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Principles for
Sustainable Insurance

Nature-Positive Insurance: Evolving Thinking and Practices

A briefing paper produced by UNEP FI's
Principles for Sustainable Insurance
Initiative and Nature Team

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Acronyms

CISL	Cambridge Institute for Sustainability Leadership
COP15	15 th meeting of the Conference of the Parties to the CBD
ENCORE	Exploring Natural Capital Opportunities, Risks and Exposure
FPIC	Free, prior and informed consent
GBF	Kunming-Montreal Global Biodiversity Framework
GRI	Global Reporting Initiative
IPBES	Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services
IPLCs	Indigenous Peoples and Local Communities
ISSB	International Sustainability Standards Board
IUCN	International Union for Conservation of Nature
NBSAPs	National biodiversity strategies and action plans
NbS	Nature-based Solutions
PSI	UN Environment Programme's Principles for Sustainable Insurance Initiative
SCBD	Secretariat of the Convention on Biological Diversity
SDGs	Sustainable Development Goals
SIF	UNDP Sustainable Insurance Forum
TCFD	Task Force on Climate-related Financial Disclosures
TNFD	Task Force on Nature-related Financial Disclosures
UN	United Nations
UNDP	United Nations Development Programme
UNEP	United Nations Environment Programme
UNEP FI	UNEP Finance Initiative
UNEP-WCMC	UNEP-World Conservation Monitoring Centre
UNFCCC	United Nations Framework Convention on Climate Change



About UN Environment Programme's Principles for Sustainable Insurance Initiative

Endorsed by the UN Secretary-General and insurance industry CEOs, the Principles for Sustainable Insurance (PSI) serve as a global framework for the insurance industry to address environmental, social and governance (ESG) risks and opportunities—and a global initiative to strengthen the insurance industry's contribution as risk managers, insurers and investors to building resilient, inclusive and sustainable communities and economies on a healthy planet.

Developed by UN Environment Programme's Finance Initiative, the PSI was launched at the 2012 UN Conference on Sustainable Development (Rio+20) and has led to the largest collaborative initiative between the UN and the insurance industry. As of August 2023, more than 250 organisations have joined the PSI, including insurers representing about one-third of world premium and USD 15 trillion in assets under management, and the most extensive global network of insurance and stakeholder organisations committed to addressing sustainability challenges.

Learn more at:

unepfi.org/psi

“The Principles for Sustainable Insurance provide a global roadmap to develop and expand the innovative risk management and insurance solutions that we need to promote renewable energy, clean water, food security, sustainable cities and disaster-resilient communities.”

UN Secretary-General
(PSI launch, 2012 UN Conference on Sustainable Development)

The PSI collaborated with the Nature thematic team of the United Nations Environment Programme Finance Initiative in producing this paper.

Learn more at:

unepfi.org/nature



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More than 30 organisations¹ from the insurance industry and wider financial community participated in workshops and interviews that were carried out to solicit insights for this paper.

¹ Workshop participants: Achmea, Aon, AVLA, AXA, Everest Group Limited, Hellenic Hull Management (HMA) Limited, INEA LION Group, Insurance Australia Group, Interamerican Hellenic Life Insurance Group, Länsförsäkringar AB, Marsh McLennan, MS&AD Insurance Group, Munich Re, Santam, SCOR, Seguros Bolivar, Singapore Life Holdings, Sampo Holdings, Swiss Re, TD Insurance, Tokio Marine Holdings, Willis Towers Watson, Zurich Insurance Group,

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Interview participants: Global Resilience Partnership, Swiss Re, Willis Towers Watson



Executive summary

As evidenced by the adoption of the Kunming-Montreal Global Biodiversity Framework in December 2022,² there is a growing recognition of the importance of finance for nature, both in reducing nature-related risks and seizing nature-positive opportunities. This timely briefing paper calls on insurers to take action to halt and reverse nature loss so that by 2030 nature is visibly and measurably on the path to recovery.

As risk managers, insurers and investors, the insurance industry plays an important role in promoting economic, social, and environmental sustainability—or sustainable development. This paper builds on the long-standing work of UN Environment Programme's Principles for Sustainable Insurance Initiative (PSI) in addressing nature-related risks over the past decade—from tackling illegal, unreported and unregulated (IUU) fishing, environmental pollution liability, plastic pollution and high-impact hydropower projects; to protecting UNESCO World Heritage Sites and building climate resilience by protecting ecosystems such as coral reefs and mangrove forests. This cumulative work culminated in the agenda-setting PSI Nature-Positive Insurance Series in 2021 co-organised by the UN Convention on Biological Diversity, as well as the inclusion of nature-related risks in the development of the first-ever environmental, social and governance (ESG) guides for non-life insurance (2020) and life & health insurance (2022) produced by the PSI.³

This paper articulates the role that insurers can play in supporting the goals of the Kunming-Montreal Global Biodiversity Framework and ultimately support the transition to a nature-positive global economy. Qualitative interviews and two workshops were held with experts from the insurance industry and wider financial community to solicit their insights.

The global goal for nature and Global Biodiversity Framework: Why they matter to the insurance industry

The world is currently facing a triple planetary crisis, including climate change, nature and biodiversity loss, and pollution and waste. The dependence of the global economy on nature makes it vulnerable to nature-related risks. Rebuilding and replenishing natural capital is therefore a critical goal for all sectors of the economy and all actors in society, including governments, businesses, and civil society.

-
- 2 The Global Biodiversity Framework sets goals for governments regarding biodiversity conservation and restoration, nature's contribution to people, access and benefit sharing and tools and solutions for mainstreaming and implementation.
 - 3 Resources developed by the PSI to address a variety of nature-related risks over the last decade can be found in unepfi.org/industries/insurance/nature-positive-insurance-series/



The global goal of becoming nature-positive by 2030 coupled with the adoption of the Kunming-Montreal Global Biodiversity Framework (GBF) at COP15 emphasise the need for urgent and transformative action to halt and reverse nature loss. The paper identifies how the insurance industry in its role as risk managers and insurers can contribute to achieving the goals and targets of the GBF through a range of possible actions, from embedding nature in risk management frameworks and setting underwriting criteria and guidelines; to engaging with clients and potential clients, and developing insurance products and solutions that cover natural ecosystems and economic activities that value, conserve, restore and wisely use biodiversity and ecosystem services.

Managing nature-related risks: Emerging practices in the insurance industry

Insurers and reinsurers are increasingly recognising the need to address nature-related risks in their risk management and underwriting frameworks. These risks encompass physical, transition, and systemic risks resulting from the loss and degradation of natural ecosystems, misalignment with emerging regulations, and the breakdown of entire systems.

To effectively integrate these risks, insurers should update their risk management methodologies, models, and decision-making processes. This includes enhancing their understanding of the interdependencies between natural ecosystems and insured assets, activities through data collection and analysis; and the development of relevant indicators and metrics.

Integrating nature-related risks requires insurers to adapt their risk assessment tools and frameworks. This can involve leveraging catastrophe risk modelling to analyse the physical risks associated with climate-related hazards and developing parallel nature scenarios to enhance risk understanding and risk reduction. Furthermore, insurers need to address the challenges posed by transition risks, which can arise from the misalignment between their strategies and evolving market and regulatory landscapes. This includes monitoring changes in market dynamics, technological advancements, and policy and legal frameworks to assess the viability and insurability of assets and activities.

Insuring nature: Innovative solutions and new opportunities

Insurers are recognising the significance of insuring natural ecosystems and are exploring transformative practices in this area. Nature-related opportunities go beyond risk management and can be strategic for innovative insurers.

Nature-based Solutions (NbS) are an important tool for insurers to protect and restore ecosystems while addressing societal challenges, providing economic, social, and environmental co-benefits. Insurers play a crucial role in supporting NbS by assessing risks, providing tailored insurance coverage, and allocating financial resources. Collaborative efforts among different stakeholders and credible certifications are important for facilitating NbS, but challenges remain, such as a lack of clear ownership of natural assets and insufficient data for risk assessment.



Insurers are also developing new risk management services and insurance products to address concerns related to the loss of biodiversity and ecosystem services. They are focusing on areas such as biodiversity protection and restoration, community-based resilience approaches, and green infrastructure. However, scaling up insurance for nature-positive opportunities faces challenges related to knowledge and modelling capabilities within insurance companies and other market participants, competing internal priorities, and the need for applicable projects on the demand side.

With the adoption of the GBF, as well as other global developments to address nature-related issues, and as more data and tools become available, expectations for the insurance industry's approach to nature will increase. This creates an incentive for insurers to identify more opportunities for risk management and insurance solutions that promote and lead to nature-positive outcomes.

Key actions to advance nature-positive insurance

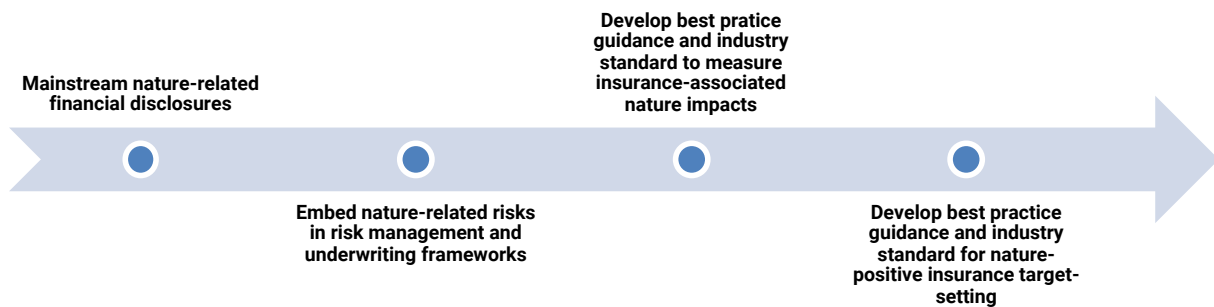
Nature-positive insurance (NPI) can be defined as risk management and insurance strategies, approaches, practices, products, services and solutions that address nature-related dependencies, impacts, risks and opportunities in order to value, conserve, restore and wisely use biodiversity and ecosystem services; and to promote economic, social and environmental sustainability. NPI aims to actively contribute to achieving the mission of the Kunming-Montreal Global Biodiversity Framework to halt and reverse nature loss by 2030, and its vision of a world living in harmony with nature by 2050.

The insurance industry can adopt a range of approaches to advance NPI:





Furthermore, this paper has identified gaps in knowledge, tools, methods and standards and proposes the following roadmap in order to speed up and scale up nature-positive insurance thinking and practices globally:



In recognition of the need for collaborative efforts to implement this roadmap, the PSI and UNEP FI's Nature Team believe that the establishment of a **Nature-Positive Insurance Forum** is essential. This Forum can serve as a global platform for the insurance industry and key stakeholders (e.g., insurance regulators and supervisors, nature-positive finance standard-setters, real economy actors, environmental and conservation groups, scientific and academic community, civil society) to engage in order to support the development and advancement of nature-positive insurance approaches, frameworks, guidance, tools, methodologies and standards. This forum can also serve as a space for sharing best practices and peer-to-peer learning and collaboration which is an integral part in every step of the roadmap.



Aims and scope

With the adoption of the Kunming-Montreal Global Biodiversity Framework (GBF) in December 2022 as an overarching framework for insurers to align with, this paper articulates the links between nature and the insurance industry, particularly the role of insurance in helping achieve the global goal of becoming nature-positive by 2030. **The paper calls on insurers to take action through individual and collaborative efforts to halt and reverse nature loss so that by 2030 nature is visibly and measurably on the path to recovery.**

As risk managers, insurers and investors, the insurance industry plays an important role in promoting economic, social, and environmental sustainability—or sustainable development. This paper builds on the long-standing work of UN Environment Programme’s Principles for Sustainable Insurance Initiative (PSI) in addressing nature-related risks over the past decade—from tackling illegal, unreported and unregulated (IUU) fishing (PSI & Oceana, 2019), environmental pollution liability (PSI, 2022), plastic pollution (PSI 2019; Minderoo Foundation, 2022) and high-impact hydropower projects (WWF, 2022); to protecting UNESCO World Heritage Sites (PSI, WWF & UNESCO, 2019) and building climate resilience by protecting ecosystems such as coral reefs and mangrove forests (PSI, 2015). This cumulative work culminated in the agenda-setting PSI Nature-Positive Insurance Series (PSI, 2021) co-organised by the UN Convention on Biological Diversity, as well as the inclusion of nature-related risks in the development of the first-ever environmental, social and governance (ESG) guides for non-life insurance (PSI, 2020) and life & health insurance (PSI, 2022) produced by the PSI.

UNEP FI’s Nature Team has also contributed significantly to advance the integration of nature into financial decision-making and accelerate nature-positive action in the financial sector. This paper for insurers follows similar publications for investors and banks, namely: “Stepping up on biodiversity: What the Kunming-Montreal Global Biodiversity Framework means for responsible investors” (UNEP FI 2023) and “Banking on nature: What the Kunming-Montreal Global Biodiversity Framework means for responsible banks” (UNEP FI, 2023).





Given the context above, this paper outlines the role that insurers can play in supporting the goals of the GBF and ultimately support the transition to a nature-positive global economy.

This paper focuses on the risk manager and insurer roles of the insurance industry and explores:

- The implications of the GBF for the insurance industry
- Nature-related risks for insurers and approaches to assessing and managing them
- Opportunities for insurance to support and promote nature-positive outcomes
- Recommendations and key actions for insurers to support the achievement of the global goal of becoming nature-positive by 2030

As part of this work, qualitative interviews and two workshops were held with key experts from the insurance industry and wider financial community. Their insights are reflected throughout this document.

This paper is mirrored by similar UNEP FI reports developed for banks and investors. Therefore, the role of insurers as investors, which is equally important, is out of scope for the purposes of this paper.



The global goal for nature and the Global Biodiversity Framework: Why they matter to the insurance industry

The world is facing a triple planetary crisis driven by climate change, nature and biodiversity loss, and pollution and waste. More than half the world's GDP—i.e. USD 44 trillion of economic value generation—is moderately or highly dependent on nature (Russo, 2020)—which is increasingly threatened by human activities and climate change.

Given this co-dependency, the global economy is exposed to nature-related risks as highlighted in the World Economic Forum's Global Risks Report (2022), which identified climate action failure, extreme weather events, and biodiversity loss and ecosystem collapse as the top three risks to the global economy. This all draws attention towards the need to rebuild and replenish our natural capital; a goal which all parts of the economy—from governments and policymakers to businesses and households—must strive to achieve.

“Biodiversity is fundamental to human well-being and a healthy planet, and economic prosperity for all people. Including for living well, in balance and in harmony with Mother Earth, we depend on it for food, medicine, energy, clean air and water, security from natural disasters as well as recreation and cultural inspiration, and it supports all systems of life on earth.”

UNEP and CBD, 2022

In this context, the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES) carried out a Global Assessment on Biodiversity and Ecosystem Services in 2019, concluding that:

1. Nature and its vital contributions to people, which together embody biodiversity and ecosystem functions and services, **are deteriorating worldwide**



2. Direct and indirect **drivers of change have accelerated** during the past 50 years. The direct drivers of change in nature with the largest global impact have been (starting with those with most impact):
 - a. **Changes in land and sea use**
 - b. **Direct exploitation of organisms**
 - c. **Climate change**
 - d. **Pollution**
 - e. **Invasion of alien species**
3. **Goals for conserving and sustainably using nature and achieving sustainability cannot be met by current trajectories**, and goals for 2030 and beyond may only be achieved through transformative changes across economic, social, political and technological factors
4. Nature can be conserved, restored and used sustainably while other global societal goals are simultaneously met through **urgent and concerted efforts fostering transformative change**

In response to the findings of the IPBES Global Assessment, a number of initiatives and frameworks have been implemented to bring about a transformation in our societies' relationship with biodiversity by 2030. These include the global goal for nature and the Kunming-Montreal Global Biodiversity Framework.

The global goal for nature: Nature-positive by 2030

The global goal of becoming nature-positive defines what is needed to halt and reverse nature loss by 2030, measured from a baseline of 2020. This is to be achieved by increasing the health, abundance, diversity and resilience of species, populations and ecosystems so that nature is both visibly and measurably recovering. It is an objective that should inform actions under all multilateral environmental agreements, in particular the three Rio Conventions on biodiversity, climate change and desertification, and the Sustainable Development Goals (SDGs), and guide the activities of government, civil society and business (Locke et al. 2020; Nature Positive, no date).

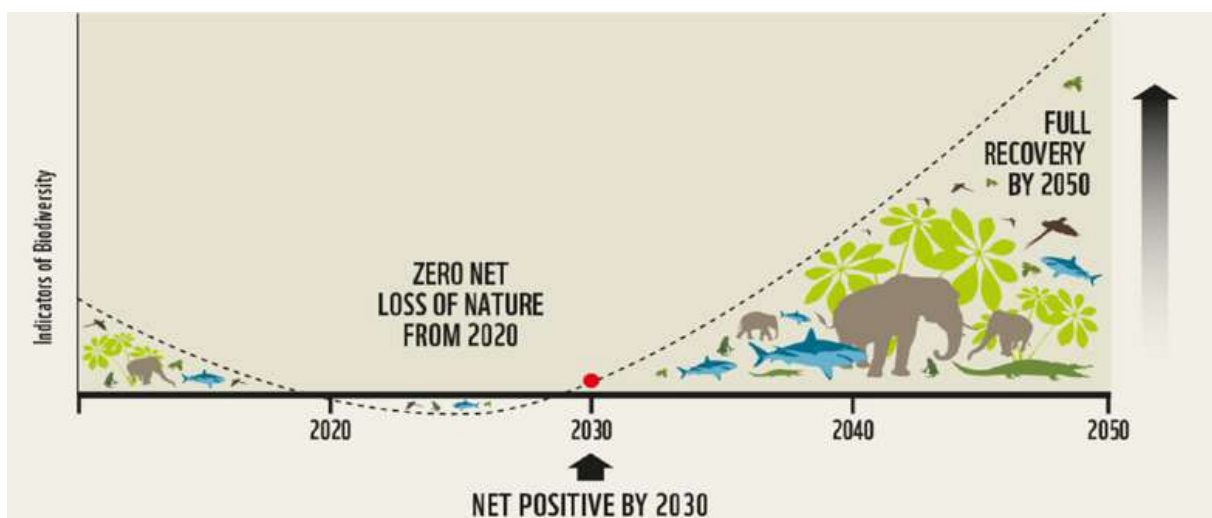


Figure 1: The global goal for nature: Nature-positive by 2030 (Source: Nature Positive)



The Kunming-Montreal Global Biodiversity Framework

On 19 December 2022, Parties to the Convention on Biological Diversity (CBD)⁴ adopted the Kunming-Montreal Global Biodiversity Framework (GBF) at COP15. “The framework aims to catalyse, enable and galvanize urgent and transformative action by Governments, subnational and local governments, and with the involvement of all of society to halt and reverse biodiversity loss” (UNEP and CBD, 2022).

The GBF’s mission to halt and reverse nature loss by 2030 is built around a theory of change which recognises that urgent action is required to achieve sustainable development so that the drivers that have exacerbated biodiversity loss will be reduced and/or reversed to allow for the recovery of all ecosystems and to achieve the vision of living in harmony with nature by 2050 (UNEP and CBD, 2022).

The GBF is widely considered to be nature’s parallel to the Paris Agreement on Climate Change (UNFCCC, 2015). The framework aims to transform economic and financial systems, and to align all financial flows with the conservation and sustainable use of biodiversity. **The global economy cannot reach net-zero emissions without being nature positive.** Neither climate change nor biodiversity loss will be resolved in isolation because they mutually reinforce each other and are interconnected. Indeed, climate change is likely to become the main driver of biodiversity degradation by the end of the century, as rising temperatures destabilise ecosystems and produce nature loss. Biodiversity degradation, in turn, accelerates climate change as ecosystems absorb less carbon, which undermines their ability to mitigate greenhouse gas emissions and to protect countries, cities and communities against extreme weather events. Therefore, it is imperative for the insurance industry to embrace a holistic approach to addressing both climate and biodiversity risks in order to maximise its ability to reduce the adverse social, economic and environmental impacts of nature loss on the insurance industry and the wider economy.

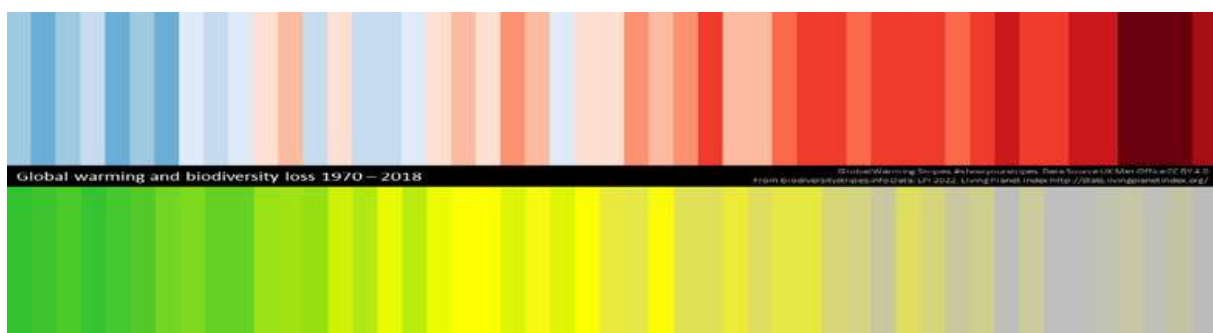


Figure 2: Global warming and biodiversity loss (1970-2018): The climate and nature crises are two sides of the same coin (Source: Biodiversity stripes info: LPI 2022. Living Planet Index)

4 The Convention on Biological Diversity (CBD) was signed during the 1992 Rio Earth Summit by 150 government leaders. It is dedicated to promote sustainable development, recognising that biological diversity encompasses flora, fauna, microorganisms, ecosystems, as well as people and our need for food security, medicines, fresh air and water, shelter, and a clean and healthy environment (CBD, no date).



How the insurance industry can contribute to achieving the GBF's goals and targets

The GBF takes a “whole-of-government and whole-of-society approach”. This means that the framework relies on both governments and all actors of society, including the financial community, to take action and cooperate in order to be successful.

As risk managers, insurers, and investors, the insurance industry plays an important role in promoting economic, social, and environmental sustainability—or sustainable development. In this context, it is vital to consider how the insurance industry can contribute to achieving the GBF's goals and targets.

The GBF contains four goals and 23 targets and is supported by a resource mobilisation plan and a monitoring framework. Below is a summary of the main goals and targets⁵ of the GBF that link directly to the insurance industry. It focuses on the risk management and underwriting activities of insurers and includes explanations of their relevance based on the impact to and role of the insurance industry.

5 Targets 14, 15 and 19 directly reference private finance, including insurance. However, other targets that have not been listed in this table also have indirect relevance to private finance (including expected regulatory changes and societal expectations of good practice).



Global Biodiversity Framework goal/target	Relevance to insurance
Goal A	
<p>The integrity, connectivity and resilience of all ecosystems are maintained, enhanced, or restored, substantially increasing the area of natural ecosystems by 2050;</p> <p>Human induced extinction of known threatened species is halted, and, by 2050, extinction rate and risk of all species are reduced tenfold and the abundance of native wild species is increased to healthy and resilient levels;</p> <p>The genetic diversity within populations of wild and domesticated species, is maintained, safeguarding their adaptive potential.</p>	<p>Ecosystem integrity, connectivity, and resilience are essential to reduce the frequency and severity of extreme weather events such as floods, storms, wildfires and heatwaves. By contributing to the preservation, enhancement, and restoration of natural ecosystems, the insurance industry can play a crucial role in reducing the risks associated with these events. Maintaining healthy ecosystems contribute to long-term economic stability and therefore benefit the insurance industry.</p> <p>Insurers can support this goal by incorporating nature-related considerations into risk management and underwriting strategies and practices, using their data and analytical capabilities to assess and monitor nature-related risks, and developing risk management services and insurance products that reduce and cover risks associated with biodiversity loss and ecosystem degradation.</p>
Goal B	
<p>Biodiversity is sustainably used and managed and nature's contributions to people, including ecosystem functions and services, are valued, maintained and enhanced, with those currently in decline being restored, supporting the achievement of sustainable development for the benefit of present and future generations by 2050.</p>	<p>Biodiversity loss and degradation of ecosystems can have far-reaching consequences for society and the economy. As nature's contributions to people, including ecosystem functions and services, decline, the insurance industry faces increased risks associated with climate change impacts, natural disasters, and resource scarcity. Recognising the value of nature and integrating it into risk management and underwriting strategies and practices can help insurers identify, assess, quantify, reduce and cover nature-related risks and promote sustainable development.</p>



Global Biodiversity Framework goal/target	Relevance to insurance
Goal C	
<p>The monetary and non-monetary benefits from the utilization of genetic resources, and digital sequence information on genetic resources, and of traditional knowledge associated with genetic resources, as applicable, are shared fairly and equitably, including, as appropriate with indigenous peoples and local communities, and substantially increased by 2050, while ensuring traditional knowledge associated with genetic resources is appropriately protected, thereby contributing to the conservation and sustainable use of biodiversity, in accordance with internationally agreed access and benefit-sharing instruments.</p>	<p>The insurance industry can ensure compliance with internationally-agreed Access and Benefit-Sharing (ABS) instruments when its activities involve the use of genetic resources or digital sequence information (DSI), including compliance with free, prior and informed consent (FPIC) related to biodiversity and natural assets, and for transactions in scope, with the Nagoya Protocol. After the CBD's COP16 (happening in 2024), there will be further guidance, and potentially a new financial mechanism, related to DSI such as DNA, with relevance to various sectors such as pharmaceuticals, research, chemicals, and healthcare.</p> <p>Insurers can collaborate with relevant stakeholders, including indigenous peoples and local communities (IPLCs), and organisations working on genetic resources and traditional knowledge, to ensure fair and equitable sharing of benefits.</p>
Goal D	
<p>Adequate means of implementation, including financial resources, capacity building, technical and scientific cooperation, and access to and transfer of technology to fully implement the Kunming-Montreal Global Biodiversity Framework are secured and equitably accessible to all Parties, especially developing countries, in particular the least developed countries and small island developing states, as well as countries with economies in transition, progressively closing the biodiversity finance gap of 700 billion dollars per year, and aligning financial flows with the Kunming-Montreal Global Biodiversity Framework and the 2050 Vision for Biodiversity.</p>	<p>This is the equivalent of Article 2.1c of the Paris Agreement on Climate Change, calling for all financial institutions, both public and private, to align their portfolios urgently to help deliver this agreement. It also conveys a role for the private sector in closing the biodiversity finance gap (elaborated in target 19) and the monitoring that will take place globally and nationally.</p> <p>The insurance industry plays a vital role in understanding and managing financial risks associated with biodiversity loss and can contribute to closing the biodiversity finance gap. Insurers can facilitate capacity-building efforts and support the transfer of technical and scientific knowledge to enhance biodiversity conservation and sustainable development, particularly in developing countries and vulnerable regions.</p>



Global Biodiversity Framework goal/target	Relevance to insurance
Target 14	
<p>Ensure the full integration of biodiversity and its multiple values into policies, regulations, planning and development processes, poverty eradication strategies, strategic environmental assessments, environmental impact assessments and, as appropriate, national accounting, within and across all levels of government and across all sectors, in particular those with significant impacts on biodiversity, progressively aligning all relevant public and private activities, fiscal and financial flows with the goals and targets of this framework.</p>	<p>Target 14 clarifies that finance should progressively align with both the goals and the targets of the GBF. The insurance industry is impacted by these integration efforts as it operates within policy, regulatory and legal frameworks and interacts with various stakeholders. Insurers can support this target by collaborating with policymakers and regulators at various levels to advocate for the integration of biodiversity into policies, regulations, and planning processes. Financial institutions, including insurers, will also be impacted by changes in national accounting standards, which will increasingly include biodiversity and ecosystem-related values. For example, the International Sustainability Standards Board (ISSB) will broaden its sustainability accounting standard to include natural ecosystems.</p>
Target 15	
<p>Take legal, administrative or policy measures to encourage and enable business, and in particular to ensure that large and transnational companies and financial institutions:</p> <ol style="list-style-type: none"> a. Regularly monitor, assess, and transparently disclose their risks, dependencies and impacts on biodiversity, including with requirements for all large as well as transnational companies and financial institutions along their operations, supply and value chains and portfolios; b. Provide information needed to consumers to promote sustainable consumption patterns; c. Report on compliance with access and benefit-sharing regulations and measures; <p>In order to progressively reduce negative impacts on biodiversity, increase positive impacts, reduce biodiversity-related risks to business and financial institutions, and promote actions to ensure sustainable patterns of production.</p>	<p>The insurance industry should proactively assess its nature-related impacts, dependencies and risks. For example, insurers can use tools and resources such as UNEP FI's ENCORE (Exploring Natural Capital Opportunities, Risks and Exposure) and the Integrated Biodiversity Assessment Tool (IBAT); the PSI's environmental, social and governance (ESG) guides for non-life and life & health insurance business); and specific PSI guidance and resources related to UNESCO World Heritage Sites; illegal, unreported and unregulated (IUU) fishing; high-impact hydropower; environmental pollution liability, and plastic pollution. Furthermore, insurers should pilot the Taskforce Nature-related Financial Disclosures (TNFD) framework for key sectors and geographies, as relevant.</p> <p>Over time, it is expected that nature-related disclosures will gain traction in policy and regulation, including financial regulation. These will particularly target large and transnational companies and financial institutions.</p> <p>By incorporating nature considerations into risk management and underwriting, developing insurance products that incentivise sustainable practices by clients, insurers can help reduce negative impacts on nature and support the transition to a nature-positive economy.</p>



Global Biodiversity Framework goal/target	Relevance to insurance
Target 19	
<p>Substantially and progressively increase the level of financial resources from all sources to implement national biodiversity strategies and action plans (NBSAPs), by 2030 mobilising at least USD 200 billion per year, including by:</p> <ol style="list-style-type: none">a. Increasing total biodiversity related international financial resources to developing countries to >USD 20 billion per year by 2025, and to at least >USD 30 billion per year by 2030;b. National biodiversity finance plans;c. Leveraging private finance, promoting blended finance, implementing strategies for raising new and additional resources, and encouraging the private sector to invest in biodiversity, including through impact funds and other instruments;d. Stimulating innovative schemes such as payment for ecosystem services, green bonds, biodiversity offsets and credits, benefit-sharing mechanisms, with environmental and social safeguards;e. Optimising co-benefits and synergies of finance targeting the biodiversity and climate crises;f. Enhancing the role of collective actions including by indigenous peoples and local communities (IPLCs), community-based natural resource management;g. Enhancing the effectiveness, efficiency and transparency of resource provision and use.	<p>This “finance target” involves a more significant role for private finance than any comparable global agreement. Calls for private finance to play a significant role in closing the nature finance gap; accompanied by indicators which will be monitored nationally and globally. The insurance industry should be aware of and potentially support the development of NBSAPs in each country (equivalents of nationally-determined contributions (NDCs) in the Paris Agreement), including their financing plans and the relevant targets and initiatives domestically.</p> <p>This target also links biodiversity finance to climate finance, particularly voluntary carbon markets, and introduces the language of offsets and credit markets. Estimates of the potential market size vary considerably—from larger than the voluntary carbon market to smaller and more localised markets, but it is expected that biodiversity credits will accelerate as a financing opportunity for nature in the coming years.</p> <p>Insurers can support this target by incorporating nature-related risks into their risk management and underwriting strategies and practices, considering the adverse impacts of biodiversity loss and ecosystem degradation on various industries and sectors, and supporting clients in the transition to a nature-positive economy.</p> <p>Although not the focus of this paper, insurers can also play a role as investors by leveraging private finance and promoting blended finance mechanisms to mobilise financial resources for biodiversity conservation. Insurers can stimulate the development and adoption of innovative financial instruments that support biodiversity conservation. This can include products such as green bonds, offsets, and payments for ecosystem services. Furthermore, by offering insurance solutions for these financial instruments, insurers can contribute to the effective development, implementation and scaling up of biodiversity finance strategies.</p>



Managing nature-related risks: Emerging practices in the insurance industry

As ecosystems face increasing threats from climate change, habitat destruction, and biodiversity loss, insurers are recognising the need to integrate nature-related risks into their approaches to risk management and underwriting.

This section explores the concept of nature-related risks, examines how insurers can incorporate them into their risk management and underwriting activities and the challenges and barriers in doing so.

Nature-related risks

The Taskforce on Nature-Related Financial Disclosures (TNFD) defines nature-related risks as: “potential threats posed to an organisation linked to its, and other organisations’, dependencies on nature and nature impacts. These can derive from physical, transition and systemic risks.”

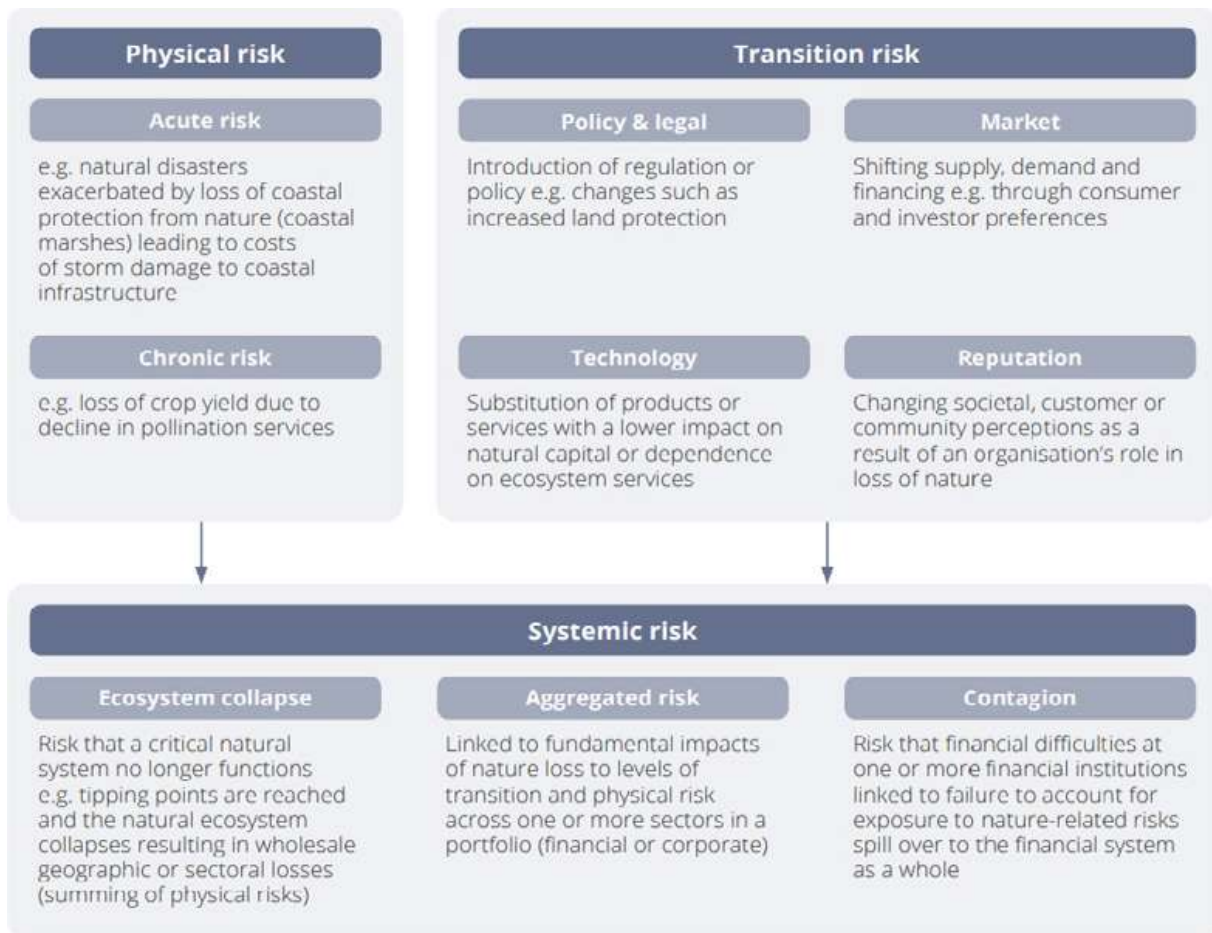


Figure 3: Categories of nature-related risks (Source: TNFD)

There is an increasing recognition by the global insurance industry, including insurance regulators and supervisors, of the financial materiality of nature-related risks (SIF, 2021). The ongoing loss of nature can have significant negative impacts on economic activities which, in turn, can lead to financial risks relevant to the insurance industry. Potential nature-related risks that insurers could face can be classified into three categories:

- **Physical risks** → Resulting from the compromise of natural systems due to climatic events, geological events, or changes in ecosystem equilibria. This can include risks such as increased frequency and severity of extreme weather events (e.g., hurricanes, floods, wildfires), which can result in property damage, business interruption, and increased insurance claims. Other physical risks may arise from the degradation of ecosystems that support certain industries or regions, leading to economic losses and potential liabilities for insurers.
- **Transition risks** → Emerging from the misalignment between an organisation's strategy and the evolving regulatory, policy, and societal landscape related to nature conservation. Insurers may face challenges when their strategies and operations are misaligned with emerging regulations and evolving market expectations around environmental sustainability. As stakeholders demand more sustainable practices, insurers may encounter reputational risks, regulatory compliance risks, and shifts in customer preferences that can affect their market competitiveness and profitability.



- **Systemic risks** → Characterised by the breakdown of entire systems rather than isolated failures, resulting in cascading interactions of physical and transition risks that hinder system recovery after shocks. Systemic risks may manifest as widespread losses across portfolios due to large-scale natural disasters or ecological disruptions, affecting the financial stability of insurance companies and the broader industry. These risks can also be exacerbated by the potential feedback loop between economic activities, nature loss, and financial vulnerabilities, creating systemic threats to the insurance industry.

Integrating nature-related risks into risk management and underwriting frameworks

Understanding, preventing, reducing and pricing and carrying risk represents the risk management continuum in the insurance business. Therefore, insurers should consider integrating nature-related dependencies, impacts, risks and opportunities into their existing risk management and underwriting frameworks. By doing so, insurers can align their risk management and underwriting strategies and practices with the evolving nature-related risks landscape, support sustainable development, and promote the long-term resilience of insured assets and communities.

In this context, there have been efforts to include nature-related risks into environmental, social and governance (ESG) or sustainability risk management frameworks for insurers. For example, the first-ever ESG guides for non-life insurance (PSI, 2020) and life & health insurance (PSI, 2022) that the PSI produced both integrated risks related to biodiversity loss and ecosystem degradation, including ESG risk heat maps.

The ESG guide for non-life insurance developed two heat maps providing optional guidance for organisations to get an indication of levels of potential ESG risks across economic sectors and insurance lines of business. This exercise identified that nature-related risks such as environmental degradation, protected sites and species, unsustainable practices, animal welfare/testing, among others, could have a potential high or direct risk on various economic sectors (e.g., agriculture, construction, mining) and on various lines of business (e.g., agribusiness, property, construction and engineering)

The ESG guide for life & health, includes a heat map that breaks down ESG risks into specific themes and risk criteria that are deemed relevant to the life & health insurance business. The heat map indicates the potential impact of a range of ESG risks on four key underwriting risks: mortality, longevity, morbidity and hospitalisation. The guide identified that nature-related risks such as biodiversity loss, deforestation, exposure to unconventional mining or energy practices, soil pollution, plastic pollution and water pollution can increase the underwriting risks of mortality, morbidity and hospitalisation. Some systemic risks such as rapid spread of infectious diseases or increased frequency of natural catastrophes can also increase these underwriting risks to a higher extent.

Furthermore, a number of initiatives and organisations have developed tools and frameworks to assess nature-related risks. For example, the UN-convened Sustainable Insurance Forum (SIF) for insurance regulators and supervisors developed a materiality



assessment of nature-related risks for the insurance industry (SIF, 2021) . Swiss Re also developed a Biodiversity and Ecosystems Index which combined economic sector and geographical exposure to assess nature loss at a more localised level (Swiss Re, 2020). MSCI has also recognised the importance of accounting for nature-related risks by calling on insurers to combine biodiversity-screening metrics with MSCI’s assessment of companies’ risk management practices and controversy data (MSCI, 2023). Kickstarting and expanding efforts of this nature will require increased collaboration among insurers, regulators and key stakeholders to develop comprehensive and coherent conceptual frameworks on nature-related risks relevant to the insurance industry.

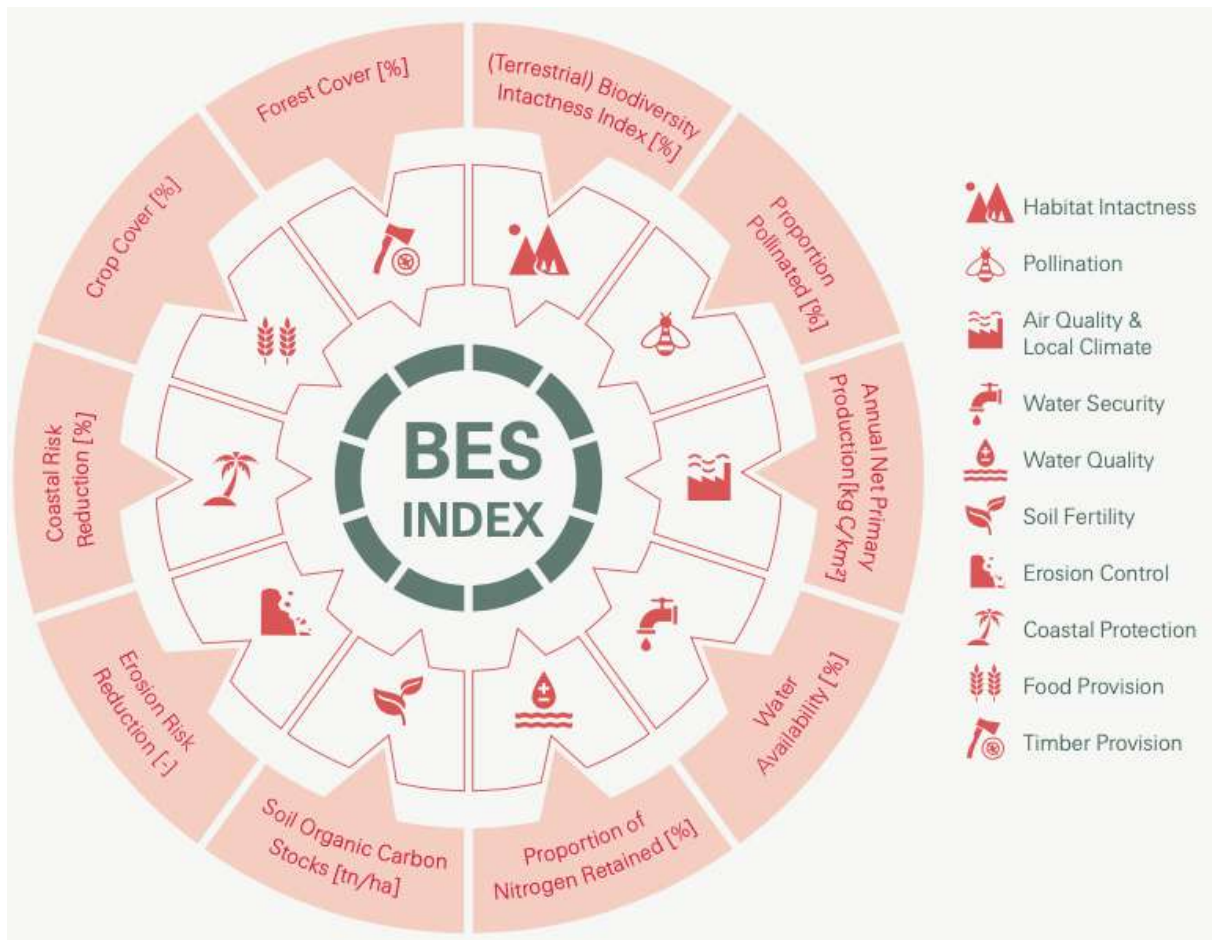


Figure 4: Ecosystem services included in the Swiss Re BES Index (Source: Swiss Re)

To **effectively integrate nature-related risks into risk management and underwriting frameworks**, insurers must first update their methodologies, models, and decision-making processes. Workshop participants suggested that this requires a shift in perspective to recognise the significance of nature and its potential impact on insured assets and liabilities. This recognition must happen at both the industry and organisational levels, with senior management being key in championing the systematic integration of nature-related risks into fundamental insurance thinking and practices.

To assess nature-related risks, insurers need to enhance their understanding of the interdependencies between natural systems and insured assets. This involves collecting



and analysing relevant data, developing relevant indicators and metrics, and developing appropriate risk assessment tools.

Collecting and analysing relevant data on climate change, biodiversity loss, ecosystem services, and other environmental factors is vital to understand nature-related risks. However, one crucial challenge highlighted by multiple participants in the workshops was the availability and accessibility of comprehensive and high-quality data. Insurers recognise that quantitative information plays a pivotal role in their decision-making processes; therefore, efforts are required to obtain robust and reliable data that allows for a more accurate understanding of the potential consequences of nature-related risks. A recommendation from the workshops to address this was to put more focus on collaborative efforts, both within the insurance industry and with key stakeholders, to avoid duplicating efforts and streamline the availability of data.

An important step is to **incorporate relevant indicators and metrics** that capture the potential consequences of nature-related risks. Based on the views shared by industry experts and workshop participants, implementation of existing frameworks (e.g., SIF, CISL) provide good but largely qualitative insights. Participants also highlighted that the effectiveness of these frameworks will vary depending on local contexts and availability of quantitative data. Developing more quantitative tools (e.g., ENCORE tool, IBAT) that help both identify and categorise nature-related risks and impacts that are particular to a region or ecosystem would be helpful for re/insurers to incorporate into risk management and underwriting processes. Furthermore, the standardisation of metrics and methodologies was considered essential to ensure consistency and comparability in risk management and underwriting practices across the industry.

Given the lack of existing tools dedicated to the insurance business, a recommendation from the workshops was for the insurance industry and key stakeholders to **develop new risk assessment tools or modify existing ones** to accommodate the unique characteristics of nature-related risks. A particular recommendation was to leverage catastrophe risk modelling used to analyse the physical risks associated with climate-related hazards. By creating a parallel and developing nature scenarios (similar to climate change scenarios) and using these projections into their risk modelling activities, insurers could enhance their understanding of the potential impacts on insured assets and develop appropriate risk management and underwriting strategies.

Collaboration with scientific experts, environmental organisations, and industry peers is crucial for successful integration. These partnerships can provide insurers with access to specialised knowledge, expertise, and data on nature-related risks. **Collaborative efforts** were highlighted by workshop participants as being particularly important for the development of industry-wide standards and best practices, ensuring consistent and effective integration of nature-related risks across the insurance industry.



Finally, as requirements in relation to the assessment and disclosure of nature-related risks (e.g. European Union's Sustainable Finance Disclosure Regulation (SFDR) and Corporate Sustainability Reporting Directive (CSRD), the voluntary TNFD framework)⁶ emerge and are implemented, **transition risks** pose additional challenges in risk assessment due to their complex nature and uncertain outcomes. Workshop participants highlighted the need to monitor and analyse evolving regulations, policies, and societal expectations related to nature conservation. This includes assessing how changes in market dynamics, technological advancements, and legal frameworks may impact the viability and insurability of certain assets and activities.

6 The TNFD aims to develop a framework for corporates and financial institutions to assess, manage and report on their dependencies and impacts on nature, aiding in the appraisal of nature-related risk and the redirection of global financial flows away from nature-negative outcomes and towards nature-positive, or at least nature-neutral, outcomes.



Insuring nature: Innovative solutions and new opportunities

Insuring nature has become increasingly significant in the face of mounting environmental challenges and the recognition of the crucial role that nature plays in our societies and economies. The purpose of this section is to delve into the realm of insuring nature, exploring the emerging practices and transformative potential that lies within. We will examine how insurers are embracing their role as agents of change and seizing opportunities to create nature-positive insurance solutions.

Nature-related opportunities

Beyond being a risk management priority, nature can be a strategic opportunity for innovative insurers.⁷ The TNFD has defined “nature-related opportunities” as those “generated through impacts and dependencies on nature and can occur [...] through the strategic transformation of business models, products, services, markets and investments that actively work to reverse the loss of nature, including by restoration, regeneration of nature, and implementation of nature-based solutions” (TNFD).

7 Target 12 of the GBF sets out to increase green and blue spaces in urban and densely-populated areas, further opening up opportunities to provide new nature-related financial products (UNEP and CBD 2022).

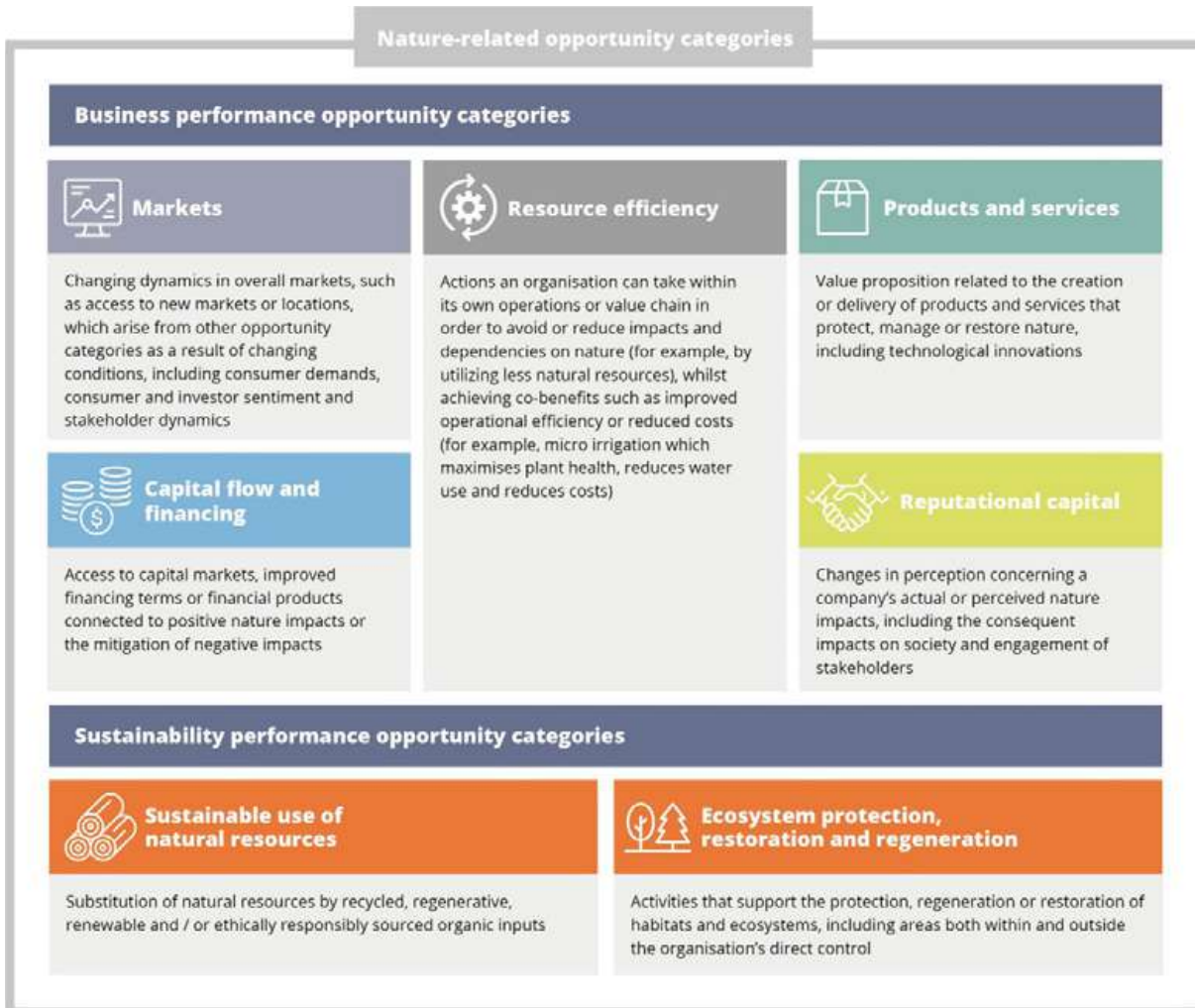


Figure 5: Nature-related opportunities (Source: TNFD)

The insurance industry has a key role in the global response to address the ongoing and interrelated triple planetary crisis. Insurers can take action to identify and support nature-related opportunities and deepen their and their clients' understanding of the value of these opportunities in reducing risks.

Nature-based solutions

Nature-based solutions (NbS) are defined as “actions to protect, sustainably manage, and restore natural and modified ecosystems that address societal challenges effectively and adaptively, simultaneously benefiting people and nature” (IUCN). NbS leverages the advantages derived from robust ecological systems and aims to address significant concerns such as climate change, reducing the risks associated with disasters, ensuring food and water security, countering the loss of biodiversity, improving human health, and enhancing community resilience by providing stable income and employment opportunities.



NbS provides economic, social, and environmental co-benefits, in addition to serving a primary function, including provision of ecosystem services such as flood defence, food production and recreational opportunities (UNEP and IUCN, 2021). They are considered “nature-positive” as they provide positive outcomes for securing nature, with multiple co-benefits for people (UNDP, SCBD and UNEP-WCMC 2021). Interview participants highlighted that NbS is an important and evolving opportunity space for insurers, especially given the increasing availability of data on the benefits of nature-based solutions, leading to legitimate opportunities for private sector flows and financial returns.

Insurers play a crucial role as key stakeholders in supporting and financing NbS. By allocating financial resources towards NbS projects, insurers not only contribute to the preservation and restoration of ecosystems but also create opportunities for sustainable and inclusive economic development. Additionally, insurers can leverage their expertise in risk management and underwriting to evaluate the risks associated with NbS projects and provide insurance coverage tailored to the specific needs of these initiatives. This approach can help reduce the financial risks associated with NbS implementation, thereby encouraging further investment in this field. Furthermore, insurers have a vested interest in supporting NbS—by enhancing the resilience of ecosystems, insurers can help reduce natural disaster and health risks, and therefore reduce potential insured losses associated with nature and climate-related risks.

In recent years, parametric or index-based insurance solutions for ecosystem conservation and climate change adaptation have been developed the potential to be scaled up across geographies. A concrete example is the parametric insurance solution developed for the Mexican state of Quintana Roo to cover the Mesoamerican Barrier Reef, which paid out for the first time in 2022. This was cited by interviewees as a practical way of how insurers can both support NbS and capture opportunities to extend insurance cover.

Case study: An innovative insurance solution to protect coral reefs in Mexico

From a financial and empirical point of view, Mexico provides an interesting example of how the insurance industry has participated in leveraging nature-based solutions (NbS) that simultaneously protect coastal communities and the environment. In the state of Quintana Roo, coastal tourism businesses, property owners and local municipalities have worked towards an NbS by purchasing parametric catastrophe insurance that protects 160 kilometres of coral reef against damages from storms (CISL 2022; Swiss Re 2020). In this case, insurance payouts are used to fund reef recovery and restoration activities conducted by specialist reef brigades in case of storms with wind speeds exceeding specific benchmarks. These activities minimise storm damage to coastal communities and economies and enhance reef recovery while being cost effective. Estimated costs of these repairs (between USD 50,000 and USD 150,000) is considerably lower than artificial measures, such as building a seawall, which could also protect the shoreline against waves but would cost about USD 1 million per half mile.



Several interviewees pointed at collaborative efforts among different actors to facilitate NbS. One interviewee highlighted the importance of forming partnerships between international experts and local communities while developing and implementing projects to support the restoration and conservation of ecosystems. Another interviewee highlighted that private sector activities will be best enabled if there are credible, independent, and auditable certified labels that assess the quality of an NbS.

Case study: Mangroves as a key opportunity to unlock nature-positive insurance

Mangroves serve as a first line of coastal defence against tropical storms and can reduce wave height up to 66% over the first 100 metres of forests (The Nature Conservancy, 2022). Furthermore, mangroves are powerful carbon sinks. As such, their preservation is key to reducing physical climate risks, to protecting coastal communities and economies, and to sequestering and storing carbon ("blue carbon"). By providing immediate funding for mangrove restoration following a catastrophic event, mangrove insurance enhances the repair and recovery of natural ecosystems.

In 2022, The Nature Conservancy, AXA XL, CINVESTAV-Merida, the University of Santa Cruz and the Builders Initiative Foundation published a report assessing the relevance and feasibility of mangrove insurance solutions in the Bahamas, Florida and Mexico (The Nature Conservancy, 2022). The study shows that, across the analysed region, mangroves provide an estimated present value of over USD 17 billion in flood protection benefits over 30 years. Taking into account the restoration costs and the present value of mangrove flood protection benefits, the benefit-to-cost ratio was positive across 1,200 kilometres of coastline spanning 80,000 hectares of mangroves, indicating that there are many cost-effective opportunities for mangrove insurance solutions in the area.

Bringing theory into practice, Conservation International announced the launch of a pilot project in the Philippines through the Restoration Insurance Service Company (RISCO) that would target 3,400 hectares of mangrove conservation and 600 hectares of restoration in partnership with local communities. The project is expected to create more than USD 10 million in revenue from the insurance industry and blue carbon markets. (Climate Policy Initiative, 2019).



Case study: Belize's blue bond and parametric insurance solution

In 2021, a blue bond by Credit Suisse coupled with a parametric insurance policy created by Willis Towers Watson was placed on the market as an insurance solution to protect Belize's servicing of debt following a hurricane event (Willis Tower Watson, 2022). The parametric insurance is designed to trigger a payout when an event is likely to cause damage of at least 20% of the country's GDP. By being partially relieved from the burden of debt repayment, the government of Belize has greater resources to invest in disaster response and economic recovery. In this context, the government of Belize has committed to spend about USD 4 million per year for conservation efforts that will help enhance the resilience of the Mesoamerican Reef, which protects the country's coastline. As such, the parametric solution enhances public capacity to invest in nature-based solutions, and represents a good example of public-private efforts that could address the nature and climate crisis.

While there is consistent support for these solutions, workshop and interview participants identified a number of challenges and barriers to support NbS, including:

- Lack of clear ownership of natural assets since ecosystem services are a public good and are often governed through community-based and informal property rights regimes
- Limited pipeline of risk-adjusted projects
- Lack of enabling policies to shift attention away from unsustainable activities
- An apparent need for economic returns to be available in a short time period
- Mismatch between beneficiaries and buyers of insurance products
- Insufficient data and modelling capabilities for insurers to quantify risk and structure products (e.g., identifying relevant and quantifiable parameters linked to direct loss for parametric insurance)

In conclusion, NbS offers a promising pathway to address a wide range of societal and environmental challenges. As the understanding of the benefits and effectiveness of NbS continues to grow, insurers are increasingly recognising their role in supporting and financing these solutions. As the momentum behind NbS builds, collaboration between insurers, policymakers, environmental organisations, and other key stakeholders will be essential to further unlock the potential of NbS in creating a more resilient and sustainable future for all.

Developing new risk management services and insurance products

As the importance of protecting natural ecosystems becomes increasingly recognised, insurers are exploring innovative ways to develop new risk management services and insurance products that cover biodiversity and ecosystem services. Workshop participants shared a number of opportunity areas for the development of innovative insurance products, including coverage for biodiversity protection and restoration, community-based resilience approaches, and the protection and development of green or natural infrastructure.



Case study: Reducing wildfire risk and making insurance more affordable through ecological forestry

The Nature Conservancy and Willis Tower Watson published a report in 2021 analysing the effect of ecological forestry on risk reduction and premium savings for a parametric wildfire resilience insurance model in California, where more than 2.7 million people live in very high wildfire hazard severity areas and forests cover about 33 million acres (The Nature Conservancy & Willis Tower Watson, 2021). Under a parametric wildfire insurance scheme, policyholders receive a payout when a pre-established amount of acres are burnt as a result of a weather event. This means that, unlike a traditional indemnity-based insurance product, there is no need to assess and determine the actual amount of economic loss incurred, which can take a significant amount of time to do.

In 2017 and 2018 alone, Northern California incurred losses of over USD 10 billion as a result of wildfires, which makes ecological risk reduction efforts increasingly important for insurers. Ecological forestry accomplishes this through practices such as strategic thinning and controlled burning, which contribute to enhancing forest health and resilience to weather events through greater nutrients and species diversity. Furthermore, premium costs can further be lowered through community-based catastrophe insurance arrangements whereby a local government purchases the parametric insurance product to cover homes in the community.

The study found that these practices can result in 10% to 80% premium reductions across all modelled scenarios, and 20% to 40% reductions for case study scenarios consistent with the scale of the French Meadows Forest Restoration Project in California. As such, physical forestry successfully reduces ecological and economic risks stemming from wildfires and has the potential to make insurance more accessible and affordable for local communities.

Workshop participants also pointed to a number of internal challenges in scaling up insurance for nature-positive opportunities, notably in relation to existing knowledge and risk modelling capabilities (e.g., actuarial and risk analytics teams who may not be familiar with modelling nature-related risks) as well as competing internal priorities, where sustainability objectives may not be recognised or prioritised in relation to more mainstream and standardised business processes, activities and opportunities. An additional point raised by workshop participants was that significant challenges also remain on the demand side, where insurers perceive a risk in developing products and services that cannot or will not be used until applicable and compatible projects are identified and developed.



Case study: Wetlands—A largely untapped opportunity for the insurance industry

Wetlands are of high importance for biodiversity conservation, climate resilience, and climate change mitigation. Wetlands host around 40% of the world's species, provide flood protection by blocking high tides and distributing water over plains, and are the most effective carbon sinks on Earth (Ramsar, 2021). Furthermore, they provide food and clean water, thereby promoting sustainable livelihoods. As such, their preservation is key to insurers seeking to reduce and better manage the risks stemming from nature loss and climate change.

In this context, the insurance industry has started exploring opportunities to integrate wetland protection into nature-positive insurance strategies. For instance, California, Insurance Commissioner Ricardo Lara and UNEP's Principles for Sustainable Insurance Initiative published a Sustainable Insurance Roadmap in 2022 announcing a partnership to develop insurance products and solutions for ecosystems such as wetlands and floodplains (California Department of Insurance & PSI, 2022).

In Canada, 15 leading property & casualty insurers partnered with Ducks Unlimited Canada, an environmental NGO specialising in wetland conservation, to fund community-based natural infrastructure projects in the Fraser Delta area of British Columbia and regions in Ontario and Quebec (Ducks Unlimited Canada, 2022).

Further collaborations of this nature have great potential to develop innovative risk management and insurance solutions to protect wetlands and lead to positive economic, social and environmental outcomes.

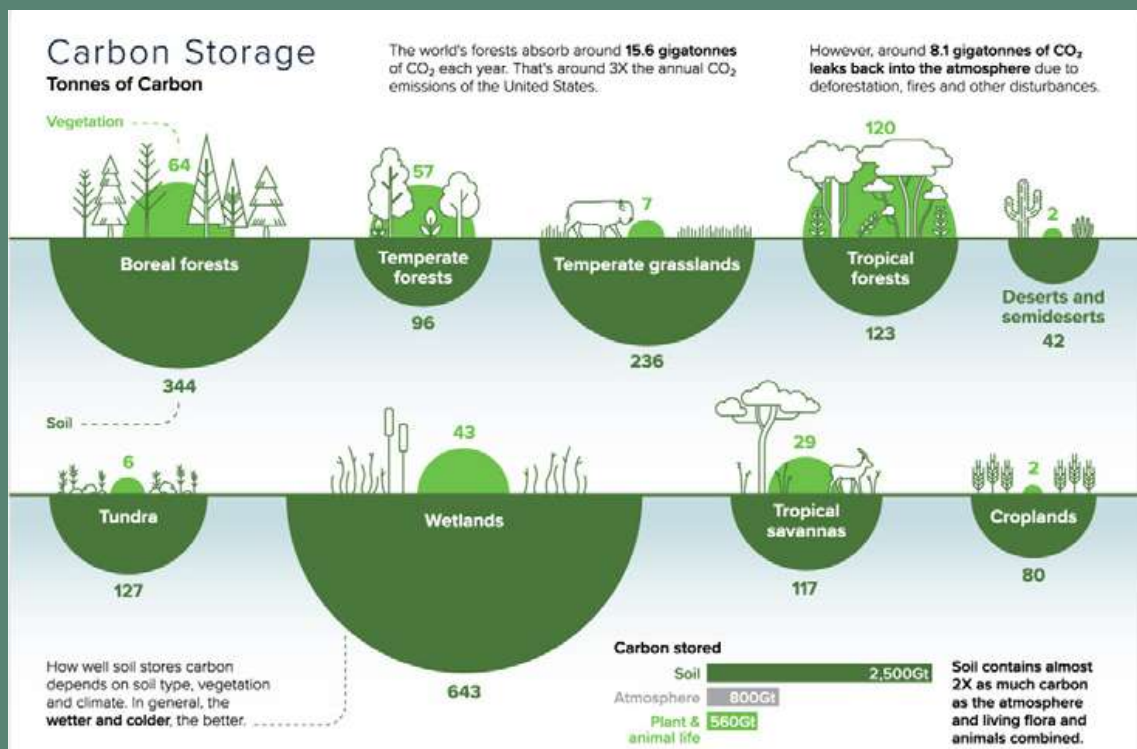


Figure 6: Visualising carbon storage in Earth's ecosystems



Regulatory trends and outlook

The insurance industry has both incentives and opportunities to support the nature-positive agenda. Incentives are driven by increasing regulations, including the regulatory requirements in the European Union via the Sustainable Finance Disclosure Regulation (SFDR) and Corporate Sustainability Reporting Directive (CSRD), as well as the emergence of the TNFD framework and the ISSB global sustainability disclosure standards, and the upcoming development of new Global Reporting Initiative (GRI) sector standards for financial services. With the adoption of the GBF, and other relevant policy frameworks (e.g. adoption of UN High Seas Treaty in 2023, upcoming UN Plastic Pollution Treaty expected in 2024), and as more data and risk assessment tools become available, expectations for the insurance industry to address nature-related risks and opportunities will increase.

By recognising the value of nature and integrating it into their core business strategies and operations, insurers can unlock new avenues for innovation and growth to enhance risk reduction, insurance penetration, portfolio diversification, and financial returns. As insurers embrace this role more fully, they will increasingly have the power to drive positive change, foster resilience, and contribute to a more sustainable future.



Next key actions to advance nature-positive insurance

Nature-positive insurance is a concept created and catalysed by PSI research studies and collaborative activities over the years, culminating with the PSI Nature-Positive Insurance Series that was co-organised by the UN Convention on Biological Diversity (CBD) in 2021. The series highlighted the key role of the insurance industry in addressing nature-related risks and covered a range of topics including the global state of nature and the Post-2020 Global Biodiversity Framework; the links between nature and the insurance industry's risk management, insurance and investment activities; state-of-the-art tools to assess nature-related risks, and innovative insurance solutions that ignited the conversation around this topic and helped set the global agenda for nature-positive insurance.

Based on the analysis carried out in this paper, nature-positive insurance (NPI) can be defined as risk management and insurance strategies, approaches, practices, products, services and solutions that address nature-related dependencies, impacts, risks and opportunities in order to value, conserve, restore and wisely use biodiversity and ecosystem services, and to promote economic, social and environmental sustainability. NPI aims to actively contribute to achieving the mission of the Kunming-Montreal Global Biodiversity Framework to halt and reverse nature loss by 2030, and its vision of a world living in harmony with nature by 2050.

Potential approaches to nature-positive insurance

This paper suggests a range of approaches that insurers can unilaterally and independently adopt to advance NPI. Transition pathways towards nature-positive for the insurance industry are still under development; therefore, these approaches are not meant to be an exhaustive list and may evolve as new knowledge emerges. The approaches suggested include but are not limited to:

- **Embedding nature in risk management frameworks** (e.g., ESG/sustainability risk management frameworks) applicable to underwriting portfolios⁸ to systematically

8 For example, see: UNEP (2020): Managing environmental, social and governance risks in non-life insurance business: The first ESG guide for the global insurance industry developed by UNEP's Principles for Sustainable Insurance Initiative; and UNEP (2022): Managing environmental, social and governance risks in life & health insurance business: The first ESG guide for the global life & health insurance industry developed by UNEP's Principles for Sustainable Insurance Initiative



assess the impact of economic activities across industry sectors and lines of insurance business on biodiversity and ecosystems in order to better identify, quantify and assess nature-related dependencies, impacts, risks and opportunities; and to respect and promote human rights, including the right to Free, Prior and Informed Consent (FPIC),⁹ particularly for indigenous peoples and local communities

- **Setting underwriting criteria and guidelines** for the most nature-negative activities that result in biodiversity loss and ecosystem and habitat destruction (e.g., deforestation, IUU fishing, pollution, invasive species, most greenhouse gas (GHG)-emitting and intensive activities) within underwriting portfolios in order to incentivise clients and potential clients to adopt sustainable practices that value, conserve, restore and wisely use biodiversity and ecosystem services (e.g., sustainable agriculture, aquaculture, forestry and fishing; green/natural infrastructure development; zero and low-emission technologies, infrastructure, transportation and buildings)
- **Engaging with clients and potential clients**, particularly those with the most nature-negative activities that result in biodiversity loss and ecosystem and habitat destruction (e.g., deforestation, IUU fishing, pollution, invasive species, most GHG-emitting and intensive activities) on their nature-positive strategies and transition pathways, and offering incentives to clients and potential clients to adopt sustainable practices that value, conserve, restore and wisely use biodiversity and ecosystem services (e.g., sustainable agriculture, aquaculture, forestry and fishing; green/natural infrastructure development; zero and low-emission technologies, infrastructure, transportation and buildings)
- **Developing insurance products and solutions** that cover natural ecosystems (e.g., forests, coral reefs, mangroves, wetlands), and economic activities that value, conserve, restore and wisely use biodiversity and ecosystem services (e.g., sustainable agriculture, aquaculture, forestry and fishing; green/natural infrastructure development; zero and low-emission technologies, infrastructure, transportation and buildings)
- **Offering sustainable claims options** (e.g., repairs and replacement options that use sustainable materials or produce zero or lower GHG emissions) that value, conserve, restore and wisely use biodiversity and ecosystem services, and promote a circular economy
- **Advocating for and engaging in governmental policies** for a science-based and socially just transition of economic sectors to nature positive
- **Collaborating with key stakeholders** (e.g., governments, wider financial and business community, insurance and financial regulators and supervisors, scientific and academic community; environmental, conservation and civil society organisations) on projects, programmes and initiatives that support and promote nature-positive insurance thinking and practices and speed up and scale up the transition to a nature-positive economy

⁹ As articulated in the UN Declaration on the Rights of Indigenous Peoples and as outlined in the PSI guides mentioned above



- **Disclosing the organisation's nature-related dependencies, impacts, risks and opportunities** to internal and external stakeholders using relevant risk management and disclosure frameworks (TNFD, ISSB, GRI) in order to promote accountability and transparency of the organisation's nature-related performance, demonstrate corporate responsibility and sustainability, and show alignment with the goals and targets of the GBF

Roadmap to speed up and scale up nature-positive insurance

This paper has identified gaps in knowledge, tools, methods and standards and proposes the following roadmap in order to speed up and scale up nature-positive insurance thinking and practices globally:

- 1. Mainstream nature-related financial disclosures:** As the TNFD framework and other relevant disclosure frameworks (e.g., ISSB, GRI) evolve and regulatory requirements emerge (e.g., EU's SFDR and CSRD), it is important to continuously assess, manage and disclose the implications of nature-related dependencies, impacts, risks and opportunities on the insurance business. For example, UNEP FI is already supporting these efforts by piloting the TNFD recommendations with various PSI member insurers.
- 2. Embed nature-related risks in risk management and underwriting frameworks:** There is a need to develop qualitative and quantitative tools and indices to more comprehensively map and assess nature-related dependencies, impacts, risks and opportunities across various lines of insurance business. This includes identifying and building data, analytical tools, and forward-looking metrics and indicators to measure nature-related risks. Various PSI research studies and best practice guidance over the years that specifically address nature-related risks, and the PSI global ESG risk management guides for non-life and life & health insurance business, which include nature-related risks, serve as a good foundation to build on.
- 3. Develop best practice guidance and industry standard to measure insurance-associated nature impacts:** As of this writing, there are no established metrics that measure the impacts on nature of insurance contracts/policies and underwriting portfolios. While this presents a major challenge, developing best practice guidance and an industry standard to measure insurance-associated nature impacts is a definite opportunity.
- 4. Develop best practice guidance and industry standard for nature-positive insurance target-setting:** As of this writing, there are no established target-setting approaches for underwriting portfolios to support the transition to a nature-positive economy. While this presents a major challenge, the developing best practice guidance and an industry standard for nature-positive insurance target-setting is a definite opportunity.



In recognition of the need for collaborative efforts to implement this roadmap, the PSI and UNEP FI's Nature Team believe that the establishment of a **Nature-Positive Insurance Forum** is essential. This Forum can serve as a global platform for the insurance industry and key stakeholders (e.g., insurance regulators and supervisors, nature-positive finance standard-setters, real economy actors, environmental and conservation groups, scientific and academic community, civil society) to engage in order to support the development and advancement of nature-positive insurance approaches, frameworks, guidance, tools, methodologies and standards. This forum can also serve as a space for sharing best practices and peer-to-peer learning and collaboration which is an integral part in every step of the roadmap.



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About UN Environment Programme's Principles for Sustainable Insurance Initiative

Endorsed by the UN Secretary-General and insurance industry CEOs, the Principles for Sustainable Insurance (PSI) serve as a global framework for the insurance industry to address environmental, social and governance (ESG) risks and opportunities—and a global initiative to strengthen the insurance industry's contribution as risk managers, insurers and investors to building resilient, inclusive and sustainable communities and economies on a healthy planet. Developed by UN Environment Programme's Finance Initiative, the PSI was launched at the 2012 UN Conference on Sustainable Development (Rio+20) and has led to the largest collaborative initiative between the UN and the insurance industry. As of August 2023, more than 250 organisations have joined the PSI, including insurers representing about one-third of world premium and USD 15 trillion in assets under management, and the most extensive global network of insurance and stakeholder organisations committed to addressing sustainability challenges.

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