



UNDP Insurance & Risk Finance Facility

Insuring Natural Capital: Protecting people, ecosystems and biodiversity

What's at Stake?

Nature and ecosystems provide [over US\\$125 trillion per year](#) in goods and services to the global economy. Healthy ecosystems sustain all life on earth and also provide critical livelihoods for communities around the world who work in sectors such as agriculture, fishing, forestry and tourism. However, as climate change, deforestation, habitat encroachment and other risks put increasing pressure on nature, the toll becomes increasingly apparent for both people and planet.

Nature protects people and places from the impacts of disasters. For example, a healthy coral reef can absorb 97% of a wave's energy, acting as a natural storm barrier which can protect vulnerable coastal communities from the impacts of hurricanes. Mangroves offer similar benefits for coastal communities in Vietnam, India and Bangladesh which receive [more than \\$250m annually](#) in flood protection benefits.

Forests can help retain excess rainwater and prevent run-offs, [reducing the likelihood of flooding and landslides](#). Without healthy reefs, mangroves, and forests we lose nature's ability to provide clean water, capture carbon, pollinate crops, regulate of climate patterns, protect biodiversity, and support livelihoods and economies.

Ensuring the preservation of natural capital is crucial in this world of rising threats, hazards and shocks, as it boosts the resilience of ecosystems, enabling them mitigate the impacts disasters and support the lives and livelihoods of the people who depend on them, thus ensuring a future that is sustainable for all.

Key Nature Statistics

- Protecting nature means protecting **\$125 trillion/year** of goods and services that depend on nature;
- This includes employment and ecosystem services worth **\$6 trillion/year** mostly in developing countries with the least resources to protect;
- Not protecting nature would lead to a global cost of **\$10 trillion/year** between now and **2050**;
- Preserving healthy terrestrial and marine ecosystems costs at least **\$300 billion/year**;
- Global cost of coastal flooding is currently **\$40 billion/year** and expected to rise to **\$1 trillion/year by 2050**.

UNDP's Natural Capital Insurance Priorities

Insurance and risk financing can play catalytic role in protecting people and building financial resilience as well as safeguarding and restoring natural assets. Parametric insurance, an innovative financial tool, serves as a mechanism to make financial resources available for the conservation and restoration of natural assets like coral reefs, mangroves, and forests when various risks materialize. This not only enhances the resilience of vulnerable communities who rely on these natural capital assets but also safeguards livelihoods and supports biodiversity conservation efforts. Insurance can compensate for economic losses and provide resources for protecting and rehabilitating affected natural assets.

Protecting Coastal Communities

One of the most critical parts of natural capital is the rich marine biota and ecosystems, including the coral reefs and mangroves, supporting 25% of all marine species and providing economic benefits to [over 1 billion people](#). Investment in protecting coral reefs and mangroves is key to ensuring they continue to provide protection and economic benefits to communities while safeguarding biodiversity.

Below in is an example of an insurance mechanism structure to protect natural assets.

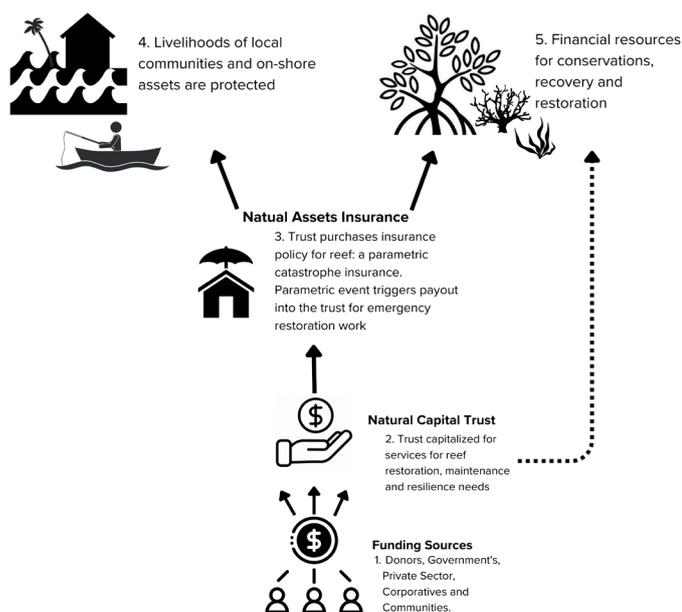


Figure 1: Parametric insurance as a mechanism towards the conservation and restoration of natural assets

In Indonesia, the IRFF with financial support from the [Ocean Risk and Resilience Action Alliance \(ORRAA\)](#) will implement a coral reef insurance programme that effectively reduces the vulnerability of low-income coastal communities to climate disasters. Simultaneously, the programme seeks to utilize a parametric insurance product for repairing reef structures in post-disaster scenarios, mitigating the impacts of coastal flooding events and supporting valuable ecosystem services and local livelihoods such as fishing. Women are also engaged in restoration activities, which enhances their financial resilience and well-being. The programme builds upon the successful model that was piloted in Mexico when Hurricane Delta struck Puerto Morelos, and an urgent effort to [restore the damaged reef](#) was undertaken.

Opportunities to scale: The IRFF aims to implement more insurance schemes, such as the examples above, leveraging the insurance mechanism to build coastal resilience through coral reef and mangrove protection globally in countries such

as Fiji, Maldives, and the Philippines. These ecosystems play a pivotal role in supporting local economies through activities such as tourism, fishing, and resilience services. One major example is the Reef2Resilience initiative which looks to scale up the Indonesia exemplar in 10 countries by 2025.

UNDP and ORRAA: Building Evidence on Coral Reef Insurance

The IRFF has, in addition, worked to identify gaps in policies and the regulatory frameworks relevant to coral reef insurance development to support the creation of an enabling environment. UNDP and ORRAA In addition released a report on ['Insuring Nature to Reduce Risks'](#), focused on leveraging natural capital to build coastal and community resilience through insurance.

Protecting Forests

The same insurance parametric mechanism used to protect coral reefs and mangroves can also be used to protect forests. [Forests form an essential part of global ecosystems](#) and natural capital, containing more than 80 percent of the world's amphibian species, 75 percent of bird species, and 68 percent of mammal species. As well, they are a critical resource in the fight against climate change through their ability to capture and store carbon, and are central to the economic lives of millions of people. Major wildfires over the last few years, as well as the continuing threat of deforestation, have brought an important need to protect forests. Insuring them provides one pathway for improving the management and protection of forests, and preserving and expanding their benefits across the globe.

The recent damaging wildfires in California have particularly emphasized the need for innovative solutions to address wildfire risk, costing [\\$5-9 billion USD in damages](#). Insuring forests can reduce the costs and improve forest management to prevent fires. A 2021 study of the French Meadows Forest Restoration Project in California, found that ecological forest management reduced expected annual economic losses to fires by up to 44%. As well, they found that the project produced expected savings of [20-40% on premiums for home insurance](#). By reinvesting those savings, forest insurance creates a virtuous cycle in which forest management and protection mobilizes the funding for more forest management and protection.

Opportunities to scale: IRFF's overall objective is to strengthen and reinforce the resilience impact of forest protection initiatives such as the one

demonstrated above, through innovative risk transfer solutions, including insurance. The IRFF will focus the initiative in its programme countries across Africa or Asia, where forest protection is vital. This will support countries and development partners in protecting the multi-billion-dollar investments and efforts in forest conservation, thus providing protective reassurance to the ecosystem and local communities.

Protecting Biodiversity and Wildlife

Many of the world’s species, like tigers, are in chronic or acute decline. Their decline and extinction in most places can be linked directly to conflict with humans due to loss of lives and property which exacerbate negative community sentiment toward the species and makes their active lethal control much easier to justify by local authorities. Some of the most common Human Wildlife Conflict (HWC) incidents are linked to livestock loss; crop loss; human injury and death; and structural / property damage.

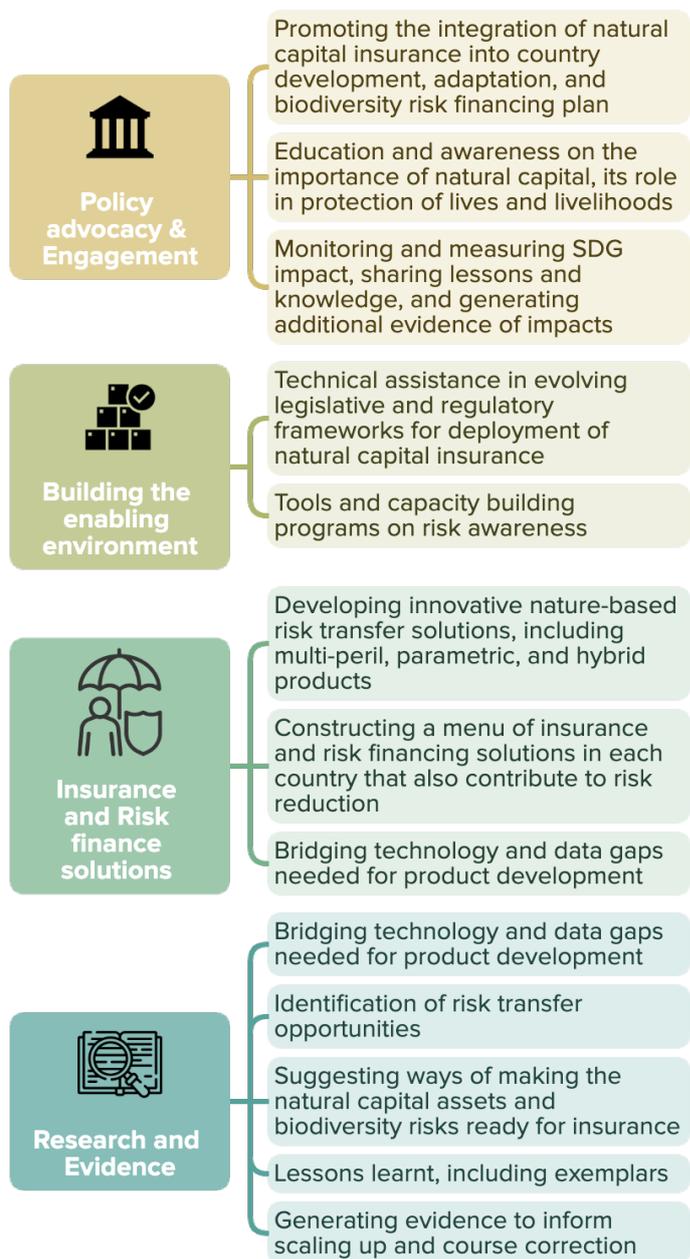
Insurance can play a crucial role in supporting HWC by providing financial protection and addressing the associated risks. Addressing the economic impact of HWC through insurance presents a unique opportunity to foster coexistence between human populations and wildlife, while promoting sustainable conservation efforts. It’s equally important to tailor insurance solutions to the specific needs and challenges of the communities facing HWC. In Kenya and Sri Lanka for example Livelihoods Insurance from Elephants is working to [facilitate private markets](#) to insure small-scale women and men farmers for damage caused by human-wildlife conflict, primarily from elephants. The project is intended to help the governments of Kenya and Sri Lanka to pilot new insurance schemes, learn from one other, and develop an effective national approach to tackle HWC.

Opportunities to scale: Collaborating with the insurance industry and diverse partners, the IRFF aims to establish a conducive environment to reduce HWC, by leveraging risk financing as a catalyst to safeguard the lives and livelihoods of the most vulnerable families and communities in developing countries. Insurance will cover farmers, their assets, lives and livelihoods, and risk financing will cover tourism and environmental values of having resilient biodiversity. Initial programme development has begun in Bhutan, Nepal and Sub-Saharan Africa.

The Approach

Recognizing the immense value of nature and ecosystems to our global economy and communities, the IRFF is dedicated to implementing innovative insurance schemes, to safeguard nature and the vital livelihoods dependent on them. Our vision extends beyond protection; it involves fostering sustainable practices, supporting local economies, and building resilience in the face of mounting challenges. By partnering with the IRFF, partners contribute to the preservation of essential services, protection from disasters, and the cultivation of a future where both nature and humanity thrive.

Across each priority area the UNDFP IRFF team provides a set of services, support and engagement, that go from political engagement through governance, product development and research and evidence.



UNDP's Comparative Advantage: Bridging Experience and Expertise in Nature and Insurance Solutions

UNDP's Insurance and Risk Finance Facility

The Insurance and Risk Finance Facility is a flagship initiative of UNDP's Sustainable Finance Hub and is part of the wider UNDP Global Policy Network. It is the heart of UNDP's insurance and risk finance support to UNDP country offices and programme countries. The IRFF leverages natural capital to build community resilience against climate risks, reduce socio-economic vulnerability and protect biodiversity and ecosystems. IRFF plays a vital part in promoting initiatives and raising awareness to strengthen community resilience against climate risks and reducing their socio-economic vulnerability, including where their assets, lives and livelihoods depend on natural capital. The IRFF also leverages UNDP's decades of experience supporting climate change adaptation programmes that increase the resilience of vulnerable communities, ecosystems, and ecosystem services to climate change by implementing ecosystem-based adaptation and other nature-based solutions which cut across a variety of sectors – including finance, energy, agriculture, forestry and resource extraction.

These solutions help countries achieve multiple SDGs, and are efficient measures to accelerate the ambition of Nationally Determined Contributions (NDCs) particularly in mega-biodiverse, forest-rich, and island countries.

The IRFF is currently operational in 34 countries and supports the development of innovative insurance products and services that are aimed towards vulnerable people and communities, while also investing in the long-term transformation of insurance markets. The Facility works closely with industry partners to deliver policy advice, guidance, tools, methodologies and networks that boost country and community resilience towards socio-economic, health, climate and other shocks. The aim of the IRFF is to work with partners to construct robust financial resilience of families and countries, in the face of rising climate risk, through inclusive insurance, risk financing mechanisms, governance and development, advocacy, research and evidence.

Want to partner or more information on natural capital projects? Reach out to us!

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