- Reviews chronic hazards including drought, temperature changes and changes in precipitation patterns
- Examines hazard descriptions, typical impact pathways and available datasets for deeper modelling

Climate Hazard Dashboard					
Category	Hazard	Description	Type	Typical Impact	Dataset
☒ Solid mass-related ☐ Temperature-related ☐ Water-related ☐ Wind-related	Heatwaves	Periods of extreme heat above historical norms driven by rising average temperatures	Acute	Worker productivity loss, increased electricity demand, infrastructure overheating	Expertise Climate Data NDM Climate Data Portal World Bank Climate Change Knowledge Portal
	Cold snap / frost	Sudden extreme drops in temperature due to increased climate variability	Acute	Crop damage, frozen infrastructure, transport disruption	Expertise Climate Data NDM Climate Data Portal
	Forest fire	Fires in forested landscapes driven by heat, drought and dry conditions	Acute	Loss of forests and assets, air pollution, damage to transmission infrastructure	Global Forest Watch Fires
☐ Acute ☒ Chronic	Wildfire	Rapidly spreading vegetation fires driven by extreme heat and prolonged drought conditions	Acute	Property destruction, infrastructure damage, service disruption	Global Forest Watch Fires
☐ Cold stress ☐ Flood damage ☐ Heat stress ☐ Mass movement damage ☐ Storm damage ☐ Wildfire damage	Cyclones / storms / typhoons / hurricanes	Large-scale storm systems with extreme winds, rainfall and storm surge driven by warmer oceans and atmosphere	Acute	Physical damage to infrastructure, power outages, supply chain disruption	EM-DAT International Disaster Database
	Thunderstorms (incl. blizzards, dust storms, sandstorms)	Severe atmospheric disturbances producing strong winds, precipitation or airborne dust	Acute	Crop loss, transport disruption, infrastructure damage	EM-DAT International Disaster Database
	Tornadoes	Highly destructive rotating wind systems associated with severe convective storms	Acute	Localised infrastructure destruction and property damage	EM-DAT International Disaster Database
	Extreme precipitation	Intense rainfall, hail or snowfall events driven by increased atmospheric moisture	Acute	Flooding, infrastructure damage, drainage system overload	NGR EarthData Natural Hazards OFDI Risk Data Library Tools WRI Aqueduct Tool
	Floods (coastal, fluvial, pluvial, groundwater)	Water overflow from rivers, rainfall accumulation or storm surge driven by intense precipitation or sea level rise	Acute	Asset inundation, property damage, supply chain disruption	NGR EarthData Natural Hazards OFDI Risk Data Library Tools WRI Aqueduct Tool

The analysis shows that agricultural losses are increasingly driven by a combination of events linked to drought and rainfall variability.

Outcome

The insurer uses these findings to inform the design of its agricultural insurance products, including how climate risk is reflected in product coverage design, regional targeting of policies and consideration of potential triggers linked to drought and rainfall variability.

The insights also support discussions on whether existing products adequately reflect emerging compound climate risks or require redesign to remain commercially viable under future climate conditions.

3.3 Applying qualification checks

Once financial institutions have identified relevant sectors and climate hazards, the next step is determining whether specific activities or investments qualify as contributing to climate adaptation under a taxonomy. This requires understanding how qualification checks are defined and applied within different taxonomy frameworks.

Qualification checks define the conditions that activities must meet to be considered as contributing to climate adaptation. These checks provide a structured approach for assessing whether investments genuinely enhance resilience and reduce climate-related risks. In addition, careful assessment of adaptation investments is required to avoid poorly designed adaptation actions that could result in maladaptation.

However, adaptation taxonomies use different methods to determine eligibility. Some rely on clearly defined qualitative and/or quantitative criteria, while others emphasize adaptation planning processes, predefined whitelists of eligible solutions or high-level guiding principles. Understanding these different approaches is critical for financial institutions seeking to apply taxonomies consistently.

Key approaches used in adaptation taxonomies

Taxonomy frameworks generally rely on several common approaches for defining qualification checks:

- **Quantitative/qualitative criteria**—Activities must meet defined thresholds, metrics or performance standards to demonstrate a substantial contribution to adaptation. These criteria may also include **DNSH** requirements to ensure activities do not undermine other sustainability objectives.
- **Process-based criteria**—Assessment focuses on the quality of climate risk assessments, adaptation planning and risk management processes undertaken by the project or organization. For example, the EU Taxonomy employs process-based, technical criteria to confirm substantial contribution to adaptation.
- **Whitelists**—Predefined lists of technologies, measures or activities that are automatically considered eligible for adaptation finance. Hong Kong (China)'s taxonomy applies a whitelist approach for the water infrastructure sector, where specific adaptation measures are pre-determined to be eligible
- **Principles-based approaches**—Eligibility is assessed based on high-level principles or guiding questions rather than predefined thresholds or processes.
- **Hybrid approaches**—In practice, many taxonomies combine multiple methods using different approaches depending on the sector, type of activity or availability of technical evidence. For example, Rwanda's Green Taxonomy combines whitelists, process-based and quantitative/qualitative criteria, while Mexico's Sustainable Taxonomy relies on process-based and quantitative/qualitative criteria to demonstrate substantial contribution to adaptation.

Each of these approaches reflects trade-offs between rigour, usability and flexibility and financial institutions may encounter several of them when working across multiple taxonomy frameworks.

Case study: Financial institution participation in shaping a nationally appropriate taxonomic approach in South Africa

Financial institutions and regulators in South Africa required a clear and credible system to identify, track and report green and climate-aligned investments. However, developing a taxonomy that was both internationally comparable and locally relevant required balancing different approaches. In response, South Africa launched a national [Green Finance Taxonomy](#) in 2022 to support capital allocation towards environmentally sustainable and climate-resilient activities, aligned with international best practice and national priorities. The initiative was led by the [National Treasury](#) under the [Sustainable Finance Initiative](#) and supported by a multi-stakeholder [Taxonomy Working Group](#) of regulators, financial institutions and industry representatives.

The development process drew on cross-sector engagement and international input, building on global frameworks and adapting them to domestic priorities. The resulting South Africa Green Finance Taxonomy adopted a hybrid approach to defining substantial contribution criteria, combining:

- Principles-based approach
- Process-based assessment
- Quantitative and qualitative thresholds

This hybrid structure helped balance international comparability with national priorities, while improving clarity for financial institutions and supporting more consistent identification and tracking of green investments. It also established a governance structure for ongoing refinement and implementation. Given South Africa's exposure to physical climate risks such as water stress, the taxonomy identifies climate change adaptation as one of its key pillars and provides technical screening criteria for investments that address physical risks and build climate resilience.

Overall, the South Africa Green Finance Taxonomy demonstrates that effective taxonomy design often requires a blended approach, combining principles-based, process-based and quantitative criteria to ensure both flexibility and credibility in defining eligible activities.

Implications for financial institutions

The diversity of taxonomy approaches has important implications for financial institutions implementing adaptation taxonomies or assessing taxonomy alignment.

Key considerations include:

- **Data requirements:** Quantitative/qualitative criteria often require detailed data or performance metrics, while process-based approaches rely more heavily on documentation of climate risk assessments and adaptation plans.
- **Documentation and verification:** Some approaches require substantial technical evidence and documentation, while others depend on governance processes or expert judgement.
- **Comparability across taxonomies:** When institutions operate across multiple jurisdictions, differing criteria structures may complicate efforts to compare or aggregate taxonomy-aligned investments.

These challenges highlight the importance of tools that help institutions quickly identify how a taxonomy defines eligibility and what types of information are required to demonstrate compliance.

Combining approaches to support taxonomy uptake

In practice, many taxonomies combine multiple approaches in order to balance practical implementation with technical robustness. For example, the Rwanda Green Taxonomy combines a whitelist for well-established, low-risk adaptation solutions, qualitative/quantitative criteria where performance thresholds can be clearly defined and process-based criteria for more complex or context-specific investments.

Some regional frameworks also adopt hybrid structures. The ASEAN Taxonomy for Sustainable Finance includes both a principles-based Foundation Framework, applicable across sectors, and a criteria-based Plus Standard, which applies detailed screening criteria where sufficient evidence exists. Whitelists can also play an important role in enabling implementation.

Case study: Green Technology Selector

Financial institutions often face difficulties assessing whether technologies meet adaptation qualification checks, particularly where technical expertise, consistent classification approaches, or clear market standards are limited. This can increase transaction costs and slow investment decisions.

In response to this, the [European Bank for Reconstruction and Development \(EBRD\)](#) developed the [Green Technology Selector](#) to help accelerate investment in green and climate-resilient technologies. The platform functions as a practical whitelist of pre-approved technology investments that contribute to climate adaptation and broader environmental objectives, while linking eligible technologies to EBRD financing programmes through partner financial institutions.

The platform enables financial institutions to:

- Reference pre-approved eligible technologies
- Reduce technical screening and due diligence burdens
- Apply more consistent qualification checks
- Link financing directly to technologies already aligned with sustainability objectives

While such approaches can improve usability and reduce barriers to adoption, taxonomy design must also ensure interoperability and comparability across markets.

Table 4: Advantages and limitations of different qualification approaches

Approach type	Description	Advantages	Limitations
Qualitative/ Quantitative criteria	Thresholds, metrics or performance standards that activities must meet to demonstrate substantial contribution to adaptation. May include DNSH checks.	Clear and transparent; supports comparability; reduces subjectivity.	Requires reliable data and technical expertise; may be rigid; needs periodic updates.
Process-based criteria	Focus on quality of climate risk assessment, adaptation planning and risk management processes rather than measurable outcomes.	Flexible across sectors; useful where outcomes are difficult to measure; supports structured adaptation planning.	Harder to verify consistently; less comparable across jurisdictions; requires technical expertise and more detailed guidance from taxonomy developers.
Whitelists	Pre-approved technologies, solutions or activities automatically considered eligible.	Simple to implement; provides clarity for users; supports rapid uptake.	Less granular; may not capture emerging solutions; requires regular updates.

Approach type	Description	Advantages	Limitations
Principles-based approaches	Assessment based on high-level guiding principles rather than specific thresholds or processes.	Highly flexible; useful where evidence is limited; supports early-stage taxonomy development.	Greater subjectivity; reduced comparability across markets; potential for greenwashing.

Tool 3: Taxonomy Criteria Checker

Why the tool is needed

Financial institutions often operate across multiple sustainable finance frameworks and may need to assess investments against different taxonomies. Because taxonomies vary widely in how they define qualification criteria, it can be difficult to determine what type of assessment process applies and what information is required.

The **Taxonomy Criteria Checker** helps users quickly identify the structure of a taxonomy and understand the type of qualification checks that may be required.

Purpose

The tool provides a quick visual overview of the qualification approaches used across different sustainable finance and adaptation taxonomies.

It allows users to identify whether a taxonomy relies on:

- Whitelist approaches
- Principles-based assessments
- Process-based criteria
- Qualitative/quantitative criteria

This can support financial institutions in comparing taxonomies, assessing alignment across frameworks and identifying the types of documentation or evidence required to demonstrate eligibility.

Use cases

The tool can support several analytical and practical uses:

- **Comparative analysis**—Identify how different national, regional and international taxonomies approach qualification of projects or activities.
- **Project assessment**—Determine the type of qualification checks required for a given taxonomy.
- **Research and reporting**—Support internal reports, presentations or investment analysis.
- **Focused analysis**—Use country and scope filters to identify taxonomies most relevant to a specific region or type of financial institution.

How to use the tool

1. Select a country or region

Use the left-hand filter to focus on taxonomies relevant to a specific country (e.g., Kenya, Indonesia) or region (e.g., ASEAN, Latin America and the Caribbean).

2. Select scope

Filter by taxonomy scope: **financial institution, national, regional or international**.

3. Interpreting the symbols

- Indicates the taxonomy uses this qualification check
- Indicates the taxonomy does not use this qualification check

4. Review the qualification checks

The main table displays each taxonomy and the qualification checks it applies:

- **Whitelist (●/○)**—whether eligible activities are explicitly listed
- **Principles-based (●/○)**—eligibility assessed through guiding principles
- **Process-based (●/○)**—activities evaluated through planning or risk management processes
- **Qualitative (●/○)**—evaluation based on descriptive criteria
- **Quantitative (●/○)**—evaluation based on measurable thresholds

5. Review notes

Additional guidance or conditions may be included for specific taxonomies.

Taxonomy Criteria	Types of qualification checks for substantial contribution to adaptation					Notes
	Taxonomy Name	Whitelist	Principles-based	Criteria-based		
				Process-based	Qualitative/Quantitative	
Country/Region ASEAN Caribbean Central Asia China Europe India Indonesia Japan Korea Latin America Middle East North America Oceania South America Sub-Saharan Africa Switzerland Taiwan Thailand United Kingdom United States Vietnam Scope Financial Institution International National Regional	Sustainable Finance Policy for Banks and Financial Institutions	●	○	○	●	Classifies investments into two primary categories: green finance and sustainability-linked finance, supported by an accompanying reporting template
	Costa Rica Sustainable Finance Taxonomy	●	○	●	●	For the adaptation objective, taxonomy includes substantial contribution criteria for Land Use (agriculture, forestry & livestock), IC and Water Supply and Treatment sectors, alongside a white list of eligible activities/assets. All other activities/assets subject to a process-based assessment.
	Ghana Green Finance Taxonomy	○	●	●	●	Incorporates a combination of principle-based, process-based and qualitative/quantitative criteria. Projects evaluated first against technical screening criteria to ensure they meet minimum sustainability thresholds, alongside applicable national sector-specific standards and certifications where applicable, and relevant international standards where appropriate.
	Hong Kong Taxonomy for Sustainable Finance (Phase 2A)	●	○	○	○	As of Phase 2A, the whitelist approach is currently limited to water infrastructure measures
	Indonesia Taxonomy for Sustainable Finance (version 2)	○	●	●	●	Focus sectors closely aligned with Indonesia's Nationally Determined Contributions (NDCs), including Industrial Processes Product Use, Forestry & Other Land Use, Energy, Agriculture and Waste. Activities must DNSH requirements, apply remedial measures to transition where needed and comply with MSB. Utilises a traffic light system (green, yellow, red) to indicate compliance
	Kenya Green Finance Taxonomy	○	●	○	●	Includes substantial contribution criteria for adapted and enabling activities, alongside generic DNSH criteria for adaptation
	Mexico Sustainable Taxonomy	○	○	●	●	Activities must comply with DNSH, minimum safeguards and meet social and gender equality requirements

A full version of the tool is provided in Excel format in the accompanying spreadsheet.

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In contrast, the ASEAN Taxonomy takes a tiered approach. Its Plus Standard combines process-based assessment with qualitative criteria, while its Foundation Framework takes a principle-based approach supported by guiding questions.

Taxonomy Criteria		Types of qualification checks for substantial contribution to adaptation					
		Criteria-based					
		Taxonomy Name	Whitelist	Principles-based	Process-based	Qualitative/Quantitative	
Country/Region		ASEAN Taxonomy	○	●	●	●	The Plus Standard combines process-based and qualitative criteria, while the Foundation Framework relies on assessment against set of principles supported by guiding questions.
Bangladesh		Costa Rica					
EU		China					
Hong Kong		Indonesia					
Korea		LAC					
Mexico		Pakistan					
Panama		Rwanda					
South Africa		Uganda					
Zambia							
Scope							
Regional							
Regional Institution							
International							
National							

Outcome

The investor is able to structure investment screening and documentation planning more effectively by using the Taxonomy Criteria Checker to identify how eligibility is assessed across jurisdictions, anticipate evidence requirements based on taxonomy type, reduce uncertainty and delays in taxonomy alignment assessments and improve consistency in how adaptation investments are evaluated across markets.

3.4 Applying “Do No Significant Harm” assessments

Many sustainable finance taxonomies include “Do No Significant Harm” (DNSH) provisions as part of their overall framework. These safeguards are designed to ensure that activities contributing to one sustainability objective do not undermine any of the other sustainability objectives. These objectives commonly include areas such as:

- Climate change mitigation
- Water and marine resource management
- Biodiversity protection
- Pollution prevention and control
- Circular economy

DNSH assessments therefore play an important role in ensuring that investments intended to support climate objectives avoid unintended negative impacts. In this area, financial institutions frequently encounter two practical challenges when applying DNSH requirements:

1. **Where adaptation activities meet substantial contribution criteria**, institutions must still demonstrate that the activity does not significantly harm other sustainability objectives.
2. **Some taxonomies do not include explicit substantial contribution criteria for adaptation**, instead relying only on DNSH assessments to determine whether an activity is not misaligned with adaptation objectives.

The sections below therefore address these two situations separately:

1. **DNSH to climate change mitigation & other sustainability objectives**
2. **DNSH to climate change adaptation**

DNSH to mitigation and other sustainability objectives

In addition to demonstrating a substantial contribution to climate adaptation, some adaptation taxonomies require that activities do not significantly harm mitigation & other sustainability objectives.

For financial institutions, this typically involves documenting evidence that the activity:

- Avoids significant harm across other taxonomy sustainability objectives
- Complies with relevant sustainability safeguards or regulatory requirements
- Has been assessed through appropriate climate risk and vulnerability assessment (CRVA) or other environmental impact assessment (EIA) processes where applicable

DNSH to climate change adaptation

In several sustainable finance taxonomies, explicit criteria for demonstrating a substantial contribution to climate adaptation have not yet been fully developed. In these frameworks, DNSH safeguards may play a more central role in determining whether an activity is aligned with adaptation objectives.

For financial institutions operating across multiple jurisdictions, this creates an additional implementation challenge. Institutions may need to apply DNSH assessments to determine whether investments are aligned with climate adaptation objectives, even where formal substantial contribution to adaptation criteria are limited or still evolving.

Implications for financial institutions

For financial institutions, DNSH requirements introduce additional layers of due diligence and documentation. Key implementation challenges may include:

- Determining how adaptation eligibility should be assessed in taxonomies that lack explicit substantial contribution criteria
- Understanding DNSH expectations across different taxonomies, which may use varying structures and terminology
- Integrating climate risk assessments into investment processes, particularly where DNSH relies on CRVA, ensuring internal governance and review processes can support consistent DNSH assessments across sectors and geographies

Tool 4a: DNSH to Mitigation and Other Sustainability Objectives & Tool 4b: DNSH to Adaptation Assessment Decision Tree

This two-part tool has been developed to address challenges financial institutions may encounter when applying DNSH requirements. It provides a structured approach for documenting compliance with DNSH requirements for mitigation & other sustainability objectives, while also offering guidance for assessing potential DNSH to adaptation risks.

Part A: DNSH to Mitigation & Other Sustainability Objectives Compliance Tracker

Why the tool is needed

Assessing DNSH compliance can be complex, as it requires evaluating activities against multiple sustainability objectives across different taxonomies. Financial institutions need a structured, consistent and transparent approach to document DNSH assessments, ensure alignment with taxonomy requirements and support internal and external reporting. This tool helps reduce ambiguity and enables clearer decision-making when determining whether projects meet DNSH criteria.

A complementary resource is the UNEP FI Impact Centre's [Interlinkages Mapping](#),¹⁶ which can help financial institutions to understand how actions in one impact area (e.g. climate change adaptation) may have positive or negative effects across environmental, social, and socio-economic outcomes.

¹⁶ An updated version of the Interlinkages Mapping is expected to be released in 2026.

Purpose

The **DNSH to Mitigation & Other Sustainability Objectives Compliance Tracker** provides a framework for recording and tracking compliance with DNSH requirements under climate mitigation and other sustainability objectives. It supports consistent assessment of projects, transparent documentation of evidence sources and compliance judgments, helping institutions align with taxonomy obligations.

Use cases

- Document DNSH assessments for individual projects or activities.
- Compare DNSH requirements across different taxonomies and sustainability objectives.
- Support internal review, risk management and reporting processes.
- Maintain a trail of evidence and decision-making for compliance audits.

How to use this tool

1. **Project Name:** Enter the name or identifier of the project being assessed.
2. **Taxonomy Applied:** Enter the taxonomy relevant to the project (e.g., EU Taxonomy, ASEAN Taxonomy).
3. **Sustainability Objective:** Choose the applicable sustainability objective (e.g., Climate Change Mitigation, Water & Marine Resource Management, Biodiversity Protection).
4. **DNSH Requirement:** Record the relevant DNSH requirement from the taxonomy for the selected sustainability objective.
5. **Information Source:** Enter the evidence used to support the assessment (e.g., CRVA, EIA, technical reports).
6. **Compliance Assessment:** Select whether the activity is Compliant, Conditional or Non-Compliant based on the evidence.
7. **Notes:** Include additional context or clarifications.

Important note:

This tool does not automatically determine compliance. It provides a simple template for documenting DNSH compliance and evidence.

Project Name	Taxonomy Applied	Sustainability Objective	DNSH Requirement	Evidence	Compliance Assessment	Notes
Coastal flood barrier project	EU Taxonomy	Climate Change Mitigation	Project/activity must not significantly increase GHG emissions	e.g. Climate Risk & Vulnerability Assessment (CRVA) / Environmental Impact Assessment (EIA) or other (user inputs data here)	Compliant	
Coastal flood barrier project	EU Taxonomy	Water & Marine Resource Management	Project/activity must not degrade water body status and ecological potential	e.g. Climate Risk & Vulnerability Assessment (CRVA) / Environmental Impact Assessment (EIA) or other (user inputs data here)	Not Compliant	
Coastal flood barrier project	EU Taxonomy	Biodiversity Protection	Project/activity must avoid significant harm to protected habitats and biodiversity-sensitive areas	e.g. Climate Risk & Vulnerability Assessment (CRVA) / Environmental Impact Assessment (EIA) or other (user inputs data here)	Conditional	No protected habitats near project (user inputs data here)
Coastal flood barrier project	EU Taxonomy	Pollution Prevention & Control	Project/activity must comply with pollution standards	e.g. Climate Risk & Vulnerability Assessment (CRVA) / Environmental Impact Assessment (EIA) or other (user inputs data here)	Not Compliant	Waste management plan in place (user inputs data here)
Coastal flood barrier project	EU Taxonomy	Circular Economy	Materials and waste must be managed according to relevant regulations	e.g. Climate Risk & Vulnerability Assessment (CRVA) / Environmental Impact Assessment (EIA) or other (user inputs data here)	Not Compliant	

A full version of the tool is provided in Excel format in the accompanying spreadsheet.

Worked example 5(a): Tracking DNSH to other sustainability objectives compliance

Objective

A large commercial bank operates across the Latin America and Caribbean region and wishes to track its DNSH compliance and maintain a consistent evidence base across its markets.

How the tool is used

The bank uses the DNSH Compliance Tracker to record organize and monitor evidence demonstrating that investments do not cause significant harm to other sustainability objectives. This centralized approach supports teams across different markets to apply a more consistent documentation process and maintain an auditable record of compliance.

For each project the bank records:

- DNSH screening outcomes against relevant sustainability objectives
- Supporting evidence and documentation
- Completion status of relevant assessments, such as Climate Risk and Vulnerability Assessments (CRVA) and Environmental Impact Assessments (EIA)

During a review of its processes, the bank identifies different compliance outcomes across its three projects in the LAC region. The tracker shows that a sustainable urban drainage project applying the Costa Rica Sustainable Finance Taxonomy has been assessed as compliant with the biodiversity protection sustainability objective, which is supported by an EIA.

Similarly, a small-scale stormwater management project assessed under the Panama Sustainable Finance Taxonomy is recorded as compliant with requirements for DNSH to the mitigation objective. This is supported by a completed Climate Risk and Vulnerability Assessment (CRVA).

An early warning systems deployment project, however, has been found to be non-compliant with DNSH requirements for the circular economy objective. The tracker highlights missing documentation, including the absence of a waste management plan addressing end-of-life electrical and electronic equipment.

The finding prompts the bank to pause progression of the project and require completion of the outstanding assessments and supporting documentation before proceeding with the investment process.

Project Name	Taxonomy Applied	Sustainability Objective	DNSH Requirement	Evidence	Compliance Assessment	Notes
Sustainable urban drainage infrastructure project	Costa Rica Sustainable Finance Taxonomy	Biodiversity Protection	Project/activity must avoid the introduction of invasive alien species or manage their spread in a controlled manner	Environmental Impact Assessment has been conducted and can be found here: pdf9_upgrade_EIA.pdf	Compliant	No protected habitats near project and all potential biodiversity risks have been managed
Early warning systems deployment project	Costa Rica Sustainable Finance Taxonomy	Circular Economy	Project/activity must have a waste management plan that ensures the highest possible percentage of recycling at the end of the useful life of electrical and electronic equipment. Project/activity must optimise, from the planning stage, the design of elements so that at the end of their useful life the equipment can be subjected	-	Not Compliant	No CRVA has been conducted as yet. Additionally, a comprehensive waste management plan is yet to be developed. These steps must be completed to be compliant
Stormwater management project (small-scale)	Panama Sustainable Finance Taxonomy	Climate Change Mitigation	The energy used for pumping must have life cycle emissions of less than 100g CO2eq/kWh	Climate Risk and Vulnerability Assessment has been conducted and can be found here: CRVA-stormwater-management.pdf	Compliant	Project is classed as small-scale and supplies a population of less than 1500. CRVA has been conducted and project has been determined to be compliant with all taxonomy requirements

Outcome

The bank uses the tracker to identify which projects can proceed, which require additional evidence, and which need corrective action before approval. This improves consistency, transparency, and oversight of DNSH compliance across markets, while maintaining a clear and auditable evidence trail.

Part B: DNSH to Adaptation Assessment Decision Tree

Why this tool is needed

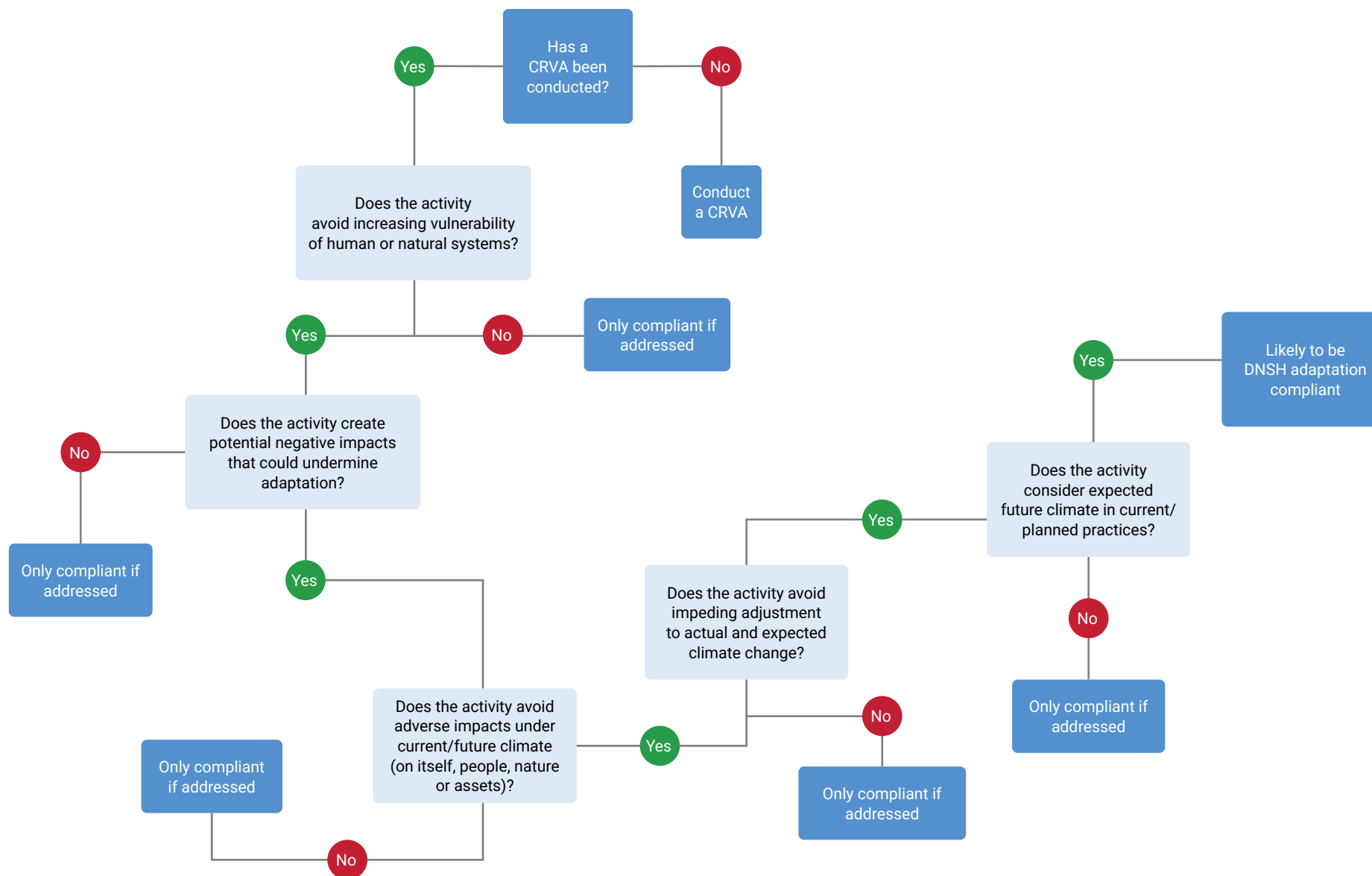
In cases where taxonomies rely heavily on DNSH assessments to demonstrate alignment with adaptation objectives, the tool includes a decision tree that guides users through a methodical evaluation process.

The process begins with assessing whether a CRVA has been conducted. This is a critical step because identifying climate hazards and exposure is necessary for evaluating whether an investment is aligned with adaptation objectives.

The decision tree then considers a series of questions designed to identify significant risks to adaptation objectives. These questions assess whether the activity:

1. Is informed by a climate risk and vulnerability assessment
2. Avoids increasing vulnerability of human or natural systems, including impacts on biodiversity
3. Avoids creating negative social, environmental or ecosystem impacts that could undermine adaptation outcomes
4. Remains resilient under current and future climate conditions
5. Does not impede the ability of systems to adjust to climate change over time
6. Considers future climate conditions in project design, operations or planning

If potential risks or harms are identified at any stage, additional mitigation measures or design changes may be required before the activity can be considered compliant. This approach helps financial institutions determine whether investments are aligned with adaptation objectives, particularly in taxonomy frameworks where DNSH assessments are the only available method for assessing adaptation alignment.



Note: The decision tree is provided in the accompanying spreadsheet, bundled with the DNSH for Mitigation and Other Sustainability Objectives Compliance Tracker.

Worked example 5(b): Demonstrating adaptation alignment where no substantial contribution to adaptation exists using the DNSH Decision Tree

Objective

A pension fund operating in a jurisdiction with a taxonomy that does not include explicit substantial contribution criteria for adaptation needs a systematic way to demonstrate the adaptation alignment of its climate-resilient infrastructure project.

How the tool is used

The fund applies the DNSH to Adaptation Decision Tree to assess whether:

- A Climate Risk and Vulnerability Assessment (CRVA) has been conducted
- The project avoids increasing vulnerability of human or natural systems
- It avoids adverse environmental, social, or ecosystem impacts
- It remains resilient under current and future climate conditions
- Future climate scenarios have been considered in design
- Long-term adaptive capacity is maintained

If any risks are identified, mitigation measures are required before the project can be considered compliant.

Using the decision tree, the pension fund confirms that the climate-resilient infrastructure project has completed a CRVA, does not increase vulnerability to climate hazards, and remains resilient under future climate scenarios.

Outcome

Based on the decision tree assessment, the project is considered adaptation-aligned through harm avoidance, as no DNSH issues are identified. This enables the pension fund to classify the project as adaptation-aligned even where explicit substantial contribution criteria are absent.

3.5 Assessing maladaptation risks

When applying adaptation finance taxonomies, financial institutions should assess maladaptation risk to avoid adaptation investments unintentionally increasing vulnerability, creating new risks, or shifting impacts onto other groups. This is particularly important as qualification checks alone may not fully capture whether an activity delivers durable adaptation outcomes.

While DNSH safeguards are a central feature of sustainable finance taxonomies, maladaptation is addressed less consistently and explicitly, and practical guidance on how to assess it remains limited. In practice, it is often conflated with DNSH to adaptation, even though the two are distinct. An activity may meet DNSH requirements yet still generate maladaptive outcomes, for example by shifting risks onto other sectors or systems.

Implications for financial institutions

For financial institutions, this has several practical implications. Taxonomy alignment should be treated as a multi-step process, where meeting adaptation criteria is only one part of the assessment alongside broader safeguards and risk considerations.

Managing maladaptation risks requires considering future climate conditions and inter-connections across systems, so institutions should demonstrate how these risks are identified and managed.

Tool 5: Maladaptation Screening Checklist

Why this tool is needed

Maladaptation remains one of the most significant yet least consistently addressed challenges in adaptation finance. While adaptation finance taxonomies increasingly include safeguards and adaptation-related criteria, practical guidance on how to identify and assess maladaptation risks remains limited. As a result, financial institutions may face difficulties determining whether adaptation-labelled investments could unintentionally increase vulnerability, shift risks elsewhere, or undermine long-term resilience outcomes.

This Checklist is intended to help address that gap by providing financial institutions with a practical and organized starting point for maladaptation screening. It is not exhaustive but is designed to support early-stage screening and encourage more consistent consideration of maladaptation risks. Institutions may integrate these questions into existing due diligence and risk management processes to strengthen the quality and credibility of adaptation investments.

For more comprehensive guidance, financial institutions may also draw on established resources such as the [resilience maladaptation self-assessment checklist](#), which provides detailed guidance and questions to support in-depth evaluation of maladaptation risks.

Maladaptation Screening Checklist			
	YES	NO	PARTIAL
1. Is the investment informed by forward-looking climate information?	☐	☐	☐
2. Does it address the root causes of vulnerability, or mainly reduce exposure to one hazard?	☐	☐	☐
3. Are the adaptation benefits widely shared?	☐	☐	☐
4. Could risks shift from one group to another?	☐	☐	☐
5. Does it lock in a single solution that could limit future adaptation options?	☐	☐	☐
6. Has it been assessed against plausible future climate scenarios, including more severe or combined events?	☐	☐	☐
7. Is it aligned with a broader adaptation strategy, rather than a standalone measure?	☐	☐	☐
8. Is there a plan in place to monitor outcomes and make adjustments over time if risks or conditions change?	☐	☐	☐

Note: The checklist is provided in the accompanying spreadsheet.

Worked example 6: Screening for maladaptation risk using the Maladaptation Screening Checklist

Objective

A regional development bank is structuring its green finance framework and wants to include climate change adaptation as an eligible project category. Before proceeding, the bank wishes to ensure that its proposed eligible adaptation investments do not create maladaptation risks. Specifically, the bank is considering the inclusion of urban drainage infrastructure upgrades, coastal flood protection and irrigation expansion in water-stressed basin projects in its framework.

How the tool is used

The bank applies the Maladaptation Screening Checklist to assess whether proposed investments are aligned with good adaptation practice and do not introduce maladaptation risks.

The checklist evaluates each project against key questions, including whether the investment is informed by forward-looking climate information, addresses underlying vulnerability, avoids risk shifting, maintains flexibility for future adaptation, and is supported by monitoring and adjustment mechanisms. Where risks are identified, projects may be redesigned, mitigated or excluded from the bank's financing framework.

Urban drainage infrastructure upgrades

Maladaptation Screening Checklist			
	YES	NO	PARTIAL
1. Is the investment informed by forward-looking climate information?	☒	☐	☐
2. Does it address the root causes of vulnerability, or mainly reduce exposure to one hazard?	☒	☐	☐
3. Are the adaptation benefits widely shared?	☒	☐	☐
4. Could risks shift from one group to another?	☐	☒	☐
5. Does it lock in a single solution that could limit future adaptation options?	☐	☒	☐
6. Has it been assessed against plausible future climate scenarios, including more severe or combined events?	☒	☐	☐
7. Is it aligned with a broader adaptation strategy, rather than a standalone measure?	☒	☐	☐
8. Is there a plan in place to monitor outcomes and make adjustments over time if risks or conditions change?	☒	☐	☐

Coastal flood protection

Maladaptation Screening Checklist			
	YES	NO	PARTIAL
1. Is the investment informed by forward-looking climate information?	☐	☐	☒
2. Does it address the root causes of vulnerability, or mainly reduce exposure to one hazard?	☒	☐	☐
3. Are the adaptation benefits widely shared?	☐	☐	☒
4. Could risks shift from one group to another?	☒	☐	☐
5. Does it lock in a single solution that could limit future adaptation options?	☒	☐	☐
6. Has it been assessed against plausible future climate scenarios, including more severe or combined events?	☐	☐	☒
7. Is it aligned with a broader adaptation strategy, rather than a standalone measure?	☐	☐	☒
8. Is there a plan in place to monitor outcomes and make adjustments over time if risks or conditions change?	☐	☐	☒

The checklist identifies potential maladaptation risks. The bank therefore requires project redesign to incorporate more flexible adaptation options, ensure risks do not shift from one group to another and establish a robust, long-term monitoring and adjustment plan before coastal protection projects can be included in the bank's financing framework.

Outcome

The checklist strengthens the quality of adaptation-labelled investments and reduces the risk that projects unintentionally increase vulnerability over time.

Worked example 7: Screening a climate-resilient investment for maladaptation risk using the Maladaptation Screening Checklist

Objective

A private equity firm is considering an investment in a coastal protection project and wishes to assess whether the proposed activity could create maladaptation risks before proceeding with investment approval.

How the tool is used

The firm applies the Maladaptation Screening Checklist to assess whether the project could unintentionally increase long-term vulnerability or undermine future adaptation.

Maladaptation Screening Checklist			
	YES	NO	PARTIAL
1. Is the investment informed by forward-looking climate information?	☒	☐	☐
2. Does it address the root causes of vulnerability, or mainly reduce exposure to one hazard?	☐	☐	☒
3. Are the adaptation benefits widely shared?	☐	☐	☒
4. Could risks shift from one group to another?	☒	☐	☐
5. Does it lock in a single solution that could limit future adaptation options?	☐	☐	☒
6. Has it been assessed against plausible future climate scenarios, including more severe or combined events?	☒	☐	☐
7. Is it aligned with a broader adaptation strategy, rather than a standalone measure?	☒	☐	☐
8. Is there a plan in place to monitor outcomes and make adjustments over time if risks or conditions change?	☒	☐	☐

The review finds that the proposed project relies heavily on a fixed design that could increase the potential for erosion in neighbouring areas and limit future adaptation options as sea levels continue to rise.

Outcome

The PE firm determines that the project presents potential maladaptation risks and should not proceed in its current form. Rather than rejecting the investment outright, the firm requires the project developer to revise the design and demonstrate how identified risks will be mitigated before the investment can proceed.

This will in turn help to strengthen the adaptation outcomes of the investment while reducing the risk of unintended negative consequences over the long term.

4. How to use the tools in practice

The five tools presented in section 3 are designed to be used together as well as independently. In practice, applying adaptation finance taxonomies effectively requires combining multiple assessment steps in a coherent, sequenced workflow.

The three integrated examples that follow illustrate how financial institutions can apply the Playbook's principles and tools in combination across real-world investment and portfolio management scenarios. Each example reflects a distinct institutional type, geographic context and operational challenge, demonstrating the flexibility and adaptability of the Playbook's approach.

The examples are not intended as prescriptive templates. The specific tools used, the sequence in which they are applied and the level of detail required will vary depending on the institution's mandate, the taxonomies applicable in their market and the nature of the investment being assessed. What the examples share is a common underlying logic: starting from a clear objective, applying the most relevant tools in sequence and using the outputs of each step to inform the next.

Taken together, the examples illustrate three distinct entry points into Playbook application:

- **Integrated example 1** shows how an asset manager operating across multiple jurisdictions can use the full suite of tools to build a coherent internal adaptation taxonomy for a specific sector, ensuring consistency across markets with different national taxonomy frameworks.
- **Integrated example 2** demonstrates how a development finance institution operating in a jurisdiction without a national taxonomy can draw on the Playbook's principles and international reference frameworks to develop a structured, credible internal approach to identifying and classifying adaptation finance.
- **Integrated example 3** shows how an insurer can use selected tools to embed climate adaptation considerations into underwriting and product design decisions, aligning with a national taxonomy while strengthening climate risk management across its portfolio.

Readers are encouraged to identify which example most closely reflects their institutional context and use it as a starting point for applying the Playbook's tools to their own investment and portfolio management processes.

4.1 Integrated example 1: Developing an internal adaptation finance taxonomy for the manufacturing sector

Objective

An asset manager that focuses on EMDEs wishes to develop a coherent, internal adaptation finance taxonomy for its manufacturing-related investments across Rwanda, Indonesia and Costa Rica. To do this, it uses a combination of the Playbook tools to ensure that eligible activities are comprehensively identified, aligned with any relevant national sustainable finance taxonomies, informed by local climate hazards, compatible with different taxonomy qualification approaches and consistent with necessary sustainability safeguards.

Using the tools

Step 1: Sector mapping and gap identification (Climate Adaptation Sector Mapper)

The asset manager begins by reviewing the adaptation-related activities included in the national taxonomies of Rwanda, Indonesia and Costa Rica within the manufacturing sector. Since these taxonomies utilize ISIC or ISIC-based sector classifications, eligible activities are typically structured according to standard sector categories.

To ensure they do not overlook potentially relevant activities, the asset manager uses the Climate Adaptation Sector Mapper to:

- Map ISIC manufacturing division codes to the primary and secondary resilience themes used in resilience-themed adaptation taxonomies
- Translate sector-based classifications into resilience-oriented categories
- Identify additional adaptation-relevant activities that may not be fully captured within the ISIC-based structure

This step allows the firm to compare sector-based taxonomy approaches with resilience-themed frameworks and determine whether any activities should be incorporated into its internal adaptation taxonomy to improve completeness and consistency.

Step 2: Understanding the climate hazard context (Climate Hazard Dashboard)

The asset manager then assesses climate exposure across Rwanda, Indonesia and Costa Rica using the Climate Hazard Dashboard to ensure that activities considered for inclusion in the internal taxonomy are linked to relevant local climate risks and reflect country-specific hazard profiles.

They do this by using the Climate Hazard Dashboard to:

- Filter hazards by country
- Review relevant acute and chronic hazards
- Examine hazard definitions, impact pathways and datasets

Step 3: Comparing taxonomy qualification criteria (Taxonomy Criteria Checker)

To ensure alignment with external frameworks, the asset manager uses the Taxonomy Criteria Checker to compare and analyze how adaptation eligibility is defined across jurisdictions.

The tool clarifies whether qualification relies on:

- Whitelist approaches
- Principles-based approaches
- Process-based assessments
- Quantitative/qualitative thresholds

This helps the asset manager to design its internal taxonomy in a way that anticipates the type of evidence and assessment structure required in each market.

Step 4: Alignment safeguard compliance and screening for maladaptation (DNSH to other Sustainability Objectives Compliance Tracker and Maladaptation Screening Checklist)

Finally, the asset manager checks that activities comply with alignment safeguards and screens to ensure that activities included in the internal taxonomy:

- Do not result in significant harm to other sustainability objectives
- Remain resilient under current and future climate conditions
- Avoid long-term lock-in of GHG emissions
- Do not shift risks across communities or systems
- Support sustained adaptive capacity over time

This strengthens the integrity of the internal framework and ensures alignment with broader sustainability considerations.

Outcomes

By using the tools together, the asset manager is able to develop an internal adaptation finance taxonomy for the manufacturing sector that is:

- Grounded in national ISIC-based sector classifications and cross-referenced with resilience-themed frameworks to identify potential gaps
- Informed by country-specific climate hazard analysis
- Designed to align with differing taxonomy qualification approaches
- Complies with alignment safeguards and avoids maladaptation risks

This integrated approach enhances consistency across jurisdictions and helps to clarify and integrate adaptation in financial decision-making processes.

4.2 Integrated example 2: Building an adaptation investment screening approach

Objective

A development finance institution (DFI) in a Least Developed Country (LDC) wants to review its lending portfolio to identify and tag adaptation-related loans. In the absence of a national sustainable finance taxonomy, the DFI applies the Playbook's principles to develop a consistent approach for classifying adaptation finance and ensuring consistency in lending decisions.

Applying the principles and tools

Step 1: Sector prioritization

The DFI begins by reviewing its lending portfolio to identify sectors most exposed to climate risk. This is cross-referenced with national climate policy priorities, including the national adaptation plan (NAP) and nationally determined contributions (NDCs).

The analysis shows that a significant share of lending exposure is concentrated in coastal infrastructure, water supply and sanitation, and public buildings, all of which are identified as highly climate-sensitive in national policy documents.

Step 2: Assessing physical climate risks across the lending portfolio using the Climate Hazard Dashboard

Then, the DFI assesses the physical climate risks affecting these priority lending sectors. Given the limited availability of localized climate risk data, the DFI is unable to conduct a full CRVA. Instead, it uses the Climate Hazard Dashboard to:

- Classify relevant acute and chronic hazards
- Review typical impact pathways for each hazard type
- Identify recommended datasets that could support more detailed future analysis

This provides a baseline for interpreting climate risks across the portfolio.

Step 3: Applying adaptation qualification checks using international guidance

Next, the DFI checks whether any of its loans can be classified as adaptation finance using international adaptation finance taxonomies and market guidance (e.g. Standard Chartered Guide for Adaptation and Resilience Finance, CBRT etc.) as reference points.

This helps the DFI to:

- Identify which types of lending activities are typically considered adaptation finance
- Understand the types of qualification checks and evidence required to demonstrate adaptation alignment
- Strengthen internal documentation standards for assessment and reporting

Step 4: Assessing DNSH across the lending portfolio using the DNSH to Mitigation and other Sustainability Objectives Compliance Tracker

Concerned about the impact of its lending activities on other sustainability objectives, the DFI uses the DNSH Compliance Tracker, alongside international adaptation taxonomy guidance to review loan information and:

- Track compliance against DNSH requirements
- Record supporting evidence for environmental and social standards
- Ensure consistency in how safeguards are applied across the lending portfolio

Step 5: Screening lending portfolio for maladaptation risks using the Maladaptation Screening Checklist

Finally, the DFI applies the Maladaptation Screening Checklist to help determine whether financed investments entail maladaptation risks. The checklist also supports upstream decision-making by indicating when proposed loans need to be restructured to avoid maladaptation risks.

Outcomes

By applying the Playbook principles and tools across its lending portfolio, the DFI is able to develop and implement an internal approach for identifying and classifying adaptation-related investments, even in the absence of a national sustainable finance taxonomy.

This enables the institution to:

- Prioritize lending based on climate vulnerability and national adaptation priorities
- Apply consistent climate risk screening using structured hazard information
- Benchmark adaptation relevance using international adaptation finance guidance
- Strengthen DNSH compliance tracking across lending activities
- Identify and address maladaptation risks early in the lending process

Together, this supports a more consistent, transparent and credible adaptation finance decision-making across the DFI's lending portfolio.

4.3 Integrated Example 3: Embedding climate adaptation into an insurer's portfolio

Objective

An insurance company operating in Uganda seeks to strengthen how it identifies and manages climate-related risks across its property and agriculture insurance portfolio. The insurer aligns its approach with Uganda's National Green Taxonomy and uses selected Playbook tools to inform underwriting and product design decisions.

Using the tools

Step 1: Assessing physical climate risks using the Climate Hazard Dashboard

The insurer uses the Climate Hazard Dashboard to understand how different climate hazards may affect insured assets across Uganda and to identify where climate risk is most material within its underwriting portfolio.

The analysis identifies drought as a key driver of agricultural losses, while extreme precipitation and flooding are increasingly contributing to urban property claims. Changes in rainfall patterns are also affecting crop yields, with the combined effects of drought and flooding emerging as a growing source of losses across the portfolio.

This provides the insurer with a clearer understanding of the climate risks affecting its products and helps inform future underwriting and product development decisions.

Step 2: DNSH screening across insurance products using the DNSH to Other Sustainability Objectives Compliance Tracker

The insurer then uses the DNSH Compliance Tracker to assess and record compliance of its insurance products with the DNSH requirements contained in Uganda's National Green Taxonomy.

The review finds that both the agricultural and property insurance products comply with the relevant DNSH requirements, and that supporting evidence is available and appropriately documented. The tracker provides a clear audit trail of compliance and helps the insurer understand the types of evidence and documentation that may be required when developing future taxonomy-aligned products.

Step 3: Maladaptation risk screening using the Maladaptation Screening Checklist

The insurer applies the Maladaptation Screening Checklist to assess whether its agricultural and property insurance products entail maladaptation risks.

The assessment finds no significant maladaptation risks. The insurer then cross-checks its products against Uganda's National Adaptation Plan (NAP), Nationally Determined Contributions (NDCs), and relevant sector policies, as outlined in the taxonomy, to ensure broader alignment with national adaptation priorities.

Step 4: Assessing alignment with Uganda's National Green Taxonomy

The insurer then assesses the agricultural and property insurance products against the principles contained in Uganda's National Green Taxonomy to determine whether they make a substantial contribution to climate adaptation objectives.

- Agricultural insurance products are found to be only partially aligned with the taxonomy. While they comply with DNSH requirements and do not present maladaptation risks, the insurer has not yet established a monitoring, reporting and evaluation framework to track adaptation outcomes, as required under the taxonomy's principles. As a result, the products require further refinement before they can be considered fully aligned.
- Property insurance products are found to be aligned with the taxonomy. They comply with the taxonomy's adaptation principles, meet DNSH requirements, avoid maladaptation risks and are supported by an established monitoring and evaluation framework. These products are therefore considered eligible under the taxonomy.

The insurer uses these findings to identify gaps in product design and prioritize actions needed to improve taxonomy alignment across its insurance products.

Outcomes

By applying the Playbook tools, the insurer gains a clearer understanding of the climate risks affecting insured assets, tracks compliance with the taxonomy's DNSH requirements, and assesses potential maladaptation risks. This enables the insurer to identify gaps in product design and evaluate alignment with Uganda's National Green Taxonomy.



Conclusion and next steps

The scale of investment required to close the global adaptation finance gap is significant and growing. Developing countries alone will need between US\$ 310–365 billion annually by 2035, yet current flows fall far short of this need. Sustainable finance taxonomies have an important role to play in addressing this gap, not by generating capital directly, but by providing the common language, consistent definitions and structured assessment approaches that financial institutions need to identify, evaluate and scale credible adaptation investments.

This Playbook has been developed in response to a clear and consistent message from financial institutions: that the practical operationalization of adaptation taxonomies remains one of the most significant barriers to their use. High-level taxonomy frameworks exist and are proliferating, but translating them into the day-to-day realities of investment screening, portfolio analysis, product structuring and reporting remains genuinely difficult.

The five principles and five tools presented in this Playbook are designed to address these challenges directly. They provide a structured but flexible pathway for financial institutions to move from taxonomy awareness to taxonomy application, prioritizing sectors where adaptation needs are most material, grounding investment decisions in robust climate risk analysis, applying qualification criteria consistently, integrating Do No Significant Harm safeguards, and identifying and managing maladaptation risks before they undermine the integrity of adaptation-labelled investments.

The practical tools: the Climate Adaptation Sector Mapper, Climate Hazard Dashboard, Taxonomy Criteria Checker, DNSH Compliance Tracker and Decision Tree, and Maladaptation Screening Checklist, are provided in full interactive form in the accompanying spreadsheet. They are designed to be used modularly, so that institutions can begin with the tools most relevant to their current needs and build towards more comprehensive taxonomy integration over time. A financial institution new to adaptation taxonomy application might begin with the Sector Mapper and Hazard Dashboard to identify where adaptation is most material in their portfolio. An institution already engaged with a specific national taxonomy might prioritize the Criteria Checker and DNSH tools to strengthen its assessment and documentation processes.

What this playbook does not cover

This Playbook focuses on the operationalization of adaptation taxonomies as they currently exist. It does not address the design of new national taxonomies, though UNEP FI's broader programme of support to governments in taxonomy development complements this Playbook directly. Institutions involved in or advising on taxonomy development should refer to UNEP FI's dedicated taxonomy development guidance and the Taxonomy Roadmap Initiative's Principles for Taxonomy Interoperability.

The Playbook addresses physical climate risks and adaptation finance. It does not cover transition risk or climate mitigation finance, which are addressed in separate UNEP FI guidance. It also does not directly address loss and damage finance, which is a distinct and increasingly important category of climate finance that sits beyond the boundary of what adaptation taxonomies currently define as eligible activity. As the Loss and Damage Fund operationalizes and as the boundary between adaptation and loss and damage becomes more practically significant for financial institutions, UNEP FI will track whether taxonomy frameworks need to evolve to reflect this distinction.

The Playbook gives limited treatment to social equity dimensions of adaptation finance, including gender-responsive adaptation, the particular vulnerabilities of indigenous and local communities, and the distributional consequences of adaptation investments. These dimensions are not peripheral: the IPCC Sixth Assessment Report makes clear that climate vulnerability is unevenly distributed by gender, income, age and social position, and that adaptation interventions that ignore this risk reinforcing existing inequities. Financial institutions should ensure that the Minimum Social Safeguards embedded in applicable taxonomies are treated as substantive requirements and should consider whether their internal adaptation assessment processes adequately capture social equity dimensions beyond what taxonomies formally require.

Finally, the Playbook addresses nature-based solutions only partially. Nature-based solutions are among the most cost-effective adaptation strategies available, yet they sit awkwardly within standard ISIC-based sector classifications and are inconsistently treated across national adaptation taxonomies. The intersection of adaptation taxonomies and the emerging generation of nature and biodiversity taxonomies is a significant area of development that this Playbook acknowledges but does not resolve. Financial institutions active in nature-based adaptation should monitor developments in biodiversity taxonomy frameworks alongside the adaptation taxonomy landscape described here.

Next steps

Progress on adaptation finance taxonomies requires action at multiple levels simultaneously. The following next steps are relevant to UNEP FI, to financial institutions, and to the broader ecosystem of taxonomy developers, regulators and standard setters.

For UNEP FI

This Playbook is a living document. The adaptation taxonomy landscape is evolving rapidly, with new national taxonomies being published, existing taxonomies being updated, and international frameworks continuing to develop. UNEP FI aims at reviewing and updating the Playbook, including the accompanying spreadsheet tools, on a regular basis to reflect significant developments in the landscape. Financial institutions that identify gaps, errors or opportunities for improvement are encouraged to share feedback through UNEP FI's network channels.

Beyond this Playbook, UNEP FI will continue to support the consistent and credible development of adaptation finance through its work with governments on national taxonomy design, its engagement with standard setters including ICMA and the LMA on the alignment of green bond and loan principles with adaptation taxonomy frameworks, and its support to financial institutions through the Principles for Responsible Banking and Principles for Sustainable Insurance in integrating adaptation considerations into their core business strategies.

For financial institutions

Financial institutions that are new to adaptation taxonomy application should begin by identifying which sectors and geographies in their portfolios face the highest exposure to physical climate risks, using the Climate Adaptation Sector Mapper and Climate Hazard Dashboard as starting points. This initial mapping exercise does not require full taxonomy alignment, it is the foundation on which more structured assessment can be built.

Institutions that are already engaging with adaptation taxonomies in some form should use the Taxonomy Criteria Checker to audit whether their current qualification approaches are consistent with the taxonomies applicable to their markets and use the DNSH tools to strengthen the documentation and governance of their adaptation investment assessments. Institutions operating in markets without a national taxonomy should consider developing an internal adaptation classification approach drawing on the international frameworks described in section 1.2 and the principles set out in section 2.

All financial institutions engaging with adaptation finance should embed maladaptation screening as a standard component of their investment due diligence processes. The Maladaptation Screening Checklist provides a practical starting point, but maladaptation risk management ultimately requires genuine engagement with the long-term climate trajectory of each investment. Institutions should ask not only whether an investment meets current taxonomy criteria, but whether it will remain genuinely adaptive under the climate conditions that will prevail over its asset lifetime.

For taxonomy developers and regulators

The most significant gap identified through the development of this Playbook is the absence of published Substantial Contribution criteria for climate adaptation in a large number of taxonomies that nominally include adaptation as a sustainability objective. Taxonomy developers should prioritize the development of substantive adaptation SC criteria, particularly for sectors beyond agriculture and water where adaptation investment is increasingly material but taxonomic guidance remains thin.

Regulators and supervisors that are considering mandating or incentivizing taxonomy alignment should also give careful attention to the adaptation dimension. Regulatory frameworks that focus exclusively on climate mitigation reporting, requiring disclosure of alignment with mitigation taxonomy criteria but not adaptation, risk systematically undervaluing adaptation investment and distorting capital allocation towards mitigation at the expense of resilience. As physical climate risks intensify, the regulatory framework for sustainable finance disclosure should evolve to give adaptation equal standing with mitigation.

Interoperability across taxonomies remains an unresolved challenge that imposes real costs on financial institutions operating across multiple jurisdictions. The Taxonomy Roadmap Initiative's Principles for Taxonomy Interoperability provide a useful foundation, but progress on practical interoperability; particularly for the adaptation dimension, has been slow. UNEP FI calls on taxonomy developers, regulators and international standard setters to accelerate work on shared adaptation definitions, common hazard classification structures and mutually recognized qualification approaches that would allow financial institutions to apply adaptation taxonomies more efficiently without sacrificing the local context-sensitivity that genuine adaptation requires.

A final word

Climate adaptation is increasingly central to the financial system's ability to function in a world of intensifying physical climate risks. Every financial institution, regardless of size, geography or business model, has exposures that are affected by climate change, and every financial institution has a role to play in directing capital towards the investments that will determine how well societies, ecosystems and economies adapt to the changes that are already underway and those still to come.

The taxonomy frameworks described in this Playbook are imperfect instruments, but they are the best available tools for creating the common language and consistent standards that adaptation finance needs to scale. Using them carefully, critically, and in the spirit of continuous improvement is the most practical contribution that financial institutions can make to closing the adaptation finance gap.

UNEP FI looks forward to working with financial institutions, governments, regulators and standard setters to strengthen these tools over time, and to building the transparent, credible and impactful adaptation finance market that the scale of the climate challenge demands.



UNEP Finance Initiative brings together a large network of banks, insurers and investors that catalyzes action across the financial system to deliver more sustainable global economies.

For more than 30 years the Initiative has been connecting the UN with financial institutions from around the world to shape the sustainable finance agenda. We've established the world's foremost sustainability frameworks, helping the finance industry achieve sustainability goals, address sustainability risks and identify the business opportunities in taking a responsible approach to banking and insurance.

Convened by a Geneva, Switzerland-based secretariat, more than 550 banks and insurers are individually implementing UNEP FI's Principles for Responsible Banking and Principles for Sustainable Insurance. Financial institutions work with UNEP FI on a voluntary basis to apply these industry frameworks and

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develop practical guidance and tools that drive institutional change, shaping the future of sustainable finance and positioning their businesses for the transition to a sustainable and inclusive economy. In parallel, UNEP FI also drives systems change and fosters enabling conditions in service of the broader mission to mobilize and align private finance to help achieve the UN Sustainable Development Goals.

Founded in 1992, UNEP FI was the first organization to engage the finance sector on sustainability and incubated the Principles for Responsible Investment, now the world's leading proponent of responsible investment.

Today, we cultivate leadership and advance sustainable market practice while supporting the implementation of global programmes at a regional level across Africa & the Middle East, Asia Pacific, Europe, Latin America & the Caribbean, and North America.



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