



Insurance and Risk Finance Facility

Innovation challenge for insurance investments in biodiversity: case of Colombia



Conservation **H**Norway













Innovation challenge for insurance investments in biodiversity: case of Colombia



UNITED NATIONS DEVELOPMENT PROGRAMME - UNDP COLOMBIA

Resident Representative Sara Ferrer Olivella

Deputy Resident Representative Carla Zacapa Zelaya

Head of Climate Change and Sustainable Development Jimena Puyana Eraso

Head of Productive Inclusion and Social Protection Alejandra Corchuelo Marmolejo

Exploration Leader of the UNDP Acceleration Laboratory Lina Fernandez Pizano

National Coordinator of the Biodiversity Finance Initiative BIOFIN Colombia Diego Olarte Suárez

National Coordinator of the Insurance and Risk Finance Facility Colombia Diana Gonzalez Moya

Financial Analyst for Biodiversity in Colombia Bayron Cubillos López

With the participation and technical support: Colombian Federation of Insurers – Fasecolda, Previsora Insurance Company, Suramericana Insurance Company, SouthPole, WWF and Pipra.

Photography: UNDP Colombia, Freepik

Design and layout: El Bando Creativo

olombia, one of the most biodiverse countries ▶ in the world, faces a significant funding gap to conserve its natural wealth and meet its biodiversity and climate commitments. **Despite efforts led by UNDP** and **BIOFIN** to mobilize and redirect financial resources through innovative solutionssuch as biodiversity credits, community funds, and payments for ecosystem services-various risks threaten the effectiveness of these investments. To enhance their resilience and long-term impact, a biodiversity insurance scheme is being developed in collaboration with conservation and insurance stakeholders.

However, despite its natural wealth, funding for conservation remains a challenge. According to estimates by BIOFIN, in the past 10 years, Colombia has invested approximately USD 660 million annually in biodiversity conservation, protection, and sustainable use. These resources represent 0.21% of the GDP and primarily come from the public sector (93.9%), international cooperation (5.2%), and the private sector (0.8%).

From a climate change perspective, the country has invested an average of USD 880 million annually over the last decade, according to data from the National Planning Department (DNP). These funds have been contributed by the public sector (55%), international cooperation (21.3%), and the private sector (23.7%).

Nevertheless, these funds are insufficient to meet the commitments under the National Biodiversity Strategy and Action Plan (NBSAP) and the goals outlined in the Kunming-Montreal Global Biodiversity Framework, as well as the country's climate ambition established in the Nationally Determined Contribution (NDC). BIOFIN estimates that the current investment needs to be tripled to ensure the effective implementation of the NBSAP and quintupled for the NDC 2.0 targets in Colombia.

BIOFIN in Colombia: Strategy and Financial Solutions

Since 2015, the United Nations Development Programme (UNDP), through BIOFIN in Colombia, has promoted financial mechanisms to close the biodiversity funding gap. The national strategy has evolved into a results-based approach, structured around six financial solutions and two enabling components that strengthen both the national regulatory framework and territorial biodiversity financing strategies.

Diagram 1. UNDP BIOFIN strategic plan in Colombia



Source: UNDP, BIOFIN.

BIOFIN's financial solutions in Colombia aim to increase and redirect financial resources for the conservation and sustainable use of biodiversity, considering factors such as funding sources, durability of interventions, access and permanence requirements, and the involvement of key stakeholders.

Below is a summary of each of these solutions:

- FS1: Mandatory biodiversity offsets and voluntary biodiversity credits. Encourages investments in mandatory and voluntary mechanisms, such as biodiversity credits and environmental offsets, to fund preservation and restoration actions over a 20- to 30-year implementation horizon.
- FS2: Access to public and private funds for biodiversity financing. Enhances technical and financial capacities for designing projects financed with public (environmental funds) and private resources (financial products from commercial banks).
- FS3: Mobilization of community resources through the creation of local funds. Promotes community savings and credit as a source of funding for sustainable biodiversity use initiatives, especially in communities without access to commercial banking.
- FS4: Investment in payment for ecosystem services (PES) schemes. Encourages public and private investment in the preservation and restoration of strategic ecosystems through mechanisms like donations and environmental offsets.
- FS5: Reform of harmful incentives and subsidies for biodiversity. Analyzes incentives from productive sectors with negative impacts on biodiversity and designs strategies for their reform.



 FS6: Strengthening the financial and business framework. Promotes the adoption of sustainability standards in the financial and business sectors, facilitating the integration of biodiversity and climate change criteria in investment decisions.

Risks to the Effectiveness of Biodiversity Investments

Through the implementation of these solutions, BIOFIN has identified various risks that may affect the effectiveness of biodiversity investments:

- **Governance Risks:** Changes in government, lack of consistent policies, absence of transparency, and misalignment with national strategies.
- Financial Risks: Low investment sustainability due to limited resource availability, perceived low profitability, and fluctuations in exchange rates or interest rates.

- **Operational and Implementation Risks:** Insufficient institutional, technical, and financial capacities to design and implement effective projects.
- Environmental and Climate Risks: Extreme climate events, accelerated biodiversity loss, degradation of ecosystem services, and conflicts between wildlife and communities.
- Market and Demand Risks: Insufficient incentives for private investment, competition with traditional economic sectors, and barriers to developing sustainable markets.
- Social and Equity Risks: Unequal distribution of benefits, violation of local and indigenous communities' rights, and lack of awareness about the importance of biodiversity.

Building the resilience of nature through insurance

Protecting and restoring ecosystems is not only an environmental imperative, but a vital economic strategy for ensuring financial resilience to rising risks. For example, protecting 30% of global mangroves will potentially safeguard US \$16.3 billion of coastal property value, 6.1 million people, and 50.7 million fisher days per year¹. Our ecosystems are being degraded at unprecedented rates, driven by an increase in the frequency and severity of hazards and shocks. This degradation also undermines nature's ability to mitigate the effects of climate change, which threatens to push more than

1. NCBI library - Priority areas to protect mangroves and maximise ecosystem services, A. Dabalà et. al, 2023.

100 million people into extreme poverty by 2030². In 2022 alone, ~ 185 million people were affected by disasters³ with only 45% of US \$275 billion in global economic losses from disasters covered by insurance⁴, and significantly less coverage in developing countries.

The escalation of global risks and crises underscores the importance of building financial resilience and investing in nature to ensure that businesses, communities, and countries continue to benefit from the substantial economic and protective value of these ecosystems which drive all life on earth.

In that sense, insurance can play a catalytic role in protecting people, building financial resilience, and safeguarding ecosystems by making financial resources available for the conservation and restoration of natural assets like wildlife, forests, coral reefs, and mangroves aftershocks and hazards. Below is an example of how a nature-based insurance product can be used to restore nature and protect local livelihoods.



Source: UNDP, IRFF.

- 3. 2022 Emergency Event Database EM-DAT
- 4. Swiss Re Natural Catastrophes and inflation in 2022

^{2.} World Bank - Revised Estimates of the Impact of Climate Change on Extreme Poverty by 2030

Bridging expertise in nature and insurance solutions with long-term governance

UNDP recognizes the critical value of nature to the global economy and communities and is committed to implementing innovative, naturerelated insurance solutions developed through multistakeholder processes at national and subnational levels. Working in partnership with governments and the insurance industry, **UNDP's Insurance and Risk Finance Facility (IRFF)** is delivering this mandate by reforming regulations, developing disaster risk management and payout management strategies, building government capacity and leveraging private sector expertise to increase financial protection from rising risks. Currently is working 4 core solutions: 1. Ecosystem-related Insurance; 2. Wildlife-related Insurance; 3. Nature-related Insurance Innovation; 4. Protection of investments Insurance solution.

By rethinking the relationship between finance, insurance, and environmental protection, UNDP aims to secure a sustainable future for generations to come, utilizing the growing awareness of nature's economic value and the intergenerational concern for its loss.

Diagram 3. UNDP as bridge of insurance and risk finance expertise



Source: UNDP, IRFF.



Opportunity: Designing an insurance scheme for biodiversity

In the face of these risks, UNDP Colombia, through its BIOFIN and IRFF initiatives, and with the support of Fasecolda (Colombia National Association of Insurance Companies), are developing two insurance schemes together with insurance and conservation entities to mitigate some of these challenges in a transversal way. This approach seeks to increase the resilience of investments in biodiversity, protecting them from political, financial and environmental uncertainties, and strengthening their long-term impact.

1. Habitat Banking in Colombia: Preserving Biodiversity and Creating Economic Opportunities. South Pole, Previsora, Pipra

abitat banks are effective tools for channeling investment into biodiversity conservation through pay-forperformance schemes. To ensure the long-term sustainability and financial viability of these initiatives, a specialized insurance product is proposed. This product protects against key environmental risks—such as human-wildlife conflict, rainfall anomalies, and wildfires—offering confidence to investors and project developers. By reducing uncertainty and securing biodiversity assets, the insurance strengthens habitat banks, supports ecosystem resilience, and promotes greater publicprivate investment in nature-based solutions.

Habitat banks are cost-effective mechanisms for mobilizing environmental offset resources that stimulate investment through their pay-forperformance scheme. In other words, it is area of either public or private ownership characterized by richness in natural resources and managed through preservation, restoration, rehabilitation, and sustainable use practices, aimed at ensuring the conservation of biodiversity. In return for the protection, management and permanent monitoring of the area, the responsible party for the bank may establish agreement with thirdparty holders of environmental obligations to compensate for the impact of development projects.

In that sense, to protect these investments, it is needed to design an insurance product that allows the protection of assets and investments destined for biodiversity management. This product aim to protect damages in areas where biodiversity conservation activities and their ecosystem services are financed, promoting tools such as habitat banks, payments for environmental services and conservation agreements with allies from the public and private sectors. Likewise, the product is seeking to generate a positive impact on natural heritage and the communities that interact with it, promoting the sustainability and resilience of ecosystems and strengthening the financial viability of biodiversity projects. Furthermore, ensures resilience of habitat banks and other conservation projects against adverse events, and provides financial incentives for the protection of biodiversity, encouraging investment in these projects.





Which problem solves?

- Damage to the environmental asset to be protected
- Existing uncertainty about investing in biodiversity projects.
- Lack of confidence in a long-term project (more than 20 years) due to lack of guarantees that ensure the sustainability of the projects



Coverage: 1. Conflicts between humans and wildlife; 2. Excess/deficit of rainfall (parametric); 3. Wildfire (parametric)





Beneficiary: Developer



Addressed to:

- Project developers
- Companies and organizations with environmental assets and obligations. (Application for individual owners)



Policyholder: Public or private developer



Validity with annual renewal: 20 years

	4
Q	Ż

Insurance conditions: Evaluation of claims-Georeferencing with polygon

Innovation challenge for insurance investments in biodiversity

Diagram 4. Insurance scheme for Habitat Banks



Source: South Pole, Previsora, Pipra

2. Water Fund insurance product in Colombia. SURA and WWF

ater ecosystems like moorlands and mangroves are vital yet increasingly threatened by human activity and climate change. To protect these ecosystems and ensure the continuity of conservation investments, the Water Insurance mechanism is being developed. It provides parametric coverage for ecosystem risks, support for sustainable rural and ethnic community enterprises, and protection against reputational and compliance risks for environmental funds. This tool enhances resilience. promotes water security, and safeguards long-term ecosystem management efforts.

Water is the source of life, human existence and biodiversity on the planet, and is essential due to its multiple services and contributions. However, this resource is finite, and its associated ecosystems are under pressure from various threats, some caused by humans and others by anthropogenic means, putting the wellbeing of Colombians at risk. For this reason, the Water Insurance innovative mechanism is under develop and seeks to manage the risks faced by ecosystems associated with water, such as the moorlands that contribute to the provision of water and the mangroves that contribute to the protection of the coasts and the biodiversity they contain.

To protect these ecosystems, joint efforts have emerged between private and public institutions, creating funds that channel financial resources into activities aimed at understanding the problem, working towards conservation and restoration, and training local communities and their sustainable productive activities. However, these investments can be lost in a context in which a greater frequency and severity of extreme weather events pose a greater risk to these types of ecosystems and communities. The Water Insurance is a risk transfer and management instrument that leverages and strengthens the continuity of the actions developed by these ecosystem management funds in the event of adverse events that may negatively impact these ecosystems and the activities that have been carried out for their conservation, providing the following coverage:



Ecosystem risk coverage:

An amount agreed upon in a parametric insurance scheme payable before the materialization of the incident, to finance activities to prevent a fire, to be implemented by ethnic and rural communities, given the determined parameter.



Coverage for sustainable communities and enterprises: Material damage and assistance for the continuity of sustainable businesses in ethnic and rural communities.



Coverage of risks associated with funds: Includes reputational and compliance risk. **Diagram 5. Insurance scheme for Water Funds**



Social and environmental benefits that positively impact communities, ecosystems and private companies

Medium and long-term fiancial returns of sustainable production systems to private equity investors

> Studies and research

Investments for Ecosystem and communities management

いたのであると

Ecosystem management Fund Community Capacity building

> Conservation projects and restauration

Ecosystems and communities

Ecosystems

Paramo grasslands

Mangrooves

Sustainable production system

Insurance payment of premium from concenssional

resources

Parametris coverage of ecosystem mitagation and adaptation

Coverage of venture risks+delivery of capabilities











Federal Ministry for the Environment, Nature Conservation and Nuclear Safety



Flanders State of the Art



ion suisse tione Svizzera tiun svizza ederation ice for the Environment FOEN





