BIOFIN
The Biodiversity Finance Initiative

UNDP



FINANCING NATURE IN PERU

Pathways for Change to Scale Biodiversity Investment through Public Investment Projects and Works for Taxes

gef global environment facility INVESTING IN OUR PLANET
Belgium partner in development
In partnership with Canada
This project is co-funded by the European Union
Flanders State of the Art
MINISTÈRE DE L'EUROPE ET DES AFFAIRES ÉTRANGÈRES
Federal Ministry for the Environment, Nature Conservation, Nuclear Safety and Consumer Protection
Norway
Schweizerische Eidgenossenschaft Confédération suisse Confederazione Svizzera Confederaziun svizra
Swiss Confederation
Federal Office for the Environment FOEN
UK International Development Partnership | Progress | Prosperity

FINANCING NATURE IN PERU: Pathways for Change to Scale Biodiversity Investment through Public Investment Projects and Works for Taxes

Content Creation:
Augusto Arrasco Díaz, Technical BIOFIN Associate, UNDP Peru

General Oversight:
The Biodiversity Finance Initiative (BIOFIN)
Astrid Aguilar Vargas Machuca, National Coordinator Biodiversity Projects Portfolio, UNDP Peru

Editorial Development:
Layout and graphic design: Rodrigo Valera Lynch
Photos: Nuria Angeles, Giulianna Camarena, Jazmin Ramirez, Mónica Suárez Galindo and UNDP Peru archive.

October 2026

Edited by:
Programa de las Naciones Unidas para el Desarrollo (PNUD)
Av. Jorge Chávez 275. Miraflores. Lima, Perú
Web: https://www.undp.org/es/peru

The Global Biodiversity Finance Initiative (BIOFIN) would like to thank its partners— GEF, the European Union, the Governments of Germany, Belgium, Canada, Flanders, France, Norway, Switzerland and the United Kingdom—for their support in making this publication possible. The views expressed in this publication are those of the authors and do not necessarily represent those of the United Nations, including UNDP, or the UN Member States.

Copyright © (2026). Creative Commons license.
Rights: Reproduction of this publication for educational or other non-commercial purposes is authorized without prior written permission from the copyright holder provided the source is fully acknowledged. Reproduction of this publication for resale or other commercial purposes is prohibited without prior written permission of the copyright holder. The designation of geographical entities in this book, and the presentation of the material, do not imply the expression of any opinion whatsoever on the part of UNDP concerning the legal status of any country, territory, or area, or of its authorities, or concerning the delimitation of its frontiers or boundaries.

TABLE OF CONTENTS

List of Acronyms 4

Glossary 6

Executive Summary 8

1. The Natural Capital Challenge and the Opportunity of Investment Mechanisms 10

2. Designing for Nature and People: An Analytical Framework for Quality Investment 14

3. Where Do Biodiversity-Related Investments Get Stuck? 18

4. Pathaways for Transformation: The Road to Quality and Scaling Up Biodiversity Investments 26

5. A Sequenced Strategy to Unlock Investment and Financing 30

6. Conclusions 34



LIST OF ACRONYMS

Invierte.pe	National Multi-Year Investment Programming and Management System (*Sistema Nacional de Programación Multianual y Gestión de Inversiones*)
MINAM	Ministry of the Environment (*Ministerio del Ambiente*)
MEF	Ministry of Economy and Finance (*Ministerio de Economía y Finanzas*)
OxI	Works for Taxes (*Obras por impuestos*)
PMI	Multi-Year Investment Programming (*Programación Multianual de Inversiones*)
UE	Executing Units (*Unidades Ejecutoras*)
UF	Formulating Units (*Unidades Formuladoras*)





GLOSSARY



BIODIVERSITY

The variability among living organisms from all sources, including, inter alia, terrestrial, marine, and other aquatic ecosystems and the ecological complexes of which they are part; this includes diversity within species, between species and of ecosystems (Article 2 of the Convention on Biological Diversity).



BIODIVERSITY-RELATED INVESTMENT PROJECTS

A broad analytical category used in this White Paper, which encompasses investments whose objective, actions, or results contribute directly to the conservation, recovery, sustainable use, and management of biological diversity.



ECOSYSTEM

A natural system of living organisms interacting with each other and with their physical environment as an ecological unit. Ecosystems are the source of ecosystem services (Article 3, Literal b of Law No. 30215, Law on Mechanisms for Compensation for Ecosystem Services).



ECOSYSTEM SERVICES

Direct and indirect economic, social, and environmental benefits that people obtain from the proper functioning of ecosystems, such as water regulation in watersheds, biodiversity maintenance, carbon sequestration, scenic beauty, soil formation, and the provision of genetic resources. They constitute part of the Nation's heritage (Article 3, Literal b of Law No. 30215, Law on Mechanisms for Compensation for Ecosystem Services).



INVESTMENT PORTFOLIO

A set of investments identified, prioritized, and ordered based on territorial, sectoral, strategic, budgetary, and gap-closing criteria. Within the framework of Invierte.pe, it forms part of the Multi-Year Investment Program (adapted from Article 3, Paragraph 26 of the Regulations of Legislative Decree No. 1252, approved by Supreme Decree No. 140-2026-EF).



INVESTMENT TYPOLOGY

A sectoral classification of investments according to the public service, producing unit, purpose of the intervention, and nature of the activities undertaken (based on the regulatory framework of Invierte.pe). This White Paper addresses the following typologies established under the Invierte.pe framework: Ecosystems; Support for the Sustainable Use of Biodiversity; Species; Surveillance and Control; Water Sowing and Harvesting; and Restoration of Degraded Forest Ecosystems and other vegetation ecosystems.



NATURAL CAPITAL

The stock of renewable and non-renewable natural resources—such as plants, animals, air, water, soils, and minerals—that, in combination, yield a flow of goods and services that contribute to human well-being, economic activity, and environmental sustainability (adapted from the United Nations System of Environmental-Economic Accounting).



NATURAL INFRASTRUCTURE

A network of natural spaces that conserves the values and functions of ecosystems, thereby providing ecosystem services (Article 3, Paragraph 17 of the Regulations of Legislative Decree No. 1252, approved by Supreme Decree No. 140-2026-EF. Within the framework of this White Paper, interventions in natural infrastructure are implemented through the investment typologies applicable under Invierte.pe, according to their purpose, service, and scope of competence.



NATIONAL MULTI-YEAR INVESTMENT PROGRAMMING AND MANAGEMENT SYSTEM – INVIERTE.PE

An administrative system of the Peruvian State designed to guide the use of public resources allocated to investment toward the effective delivery of services and the provision of the infrastructure necessary for the country's development (Article 1 of Legislative Decree No. 1252, which creates the National Multi-Year Investment Programming and Management System).



WORK FOR TAXES (OXI)

A mechanism that enables private sector participation in the financing and execution of public investments prioritized by subnational governments and national government entities, in accordance with the framework established by Law No. 29230 and its complementary regulations (adapted from the Private Investment Glossary of the Ministry of Economy and Finance).

EXECUTIVE SUMMARY

Biodiversity and natural infrastructure are strategic assets for Peru's development, providing essential services for the population and economic activities, including protection against climate-related risks, water regulation, and the conditions necessary for sustainable livelihoods. Despite this, translating this value into public investments capable of delivering tangible and sustainable results remains a challenge. The biodiversity funding gap in Peru highlights the need to improve the use of public resources and mobilize additional sources of funding.

In this context, this white paper analyzes the conditions that enable or hinder biodiversity-related investments as they progress from the identification of a need to implementation and long-term sustainability. The analysis focuses on two complementary channels for directing resources toward these investments: conventional Public Investment Projects (Proyectos de Inversión Pública, or PIPs) and the Works for Taxes mechanism (Obras por Impuestos, or OxI). To this end, it combines an assessment of a portfolio of 1,347 public investments covering the 2017–2026 period and 25 Works for Taxes projects from 2022 to 2026, a documentary review, and qualitative evidence from 26 semi-structured interviews and two participatory workshops.

The findings identify 18 bottlenecks associated with challenges across the investment cycle. These include: the limited operational integration of biodiversity and natural infrastructure into the diagnosis of investment gaps and the Multi-Year Investment Programming process (Programación Multianual de Inversiones, or PMI); the lack and limited practical use of specialized data and studies; institutional fragmentation, insufficient technical capacities, and loss of team continuity; weak development of evidence, indicators, and monitoring systems; inadequate delineation and functional siting of interventions, together with insufficient enabling territorial conditions; technical designs that are insufficiently adapted to ecological and hydrological conditions; inadequate definition of the governance, operation, maintenance, and financing arrangements required for sustainability; incomplete design of surveillance and control systems; and insufficient technical and administrative maturity to access the OxI mechanism.

A key conclusion is that constraints tend to carry over from one phase of the investment cycle to the next. Weaknesses in programming, information, or project formulation may subsequently manifest as review comments, rework, delays, higher costs, reduced targets, or difficulties in sustaining results. Therefore, accelerating investments does not mean lowering

requirements or indiscriminately simplifying procedures, but rather improving the quality of decisions and information from the earliest stages. This also requires recognizing that the different typologies of biodiversity-related investments vary in their levels of methodological development, accumulated experience, and institutional capacity.

Based on these findings, the white paper proposes eight pillars for transformation, organized into four complementary pathways. The first pathway seeks to connect territorial planning with investment programming and advance toward territorial investment portfolios that coordinate interventions across watersheds, landscapes, ecological corridors, or water systems. The second pathway proposes improving early-stage technical quality through differentiated requirements for each investment typology and a classification of projects according to their levels of maturity. The third pathway aims to diversify financing sources and improve the ability to translate ecosystem benefits into criteria that the private sector can readily understand, particularly within the OxI framework. Finally, the fourth pathway seeks to strengthen institutional memory, applied technical capacities, and the conditions required for the operation, maintenance, and sustainability of investments.

As a mechanism for putting these transformations into practice, the white paper proposes establishing a catalytic portfolio of conventional PIPs to serve as a platform for learning and demonstration. The proposal involves selecting projects from different investment typologies and levels of maturity and addressing their main constraints through intensive technical assistance, documenting the solutions, and converting them into replicable methodologies, guidelines, and tools. In a second phase, these lessons can be used to strengthen the structuring and promotion of projects suitable for implementation through OxI, reducing uncertainty and improving communication of their benefits, indicators, and sustainability conditions.

The proposed approach thus seeks to move from isolated projects toward a portfolio capable of generating learning, coordination, and scale. The objective is not simply to implement a greater number of investments, but to progressively establish the conditions necessary for resources allocated to biodiversity to deliver verifiable, sustainable, and meaningful results for local territories and economic activities. In this sense, financing biodiversity means investing in the natural capital that underpins the country's development: protecting our ecosystems today also means strengthening resilience, reducing vulnerabilities, and contributing to Peru's economic security.



1. THE NATURAL CAPITAL CHALLENGE AND THE OPPORTUNITY OF INVESTMENT MECHANISMS

THE VALUE OF NATURAL CAPITAL AND THE FINANCING CHALLENGE

Biodiversity and natural infrastructure are fundamental components of Peru's sustainable development. Ecosystems sustain services that are essential to the population and economic activities, ranging from water regulation to protection against climate-related risks and natural hazards. However, the loss of vegetation cover, the deterioration of water regulation capacity, the increase in erosion processes, and the consequent decline in ecosystem services pose critical challenges that directly affect productivity, infrastructure, security, and the well-being of the population.

Investing in biodiversity and natural infrastructure transcends the traditional notion of environmental conservation; it fundamentally implies maintaining and recovering the ecological functions upon which people, territories, and various productive activities depend. Currently, Peru faces a biodiversity financing gap that requires mobilizing additional resources to ensure the implementation of the National Biodiversity Strategy. Faced with this urgent financing need, it is indispensable to optimize and mobilize resources through all available channels, transforming conservation into a pillar of economic and social resilience.

PIPS AND WORKS FOR TAXES (OXI) AS DRIVERS OF CHANGE

To bridge this gap in access to services for the conservation, restoration, and sustainable use of natural capital, the Peruvian State has instruments and mechanisms designed to integrate biodiversity into investment decisions. For the purposes of this white paper, the analysis focuses on two complementary approaches governed by the National Multi-Year Investment Programming and Management System (Invierte.pe): conventionally implemented Public Investment Projects (PIPs) and the Works for Taxes (OxI) mechanism, which incorporates private sector participation in the financing and implementation of public investments, in accordance with its regulatory framework. Among these project types, the typologies most commonly associated with biodiversity are Ecosystems, Support for the Sustainable Use of Biodiversity, Species, Surveillance and Control, Water Sowing and Harvesting, and Degraded Forest Ecosystems.

Both mechanisms have significant potential to channel public and private funding toward biodiversity while also generating a direct and tangible impact in local territories. While conventional PIPs depend on public entities' resource allocation and operational capacities across the four phases of Invierte.pe (Programming, Formulation/Evaluation, Execution, and Operation), the OxI mechanism involves the private sector in financing and implementation, strengthening public-private collaboration, although it requires projects to be more fully structured and developed.

THE SYSTEMIC CHALLENGE: FROM THEORY TO IMPLEMENTATION

Peru has a solid institutional, regulatory, technical, and methodological foundation, as well as accumulated experience on which to build further progress. However, the existence of these instruments does not in itself guarantee that environmental and territorial priorities will be translated into mature projects, or that these projects will progress through the investment cycle in a timely manner to ensure their results are sustained over time.

The real challenge lies in the bottlenecks that arise throughout the investment cycle. Constraints related to planning, information, project formulation, capacity gaps, financing, or coordination lead to review comments, rework, delays, cost overruns, and reductions in project targets. These limitations prevent the swift conversion of financial resources into tangible interventions on the ground.

In this regard, it is imperative to address the entire chain through which environmental and social needs are transformed into high-quality investment projects, overcoming existing constraints so that PIPs and OxI can realize their full potential to channel funding toward nature conservation and the protection of livelihoods across the country.



2. DESIGNING FOR NATURE AND PEOPLE: AN ANALYTICAL FRAMEWORK FOR QUALITY INVESTMENT



INVESTMENT QUALITY, RESILIENCE, AND WELL-BEING

A biodiversity-related investment project is considered high-quality not merely when it executes its budget efficiently, but when it achieves a dual impact: restoring and conserving natural capital while improving the economic resilience and livelihoods of local communities. This perspective is essential because an investment does not begin with the physical implementation of a project. It first requires strategic decisions regarding existing gaps, priorities, territorial approaches, and project design. Likewise, once the investment has been implemented, the necessary conditions must be ensured for its operation, maintenance, monitoring, and long-term sustainability.

Consequently, problems that emerge during implementation or operation often originate in decisions made during the early design stages, gaps in information, or conditions that were overlooked at the outset.

ALIGNMENT WITH GLOBAL AND NATIONAL COMMITMENTS

Biodiversity-related Public Investment Projects (PIPs) and Works for Taxes (OxI) not only help close the financing gap identified in the National Biodiversity Strategy but also serve as critical instruments for Peru to meet its international commitments. Specifically, these investments support progress toward ecosystem restoration and species conservation targets, aligning with both national policies and the objectives of the Kunming-Montreal Global Biodiversity Framework.

At the same time, these projects contribute directly to the fight against climate change. By conserving and restoring natural infrastructure, they ensure water resource regulation—a critical factor in climate change adaptation—and reduce the vulnerability of communities to disasters, thereby protecting local livelihoods in the short, medium, and long term.

A FULL INVESTMENT CYCLE APPROACH

To ensure that projects deliver sustainable outcomes, the entire investment cycle was analyzed, covering the phases established under Invierte.pe. This comprehensive approach makes it possible to identify not only where a constraint emerges, but also where it originates and which conditions must be strengthened to prevent its negative effects—such as rework, cost overruns, or reductions in project targets—from accumulating.

The analysis recognizes the diversity of project typologies (ecosystems, species, water sowing and harvesting, among others), each of which has different levels of methodological development, accumulated experience, and institutional capacity. This diversity is essential to understanding why certain bottlenecks do not affect all investments in the same way.

ANALYTICAL PILLARS OF THE BOTTLENECK ANALYSIS

To structure the analysis of the constraints facing investments, the study is organized around three complementary and interconnected pillars:

Technical Pillar:

Covers the availability and suitability of instruments, methodologies, information, specialized studies, indicators, and capacities required for territorial analysis and the proper formulation of investments.

Institutional Pillar:

Encompasses the capacities, roles, coordination mechanisms, and governance arrangements involved throughout the investment cycle. This includes effective coordination among the Multi-Year Investment Programming Offices (OPMI), Formulation Units (UF), Executing Units (UE), different levels of government, and territorial stakeholders.

Financial Pillar:

Encompasses the conditions that influence the availability, mobilization, structuring, and sustainability of financial resources. This includes both solutions for the effective use of public resources and the conditions required to mobilize private sector funding through mechanisms such as OxI.

These pillars do not operate in isolation. For example, a technical weakness can lead to institutional delays and restrict timely access to financing, highlighting the systemic complexity of existing barriers.

EVIDENCE BASE AND METHODOLOGY

The findings presented in this document are based on rigorous data triangulation. The evidence combines the following sources:

Document Review:

Analysis of the regulatory, technical, and methodological framework, complemented by a review of project documentation and selected case studies and experiences

Investment Portfolio Analysis:

Characterization of 1,347 biodiversity-related investments over the 2017–2026 period, comprising 985 investment projects and 362 investments under the Optimization, Marginal Expansion, Rehabilitation, and Replacement (IOARR) category.

Primary Sources:

Collection of qualitative information from 28 sources, comprising 26 semi-structured interviews and two participatory workshops involving national and regional stakeholders, as well as specialists in territorial planning and biodiversity finance.



3. WHERE DO BIODIVERSITY-RELATED INVESTMENTS GET STUCK?

The analysis of the investment portfolio and consultations with key stakeholders have revealed that constraints affecting biodiversity projects are not isolated incidents, but rather barriers that accumulate throughout the investment cycle. A problem originating in the early programming or formulation phases often manifests later as delays, cost overruns, reduced project targets, or sustainability failures.

The study identified a total of 18 bottlenecks. They are categorized according to the constraints involved: cross-cutting bottlenecks; bottlenecks specific to conventional public investment implementation (PIPs); and bottlenecks specific to private capital mobilization through Works for Taxes (OxI).

CROSS-CUTTING AND SYSTEMIC BOTTLENECKS

A total of six cross-cutting bottlenecks affect all project typologies and shape the overall performance of the investment ecosystem, including OxI. They can also recur and accumulate throughout the investment cycle, affecting project quality, resource allocation, and long-term sustainability.

- **Weak coordination between territorial planning and investment programming (BN-01):** Although Peru has territorial and environmental planning instruments, such as Regional and Local Concerted Development Plans, these are not translated into operational criteria for Multi-Year Investment Programming (PMI). As a result, projects emerge from ad hoc opportunities or isolated initiatives rather than from an integrated understanding of landscapes, watersheds, or ecosystem connectivity. The cumulative impact includes low prioritization of biodiversity-related investment projects; fragmented investment portfolios lacking continuity; duplicated efforts or territorial gaps; and weak institutional ownership of the ecosystem approach.

- **Limited operational integration of biodiversity and natural infrastructure into gap assessments and PMI (BN-02):** Although investment typologies associated with biodiversity and natural infrastructure are recognized, this recognition does not always translate into the identification of gaps, territorial prioritization, or the development of investment portfolios. Difficulties in quantifying gaps associated with water regulation, biodiversity maintenance, or risk reduction, for example, limit their formal recognition as public policy problems within the system. Consequently, some biodiversity-related needs may be excluded at an early stage of programming and face unfavorable conditions when competing for inclusion in investment portfolios.

- **Limited adaptation of methodological instruments to biodiversity investments (BN-03):** Certain methodological instruments and implementation practices under Invierte.pe have difficulty incorporating the temporal, territorial, and functional characteristics of these investments. While conventional projects generally have outcomes and indicators that can be observed in the short term, investments in biodiversity and natural infrastructure generate progressive, medium- and long-term benefits that depend on complex ecological processes. This makes it difficult to translate benefits such as water regulation, risk reduction, habitat recovery, and climate resilience into comparable metrics within the system.

- **Insufficient availability and operational use of baseline information and specialized studies (BN-04):** The problem is not limited to information availability, but also involves its fragmentation across institutions, inappropriate spatial scales, low interoperability, and the difficulty of translating it into the language of public investment. Different project typologies require information at specific scales, such as micro-watersheds, recharge zones, critical habitats, or functional intervention areas, which is not always available. This forces project teams to generate additional information, make assumptions, or formulate projects under greater uncertainty, increasing formulation costs and timelines while affecting the quality of technical alternatives.

- **Institutional fragmentation, insufficient technical capacity, and loss of continuity (BN-05):** Planning, budgeting, and environmental departments—including OPMIs, Formulation Units (UF), and Executing Units (UE)—operate according to different priorities, timelines, and working approaches. High staff turnover further disrupts technical continuity and traceability. New officials are often required to reconstruct project histories and previous decisions, generating delays and limiting institutional learning.

- **Weak development of evidence, indicators, and monitoring systems (BN-06):** Significant difficulties remain in translating biodiversity needs into operational gaps and indicators. Projects tend to focus on measuring physical outputs, such as the number of seedlings planted, kilometers of trenches constructed, or hectares treated, which are insufficient to demonstrate actual changes in ecosystem functionality. Appropriate baselines and monitoring systems aligned with biological timescales—particularly the medium and long term—are missing.

BOTTLENECKS SPECIFIC TO PIPS UNDER INVIERTE.PE

When investments are implemented through conventional public mechanisms, the main constraints arise in translating natural capital into investment projects that can be properly formulated, implemented, and sustained over time. This section presents the nine bottlenecks identified in this category:

- **Conceptual and classification inconsistencies in project typologies and intervention targets (BN-07):** Inconsistencies arise in the definition and classification of certain investments related to biodiversity and natural infrastructure. These include mismatches between an investment's name, its geographic scope, its planned components, and the ecosystem or biological resource targeted by the intervention. There is also confusion between investment typologies and concepts such as ecosystem recovery, ecological restoration, reforestation, and plantation establishment. These issues can complicate the definition of intervention objectives, target setting, and the assessment of expected results, while generating review comments during project formulation and evaluation. Moreover, confusion commonly arises between biodiversity-focused interventions and conventional productive projects, alongside a weak integration of natural infrastructure into disaster risk management.

- **Weak functional delimitation and location of interventions, and insufficient enabling territorial conditions (BN-08):** Appropriate intervention siting requires identifying the areas where relevant ecological and hydrological processes occur and where interventions can deliver the expected results. However, difficulties arise in identifying hydrological zones, sediment sources, and other functional areas, potentially resulting in interventions being implemented outside the areas where they can perform their intended functions. Additional territorial conditions must also be resolved before or during formulation, including land tenure regularization, agreements with landowners or local stakeholders, and effective access to intervention sites. These constraints can lead to subsequent adjustments, delays, or even prevent planned project components from being implemented.

- **Technical designs insufficiently adapted to ecological and hydrological conditions (BN-09):** Ecosystem diversity and the specific characteristics of each territory make standardized solutions difficult to apply. Species selection, the design of restoration or recovery interventions, and, for certain project typologies, hydrological modeling require information and technical criteria suited to local conditions. When these elements are insufficiently incorporated, there is a risk that an intervention will be physically completed without producing the expected ecosystem outcomes. The problem therefore extends beyond the quality of the technical design documentation: it compromises the relationship between the intervention implemented and the ecological function it seeks to recover, conserve, or strengthen.

- **Inadequate governance, operation, maintenance, and financing to ensure sustainability (BN-10):** The completion of physical work does not guarantee the sustainability of these investments. The operator, institutional responsibilities, operating and maintenance costs, financing mechanisms, and, where appropriate, agreements with territorial stakeholders must be defined during project formulation. Difficulties in establishing these conditions can result in underestimated costs, unclear responsibilities, or a lack of resources once the investment has been completed. This risk is particularly significant for interventions whose results depend on maintenance, management, or monitoring over extended periods, as well as those requiring coordination between public entities and local stakeholders.

- **Weak integration of conditions for the conservation and sustainable use of biological resources (BN-11):** Investments supporting the sustainable use of biodiversity continue to face difficulties in adequately incorporating the conditions necessary to conserve and sustainably use biological resources. The review identifies cases in which biodiversity is treated primarily as an input for increasing production, processing, or commercialization, without sufficiently addressing the ecological conditions required to ensure sustainability. These conditions include the resource's regeneration capacity, use limits, traceability, safeguards, and governance arrangements needed for its management. The absence or inadequacy of these conditions can increase pressure on ecosystems and undermine environmental outcomes during the operational phase of investments.

- **Weak market integration and fragile operating models (BN-12):** Investments supporting the sustainable use of biodiversity face difficulties in adequately aligning conservation and sustainable use objectives with market conditions and the operational capacity of planned activities. The analysis identifies insufficient assessment of markets and value chains, limited business capacity, and the risk that productive infrastructure may remain underutilized. This can jeopardize the continuity of sustainable-use components after the investment has been implemented. Structuring these interventions therefore requires consideration of market conditions, the capacities of stakeholders, and an operating model that enables the planned components to be used and maintained over time.

- **Difficulty distinguishing investment from recurrent expenditure in surveillance and control projects (BN-13):** Surveillance and control investments face challenges in clearly distinguishing which components qualify as investment and which fall under ongoing operational and maintenance activities. This distinction is particularly important because establishing or upgrading a surveillance system may qualify as an investment, whereas its day-to-day operation requires recurring funding. Confusion may involve infrastructure, equipment, patrols, control activities, and other ongoing operations, generating review comments or difficulties in properly structuring projects. The issue is also linked to the need for clear criteria to distinguish assets and components eligible for investment financing from activities that should be funded through recurrent expenditure.

- **Incomplete design of integrated surveillance and control systems (BN-14):** The effectiveness of surveillance and control services depends on the integration of infrastructure, equipment, technology, intervention routes, territorial coverage, and operational capacity. However, there is a risk that projects will focus primarily on physical infrastructure without adequately integrating the technological, logistical, and operational components required for coordinated functioning. The participation of and coordination with local communities and other territorial stakeholders must also be considered. An incomplete design can limit service coverage and effectiveness even when the project's physical components have been completed.

- **Insufficient consideration of logistics, climate seasonality, and planting material availability (BN-15):** Territorial implementation conditions can create constraints when accessibility, logistical costs, suitable climate windows, and the availability and quality of planting material are not considered in a timely manner. In certain interventions, these factors directly affect implementation timelines, costs, and the effectiveness of planned activities. Limited availability or poor quality of planting material, as well as failure to account for appropriate seasonal conditions, can cause delays and undermine the establishment of planned interventions. These factors must be considered during investment planning and formulation, anticipating access, logistics, seasonality, and material availability requirements.

BOTTLENECKS SPECIFIC TO WORKS FOR TAXES (OXI)

The OxI mechanism represents a key opportunity to involve the private sector in financing and implementing investments related to biodiversity and natural infrastructure. However, its success depends not only on promoting the regulatory instrument, but also on the technical, institutional, and administrative conditions that projects must meet. The following are the three bottlenecks identified for this type of investment:

- Limited technical and administrative readiness of projects to enter the Works for Taxes mechanism (BN-16): This constraint concerns the level of maturity projects have reached when they enter the prioritization and structuring stages of OxI. Public entities may have prioritized project ideas but lack sufficiently developed studies, consistent technical information, appropriate territorial boundaries, a clearly defined problem, or an identification of the stakeholders involved. Outdated project profiles and difficulties in completing or updating technical design documents were also identified, partly because of limited resources for the necessary studies. These conditions increase uncertainty during project structuring and reduce the likelihood of projects advancing to subsequent stages of the mechanism.

  The private sector requires investment-ready projects with clearly communicable benefits and clearly defined post-investment responsibilities for operation and maintenance defined between the State and the company. For private companies, fragmented information, unfamiliar ecological outcomes, and difficulties in establishing verifiable short-term milestones increase perceived risk and assessment costs. Unlike building a school or a road, where the key milestone is the delivery of physical infrastructure, structuring an OxI biodiversity investment requires translating environmental impacts into risk and return indicators that corporate decision-makers can understand, compare, and justify to their boards.

  Weak translation of the strategic value for the private sector (BN-17): The benefits of biodiversity and natural infrastructure investments are not always presented using criteria relevant to private-sector decision-making. While public entities may emphasize ecosystem recovery, biodiversity conservation, or the provision of ecosystem services, companies may assess these projects in terms of their contribution to water security, the reduction of operational and climate-related risks, business continuity, corporate reputation, or compliance with environmental, social, and governance (ESG) commitments. These differences make it difficult for potential corporate participants to understand and appreciate the strategic benefits of investments delivered through Works for Taxes. Project structuring must therefore translate ecosystem benefits into criteria and indicators that clearly communicate their relevance to the private sector.

- **Difficulty structuring milestones, deliverables, and ecological verification mechanisms (BN-18):** Biodiversity-related investments face challenges in defining outputs, verifiable milestones, supervision mechanisms, and valuation criteria that adequately reflect progress in interventions whose ecological outcomes develop gradually. Conventional implementation and supervision mechanisms tend to focus on easily quantifiable physical outputs, whereas environmental effects may emerge over longer periods and depend on adaptive ecological processes. This difference makes it difficult to establish milestones that adequately recognize and value progress in ecosystem functionality. Under Works for Taxes, this increases the complexity of contractual structuring and requires verification mechanisms capable of demonstrating progress through indicators and results consistent with nature's recovery timelines.



4. PATHAWAYS FOR TRANSFORMATION: THE ROAD TO QUALITY AND SCALING UP BIODIVERSITY INVESTMENTS



The identified bottlenecks demonstrate that scaling up biodiversity investments depends on more than injecting additional financial resources or generating new project ideas. The underlying systemic challenge is to progressively strengthen the enabling conditions throughout the investment cycle. Streamlining does not mean lowering requirements or indiscriminately simplifying Invierte.pe procedures; it means improving the quality of decisions and information from the earliest stages to prevent errors from carrying over into implementation and operation.

To transform how the Peruvian State and private sector invest in natural capital, BIOFIN Peru proposes four complementary transformation pathways.

THE TERRITORIAL PATHWAY: FROM ISOLATED PROJECTS TO COORDINATED INVESTMENT PORTFOLIOS

A. Linking Planning with Programming (PMI): The first major qualitative leap is to ensure that territorial instruments, such as Regional and Local Concerted Development Plans, Ecological and Economic Zoning (ZEE) and Regional Climate Change and Biodiversity Strategies, move beyond serving as reference documents and become operational criteria for Multiyear Investment Programming (PMI). To achieve this, the use of concise programming support instruments, such as territorial fact sheets or matrices, is proposed. These would identify, for each area, the main gaps, pressures, relevant ecosystem services, beneficiary populations, and intervention opportunities. This would make environmental information directly actionable and readily understandable to the relevant bodies, including OPMIs, Formulation Units, Executing Units, and environmental authorities.

B. Moving Toward Territorial and Scalable Investment Portfolios: Ecosystem services do not operate within an isolated square kilometer; they function across landscapes and watersheds. Transformation therefore requires moving away from fragmented interventions toward the development of integrated territorial portfolios that coordinate projects across watersheds, landscapes, ecological corridors, or water systems. Functionally grouping complementary interventions—for example, water regulation, risk reduction, and sustainable use—can generate economies of scale, attract blended financing arrangements, and deliver tangible, measurable ecological impacts.

THE METHODOLOGICAL PATHWAY: EARLY TECHNICAL MATURITY AND QUALITY

C. Preventing Problems During Formulation (Early-Stage Quality): A significant proportion of implementation obstacles and project reformulations originate in inadequate pre-investment assessments. This requires establishing technical requirements differentiated by ecosystem type, incorporating from the outset field data, clearly defined areas of influence, legal and physical land tenure regularization, agreements with local stakeholders where appropriate, and realistic estimates for operation, maintenance, and biological monitoring. The objective is to address ecological complexity during the pre-investment phase.

D. Classifying Projects by Maturity: Having a pipeline of project ideas is not enough; the portfolio must be actively managed and progressively classified according to project maturity. For example, projects could be categorized as: (i) territorially prioritized ideas; (ii) projects under formulation; (iii) viable projects; (iv) projects with completed technical design documents or equivalent documentation; (v) projects ready for financing or implementation; and (vi) demonstration pilots. Classification should apply differentiated maturity criteria according to the typology and complexity of each intervention. Its main purpose would be to identify precisely what technical assistance or resources each project needs to advance to the next level, rather than treating the entire portfolio as though all projects were at the same stage. To verify the effectiveness of these criteria, they should initially be applied to a sample of projects, refined based on the results, and subsequently used to classify the broader portfolio, identify project-readiness gaps, and determine the technical assistance required for each initiative. The portfolio should also be updated periodically, evolving from an administrative register into an active management tool.

THE FINANCIAL PATHWAY: MOBILIZATION AND CORPORATE ENGAGEMENT

E. Translating Biodiversity Benefits into Corporate Value for Works for Taxes (OxI): Making effective use of the OxI mechanism depends critically on having a mature project portfolio and reducing uncertainty for corporate participants. To achieve this, ecosystem benefits must be translated into criteria that are understandable and relevant to business decision-making, including environmental, social, and governance (ESG) metrics where appropriate. Reducing uncertainty does not mean concealing ecological risks; it means making them understandable through verifiable physical milestones, indicators adapted to nature's recovery timelines, and an exceptionally clear allocation of post-investment responsibilities.

F. Financial Complementarity: Private-sector participation should form part of a diversified financing strategy, particularly for interventions implemented at the landscape or watershed scale. Both PIPs and OxI projects cover a specific portion of a territory and a defined period, meaning that they must be complemented and coordinated with other financing solutions to ensure the sustainability of the interventions and their outcomes. A diverse portfolio of biodiversity financing solutions tailored to a particular landscape or watershed, incorporating both PIPs and OxI, can therefore help secure long-term results.

THE INSTITUTIONAL PATHWAY: CONTINUOUS LEARNING AND LONG-TERM SUSTAINABILITY

G. Institutional Memory and Intelligence: The State must move away from developing every new project "from scratch." It is essential to systematically document lessons learned—including studies, actual costs, causes of project reformulation, the performance of ecological measures, solutions, results, and ex-post evaluations—in accessible repositories. If the successes and failures of one project do not inform the formulation of the next, the investment system will continue to repeat its mistakes and increase costs.

H. Applied Capacity Building and Sustainability: Strengthening capacities should not be limited to delivering theoretical training courses; it requires ongoing technical assistance throughout the formulation and implementation of actual projects. Furthermore, a sustainability-oriented approach requires operation and maintenance arrangements to be institutionalized from the design stage. Where shared-responsibility agreements with local communities are established for maintaining natural infrastructure, they must include resources, incentives, and a clearly designated public entity responsible for long-term technical supervision.

5. A SEQUENCED STRATEGY TO UNLOCK INVESTMENT AND FINANCING



To move from diagnosis to action, a pragmatic, evidence-based, and results-oriented approach is proposed. The central proposal is to develop a methodological "Catalytic Portfolio" using a sequenced strategy: first, use public financing to address systemic bottlenecks and, once the path has been cleared, apply the lessons learned to unlock private-sector participation through OxI.

PHASE ONE: ESTABLISHING A CATALYTIC PORTFOLIO

As a starting point, the proposal considers establishing a portfolio of up to 20 conventional Public Investment Projects (PIPs), seeking to include three projects for each biodiversity-related typology. These projects would serve as "bottleneck-removal pilots."

The objective is not merely to ensure that these specific projects are implemented, but to use them as real-time laboratories to identify precisely at which stage, in which form, or during which technical assessment the Invierte.pe process becomes stalled, and to develop standardized solutions. By using exclusively public financing during this initial phase, the State assumes the initial risk associated with methodological innovation, avoiding the transfer of existing administrative uncertainty to the private sector.

As an initial implementation horizon, a two-year first phase is proposed, during which an intensive technical assistance and learning process should focus on the following areas:

- **Resolving Project Documentation Issues:** Addressing specific bottlenecks—for example, missing baseline data, unresolved land tenure issues, or inadequate valuation methodologies—that are keeping these PIPs stalled.

- **Establishing Precedents and Developing a Toolbox:** Solutions implemented through these 20 pilots will be documented and converted into standardized templates, guidelines, and formats. If a pilot project establishes a method for measuring functional impacts, that methodology can be packaged so that project formulators nationwide can replicate it without starting from scratch.

PHASE TWO: PACKAGING AND PROMOTING PROJECTS FOR OXI

Once the first phase has been completed, the knowledge acquired can be transferred directly to the OxI portfolio.

- Risk Reduction: Efforts will focus on reducing uncertainty associated with the formulation of biodiversity-related projects and the verification of their results, including uncertainty regarding how the State will assess their impacts. This will be achieved by applying methodologies validated through the experience gained during the first phase.

- Corporate Translation: Efforts will focus on translating these projects into the language of corporate finance, highlighting ecosystem benefits relevant to the private sector, reputational returns, compliance with ESG metrics, and clearly defined operation and maintenance arrangements.

GOVERNANCE AND STRATEGIC PARTNERSHIPS FOR SUSTAINABILITY

To ensure that the Catalytic Portfolio can overcome administrative inertia, strong and coordinated governance will be essential. This effort should be jointly led by the Ministry of the Environment (MINAM) and the Ministry of Economy and Finance (MEF), in coordination with subnational governments.

This approach would enable MINAM to contribute environmental technical expertise, MEF to provide support and validation within the Invierte.pe framework, and subnational governments to facilitate territorial and community engagement. In parallel, it is recommended that partnerships be established with business associations and cooperation agencies to identify private-sector interest and participation requirements at an early stage for the OxI portfolio that will be made available during the second phase, thereby helping secure sustainable financing arrangements over the long term.





6. CONCLUSIONS

Biodiversity and natural infrastructure underpin essential ecosystem services for people, territories, and economic activities. Water regulation, protection against risks, ecosystem conservation, and the sustainability of livelihoods depend to a significant extent on the functioning of these natural systems. Investing in biodiversity should therefore not be understood merely as allocating resources to conservation, but as investing in natural assets that underpin well-being and sustainable development in Peru.

The challenge, however, is not simply to mobilize more resources for this purpose, but to convert them into high-quality investments. The identified bottlenecks show that constraints accumulate throughout the investment cycle: from integrating environmental priorities into programming, through information availability and the quality of project formulation, to implementation, monitoring, and subsequent sustainability. Without addressing these underlying conditions, increased financing will not generate more results. Unlocking biodiversity-related investment requires progressively strengthening the technical, institutional, and financial maturity of projects.

Peru has instruments that can support progress, but they need to be used in a more coordinated and strategic manner. The National Multi-Year Investment Programming and Management System (Invierte.pe) and the Works for Taxes (OxI) mechanism offer complementary pathways for mobilizing public and private resources toward biodiversity-related investments. Fully realizing this potential requires stronger links between territorial planning and investment programming, improved project quality from the earliest stages, investment portfolio management based on project maturity, and the development of conditions that translate ecological benefits into verifiable outcomes that different stakeholders can understand.

Within this framework, the proposed Catalytic Portfolio seeks to move from isolated projects toward a model based on learning, coordination, and scaling up. Using selected projects as pilots will make it possible to address specific problems in formulation, evaluation, implementation, and sustainability, document solutions, and convert them into replicable tools. In this way, public resources can not only finance individual projects but also generate capacities, methodologies, and evidence that progressively improve the investment portfolio and subsequently facilitate greater private-sector participation.

Ultimately, the challenge of financing biodiversity is inherently tied to development and economic security. Investing today in the conservation and restoration of natural capital means reducing vulnerabilities, protecting essential services, and strengthening the capacity of territories and economic activities to withstand future environmental and climate-related pressures. Unlocking investment in nature is an opportunity to make biodiversity a strategic component of public investment, private-sector collaboration, and Peru's sustainable development.


U N
D P