



# Report

## National Forest Finance Assessment

Morocco

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The EU-funded [Forests for the Future Facility \(F4F\)](#) provides technical support to contribute to healthy forest ecosystems and forest-related value chains in Asia, Africa, the Caribbean and Latin America. The Facility is managed by [DG International Partnerships Unit F2 – Environment, Natural Resources, Water](#).

F4F is working in collaboration with CIFOR-ICRAF on the Forest Finance Assessment reports.

#### Assessment context

This assessment of existing forest financing instruments at country level operates as the foundation for a proposed EU-funded Action 'Financing for Forest' FFF.

The Action intends to boost financing for forests at global level, by generating and sharing knowledge widely. In selected partner countries, technical assistance (TA) for the implementation of specific forest finance solutions/instruments will be provided. Prior the Action, an assessment is carried out in up to 15 countries to 1) help define which forest finance solutions will be tested and piloted and in selected countries (up to 7 countries will be selected for the Action "Financing for Forest"), 2) help EU Delegations (EUDs) and partners in other countries get a better understanding of existing financing mechanisms, and 3) generate knowledge about selected financial solutions/instruments.

As a preparatory step for the proposed EU-funded Action "Financing for Forests" (FFF), an assessment of forest financing instruments has been carried out in 11 partner countries. Implemented by CIFOR-ICRAF under the Forests for Future Facility (F4F) between February-October 2025, this assessment provides an overview of existing and innovative mechanisms that can enhance the mobilisation of finance for sustainable forest management.

#### Disclaimer

This publication was produced with the financial support of the European Union. Its contents do not necessarily reflect the views of the European Union.

This assessment has been developed based on consultations with stakeholders and inputs from subject matter experts. It is important to note that the findings and recommendations presented herein do not necessarily reflect the official forest finance priorities or the positions of the national government.

The content is intended to provide insights and support discussions in the context of forest finance but should not be interpreted as an endorsement of any specific policy or strategy.

#### Project implemented by:



Lead company

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# Acronyms

<b>AFD</b>	Agence Française de Développement
<b>AfDB</b>	African Development Bank
<b>ANEF</b>	Agence Nationale des Eaux et Forêts
<b>BAR</b>	Budgétisation Axée sur les Résultats
<b>CAPEX</b>	Capital Expenditure
<b>CESE</b>	Conseil Économique, Social et Environnemental
<b>CIFOR</b>	Center for International Forestry Research
<b>DfNS</b>	Debt-for-Nature Swaps
<b>DREF</b>	Direction Régionale des Eaux et Forêts
<b>EIB</b>	European Development Bank
<b>EU</b>	European Union
<b>F4F</b>	Forest for the Future Facility
<b>FFF</b>	Financing for Forests
<b>GAR</b>	Gestion Axée sur les Résultats
<b>GHG</b>	Greenhouse Gas
<b>HCEFLCD</b>	Haut-Commissariat aux Eaux et Forêts et à la Lutte Contre la Désertification
<b>IRES</b>	Institut Royal des Études Stratégiques
<b>LOF</b>	Loi Organique des Finances
<b>MAPMDREF</b>	Ministry of Agriculture, Maritime Fisheries, Rural Development and Water and Forests
<b>MRV</b>	Monitoring, Reporting, and Verification
<b>NFF</b>	National Forest Fund
<b>NGO</b>	Non-Governmental Organization
<b>NWFP</b>	Non-Wood Forest Products
<b>ODF</b>	Organisme de Développement Forestier
<b>OPEX</b>	Operating Expenditure
<b>PAPFM</b>	Programme d'Appui à la Politique Forestière du Maroc
<b>PES</b>	Payment for Ecosystem Services
<b>PSE</b>	Planification, Suivi et Évaluation
<b>SDG</b>	Sustainable Development Goals
<b>S&amp;E</b>	Suivi et Évaluation
<b>SFM</b>	Sustainable Forest Management
<b>TA</b>	Technical Assistance
<b>TBI</b>	The Broker Institute
<b>UE</b>	Union Européenne
<b>USD</b>	United States Dollars
<b>CIFOR</b>	Centre for International Forestry Research



# Introduction

This report presents the findings of the national forest finance assessment conducted in Morocco as part of the EU-supported initiative “Financing for Forests” (FFF). The initiative is led by the Forests for the Future Facility (F4F) and implemented in partnership with the Centre for International Forestry Research and World Agroforestry (CIFOR-ICRAF). The present assessment forms part of a broader pre-action phase covering 15 countries worldwide, aimed at supporting the design and implementation of a future EU-funded programme to accelerate sustainable forest finance.

Morocco was selected as one of the focus countries in the second phase, in recognition of its ambitious forestry strategy and its alignment with international climate and biodiversity commitments. The *Stratégie Forêts du Maroc 2020-2030*, launched in 2020, represents a significant paradigm shift in forest policy, prioritising participatory management, multifunctionality, restoration, and economic inclusion. Beyond the forestry strategy, it is also important to highlight Morocco’s Nationally Determined Contribution (NDC) and its carbon neutrality ambitions for 2050, in which forestry appears as a central pillar of the decarbonisation strategy and carbon-neutrality plan. In the NDC 3.0, currently being finalised, Morocco has also included a pipeline of forestry projects (8 in adaptation and 17 in mitigation), underscoring the strategic role of forests in its long-term climate vision.

Despite these ambitions, the financial ecosystem to support such a transition remains fragmented, undercapitalised, and often not fully aligned with the long-term needs of forest conservation and landscape resilience. The Moroccan forest sector

faces structural challenges, including delayed returns on investment, complex land tenure systems, limited access to affordable finance for smallholders and enterprises, and a lack of dedicated financial products for restoration and ecosystem services. At the same time, promising initiatives—such as carbon credit readiness efforts, conservation trust funds, and value-chain financing—are emerging and could be scaled with appropriate technical and financial support.

This country-level assessment seeks to provide a comprehensive and practical overview of Morocco’s forest finance landscape. Its primary objective is to identify existing and potential financial instruments that can help mobilise increased and more effective investment in forest management, reforestation, biodiversity conservation, and sustainable wood and non-wood value chains.

The methodology followed a standardised yet adaptable five-step approach:

- 1. Desk Review** – An extensive literature and data review, supported by ANEF, the EU Delegation to Morocco, and development partners.
- 2. Stakeholder Interviews** – 25 in-depth interviews with public, private, and civil society actors to capture real-world barriers and opportunities
- 3. Finance Mechanism Mapping**—Identification of operational and potential forest finance instruments, including public, private, and blended solutions
- 4. National Roundtable** – A stakeholder workshop to prioritise financial solutions and validate key issues.
- 5. Consultation and Validation** – Review of draft findings with stakeholders to ensure relevance, realism, and policy alignment.

The report is structured around four pillars: a review of Morocco's forest sector and finance performance; a diagnostic of current financing flows; an assessment of forest finance instruments; and a set of priority recommendations. This analysis faced several limitations related to data availability and project timing. First, national forestry expenditure data

remains fragmented, with limited disaggregation by financing source or programme outcome. In addition, data to quantify financing gaps are not readily available, and the analysis had to rely on a qualitative assessment to evaluate the gap. Finally, the time constraints of the current assignment limited the possibility for in-depth consultations with all stakeholders.

## Key findings

Morocco's forest estate—spanning over 9 million hectares, with Alpha grassland representing about 20-30% of forest coverage—is a key asset for climate adaptation, rural livelihoods, and ecosystem services. Yet the sector suffers from chronic underinvestment, particularly in areas such as productive forestry, non-wood forest product (NWFP) value chains, community-based restoration, and carbon sequestration. Our report highlights a financing gap of over EURO 200-300 million over five years, with severe shortfalls in private sector participation, long-term investment capital, results-based finance, and carbon markets. Public finance from the national budget and development partners (AFD, EU, World Bank, EIB, GIZ) remains the backbone of forest financing, accounting for over EURO 400 million mobilised in recent years. These flows have supported sectoral reform, institutional strengthening (including the creation of ANEF), and the rollout of participatory forest management. However, they are fragmented across multiple donors and programs, and rarely scaled to long-term or landscape-level impact.

To close the gap and modernise forest finance, this report proposes a set of seven priority financial solutions (see table below). These recommendations are designed to address structural barriers identified in our analysis, including the absence of risk-sharing mechanisms (e.g., guarantees), incentive-based models (e.g., PES), and investment pipelines suitable for capital markets (e.g., bonds). Each solution is tailored to Morocco's legal, institutional, and market realities, and can be pursued through targeted reforms and partnerships.

To succeed, these mechanisms will require policy clarification (e.g., for concessions, carbon rights, benefit-sharing), capacity-building within ANEF and other institutions, and dedicated technical assistance to design instruments and prepare investment-ready projects. Blended finance will be essential, combining public support, concessional donor funding, and catalytic private capital. With the right mix of instruments, Morocco can mobilise an estimated EURO 300-400 million in additional finance by 2030, while positioning itself as a regional leader in nature-based and climate-resilient development.

**Table 1. Forest finance solutions with potential in Morocco**

No	Recommendation	Expected Impact (Gap Addressed)	Support Needed (Policy, Market, Institutional)	Source of Finance	High / Medium / Low Priority
1.	National Forest Investment Platform	Fragmented funding, poor coordination across actors	Platform design, staffing, donor TA, inter-ministerial mandate (ANEF, MEF)	Public budget + Donor funding (AFD, EU, EIB)	High
2.	Strengthening the Existing National Forest Fund (NFF)	Lack of scalable and de-risked forest investments; need to pool capital for PES and restoration	Governance reform, capital diversification, integration of biodiversity indicators, blended facility structuring	Blended (EFSD+, AFD, EIB, GCF, private impact investors)	High
3.	Operationalise a National PES Framework	Lack of incentives for community restoration; absence of results-based finance	Legal framework, MRV system, benefit-sharing rules, registry, pilot sites	Blended finance (GEF, GCF, basin agencies, public budgets)	Medium
4.	Develop a Forest Carbon Market Readiness Roadmap	No operational forest carbon market despite high potential	Clarify carbon rights, host approval, project pipeline, carbon registry, MRV standards	Donors (LEAF Coalition, EIB, World Bank) + Carbon buyers	Medium
5.	Design a Guarantee Scheme for Forest Investments	Credit access constraints and investor risk aversion	Legal adjustments, product design, coordination with Tamwilcom and financial institutions	Blended – EFSD+, EIB, AFD, public capital	High
6.	Create a Dedicated Grant Facility for Forest-Based MSMEs	Undercapitalised cooperatives, lack of access to credit	Grant design, eligibility criteria, TA, regional delivery systems	Public budget + Donor funding (GIZ, AFD, USAID) with local FI involvement	Medium
7.	Issue Morocco's First Green or Biodiversity Bond for Forests	Absence of capital market instruments for forest investment	Project pipeline, ICMA alignment, MRV readiness, TA	Institutional issuers (CDG, CAM, BCP) + Donor support (EIB, EFSD+)	Low
8.	Introduce Climate Taxation Linked to Ecosystem Investment	No domestic revenue earmarked for forestry	Fiscal modelling, earmarking in Finance Law, inter-agency coordination	Public (national budget, CBAM, eco-taxes)	Medium

# Forest sector overview and performance gaps

## 3.1 Brief description of the main features of the forest sector

Morocco's forest sector plays a strategic role in environmental stability, biodiversity conservation, and rural livelihoods, while contributing more modestly to national economic output. The country's forest ecosystems are ecologically rich and diverse, spanning Mediterranean coniferous and broadleaf forests, high-altitude cedar groves, cork oak woodlands, Argan forests (endemic to Morocco), and steppe and Alpha grassland formations. This diversity places Morocco among the key biodiversity hotspots of the Mediterranean basin. Forest coverage is estimated at around 9 million hectares, representing approximately 12.7% of national territory, of which 20–30% consists of Alpha grasslands (ANEF, 2024). However, these ecosystems are increasingly threatened by overgrazing, fuelwood overharvesting, agricultural encroachment, and the growing impacts of climate change, including drought, desertification, and wildfires.

Economically, the forestry sector contributes around 2% of agricultural GDP and approximately 0.4% of total GDP, according to national data reported by the FAO (FAO, 2020). Yet the sector plays a disproportionately important role in supporting rural livelihoods. An estimated 500,000 people find employment in forestry-related activities—both directly and indirectly—including in timber harvesting, non-timber product collection, charcoal production, and seasonal labour (AfDB, 2022). Non-timber forest products—such as argan oil, medicinal and aromatic plants, honey, and cork—constitute a vital and growing source of income, with Morocco accounting for about 4% of the global cork market (PADIDZOF, 2022). At the same time, forest-

based subsistence activities remain widespread and largely informal, revealing a dual dynamic in forest use: productive and sustainable revenue streams coexist with unsustainable and degrading extraction practices, which are often the only accessible options for the poorest rural households. Morocco's forests also host more than 4,000 vascular plant species, nearly 20% of which are endemic, and shelter key fauna including the Barbary macaque and Cuvier's gazelle (FAO, 2020; World Resources Institute, 2023). These landscapes deliver critical ecosystem services such as soil stabilisation, water regulation, carbon sequestration, and protection against desertification, which are increasingly recognised in national policies and international donor programmes like the Global Forest Goals and PADIDZOF (UN DESA, 2021; AfDB, 2022).

Nonetheless, forest-dependent populations—estimated at over 3 million—remain highly vulnerable, with many reliant on unsustainable practices and lacking access to formal forest-based employment or resilient value chains. This perpetuates a cycle of rural poverty and ecological degradation, underscoring the urgency of transforming Morocco's forest economy through blended finance, regulatory reforms, and inclusive investment models. In addition, and despite this ecological wealth, Morocco's forests are not sufficiently productive to meet domestic wood demand. The country remains structurally dependent on wood imports, and the state collects more revenue from levies on imported wood than from domestic timber production, as noted in the financial review of the National Forest Fund (ANEF, 2024). This structural imbalance reflects low levels of commercial forest productivity and underinvestment in sustainable forest-based value chains. Finally, the wood transformation sector is underdeveloped and

uncompetitive, while private investment remains negligible due to regulatory and financial barriers. Institutional capacity, inter-agency coordination, and budgetary resources are insufficient to operationalise the scale and complexity of the strategy.

### 3.2 National Targets and Performance Gaps

Despite Morocco's significant forest endowment and the strategic ambitions of the *Forêts du Maroc 2020-2030*, forest-based livelihoods remain fragile and largely informal. Approximately 3 million people

rely on forests for subsistence uses, including fuelwood, grazing, and non-timber forest products (NTFPs), but have limited access to structured value chains, credit, or training. This lack of economic alternatives contributes to environmental degradation and entrenched poverty in rural areas. At the same time, a clear implementation gap exists between national policy and field-level results. Key targets for restoration, participatory governance, and forest-based employment are progressing slowly. Without targeted financial instruments and support systems, Morocco risks falling short of its goals for forest restoration, biodiversity conservation, and rural development.

**Table 2. National targets related to the forest**

Type of Target	Key Objective	Source	Target vs. Status Quo	Indicative Financing Gap (EUR million, 2024-2029)
Forest Restoration	Restore forest cover and degraded land.	Stratégie Forêts 2020-2030, NDC	Target: +133,000 ha reforested by 2030; Status: ~50,000-100,000 ha/year targeted, <80% success rate	<b>80-100</b> (nurseries, planting, maintenance, fire prevention)
Sustainable Forest Management	Implement forest management plans across all forest areas	Feuille de route, Action Plan	Target: 100% managed forests; Status: ~30% of forest classified under SFM (2023)	<b>25-40</b> (capacity-building, monitoring, governance)
Productive Forestry	Mobilise 120,000 ha of eucalyptus/pine through PPP concessions.	Stratégie Forêts 2020-2030	Target: Full concession deployment; Status: preparatory phases to be launched. This key reform depends on the Forest law enactment, however, the latter has not yet been submitted to Parliament vote (since at least 2018), it is still being discussed in specific commissions.	<b>20-30</b> (PPP preparation, infrastructure, risk-sharing)
Forest-based Employment	Generate 27,500 direct forest-related jobs (participatory, productive, ecotourism)	Stratégie Forêts 2020-2030	Target: 9,500 (participative), 6,000 (productive), 12,000 (ecotourism); Status: early implementation	<b>15-25</b> (local enterprises, training, eco-tourism pilots)
Participatory Governance	Create 200 Forest Development Organisations (ODF) and 500 territorial facilitators.	Feuille de route, Action Plan	Target: 200 ODF, 500 facilitators; Status: <50 ODF active, pre-pilot phase scaling up. Note: these targets are being revised downward.	<b>10-20</b> (facilitators, ODF support, contracts)
Biodiversity & Protected Areas	Expand and manage 10 National Parks with a functional ecotourism offer.	Stratégie Forêts 2020-2030	Target: 10 PNs, 1M tourists/year; Status: pilot underway (e.g. Parc Ifrane), phased rollout to 2026	<b>20-30</b> (ecotourism infra, park mgmt, monitoring)
Wood Production & Industry	Increase domestic wood production by 30% and reduce dependency on imports.	Stratégie Forêts 2020-2030	Target: +30% production; Status: domestic supply still low, industry value chains unstructured	<b>15-25</b> (value-chain investment, processing)
Argan Forest & NTFPs	Develop 50,000 ha of Argan plantations and support cooperatives	NDC, Forest Policy	Target: 50,000 ha; Status: partially underway via Arganier Plan and pilot cooperatives	<b>10-20</b> (plantations, cooperative support, certification)
Forest Digitalisation	Modernise forest management via digital tools and forest inventory	Feuille de route	Target: full digital rollout; Status: plans in development, IT platforms being procured	<b>5-10</b> (inventory, GIS, monitoring tools)
Seed & Nursery Systems	Professionalise and privatise forest nursery systems	Feuille de route, Action Plan	Target: 1 pilot public nursery, PPP model; Status: framework established, AAP pending	<b>5-10</b> (nursery infra, PPP set-up, training)

## Assessment of current levels of finance and investment

Public funding from the Ministry of Agriculture, Maritime Fisheries, Rural Development, and Water and Forests (MAPMDREF) remains the primary source of forest sector financing in Morocco, supporting reforestation, infrastructure development, and surveillance. However, allocations are often unpredictable and insufficient to meet the sector's strategic needs. Morocco's Sustainable Forest Management (SFM) approach is also supported by key international partners, including AFD (EURO 100 million), the EU (EURO 58 million), the World Bank (EURO 84 million in preparation), GEF (EURO 10.26 million), GIZ (EURO 20 million), and EU member states (EURO 45.6 million via twinning). Despite this support, resources remain fragmented and inadequate to sustainably manage Morocco's 9 million hectares of forest, with persistent gaps in staffing, monitoring, and infrastructure.

Restoration and reforestation are core priorities of the national strategy, which aims to restore 133,000 hectares of land by 2030. Current efforts reach up to 100,000 hectares annually, though survival rates remain low due to underfunded nurseries and limited local engagement. Programs like PADIDZOF and Terre Verte contribute to ecosystem rehabilitation; however, long-term maintenance remains underfunded. Similarly, NWFPs offer livelihood opportunities, especially for women and youth, yet remain undercapitalised and poorly integrated into formal markets due to a lack of certification, packaging, and access to finance.

The productive forestry sector is also underdeveloped. Although Morocco has over 120,000 hectares of eucalyptus and pine plantations, investment is constrained by unclear land tenure, regulatory hurdles, and low returns. The concession model shows potential

but remains in early stages. Protected areas also lack sustained funding and professional management. Promising pilots, such as those in Ifrane National Park, highlight the potential for ecotourism and biodiversity enterprises; however, broader scaling requires more substantial investment and coordination. Environmental services and ecosystem-based finance, such as carbon credits, PES, and biodiversity offsets, are still largely unrealised. Despite Morocco's participation in global initiatives like the Bonn Challenge, there are no operational forest carbon projects or PES frameworks due to legal, institutional, and technical barriers. Scaling these mechanisms will require new legislation, valuation tools, and MRV systems.

The Moroccan forest sector faces persistent and systemic financing constraints that undermine the sustainability of forest management and the effectiveness of the national forestry strategy. One of the most critical challenges lies in the mismatch between current public budget cycles and the long-term nature of forest restoration and maintenance. Forest ecosystems require sustained, multi-year investments for reforestation, fire prevention, biodiversity conservation, and soil regeneration; yet, funding is often allocated on a short-term, annual basis, limiting continuity and impact. Furthermore, incentives for community engagement remain underfunded, despite the central role of participatory governance in the *Forêts du Maroc 2020-2030* strategy. The lack of structured and predictable financing mechanisms, such as a fully operational and capitalised NFF, further restricts the ability to channel resources efficiently toward local initiatives. Forest-based cooperatives and small and medium-sized enterprises (SMEs) also face challenges in accessing credit and investment due to their informal

status, weak collateral, and limited financial literacy. This hampers the development of value chains for non-timber forest products, ecotourism, and sustainable wood production.

The estimated financing gap of EURO 200-300 million over the next five years must be addressed to achieve national restoration targets, fulfil international commitments, and build a resilient, low-carbon forest economy. This gap is sourced from the internal financial diagnostics and investment needs assessment underpinning the implementation of the *Stratégie Forêts du Maroc 2020-2030*, as presented in various donor and planning discussions involving ANEF, MEF, and international partners (including AfDB and AFD). ANEF calculated the financing gap based on estimated unit costs of reforestation, community engagement, biodiversity monitoring, and fire prevention across target hectares identified in the strategy. The projection spans a five-year horizon (2024–2029) and includes cost escalations based on an assumed inflation rate of 3% per annum, with no discounting applied to ensure alignment with

government budget planning. Baseline investment levels from public budgets and donor financing were subtracted to estimate the net gap of EUR 200-300 million.

Data availability for forest finance tracking in Morocco remains limited. There is no centralised or publicly accessible system to consolidate national, regional, and donor-level funding data. While ANEF and other ministries collect project-level information, it is fragmented and lacks standardisation, hindering coordination and strategic planning. Forest and biodiversity budget tagging is not yet applied within national public finance systems, making it challenging to align expenditures with climate and environmental goals. Meanwhile, natural capital accounting is still in its early stages of development. Strengthening data systems and institutional capacity—especially by integrating forest inventories, protected area monitoring, and satellite tools—will be crucial to enhancing transparency, informing investment decisions, and facilitating access to results-based finance.

**Table 3. Forest sector Investments and main gaps (EUR million)**

Main Sector(s)	Amount of investment	Source (Donor / Partner)	Type of Support
Forest restoration, participatory forestry, biodiversity, and institutional reform	100.0	AFD	Loan + Project Grants
Governance reform, protected areas, biodiversity, capacity-building	55.0 <sup>1</sup>	EU	Budget Support + TA+Twinning
Investment for national parks and value chain reinforcement	87.8	AfDB	Project Investment + TA support
Inclusive forest development, restoration, and forest value chains	84.0	World Bank	Project Investment
National parks and watershed restotation	100+14	EIB/EU	Blending/investment
Forest governance, decentralisation, and monitoring systems	20.0	GIZ	Technical Assistance
Conservation, biodiversity, and climate adaptation	10.26	GEF	Grants
Women's cooperatives, local economy, and non-wood forest products	4.0	USAID	Grants
Human resource development, planning tools, and sustainable forest management	3.0	JICA	Technical Assistance
Institutional capacity, digital forestry, and legal reform	45.6	Various EU Members	Institutional Cooperation
Climate resilience, ecotourism, community forestry, and carbon market readiness	15.0	Others	Grants and Technical Support

<sup>1</sup> The EU, under TERRE VERTE (totaling 115M partly to agriculture and partly to forestry), is currently funding to the forest sector: 50M of budget support; another 2.6M of TA; another 1.2M dedicated to a twinning project with ANEF. On top of that, ENFI is part of a consortium which has benefitted from a 4M Grant.

# Assessment of Forest Finance solutions and instruments

## 5.1 Forest finance solutions and instruments applied in Morocco

Unlocking the full potential of forest finance solutions in Morocco depends on a set of foundational enablers that cut across all financing instruments. Strengthening land and resource tenure security (especially for local communities and cooperatives) is critical to de-risk investments and enable inclusive co-management. Secure tenure is also a precondition for accessing compensation schemes, forest contracts, and benefit-sharing mechanisms. In parallel, Morocco must invest in robust monitoring, reporting, and verification (MRV) systems, including geospatial forest inventories, biodiversity tracking, and results-based monitoring linked to payments (e.g. for “mise en défens” or future PES schemes). The progressive rollout of a national green taxonomy aligned with EU and international standards will help classify forest-positive investments and facilitate green budgeting, climate tagging, and access to concessional or blended finance. Finally, advancing governance reforms, such as the decentralisation of ANEF operations, clearer fiduciary rules for the National Forest Fund, and stronger interministerial coordination (notably with MEF and MAPMDREF), will be essential to ensure that financial flows are transparent, targeted, and transformational. Together, these cross-cutting enablers provide the institutional backbone for scaling up effective, equitable, and accountable forest finance.

### 5.1.1 Public finance

Public finance remains the dominant source of funding for Morocco’s forest sector. It is mobilised through the national budget under the Ministry of Agriculture, Maritime Fisheries, Rural Development and Water and Forests (MAPMDREF), and primarily executed by the National Agency for Water and Forests (ANEF). Annual budget allocations range from MAD 1.5 to 2 billion (EUR 140–190 million), covering operations such as reforestation, fire prevention, forest governance, and protected area management. These funds are disbursed as budgetary appropriations to ANEF, which manages them through a combination of central programmes and delegated credits to regional and provincial forest services. Unlike subsidies or credit lines, public finance in this sector is not typically channelled through loans or matching grants to third parties; instead, it funds direct public service delivery and infrastructure investment, including support to community engagement programmes and technical capacity. While this model ensures strong state oversight, it limits flexibility and innovation. Investment in biodiversity finance, ecosystem services (e.g., PES or carbon markets), and forest-based industries remains modest. Moreover, challenges persist around fragmented budget lines, limited transparency, and the lack of multi-year planning. To improve efficiency and impact, Morocco must strengthen green budget tagging, decentralise budget execution further, and enhance inter-agency coordination, particularly between ANEF, the Ministry of Economy and Finance, and territorial authorities. Establishing a Forest Investment Platform could consolidate domestic and external funding streams, align resources with national restoration priorities, and crowd in co-financing for transformative initiatives.

**Table 4. Public finance as a forest finance solution**

Finance Solution	Impact and Effectiveness	Scalability	Alignment with Global Frameworks	Inclusiveness	Market Potential
Public finance (including Fiscal Reforms, Green Budgeting, etc.)	Moderate to high: Key enabler for basic services and institutional reform, but limited innovation.	High: Can be scaled nationally with reforms and multi-annual planning.	Strong alignment with NDCs, SDGs, and the Global Biodiversity Framework.	Moderate: Supports local actors through programs but lacks direct targeting mechanisms.	Moderate: Indirectly supports market readiness, but limited crowd-in of private capital.

### 5.1.2 Concessional lending

Concessional lending has become a key pillar of Morocco's forest finance strategy, offering long-term, low-interest capital that aligns with the sector's extended investment horizons and environmental goals. These loans play a critical role in advancing the objectives of the *Forêts du Maroc 2020-2030* strategy, which emphasises large-scale restoration, participatory forest governance, and rural economic development. Recent commitments exceed EUR 400 million. Notably, the EIB is providing EUR 100 million (2024-2028) for forest and biodiversity resilience, including a technical assistance component. The AFD is providing EUR 100 million in the form of budgetary support (policy-based programmes), disbursed directly into the national treasury, and EUR 3 million in technical assistance. This support is aligned with forest sector reform milestones, and co-finances key actions such as the digitalisation of forest management, the implementation of participatory governance mechanisms, and institutional strengthening within ANEF. Similarly, the World Bank has allocated EUR 58 million as policy-based budget support, accompanied by EUR 23.7 million in targeted funding to reinforce forest governance, green job creation, and climate-resilient landscapes. As with AFD, World Bank disbursements are done within policy-based programmes and linked to policy triggers, including legal reforms, decentralisation measures, and improvements in public financial management.

Once received, these concessional funds are incorporated into the general budget and reallocated by the Ministry of Economy and Finance (MEF) in coordination with MAPMDREF and ANEF. They are used to finance both structural and operational components of the forest strategy. This includes allocations to the ANEF operating budget, support for community forestry programmes, and in some cases, the design of green public expenditure mechanisms such as subsidies for

cooperatives, ecosystem-based restoration contracts, and potentially, loan facilities for value chain actors. Although these funds do not flow directly as grants or credit lines to beneficiaries, they often enable the public sector to absorb project preparation costs, subsidise local initiatives, and leverage further blended or private capital.

### 5.1.3 TA support

Technical assistance (TA) is a cornerstone of Morocco's forest sector transformation. It enables institutions and stakeholders to design, implement, and monitor reforms under the *Forêts du Maroc 2020-2030* strategy. While concessional loans provide the capital, TA ensures the capacities, systems, and partnerships needed to deliver results on the ground.

The European Union (EU) provides approximately EURO 50 million focused on budget support, with an additional EURO 2.6 million for TA under the Terre Verte programme. The EU has been instrumental in supporting the operationalisation of ANEF, the development of territorial forest contracts, digital monitoring tools, and natural capital accounting systems. AFD complements its EURO 100 million loan with EURO 5 million in TA, deeply embedded in implementation. It has supported the rollout of participatory governance mechanisms, digital forest management tools (GIS, cadastral systems), and local planning capacities. AFD's TA also contributed to pilot forest concessions, safeguard protocols, and decentralised institutional coaching. The EU, under a blending project with EIB, contributes EURO 4 million in TA and EURO 10 million in investment grant to strengthen gender roadmap implementation, climate resilience planning and biodiversity monitoring. At the same time, KfW (EURO 4.6M) and GIZ (EURO 5.5M) focus on PES design, decentralisation, and protected areas. Canada (EURO 7M) supports gender-responsive

and indigenous knowledge approaches to restoration. Other contributors include FFEM (EURO 3.8M), FAO (EURO 0.3M), AfDB (EURO 0.3M), Korea (EURO 1.4M), and JICA through targeted support on fire prevention, governance, and innovation.

Collectively, these efforts have supported the establishment of ANEF, participatory models (ODFs), early warning systems, and alignment with Morocco's NDC, NBSAP, and Land Degradation Neutrality goals. However, challenges remain: TA coordination is uneven (The multiplication of TAs represents a strength but also a real steering and coordination challenge for ANEF), impacts at the local level are inconsistent, and TA is not always linked to investment preparation or scaled deployment. To enhance effectiveness, Morocco could establish a national TA coordination platform under ANEF, expand community-level support (ODFs, cooperatives), and deploy modular TA packages tailored to local forest contexts. Linking TA to project development—such as pre-feasibility and safeguards—would further strengthen its catalytic role in unlocking blended finance. Technical assistance remains a strategic pillar of Morocco's forest finance architecture. With more structured delivery and integration, it can amplify the impact of investments and drive lasting transformation across Morocco's forest landscapes.

#### **5.1.4 The National Forest Fund (Fonds National des Forêts)**

The National Forest Fund (NFF) of Morocco, or Fonds National Forestier, stands as one of the country's longest-standing financial mechanisms dedicated to forest management and conservation. Established in 1949 and formalized in its current structure in 1961, the FNF operates as a special account of the national treasury, allowing it to retain unspent funds from one fiscal year to the next. This institutional autonomy, paired with its legal mandate, enables the NFF to play a critical role in supporting Morocco's efforts to restore degraded landscapes, conserve biodiversity, and promote sustainable forest use.

The NFF is entirely capitalized through domestic resources, a distinctive feature among forest funds in the Global South. Its main revenue streams include a 12% tax on imported wood, a 20% tax on the sale of primary forest products from state forests, and levies linked to forest recognition procedures, road maintenance, and deforestation. The NFF had an annual allocation of 750 million MAD in 2024, but

only 500 million MAD was actually disbursed to the central budget. The remaining amount (approximately 250 million MAD) may be carried forward or reserved for future operations. With a total forest investment budget of 1.5 billion MAD, the NFF accounted for a significant share—around 33%—of the overall funding for activities carried out by the Ministry of Water and Forests.

Through these funds, the NFF has financed a broad portfolio of biological and technical interventions: reforestation programs, regeneration and sylvo-pastoral improvement, nursery operations, and ecosystem restoration. A particularly innovative feature of the FNF is its compensation scheme for "mise en défens"—a result-based payment approach wherein sylvo-pastoral associations are financially compensated in exchange for excluding grazing or agricultural activities from forest regeneration zones (see more details below). This mechanism, while not a pure payment for ecosystem services (PES) in the classical sense, represents a PES-like scheme that supports both environmental outcomes and local livelihoods. Payments range from USD 27 to 38 per hectare per year, depending on the ecosystem type.

Between 2005 and 2011, more than 80,000 hectares were protected through this mechanism, with over 14,000 individuals engaged through local associations. These successes reflect not only the fund's financial capacity but also the social engineering expertise of Morocco's forest administration, which plays a pivotal role in mobilising communities and facilitating co-management agreements.

Despite its impact, the FNF faces institutional and operational limitations. Its governance remains restricted to the forest administration and the Ministry of Finance, limiting transparency and stakeholder engagement. Monitoring and evaluation systems do not yet integrate biodiversity indicators, and decentralisation is limited, in contrast to more dynamic forest fund models such as Vietnam's VNFF. Moreover, the FNF's potential to leverage private sector contributions—particularly from tourism, water utilities, or ecosystem service beneficiaries—remains largely untapped. To fully realise its potential, the FNF could benefit from a strategic reform agenda: opening its governance to civil society and private actors; diversifying its funding sources through polluter-pays and beneficiary-pays approaches; introducing biodiversity metrics into its M&E framework; and exploring its role as an intermediary for REDD+ or other ecosystem service markets.

### 5.1.5 Payment for ecosystem services

Payment for Ecosystem Services (PES) presents Morocco with a promising yet largely untapped approach to financing sustainable forest management. PES schemes involve compensating individuals or communities who maintain, restore, or enhance ecosystem services, such as clean water, carbon sequestration, or biodiversity conservation, through direct or indirect payments from beneficiaries of those services. In doing so, PES aligns ecological stewardship with economic incentives, creating a pathway for rural development and environmental protection to reinforce one another.

In the Moroccan context, PES remains in an early conceptual stage. While the *Forêts du Maroc 2020-2030* strategy and international commitments like the Bonn Challenge and AFR100 acknowledge the role of nature-

based solutions, there is currently no operational PES scheme at the national level. Initial efforts have focused on exploratory studies and pilot proposals, particularly in forested watersheds and protected landscapes where the benefits of improved land use, such as erosion control or water quality, can be clearly demonstrated. Technically, PES requires a robust enabling environment: a clear definition of the ecosystem services being provided, identification of the service providers and beneficiaries, mechanisms to transfer compensation, and reliable systems to monitor and verify outcomes. In Morocco, potential applications have been explored in upper watershed areas such as Oued Assif el Mal, where reforestation and controlled grazing could benefit downstream water users. However, these pilots remain isolated and are not yet part of a structured or funded national framework.

**Table 5. Case Study: Compensation for Forest Plot Fencing as an Environmental Payment Mechanism in Morocco**

#### Background

The “mise en défens” compensation scheme in Morocco was officially introduced in 2020, as part of the launch of the national strategy *Forêts du Maroc 2020-2030*. It was one of the flagship innovations proposed under the participatory forest management pillar of the strategy, aiming to: (i) encourage community involvement in forest restoration, (ii) reduce overgrazing and land degradation, and (iii) pilot performance-based incentives for rural populations. The scheme was operationalised shortly after the royal launch of the strategy by His Majesty King Mohammed VI in February 2020, and initial pilot contracts were rolled out between 2020 and 2021 in selected provinces of the Middle Atlas, including Ifrane, Khénifra, Azilal, and Béni Mellal. The introduction of the scheme also coincided with the institutional restructuring of Morocco’s forest governance, including the creation of ANEF and the deployment of animateurs territoriaux (territorial facilitators) to work directly with local populations.

#### Objective and Concept

The mechanism is based on a simple principle. In exchange for voluntarily fencing off a forest plot for a specified period (typically two to three years), beneficiaries receive a financial incentive of MAD 1,000 per hectare (MAD 250 in its earlier version). This payment compensates for the opportunity cost of foregoing activities such as grazing, woodcutting, or plant harvesting, while actively involving communities as partners in ecosystem restoration. The initiative was initially piloted in ecologically sensitive areas prone to desertification and land degradation—such as the provinces of Beni Mellal, Azilal, Khénifra, and Ifrane—where forest ecosystems are under significant pressure.

#### Implementation and Governance

ANEF coordinates the scheme in collaboration with local authorities and newly created Forest Development Organisations (Organisme de Développement Forestier or ODF) as part of Morocco’s reformed forest governance model. Territorial facilitators are responsible for liaising with communities, identifying forest users, and formalising their participation through fencing contracts. Plots to be fenced are selected through a participatory process based on their degradation status, ecological importance, and community usage. A monitoring map is developed, and compliance is verified through field inspections.

**Table 5.** Continued**Results Observed**

Initial results from pilot areas show high community uptake, driven by the mechanism's clarity and the immediate visibility of financial benefits. Several hundred hectares have been fenced in the Middle Atlas, with early signs of natural regeneration seen after two growing seasons, particularly in holm oak and cedar ecosystems. Beyond the ecological gains, the mechanism has helped to ease tensions between forest authorities and users, shifting from a model of enforcement to one of contractual engagement and incentives.

**Recent results:**

- The annual compensation rate has been significantly increased from 250 DH/ha/year to 1 000 DH/ha/year, and 1 100 DH/ha/year in argan forest zones in 2024
- Coverage by local community structures includes 300 forestry cooperatives with over 18 000 members as of 2024
- [lesiteinfo.com](http://lesiteinfo.com)
- Scale of protection: By 2018, the scheme had covered more than 124 000 ha across 200+ community associations
- Between 2020 and 2024, the government registered 480 000 ha of forests, securing them via this mechanism—with a further 250 000 ha planned by end of 2025

Currently, Morocco needs to strengthen its public funding stream for PES, with most activity limited to donor-funded feasibility studies. However, PES holds strong financing potential from sources like the Green Climate Fund (GCF), GEF, EFSD+, and domestic actors such as water utilities, municipalities, and tourism operators, who benefit from ecosystem services but lack precise mechanisms to invest in them. PES could be viable in degraded catchments, park buffer zones, reforestation areas, and culturally significant landscapes. Key challenges include the absence of a formal PES policy, fragmented monitoring systems, limited buyer awareness, and a lack of intermediaries to support smallholders. To advance PES, Morocco should develop a national framework, launch pilots in priority landscapes, and link these to MRV systems and forest inventories. Early-stage funding could be blended from public and climate finance sources. Capacity-building, clear benefit-sharing rules, and participatory design will be critical to ensure equitable and effective implementation. With targeted reforms and strong institutional coordination, particularly among ANEF, basin agencies, and donors, PES can become a strategic tool to finance restoration, incentivise community stewardship, and align with Morocco's forest, climate, and biodiversity goals.

**5.1.6 Blended finance**

Blended finance is emerging as a key solution to bridge Morocco's forest sector investment gap by strategically combining public, concessional, and donor funds with private capital. Blended finance is defined as the strategic use of development finance for the mobilization of additional finance towards the forestry sector with a particular emphasis on leveraging private capital that would otherwise not be invested. It combines concessional finance from public and donor funding sources with commercial capital, using tools such as guarantees, debt, and TA to reduce risk and improve investment scalability. Designed to lower risks and catalyse co-financing, this model is well-suited to the forestry sector, where returns are long-term, social co-benefits are high, and commercial capital remains hesitant. Though not yet formalised as a dedicated facility, blended finance is already being applied in Morocco. As indicated earlier, several flagship operations exhibit blended characteristics. AFD's EURO 100 million concessional loan, paired with EURO 5 million in technical assistance, supports governance reform and participatory forest management, laying the foundations for future public-private engagement. Similarly, EIB's EURO 100 million loan (2024-2028) incorporates a EURO 10 million TA envelope and is designed to be complemented by EFSD+ guarantees, targeting carbon, ecotourism, and biodiversity-positive ventures. The PADIDZOF program, led by AfDB, channels EURO 84 million in loans, EURO 31.2 million in national co-financing, and GEF grants to promote inclusive forest value chains and rural economic development.

As Morocco advances toward more sustainable and inclusive forest management, blended finance is a critical enabler—combining public and concessional funding with private capital to bridge the forest sector's persistent investment gap. Forestry, with its long investment cycles and strong environmental and social co-benefits, remains unattractive to most commercial financiers. Yet, through well-designed risk-sharing mechanisms and strategic partnerships, local banks are slow to play a more prominent role in unlocking green investment opportunities. The investment profile of the forestry sector—marked by long payback periods, unclear revenue streams, land tenure complexity, and limited bankable pipelines—makes forestry inherently unattractive to most commercial financiers. To date, only a handful of Moroccan banks are actively engaged in forest-related financing, primarily due to these structural constraints. Among these, Crédit Agricole du Maroc (CAM) stands out as the most strategically positioned institution. With a clear rural mandate and strong ties to agricultural and forest-dependent communities, CAM has already managed concessional credit lines from AFD and the African Development Bank. Its experience in financing climate-smart agriculture and rural value chains makes it a natural intermediary for channelling blended finance into forest-related investments, particularly in reforestation, sylvo-pastoral systems, and non-timber forest product cooperatives. CAM is also well-suited to administer EFSD+ backed instruments or new green credit lines emerging from EIB and GEF-supported programs. Other Moroccan banks are increasingly relevant in this space. Banque Centrale Populaire (BCP), with its extensive regional network and strong presence among cooperatives and SMEs, could play a pivotal role in scaling up investments in ecotourism, forest entrepreneurship, and community-led conservation. BMCE Bank of Africa, recognised for its sustainability commitments, may also become a key partner for biodiversity-positive ventures or carbon-linked investment platforms. Meanwhile, Attijariwafa Bank, Morocco's largest financial institution, offers potential for engaging in larger-scale forest-based infrastructure projects, primarily through public-private partnerships.

Despite these efforts, Morocco lacks a unified framework to structure, scale, and de-risk forest investments systematically. A national blended forest finance platform, hosted by ANEF or a specialised intermediary, could serve as a coordination hub to

pool resources, manage guarantees, prepare bankable projects, and engage investors. It would also align investments with national climate and biodiversity targets. Priority sectors for blended financing include productive forestry (e.g., eucalyptus and pine), NWFP value chains, degraded land restoration, and nature-based enterprises. Unlocking this potential requires well-structured financial instruments, robust technical assistance, and targeted risk-sharing tools such as guarantees and subordinated capital. With leverage ratios of 1:3 to 1:10 achievable, strategic public contributions could unlock significant private capital. Finally, scaling blended finance will depend on a substantial project pipeline, built through feasibility studies, investment design, and aggregation of local initiatives. Support for cooperatives and SMEs, often excluded from mainstream finance, will be key to ensuring inclusive and impactful outcomes. In short, blended finance is no longer theoretical in Morocco's forestry sector. The next step is to consolidate scattered efforts into a coherent strategy, one that turns emerging practice into a transformative financial architecture for forest resilience and inclusive green growth.

## 5.2 Finance solutions and instruments not applied in the country

### 5.2.1 Fixed-income instruments

Green and blue bonds are effective instruments for channelling capital into environmental priorities. In Morocco, the green bond market has seen promising development since its first issuance in 2016, with national guidelines and legal frameworks now aligned with international standards. However, these instruments have yet to be used for the forestry sector. This gap is not due to legal constraints but to the absence of a pipeline of investment-ready forest projects that meet bond market requirements in terms of scale, returns, and measurable outcomes. So far, green bonds have been deployed mainly in the energy, water, and transport sectors with clearer revenue models and consolidated planning.

While institutional capacity exists in entities like CDG, Masen, and ONEE, forestry institutions such as ANEF lack the technical systems and experience needed to structure and issue labelled bonds. Significant support would be needed to establish impact tracking systems, use-of-proceeds frameworks, and credible repayment sources based on forest-related revenue or climate

finance. Nonetheless, Morocco's successful use of green bonds in other sectors shows the approach is feasible. If supported by donor-backed guarantees and performance-based financing, green or biodiversity bonds could help finance reforestation, carbon credit generation, ecosystem restoration, or non-wood forest product value chains. Initial efforts should focus on aggregating bankable forest investments and developing a framework aligned with ICMA principles.

In summary, while no green or blue bond has yet targeted Moroccan forests, the institutional and regulatory foundations are in place. With stronger project preparation and investor engagement, these instruments could play a key role in scaling nature-based finance and supporting national climate and biodiversity goals. Thematic bonds specifically designed to fund the forestry sector may show promise in the longer term. Several IFIs/DFIs have expertise in green and sustainability bond markets, and are uniquely positioned to support Morocco in structuring and launching its first forest-themed bonds. For instance, as the pioneer issuer of the world's first green bond in 2007, the EIB brings decades of experience not only as an issuer, but also as an anchor investor and strategic advisor. In the Moroccan context, the EIB could act as a cornerstone buyer of forest-themed bonds, purchasing a portion of an issuance by a domestic financial intermediary—such as Crédit Agricole du Maroc (CAM) or Banque Centrale Populaire (BCP)—and thereby signalling confidence to other private investors. This crowding-in effect could accelerate the development of Morocco's nascent sustainable finance market while channelling capital directly into biodiversity-positive and carbon-aligned forest ventures. In addition, through its EFSD+ Guarantee, the EIB could absorb first-loss risk, enabling Moroccan banks to issue forest-linked bonds even in the face of perceived market uncertainty. Additionally, the Bank could offer technical assistance to local issuers—helping them adopt international green bond standards, structure eligible investment portfolios (e.g., reforestation, PES, ecotourism), and meet stringent monitoring and reporting requirements. The IFI's involvement would also facilitate the integration of the forest sector into local and regional capital markets, offering longer tenors, retrocession mechanisms (i.e., passing on IFI's cost advantages), and potential issuance in Moroccan dirhams to attract domestic institutional investors.

### 5.2.2 Private equity

Equity investment offers a promising yet underutilised pathway to mobilise long-term private finance for Morocco's forest sector. Unlike debt, equity allows investors to share in the risk and return of projects, making it especially suitable for sectors such as sustainable forestry, reforestation, and biodiversity conservation: sectors, which are characterised by long investment horizons and complex environmental dependencies. Globally, equity-based funds have supported landscape restoration, agroforestry, and carbon credit projects, often tied to measurable environmental and social outcomes. In Morocco, however, equity investment in forestry is still in its infancy. Legal and institutional constraints remain significant: forests are part of the public domain, and private actors cannot own forest land or obtain long-term exclusive concessions. While participatory governance and delegated management models have been introduced, they fall short of the tenure security and revenue rights equity investors typically require. The planned development of a concession framework, enabling co-management of productive forests under long-term contracts, offers a critical opening for future equity participation.

Market readiness is slowly emerging. Morocco has cultivated a community of impact investors and blended finance partners active in infrastructure and renewables. However, forestry lacks the bankable project pipelines and commercial value chains needed to attract equity. Viable investment models based on carbon markets, sustainable timber, NWFPs, and ecotourists require technical preparation, strong local partnerships, and a return profile of at least 7–10% to be competitive.

Experience from intermediaries and project developers shows that equity can work when paired with project development capacity, certification (e.g., Verra, Label Bas Carbone existing in the EU), and delivery partners. These actors co-develop bankable, verified projects with built-in safeguards and performance incentives, targeting both environmental outcomes and investor returns. This model highlights that equity capital alone is insufficient; long-term success depends on bundled support—technical assistance, implementation capacity, and social inclusion. To replicate such models, Morocco could establish a dedicated forest equity fund, with public or donor co-financing. This fund would invest in landscapes suited to future concessions (e.g., eucalyptus, cork oak) or in carbon-rich ecosystems eligible for voluntary carbon markets. Alongside capital, the fund would need to support aggregation, risk-sharing mechanisms, and investor-aligned governance frameworks.

To date, no equity-based forest fund exists in Morocco. However, with rising investor interest in nature-based solutions, alignment with global biodiversity and climate agendas, and ongoing policy reform, the conditions are becoming favourable. Unlocking this opportunity will require clear legal rights, a robust pipeline of investable projects, and integrated financing structures that reward long-term environmental performance.

### **5.2.3 Carbon market (Voluntary)**

The voluntary carbon market (VCM) presents a compelling, results-based financing mechanism for Morocco to mobilise private capital in support of its forest restoration, climate mitigation, and biodiversity goals. As global demand for high-quality, nature-based carbon credits continues to grow—driven by corporate net-zero commitments and increased interest in biodiversity co-benefits—countries with large forest areas and ambitious restoration plans, such as Morocco, are well-positioned to benefit. However, despite this potential, Morocco has yet to operationalise a single forest-related carbon project under any of the leading voluntary standards. Realising this opportunity will require coordinated regulatory reform, institutional readiness, project development capacity, and investment in foundational infrastructure.

Legally, Morocco does not currently impose formal restrictions on the development of voluntary carbon projects. It has ratified the Paris Agreement and is aligned with the emerging guidance on Article 6 of the UNFCCC. This leaves the door open for voluntary market activity. However, Morocco has yet to define a national carbon finance strategy, nor has it clarified its position on critical issues such as corresponding adjustments, credit ownership, or benefit-sharing mechanisms. As such, while there are no legal prohibitions, the regulatory uncertainty discourages investors and certifiers from engaging with Moroccan projects. For example, without official host country approval or alignment with national climate accounting, international buyers may hesitate to purchase Moroccan credits for fear of double-counting or future disqualification under Article 6.

Developing a credible voluntary carbon market in Morocco would therefore require the establishment of a clear regulatory framework, including the designation of an authority responsible for approving carbon projects, the publication of eligibility guidelines, and procedures for verifying and tracking emissions reductions. Morocco should also define its policy on corresponding

adjustments and establish a process for endorsing voluntary projects, particularly those that are expected to contribute to its Nationally Determined Contributions (NDCs). From a market readiness standpoint, Morocco lacks the basic infrastructure required to register and trade forest carbon credits. There is no domestic carbon registry, no standardised procedures for project validation and verification, and no public pipeline of investable carbon projects. In addition, forest governance and land tenure issues remain unresolved in many areas, complicating the assignment of carbon rights or the development of long-term agreements with local communities. A functional carbon market will require land tenure clarity, secure long-term access or usage rights for project developers, and legal recognition of carbon as a tradable environmental asset.

Morocco will also need to build an ecosystem of accredited service providers, including project developers, carbon measurement experts, legal advisors, MRV (monitoring, reporting, and verification) firms, and third-party certifiers, to ensure project credibility and compliance with international standards such as Verra (VCS), Gold Standard, or Plan Vivo. This ecosystem is still nascent in Morocco, and most local actors, such as cooperatives, ANEF field offices, and even some public institutions, lack familiarity with how the voluntary market operates. As a result, capacity building is urgently needed across the value chain, from public authorities and project developers to community beneficiaries and financial institutions. Another critical enabler will be the development of carbon pricing benchmarks, valuation tools, and benefit-sharing models that are accessible to forest users, cooperatives, and municipalities. This includes ensuring that communities who protect or restore forests are fairly compensated for their efforts, either through direct cash transfers, in-kind support, or shared project revenue.

ANEF could play a catalytic role in coordinating and scaling forest carbon initiatives. However, this would require equipping ANEF with technical expertise, regulatory authority, and inter-agency coordination capacity. ANEF could lead the design of carbon project templates, help facilitate access to land and baseline data, and oversee safeguards to ensure social and environmental integrity. Coordination with the Ministry of Energy Transition and Sustainable Development is also essential to ensure consistency between carbon project development and Morocco's broader climate commitments.

To kick-start the market, Morocco could benefit from launching a limited number of pilot forest carbon projects, ideally in priority areas for restoration and community co-management. These pilots would serve not only to test technical methodologies and institutional procedures, but also to build public trust, demonstrate benefits to local populations,

and attract international buyers. Support from development partners, such as the World Bank, EIB, AFD, and the LEAF Coalition, could be leveraged to co-finance these pilots, support transaction costs, and provide guarantees or advance purchase commitments to reduce market entry risk.

**Table 6. Case Study: The Voluntary Carbon Market Mechanism in Morocco**

As Morocco seeks to scale up its forest restoration and biodiversity goals, the voluntary carbon market (VCM) offers a high-potential pathway to attract private capital into forestry. The diagram above outlines a project finance model that has been successfully deployed in other jurisdictions—especially in Europe under frameworks like Label Bas Carbone—and could be adapted to the Moroccan context.

In this model, the central player is the project developer or implementing partner, who serves as the operational hub, linking upstream actors (e.g. forest owners, cooperatives, technical intermediaries) with downstream stakeholders (e.g. corporate offset buyers, financial investors, and carbon certifiers). In Morocco, such a model could be piloted in selected degraded forest landscapes—such as in the Middle Atlas or southern Rif regions—where communities are already engaged in forest management and where reforestation or avoided degradation activities can generate measurable carbon benefits.

The first layer of the model involves forest owners or managers, which in Morocco would not be private individuals, but ANEF as custodian of state-owned forests, or communities operating under participatory forest management agreements. In some areas, collectives or cooperatives may have partial user rights, particularly under grazing or non-wood product regimes. These forest owners would work in partnership with technical intermediaries—such as cooperatives, federations, or syndicates—to implement restoration activities. These could include tree planting, grazing restriction (*mise en défens*), enrichment planting, and soil and water conservation. These technical actors are critical for ensuring day-to-day implementation and for managing relations with local beneficiaries.

The project developer would sit at the centre of the operation, bundling projects, designing methodologies, and ensuring alignment with voluntary certification standards such as Verra (VCS), Gold Standard, or Label Bas Carbone (adapted for Moroccan contexts). The developer would be responsible for compiling the baseline studies, managing data collection, and coordinating third-party verification and MRV systems. This role could be played by an experienced NGO, a specialised firm (such as Hummingbirds or Reforest'Action), or a hybrid public-private platform.

On the financing side, the project would seek upfront funding from a mix of investors, including impact funds, climate finance facilities, or concessional public instruments (e.g. from AFD, EIB, or EFSD+). These investors would provide early-stage capital to fund project development, monitoring, and upfront restoration costs, with a view to recovering their investment through the sale of verified carbon credits over time. Once verified, the carbon credits generated would be sold to final beneficiaries, typically international or domestic companies—such as airlines, financial institutions, luxury brands, or service providers—seeking to offset part of their carbon footprint. These buyers would purchase credits based on pre-agreed offtake contracts or through carbon marketplaces. The revenue from credit sales would then flow back through the system, enabling: (i) repayment of investor capital with modest returns (typically 5–10%), (ii) ongoing funding for project maintenance and community engagement, (iii) and revenue-sharing with local partners or forest users, based on clear benefit-sharing agreements.

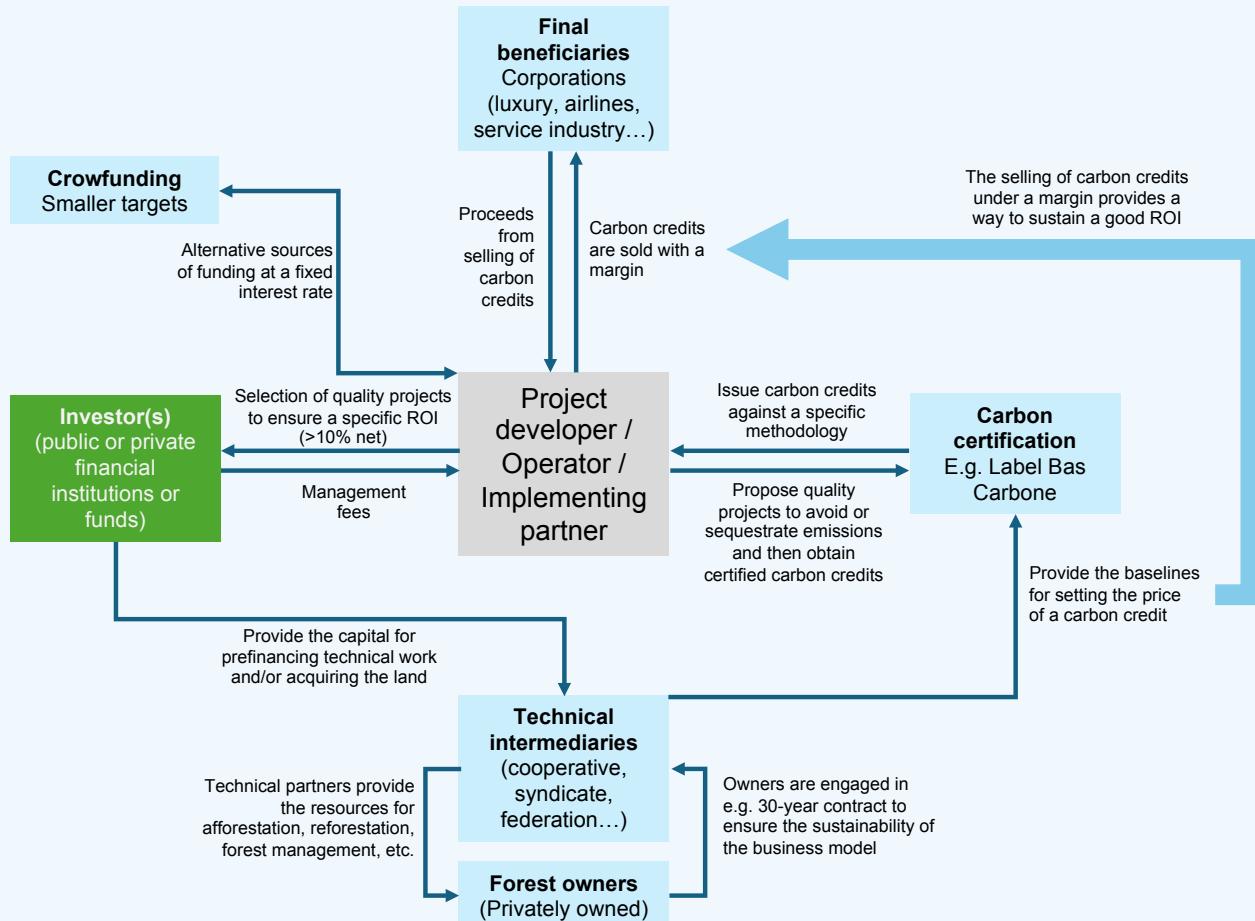
**Table 6.** Continued

To operationalise this model in Morocco, several steps would be required:

- Legal and institutional preparation: ANEF and the Ministry of Energy Transition would need to clarify rules around carbon ownership, benefit-sharing, and host-country authorisation for VCM projects.
- Pilot site selection: Suitable territories would be identified based on restoration potential, community readiness, and biophysical suitability for carbon sequestration.
- Project developer support: A national or international entity would be selected or incubated to manage the first generation of projects, working in coordination with ANEF and local actors.
- Technical assistance and capacity building: Training for forest agents, cooperatives, and local officials on carbon monitoring, data collection, and certification standards would be essential.

- Investor engagement: Impact investors and carbon buyers would be brought into early discussions, potentially through pre-purchase agreements, performance guarantees, or blended finance mechanisms.
- Certification alignment: Methodologies compatible with Moroccan forest types (e.g. holm oak, cork oak, cedar) would be adapted, and projects would be registered with internationally recognised standards.

This model would not only unlock climate finance but also contribute to biodiversity goals, rural employment, and long-term forest stewardship. In doing so, it would demonstrate that Moroccan forests—though publicly owned—can become a viable and investable asset class when structured through multi-stakeholder partnerships and carbon-linked incentives. Such a pilot would set the foundation for scaling voluntary carbon finance across the country, while reinforcing Morocco's leadership in combining ecological restoration, rural development, and green investment.



### 5.2.4 Derisking (Guarantees)

Guarantees are a vital tool for unlocking private investment in high-risk or long-term sectors—conditions that accurately reflect much of Morocco's forest economy. Globally, guarantees are used to de-risk reforestation, carbon projects, and biodiversity-based enterprises. Yet in Morocco, despite growing financing needs, guarantee instruments remain largely absent from forest-sector finance. Legally, there are no barriers to their use. Morocco employs guarantees in infrastructure, energy, and agriculture, including sovereign and risk-sharing arrangements with international partners. Forestry, however, has not benefited, mainly due to a lack of bankable forest investments and unclear institutional responsibility for managing risk. Moreover, because forests are publicly owned, investment risks are difficult to allocate under traditional private-sector models.

Market readiness is mixed. Instruments like the EFSD+ offer flexible EU-backed guarantees that could reduce revenue, credit, or political risk for forest projects. But Morocco's institutions lack experience in designing and deploying these tools, particularly for community-managed landscapes or returns that are diffuse and long-term. Institutional capacity is a key barrier. While the Ministry of Economy and Finance has experience managing guarantees, agencies like ANEF would require technical support to serve as credible partners. National financial institutions, such as Tamwilcom or CDG Capital, have utilised guarantees in other sectors but not in forestry, primarily due to the limited risk assessment frameworks for nature-based investments. This presents a significant opportunity: creating a national forest guarantee mechanism—either as a window within an existing institution (e.g., Tamwilcom) or as part of a broader green finance initiative. Such a mechanism could offer partial credit guarantees, first-loss protection, or performance-based coverage to support forest concessions, carbon finance, or SME lending for forest value chains.

Though Morocco has no precedent for forest guarantees, lessons from energy and agriculture show they can reduce early-stage risk and enable private investment. In energy, they have supported renewable power purchase agreements; in agriculture, they've helped banks lend to smallholders with public risk coverage. A tailored guarantee scheme could:

- Secure concession-based forestry investments with unclear tenure or revenue flows;
- Backstop carbon credit delivery to meet certification and buyer requirements;
- Support cooperative lending where collateral is weak;
- Enhance credit ratings for green bonds or impact funds focused on restoration.

### 5.2.5 Investment grants

Micro, small, and medium-sized enterprises (MSMEs) play a critical role in Morocco's rural and forest-adjacent economies, particularly in areas such as non-wood forest product (NWFP) processing, ecotourism, sustainable land use, and environmental services. Yet, despite their economic and social relevance, MSMEs operating in or near forest landscapes face persistent barriers to investment: limited access to finance, weak collateral, lack of technical capacity, and exposure to environmental risks. Investment grants—small-scale, performance-linked capital injections—have emerged globally as an effective tool to address these barriers and accelerate the transition of micro, small, and medium-sized enterprises (MSMEs) toward sustainable and green business models. In Morocco, this instrument is legally viable and operational in other sectors, but remains underused in forest-related value chains, even if the EU is contributing to a EURO 10 million investment grant under an EIB investment programme.

From a regulatory perspective, there are no legal constraints to deploying investment grants for MSMEs in Morocco. On the contrary, national development strategies actively promote entrepreneurship and green innovation, including through subsidised programs and donor-supported matching grants. Several grant-based schemes exist under industrial and agricultural ministries. Still, forest-specific enterprises—such as cooperatives engaged in essential oils, wild honey, wild fruits, medicinal plants, cork, or eco-agroforestry—are rarely targeted directly. Their exclusion is primarily due to a lack of sectoral coordination and project identification, rather than legal incompatibility.

In terms of market readiness, there is clear and growing demand among forest-linked MSMEs for investment support. Many rural cooperatives and small businesses have promising products and local

market access but struggle to scale due to a lack of machinery, working capital, certification, or branding support. Yet commercial banks are reluctant to lend to these entities, given their informality, lack of collateral, and high perceived risk. Investment grants can serve as catalytic finance to unlock follow-on lending or co-financing from other sources. Morocco's experience in agriculture, craft industries, and solar energy shows that when grants are paired with technical assistance and simplified application procedures, take-up can be rapid and impactful.

A particularly relevant model is the Green Economy Financing Facility (GEFF), implemented by the European Bank for Reconstruction and Development (EBRD) in Morocco and other countries. GEFF combines three components: (1) concessional credit lines channelled through local banks; (2) technical assistance to MSMEs for business development, energy audits, and investment planning; and (3) performance-based investment grants, typically covering 10–15% of eligible expenditures for green technologies or sustainable practices. While GEFF has so far focused on energy and water efficiency, its structure could be adapted to nature-based enterprises, with eligible investments ranging from NWFP processing equipment and sustainable packaging to biodiversity-friendly infrastructure and carbon farming start-ups.

On the institutional capacity side, Morocco has a relatively well-developed ecosystem for MSME support, including public entities such as Tamwilcom, the Ministry of Industry, and regional investment centres (CRIIs), as well as non-governmental intermediaries like development NGOs and cooperative federations. However, most of these actors have limited familiarity with forest-linked MSMEs or nature-based business models. A tailored facility for green forest MSMEs would require institutional alignment with ANEF, local forest authorities, and actors active in ecosystem restoration and community development. It would also benefit from donor coordination and integration with broader climate and biodiversity finance flows.

Despite the absence of a dedicated forest MSME grant program to date, Morocco has experimented with similar tools in adjacent sectors. The INDH (National Human Development Initiative), for example, has deployed small grants for rural cooperatives and social enterprises in priority provinces, with modest but measurable results. In the green finance space,

projects led by GIZ and AFD have piloted matching grants for renewable energy and sustainable agriculture, often with strong local uptake (AFD has a scheme operated with Crédit Agricole du Maroc). These experiences show that when investment grants are clearly targeted, accessible, and tied to technical support, they can significantly improve the viability of micro and small green enterprises.

To build on this momentum, Morocco could establish a dedicated green investment grant facility for forest-linked MSMEs, potentially under the umbrella of a larger climate adaptation or biodiversity financing program. The facility could:

- Offer small grants (e.g. EURO 5,000–EURO 25,000) to eligible cooperatives, eco-enterprises, or women-led initiatives;
- Be administered through decentralised forest offices or regional investment platforms;
- Require environmental or social impact criteria (e.g. deforestation avoidance, community employment, value chain integration);
- Be linked to technical assistance on business planning, market access, and impact monitoring.

Such a scheme could also serve as a blending platform, allowing MSMEs to access concessional credit from local banks (as in GEFF) or participate in donor-funded ecosystem service programs (e.g. PES or voluntary carbon market pilots). The presence of a small grant component can de-risk larger investments, validate business models, and establish the track record necessary for follow-on financing.

### 5.2.6 Climate taxation

Climate-related taxation is gaining traction globally as a tool to curb emissions and raise predictable revenues for green investment. For Morocco—where the *Forêts du Maroc 2020–2030* strategy and NDCs commit to scaling nature-based solutions—climate taxes offer a largely untapped pathway to mobilise domestic finance for forest and biodiversity protection. Legally, there are no obstacles. Morocco's Finance Law framework enables the creation of targeted fiscal tools, and the 2023 law introduced a domestic carbon tax on certain imports aligned with the EU's Carbon Border Adjustment Mechanism. Selective eco-taxes also exist in the energy and transportation sectors. Yet no climate taxes are currently linked to land use, forestry, or biodiversity, nor are green revenues earmarked for ecosystem investment. This lack of dedicated channels weakens the fiscal link between polluting sectors and environmental outcomes.

Market readiness is improving. Morocco is aligning with global climate finance trends and is pursuing a green industrial policy. But awareness of climate taxation remains limited, and political sensitivity—especially in rural areas—requires careful design and stakeholder engagement. Institutionally, Morocco has the capacity to implement climate taxes. The Ministry of Economy and Finance, the Tax Administration, and the Ministry of Energy Transition are actively involved in fiscal reform, but their ties to forest actors, such as ANEF, are limited. Cross-sector coordination, economic modelling, and policy coherence will be needed to develop viable instruments that can fund reforestation, fire prevention, or ecosystem restoration. Previous fiscal reforms, such as plastic bag bans and pollution fees, offer a starting point but were not designed to support natural capital. The Fonds pour la Protection et la Sécurité de l'Environnement (FPSE) collects pollution levies but lacks transparency and rarely funds forest initiatives.

Looking ahead, Morocco could explore several tax options:

- A carbon tax on high-emission sectors, earmarked for restoration;
- A forest-use or land degradation levy;
- A “climate solidarity” tax on air travel or luxury goods;
- A biodiversity share of eco-tax or CBAM revenues.

Global experience shows these instruments are most effective when paired with public communication, compensation for vulnerable groups, and transparent revenue allocation. Given its legal status as a treasury-managed special account with a proven track record in channelling domestic revenues toward reforestation and ecosystem restoration, Morocco’s NFF is ideally positioned to receive future climate-related tax revenues. Unlike general budget mechanisms, the NFF has a clear mandate to support sustainable forest management and can deliver targeted, transparent, and traceable environmental spending. *Channelling* proceeds from carbon or eco-taxes into the NFF would strengthen the fiscal link between polluting activities and ecosystem repair, closing the loop between climate action and natural capital investment. Moreover, doing so would ensure alignment with the country’s *Forêts du Maroc 2020-2030* strategy and unlock co-benefits for biodiversity, water regulation, and rural livelihoods.

### 5.2.7 Debt-for-Nature Swaps

Debt-for-Nature Swaps (DfNS) are financial mechanisms whereby a portion of a country’s external debt is cancelled or restructured in exchange for domestic investments in environmental protection, including reforestation, biodiversity conservation, or forest governance reform. In theory, DfNS can unlock new funding for critical ecosystem services while alleviating sovereign debt burdens. In the context of Morocco’s forest sector—characterized by increasing pressure from land degradation, climate change, and rural poverty—such instruments may appear attractive at first glance.

However, there are several compelling reasons why Morocco should not prioritize Debt-for-Nature Swaps as a central financing tool for its forest strategy. First, the scale of fiscal benefit from DfNS is often modest, especially for middle-income countries like Morocco. These swaps usually involve small portions of bilateral or commercial debt and deliver limited liquidity compared to the country’s overall forest investment needs. Yet, they demand complex negotiation processes, legal arrangements, and the establishment of dedicated environmental funds—efforts that may divert institutional energy away from more direct and efficient sources of finance. Second, the forest sector in Morocco is already embedded in a broader national strategy—the *Forêts du Maroc 2020-2030* roadmap—which has strong alignment with international donors and public-private investment programs. Through existing partnerships with entities such as AFD, FAO, and the Green Climate Fund, Morocco has access to concessional loans, technical grants, and blended finance models that are better suited to scaling reforestation, agroforestry, and biodiversity initiatives. These channels are faster to deploy and more flexible in terms of design and governance. Third, the governance and implementation capacity required for DfNS is not insignificant. Successful swaps often necessitate the creation of new financial entities or conservation trust funds with multi-stakeholder oversight—something that could prove burdensome or duplicative given Morocco’s already complex institutional landscape for forest and land use management.

In conclusion, while Debt-for-Nature Swaps may offer technical value, they are not the most strategic instrument for accelerating Morocco’s forest sector financing. Instead, Morocco would benefit more from

scaling results-based payments, climate-resilient forest bonds, and payment for ecosystem services (PES) mechanisms, solutions that align with the country's policy priorities, financing scale, and institutional capabilities.

### 5.2.8 Summary

Morocco has made progress in green finance, but most instruments remain underutilised for the forestry sector. While green and blue bonds have been successfully issued for energy and water, no forest-focused bond has yet emerged due to limited project pipelines and monetisation models. Private equity is promising, especially through dedicated funds, but legal constraints on land ownership and a lack of clear concession frameworks restrict investor engagement. The voluntary carbon market (VCM) offers strong potential, yet remains dormant due to regulatory uncertainty, institutional inexperience, and

lack of certified projects. Guarantees could play a transformative role in de-risking forest investment, particularly through mechanisms like EFSD+, but no such tools are currently deployed in the sector. Investment grants for MSMEs are legally viable and impactful in other sectors, but have not been tailored to nature-based enterprises. A grant facility linked to forest cooperatives could unlock value chains in NWFPs, ecotourism, and restoration. Climate taxation, though legally feasible and aligned with Morocco's fiscal system, has not been leveraged to support forest finance. With no earmarking or natural capital allocation, green taxes remain disconnected from biodiversity investment.

Overall, strong policy frameworks exist; however, a combination of legal reform, institutional capacity, and financial innovation is necessary to activate and scale these instruments for Morocco's forests.

**Table 7. Summary of potential financial solutions for the forestry sector**

Finance solution	Regulatory constraints	Market readiness	Institutional capacity	Past attempts
<b>Green/Blue Bonds</b>	Morocco has a legally sound framework for green/blue bonds aligned with ICMA standards. However, forestry projects are not yet listed in national green investment taxonomies, limiting eligibility for labelled bond issuance.	There is proven investor demand for green bonds in Morocco's infrastructure and energy sectors. However, no forest bond pipeline or monetisation model currently exists to structure forestry-related issuances.	Institutions like CDG and MASEN have the experience to issue bonds, but ANEF lacks technical capacity for bond structuring, MRV systems, and aligning forestry with ICMA principles. Therefore TA support is required from IFIs/DFIs to develop the right market conditions.	Green bonds were successfully issued for solar energy (MASEN) and water infrastructure (ONEE), but no initiatives have targeted reforestation, forest conservation, or biodiversity finance.
<b>Private Equity</b>	Current forest laws prohibit private ownership or long-term leasing of public forest land, which limits the legal basis for equity-based investment. Concession reforms are under discussion but not yet enacted.	Impact and climate investors are active in Morocco, but forestry lacks structured, revenue-generating business models. Risk-adjusted return expectations for equity investors remain unmet in this sector.	Morocco lacks specialised forest investment funds. ANEF and local institutions have limited experience with investor engagement or private project development in the forest sector.	No equity fund focused on forestry has been launched. Small-scale equity investments in agriculture or land use exist, but forestry remains excluded due to tenure insecurity and revenue risks.
<b>Voluntary Carbon Market</b>	There are no legal prohibitions against voluntary carbon projects, but the absence of a defined national carbon policy, host country approval framework, and benefit-sharing regulations creates uncertainty.	There is strong international demand for high-quality carbon credits, especially from nature-based solutions. However, Morocco lacks registered forest projects, verified methodologies, and transaction platforms.	No national carbon registry exists, and institutions lack clarity on roles. ANEF and relevant ministries need capacity building to authorise, monitor, and integrate carbon projects with national goals.	Feasibility studies for forest carbon projects were conducted by NGOs and research centers. None have reached registration due to cost, uncertainty in regulation, and lack of verification capacity.

*continued on next page*

**Table 7.** Continued

Finance solution	Regulatory constraints	Market readiness	Institutional capacity	Past attempts
<b>Guarantees (De-risking)</b>	No legal obstacles exist for using guarantees. However, no forest-specific guarantee schemes have been created, and standard instruments are not yet tailored for ecosystem restoration or forest value chains.	International DFIs offer guarantee tools for climate finance. Market actors show interest, but Moroccan banks and project developers are unfamiliar with structuring guarantees for forest-related investments.	While MEF and national banks have used guarantees in other sectors, ANEF and commercial banks need training and tools to apply de-risking instruments to forestry and ecosystem services.	Guarantees have supported solar, wind, and agriculture projects in Morocco. None have been used in forest-related investments, and no structured risk-sharing facilities exist for this purpose.
<b>Investment Grants (MSMEs)</b>	Public finance laws allow for non-reimbursable grants to MSMEs, and national strategies promote entrepreneurship. Yet no legal mechanism prioritises or earmarks grants for forest-based enterprises.	Rural MSMEs show high interest in upgrading their operations for value-added forest products. However, they face high credit risk and limited access to finance without grant-based incentives.	National MSME support agencies (e.g., Tamwilcom, CRIs) and NGOs have strong implementation capacity, but few have worked in forest-linked sectors or developed green product lines for rural cooperatives.	Grant programs exist under INDH and donor-funded initiatives for agriculture and crafts. However, forest enterprises are not explicitly targeted, and access by cooperatives remains limited.
<b>Climate Taxation</b>	Morocco permits environmental taxation through the Finance Law process. Selective eco-taxes exist, but no forest-specific levies or climate taxes are earmarked for forestry or biodiversity investment.	Public and policy awareness of climate taxation is limited. Fiscal reform is gaining traction, but climate-linked levies are not yet linked to forest policy or environmental spending.	The Ministry of Finance and related agencies are capable of designing climate taxes. However, inter-agency coordination with ANEF and biodiversity agencies is weak, and tagging of environmental spending is rare.	Environmental levies on plastic bags and vehicles have been implemented. Revenues have not been earmarked for nature-based investments, and no climate or biodiversity funds are in place.

### 5.3 Availability and gaps of baseline data (climate, biodiversity, social) and MRV systems

The availability of reliable baseline data and robust Monitoring, Reporting, and Verification (MRV) systems is a critical enabler for forest finance instruments, especially those linked to results-based payments, carbon markets, biodiversity credits, and climate adaptation. In Morocco, however, data coverage across key domains remains uneven and fragmented. Regarding climate indicators, Morocco has developed national greenhouse gas inventories and vulnerability assessments; however, ecosystem-level carbon baselines for forested landscapes are currently limited. There is a lack of spatially explicit data on carbon sequestration potential, soil carbon stocks, and emissions from land-use change at the local level. In the biodiversity domain, Morocco has a strong network of protected areas and species inventories, but lacks consistent habitat-level monitoring and indicators

of ecosystem integrity. Many forest areas lack georeferenced biodiversity baselines or repeatable monitoring protocols aligned with international standards. Socio-economic data, particularly related to forest-dependent livelihoods, access to resources, and land tenure, is outdated or scattered across various local and national institutions. This poses challenges for designing benefit-sharing mechanisms and ensuring that social co-benefits of forest projects are captured and verified.

Finally, MRV systems remain underdeveloped, with no unified national platform or standardised tools to track environmental and social outcomes across forest investments. Data fragmentation, low technical capacity at the local level, and limited integration with global standards (e.g. for carbon or biodiversity certification) are key constraints. Closing these data and MRV gaps will be essential to de-risk investments, enable access to climate finance, and build trust in performance-based forest finance mechanisms.

# Recommendations for Forest Finance solutions and instruments

## 6.1 Brief summary of main findings

A mix of public and international financing instruments supports Morocco's forest sector. Over EURO 400 million has been mobilised in recent years through grants, loans, and technical assistance, targeting key reforms and investments under the Forêts du Maroc 2020-2030 strategy. These investments have supported institutional restructuring (notably ANEF), reforestation pilots, participatory forest governance, and policy alignment. However, they remain insufficient to cover the EURO 200–300 million financing gap over the next five years and are unevenly distributed across subsectors.

Despite important progress, Morocco's forest finance architecture faces several bottlenecks:

- **Fragmentation and underutilization of instruments:** While concessional lending and TA are active, tools such as guarantees, equity, green bonds, and PES remain largely untapped or undeveloped.
- **Weak investment pipelines:** There is a shortage of mature, investment-ready projects, especially for private and blended finance.
- **Legal and institutional hurdles:** Lack of concession frameworks, unclear carbon rights, and limited fiscal devolution constrain private sector engagement.
- **Low financial access for MSMEs:** Cooperatives and forest-based enterprises face barriers to capital, equipment, and scale.
- **Limited climate finance access:** Morocco underutilizes international funds (e.g. GCF, GEF, REDD+), and struggles to align project design with donor criteria.

- **Monitoring and valuation gaps:** MRV systems, baseline data, and natural capital accounting are still in development, impeding PES and carbon credit schemes.

To address these challenges, Morocco should pursue a set of priority interventions to both scale existing instruments and develop underused solutions:

### A. Strengthen and Scale What Exists

- **Public Finance:** Improve budget traceability, integrate biodiversity/climate tagging, shift to multi-year programming, and review of domestic funding mechanisms for the forest sector (NFF and earmarked fees and taxes).
- **Concessional Loans:** Pair with technical assistance and de-risking tools to enhance absorption and impact.
- **Technical Assistance (TA):** Establish a national TA coordination platform; focus more support on local actors and project development.

### B. Activate Underdeveloped but Viable Instruments

The NFF could serve as the anchor institution to receive, manage, and deploy funds—especially revenues from climate taxation, eco-levies, and carbon finance. As a dedicated conservation trust fund, the NFF already meets many institutional prerequisites: legal recognition, operational track record, and a mandate to support reforestation, forest restoration, and community-based conservation. Globally, trust fund models have been successfully deployed to finance protected areas and biodiversity programs, providing transparent, long-term, and blended funding. In Morocco, the NFF can be upgraded and linked to new instruments in a modular, scalable finance platform. The emerging blueprint could include:

- **Blended Finance Platform:** Establish a national vehicle that pools public, donor, and private funds under a layered capital structure. Managed in coordination with the NFF, this platform could absorb risk through concessional tranches and guarantees, and support both public goods and commercially viable ventures.
- **Guarantee Mechanisms:** Develop forest-specific guarantees—channelled via Tamwilcom or managed directly by ANEF—to de-risk investments in forest concessions, community PES schemes, and green MSME lending.
- **Voluntary Carbon Market (VCM):** Advance a regulatory framework for forest carbon, define carbon rights, and pilot certification models. The NFF could act as a benefit-sharing intermediary, ensuring equity, environmental integrity, and monitoring of results.
- **Equity Fund for Forest Ventures:** Launch a public-donor-backed equity vehicle to finance project developers and implementing partners in agroforestry, ecotourism, or rewilding. Returns would be modest but structured for reinvestment and scale.
- **Investment Grants for MSMEs:** Create a facility offering €5,000–25,000 investment grants, linked to technical assistance and climate or biodiversity outcomes. Targeted beneficiaries could include cooperatives, youth- and women-led initiatives, and community enterprises.
- **Green and Biodiversity Bonds:** In partnership with the EIB and local financial institutions, develop pipelines for forest-linked bond issuance. These could fund bundled reforestation or conservation portfolios, backed by transparent MRV systems and aligned with EU taxonomy standards.
- **Climate Taxation:** Introduce targeted instruments—such as forest-use levies, carbon solidarity taxes on air travel, or a biodiversity share of CBAM proceeds—and earmark revenues directly into the NFF. This fiscal linkage would align polluter-pays principles with ecological restoration.
- **Payments for Ecosystem Services (PES):** Launch a national PES framework and pilot localised schemes through basin agencies, municipalities, or tourism stakeholders. The NFF could serve as the payment channel and monitoring hub, ensuring accountability and results-based disbursement.

In short, Morocco has laid the groundwork for transformational change in forest finance, but the next phase must focus on scaling what works, unlocking private capital, and structuring innovative instruments. Priority actions include building a blended finance facility, piloting guarantees and carbon projects, and equipping ANEF and local actors with the tools to develop and deliver bankable, nature-based solutions. With the right reforms, Morocco can close its forest finance gap and become a regional leader in sustainable, inclusive forest investment.

## 6.2 Recommendations

Based on the analysis, the following recommendations can be made:

### 1. Establish a National Forest Investment Platform

- **Description:** Create a national platform to coordinate forest finance across public, private, and donor stakeholders. The platform would centralise investment opportunities, match financing sources with projects, and improve planning and transparency. It would serve as an interface for forest sector investment tracking and pipeline aggregation.
- **Expected Impact:** Addresses fragmentation in funding and weak alignment across institutions, impeding efficient use of resources and investment scale-up.
- **Feasibility:** Requires a policy mandate, inter-ministerial collaboration (ANEF, MEF), and digital infrastructure supported by technical assistance.
- **Lead:** Government
- **Potential Sources of Funding:** Public (ANEF, MEF) and donor (AFD, EU, EIB) contributions.
- **Time Horizon:** Short-term for platform design (2025–2026); medium-term for operationalisation.

### 2. Strengthening the Existing National Forest Fund (NFF)

- **Description:** Building on international evidence and national experience, Morocco should expand the mandate and operational scope of its National Forest Fund (NFF) into a forest-focused blended finance facility. This structure would pool public, donor, and private capital into layered investment vehicles, complemented by technical assistance, risk guarantees, and concessional financing. It would support investments in reforestation, non-wood forest

products (NWFPs), and ecosystem services, and serve as the core financial platform to operationalise Payments for Ecosystem Services (PES) models.<sup>2</sup>

- **Expected Impact:** This approach directly responds to the investment constraints identified in the forest sector—namely high upfront risks, long return periods, and fragmented funding. A restructured NFF would enable Morocco to channel climate and biodiversity finance more effectively into scalable, socially inclusive nature-based solutions, echoing successful international models such as Costa Rica's FONAFIFO and Vietnam's VNFF.
- **Feasibility:** As emphasized in the study by Liagre et al. (2021), the Moroccan NFF already exhibits many foundational features of a PES-like instrument and can evolve into a more catalytic role. However, success will depend on improved governance openness, capital diversification, and integration of biodiversity indicators into its monitoring and evaluation system.
- **Lead:** Government
- **Potential Sources of Funding:** AFD, EIB, EFSD+, GCF, and private impact investors.
- **Time Horizon:** Short-term for platform design (2025-2026); medium-term for operationalisation, aligned with Morocco's green finance roadmap and the implementation of the Forêts du Maroc 2020-2030 strategy.

### 3. Operationalise a National PES Framework

- **Description:** Implement a Payments for Ecosystem Services (PES) framework to reward communities and users for forest protection, restoration, and environmental service delivery. Build on existing mise en défens programs with a formalised MRV and benefit-sharing system.
- **Expected Impact:** Addresses the lack of incentives for local actors and the absence of results-based financing to maintain restored areas over time.
- **Feasibility:** High; requires legal definitions, institutional coordination, registry, and capacity for results monitoring.
- **Lead:** Government
- **Potential Sources of Funding:** Blended – GEF, GCF, water basin agencies, public budgets.

<sup>2</sup> For information, Article 16 of Law 52-00 specifies that the revenues of ANEF are composed, among others, of transfers from the **National Forest Fund (FNF)** and the **Hunting and Inland Fisheries Fund (FCPC)**. These transfers are also provided for under Articles 15 and 16 of the Finance Law 2022, which complement the provisions relating respectively to the FNF and the FCPC.

- **Time Horizon:** Immediate for pilot projects; medium-term for national rollout (2026-2027).

### 4. Develop a Forest Carbon Market Readiness Roadmap

- **Description:** Prepare a national roadmap to establish Morocco's presence in the voluntary carbon market, with guidance on project approval, carbon rights, and MRV standards. The roadmap will enable pilot projects and unlock nature-based climate finance.
- **Expected Impact:** Addresses the complete absence of forest carbon projects despite Morocco's high sequestration potential.
- **Feasibility:** High; depends on regulatory clarification, carbon ownership guidance, and institutional roles for verification and tracking.
- **Lead:** Government
- **Potential Sources of Funding:** Donors (LEAF Coalition, EIB, World Bank), private sector buyers.
- **Time Horizon:** Immediate for roadmap development; pilot projects by 2026-2027.

### 5. Design a Guarantee Scheme for Forest Investments

- **Description:** Establish a national forest guarantee scheme—possibly hosted by Tamwilcom—to de-risk investments in concessions, restoration, NWFP cooperatives, and carbon ventures. Products could include partial credit guarantees or performance-based coverage.<sup>3</sup>
- **Expected Impact:** Addresses credit access constraints and risk aversion among banks and private investors toward forest-linked activities.
- **Feasibility:** Requires legal adjustments, product design, and institutional coordination with financial institutions.
- **Lead:** Government for the national component and EUD for the EFSD+ component, if EFSF can be mobilized in Morocco.
- **Potential Sources of Funding:** Blended – EFSD+, EIB, AFD, public capital.
- **Time Horizon:** Medium-term (2027-2028).

<sup>3</sup> It is worth mentioning two relevant EFSD+ guarantee schemes that could provide useful lessons. The EDFI Carbon Sinks facility supports investors in scaling up equity investments in forestry and regenerative agribusiness, while the DFCD Aya Scalable Solutions mechanism is designed to de-risk and mobilise private capital for climate-resilient projects with strong nature-based components. Although neither currently covers Morocco (to be confirmed), their design and early implementation experience illustrate how EFSD+ guarantees can help de-risk long-term, high-impact forestry and land-use investments. Replication in the Moroccan context remains to be proven, given the country's specific regulatory and institutional constraints; however, assessing these models could help identify options to adapt or leverage similar risk-sharing approaches for forestry projects in Morocco.

## 6. Create a Dedicated Grant Facility for Forest-Based MSMEs

- **Description:** Provide small investment grants to MSMEs and cooperatives engaged in NWFPs, ecotourism, and restoration-related enterprises. Grants would be performance-based and linked to technical assistance and impact monitoring.
- **Expected Impact:** Addresses undercapitalisation of MSMEs, lack of access to finance, and weak links to green value chains.-
- **Feasibility:** High; requires administrative structure, eligibility criteria, and coordination with ANEF regional offices.
- **Lead:** Government (ANEF with the partnership of donors)
- **Potential Sources of Funding:** Public and donor funds (GIZ, AFD, USAID).
- **Time Horizon:** Immediate for piloting (2025-2026).

## 7. Issue Morocco's First Green or Biodiversity Bond for Forests

- **Description:** Design and issue a framework for green or biodiversity bond to mobilise institutional capital for reforestation, biodiversity conservation, and sustainable forest infrastructure. Projects would be bundled and aligned with ICMA principles. Even if the issuance of such bonds targeting forestry is not realistic for short and medium term, this recommendation is still relevant on the longer term.

- **Expected Impact:** Addresses the absence of large-scale, capital market-aligned investment vehicles for the forest sector.
- **Feasibility:** Medium; regulatory framework exists, but requires project preparation and MRV readiness.
- **Lead:** Main donors, e.g. EIB, AFD...
- **Potential Sources of Funding:** Institutional investors, with donor de-risking (EIB, EFSD+).
- **Time Horizon:** Medium to long-term (2027+).

## 8. Introduce Climate Taxation Linked to Ecosystem Investment

- **Description:** Develop fiscal instruments such as carbon levies, travel surcharges, or land-use taxes with earmarking for forest and biodiversity investments. Climate taxation can provide predictable domestic finance for restoration and fire prevention.
- **Expected Impact:** Addresses the lack of sustainable domestic funding sources for forest-related ecosystem services.
- **Feasibility:** High, within the Finance Law framework; requires inter-ministerial agreement and fiscal modelling.
- **Lead:** Government
- **Potential Sources of Funding:** National public budget through earmarked climate-related revenues.
- **Time Horizon:** Medium to long-term (2027-2030).

## 6.3 Summary

Title of Recommendation	Expected Impact	Feasibility	Potential Sources of Funding	Time Horizon
<b>Establish a National Forest Investment Platform</b>	Improves coordination and coherence of fragmented funding flows across public, donor, and private sources.	Requires inter-ministerial mandate, ANEF leadership, and donor support for platform design and governance.	ANEF, MEF, AFD, EU, World Bank (institutional support)	Short-term to medium-term (2024–2026)
<b>Strengthening the Existing National Forest Fund (NFF)</b>	<p>Addresses financial risk barriers and catalyses private investment into forest restoration and value chains.</p> <p>Enables Morocco to channel climate and biodiversity finance into scalable, socially inclusive forest investments. Builds on successful international models (e.g., Costa Rica, Vietnam).</p>	NFF already functions as a PES-like instrument. Scaling up requires improved governance, diversified capitalization, and biodiversity-linked MRV systems.	AFD, GCF, impact investors, blended finance mechanisms	Medium-term (2025–2027)
<b>Operationalise a National PES Framework</b>	Provides performance-based incentives to communities for forest protection and restoration activities.	Relatively high, especially building on pilot schemes (e.g., mise en défens) and growing interest in co-benefit finance.	GEF, GCF, EU budget support, watershed agencies	Immediate to medium-term (pilots by 2025)
<b>Develop a Forest Carbon Market Readiness Roadmap</b>	Prepares Morocco to participate in the voluntary carbon market by creating enabling regulatory and technical conditions.	Feasible with legal clarification, donor engagement, and capacity building on carbon MRV and project standards.	LEAF Coalition, Verra, bilateral donors, carbon buyers	Immediate (roadmap in 2024), medium-term (pilots by 2026)
<b>Design a Guarantee Scheme for Forest Investments</b>	Reduces credit and performance risk, making forest investments more attractive to commercial lenders and investors.	Requires partnership with national finance institutions (e.g., Tamwilcom) and international technical assistance.	EFSD+, EIB, AFD, MEF, national development banks	Medium-term (design and roll-out in 2025–2027)
<b>Create a Dedicated Grant Facility for Forest-Based MSMEs</b>	Supports undercapitalised cooperatives and eco-enterprises in forest-linked value chains, especially NWFPs.	Can build on INDH and GEFF-style models; simple processes and targeting of women/youth can increase uptake.	GIZ, USAID, AFD, government MSME programs	Immediate (facility launch possible in 2025)
<b>Issue Morocco's First Green or Biodiversity Bond for Forests</b>	Channels capital market funding into forestry through thematic bonds, backed by credible project pipelines.	Depends on the readiness of institutions like ANEF or CDG to prepare projects and manage bond proceeds with transparency.	Institutional investors, CDG, EIB, with donor credit enhancement	Medium to long-term (preparation by 2025, issue by 2027)
<b>Introduce Climate Taxation Linked to Ecosystem Investment</b>	Generates predictable, domestic funding for forests by taxing climate-negative activities and reinvesting proceeds.	Can be integrated into the Finance Law; needs modelling and earmarking rules to direct funds to forest restoration.	National public budget, EU CBAM tax shares, pollution levies	Medium to long-term (design in 2025, implementation by 2027)

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# Annexes

## **Annex 1. Terms of Reference (TORs)**

See attached separately.

## Annex 2. Mission calendar

• Kick-off Meeting	<b>6 March 2025</b>
• Working session with ANEF	<b>27 March 2025</b>
• Desk Review - Mapping of finance mechanisms and instruments	<b>6 March – 30 May 2025</b>
• Consultations	<b>Starting the week of 5 May 2025</b>
• Stakeholder workshop	<b>30 May 2025</b>
• Draft report	<b>17-June 2025</b>
• Final report	<b>September 2025</b>

## Annex 3. Listing of stakeholders interviewed

**Siham Fellahi** – Inspecteur des Finances, Chargée de Mission / Financement projets de développement, Coopération internationale, Ministère de l'Économie et des Finances

**A. Chahour** – Chargé d'opérations climat, Ministère de l'Économie et des Finances

**Samira BOUZIANI** – Head of Cooperation Service (Cheffe de Service de la Coopération à l'ANEF)

**Antonio D'Agnanno** – Chef d'équipe programme FORETS, ANEF / Expertise France

**Yves Louis** – Conseiller résident, jumelage institutionnel, ANEF

**Timothée Ourbak** – Chargé de projets Climat, Agence Française de Développement (AFD)

**Hamza Mjahed** – Coordinateur de projet Eau & Biodiversité, KfW Rabat

**Anselm Duchrow** – Directeur de programme Climat, Environnement & Eau, GIZ Maroc

**Rachid Outabar** – Climate, Environment & Water, GIZ Maroc

**Ignacio Tourino**, GIZ Maroc

**Waleed Addas** – Directeur, Hub Régional Maghreb, Groupe Banque Islamique de Développement (BIsD)

**Carole Megevand** – Responsable sectorielle Environnement & Ressources naturelles, Banque Mondiale

**Khiati Driss** – Spécialiste Senior en Gestion des Ressources Naturelles, Banque Africaine de Développement (BAD)

**Jalal El Moato** – Coordonateur, Plan National d'Adaptation, PNUD

**Adrien de Bassompierre** – Directeur pays Maroc, Banque Européenne d'Investissement (BEI)

**Samira Chahir** – Chargée de projet, Agence Japonaise de Coopération Internationale (JICA)

**Alexandre Huynh** – Représentant de la FAO au Maroc, Organisation des Nations Unies pour l'Alimentation et l'Agriculture (FAO)

**Adelhak Laiti** – Adjoint au Représentant de la FAO au Maroc, Organisation des Nations unies pour l'alimentation et l'agriculture

**Mustapha Chehhar** – Directeur Général Adjoint, Crédit Agricole du Maroc

**Nabila Tbeur** – Directrice de l'Innovation, INNOVX

**Godefroy Grosjean** – Expert in finance durable, CGIAR – Hub for Sustainable Finance

**Philippe Helleisen**, Rapporteur, Direction interministérielle de la transformation publique

**Geneviève Rey**, Conseil général de l'alimentation, de l'agriculture et des espaces ruraux, Ministère de l'agriculture et de l'alimentation

**Sylvain Caurla**, Economist at European Investment Bank

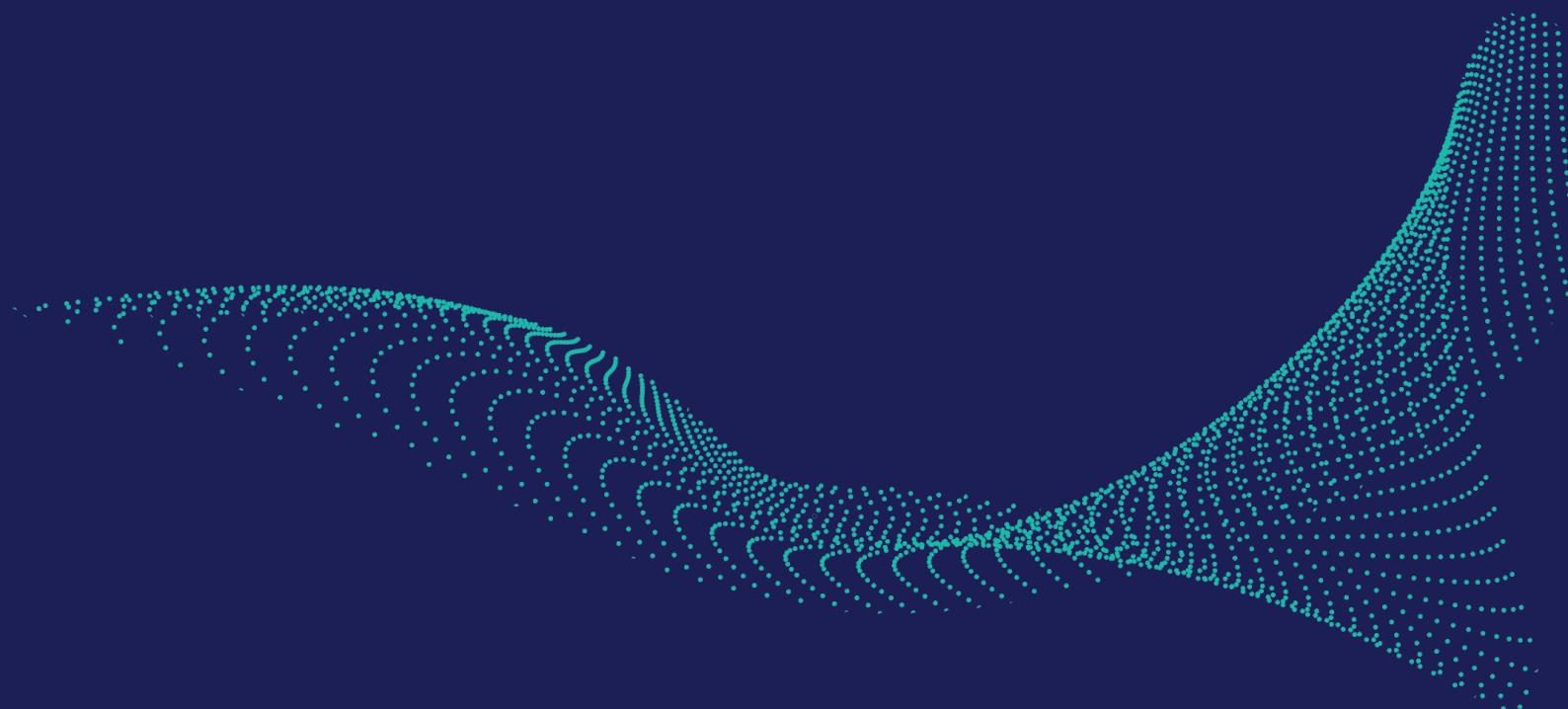
## Annex 4. Proposed list of forest finance solutions and instruments

Forest finance refers to the management and allocation of financial resources aimed at supporting sustainable forest management, conservation, and restoration activities. It involves the funding of projects and activities that maintain forest ecosystems, reduce deforestation, and enhance the provision of forest ecosystem services. Forest finance plays a crucial role

in addressing climate change, biodiversity loss, and promoting the economic viability of forests. A diversity of forest finance solutions/instruments will be assessed in each country, benefiting from the assessment. The table below highlights some of the critical funding instruments that will be considered.

### List of forest finance solutions and instruments: short definitions (non-exhaustive)

Forest Finance (FF) solutions, tools, instruments	Short definition
Public finance (including Fiscal Reforms, Green Budgeting, etc.)	<p>The adjustment of fiscal policies and budgeting processes to reflect environmental sustainability goals, often incorporating the valuation of natural resources and ecosystems into financial planning.</p> <p>Can include diverse solutions and instruments such as:</p> <ul style="list-style-type: none"> <li>• Tax breaks/waivers</li> <li>• Subsidies</li> <li>• Grant schemes</li> <li>• Dedicated funds established by national or local governments to support forest conservation or sustainable management</li> <li>• Any other state-funded schemes</li> </ul>
Payments for (Forest) Ecosystem Services / Incentives Schemes	Financial and/or non-financial incentives are provided to landowners or communities for managing their land in ways that preserve or enhance ecosystem services, such as water filtration, landscape beauty, climate benefits, and biodiversity.
National Forest Funds / Conservation Trust Funds	Dedicated funds established by governments or organisations to support forest conservation, sustainable management, and the development of forest areas through grants, incentives or loans.
Debt-for-Nature Swap	A debt-for-nature swap is a financial arrangement where part of a country's debt is forgiven or reduced by creditors in return for the country committing to environmental protection projects. This typically involves conserving natural habitats, biodiversity, or investing in sustainable development initiatives.
Green Bonds / Sustainability-linked Loans	Financial instruments issued to fund projects with environmental benefits, with green bonds raising capital for upfront expenditure and sustainability-linked loans offering incentives for achieving sustainability performance targets.
Finance instruments for value chains that support the conservation and restoration of forests	These can include concessions mechanisms, micro-credit schemes, SME support smallholder schemes, company finance for smallholders and other SMEs (out-grower schemes, off-take contracts), and venture capital/business catalysers. These instruments are strongly linked to value chains that can support forest conservation and restoration with SMEs and smallholders.
Biodiversity Markets (Biodiversity Credits/Certificates)	Markets designed for the trade of biodiversity credits or certificates, representing actions taken to conserve or restore biodiversity.
Carbon Markets / Carbon Finance	Financial markets and instruments aimed at reducing greenhouse gas emissions through the trading of carbon credits, where one credit represents the right to emit a specific amount of carbon dioxide or the equivalent amount of a different greenhouse gas (may include REDD+ mechanisms, even if not under EU legislation)
Impact Finance / Impact Investment (Fund Set Up – Sustainable Forest Funds / Blended Finance / De-risking)	<p>Investments made with the intention to generate positive environmental and social impacts alongside a financial return use strategies like fund setup, blended finance to mix different forms of private and public capital, and de-risking (Guarantees, leverage finance, first-loss positions, etc.) to reduce financial risk for investors.</p> <p>When relevant to impact and blended finance, the roles of Development Finance Institutions (DFIs) and other funds EFSD+ can be considered.</p>



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DG International Partnerships Unit F2 – Environment, Natural Resources, Water,  
Sustainable Forests for the Future Group

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The Center for International Forestry Research and World Agroforestry (CIFOR-ICRAF) harnesses the power of trees, forests and agroforestry landscapes to shift the trajectories of three global issues – biodiversity, climate change and food security – supported by our work on equity and value chains. CIFOR and ICRAF are CGIAR Research Centers.