

Part II - The COP 30 Presidency Roadmap on Halting and Reversing Deforestation and Forest Degradation by 2030

The Roadmap for Halting and Reversing Deforestation and Forest Degradation by 2030 is aimed at implementing paragraphs 33 and 34 of the outcome of GST1. It is sought to be an action-oriented document that offers guidance for the achievement of these efforts; identifies existing means of implementation and solutions being accelerated through the Action Agenda; and highlights obstacles and gaps to be addressed. It also showcases policies and measures that have been successfully implemented in real situations and can be replicated in other contexts.

Contributors are invited to submit concise inputs on one or more of the following questions:

- a) What are the most critical barriers — whether physical, economic, financial, institutional, technological or social — preventing the halting and reversing of deforestation and forest degradation?
- b) What potential levers, whether economic, financial, institutional, social or technological, exist for accelerating the implementation of the commitment to halt and reverse deforestation and forest degradation?
- c) What country, regional or sector experiences, best practices, and lessons learned can be shared regarding forest conservation and restoration?
- d) How can forest conservation, sustainable management, and restoration best reflect the diverse realities of countries at different stages of development, the rights and knowledge of indigenous peoples and local communities, and different degrees of forest cover?

The Roadmap will address a diverse set of issues. You may wish to consider one or more of the topics below when responding to the questions above.

- Deforestation: drivers and solutions;
- Forest degradation: drivers and solutions;
- Forest restoration, reforestation and afforestation;
- Sustainable forest management, bioeconomy and agroforestry;
- Forest conservation;
- Indigenous Peoples, local communities, forests and climate change;
- Law enforcement and organized crime repression at the national level;
- Forests, climate change, international cooperation and capacity building;
- International forest finance, carbon markets and sustainable value chains;
- International institutional challenges and solutions in areas such as trade rules and transnational environmental crime.

UNEP input:

(a) What are the most critical barriers — whether physical, economic, financial, institutional, technological or social — preventing the halting and reversing of deforestation and forest degradation?

- **[CHAPTER 04] Dominant Economic Drivers/incentives favouring deforestation:** Commercial agriculture (livestock, soy, and oil palm) is one of the primary drivers of deforestation, linked to around 80%-85% of global deforestation between 1990 and 2023.^{1 2 3} Forest degradation, meanwhile, is driven almost 100% by wood extraction for subsistence, primarily fuelwood and charcoal.⁴
- **[CHAPTER 04] Regional Drivers of Deforestation:** Large-scale farming remains a critical driver in specific regions, accounting for around 30% of agriculture-driven deforestation in South America (primarily linked to livestock expansion) and 38% in Asia (mainly associated with oil palm cultivation).⁵
- **[CHAPTER 04] Displacement Effects (“Leakage”):** Leakage represents a significant concern in global forest governance, as successful conservation efforts in one country (e.g., Brazil) may shift deforestation pressures to other countries seeking to fill the resulting market gap.⁶
- **[CHAPTER 10] Massive Imbalance in Financial Flows:** Private financial institutions provided US\$ 8.9 trillion in active financing to companies with the highest deforestation risk as of late 2024. This dwarfs the total global finance flows for forest protection, which were only US\$ 84 billion in 2023.⁷
- **[CHAPTER 04] Harmful Public Subsidies:** Potentially environmentally harmful agricultural subsidies reach approximately US\$ 406 billion annually⁸. In Brazil alone, roughly US\$ 1.4 billion in agricultural subsidies and US\$ 4.2 billion in agricultural loans are identified as "negative flows" that encourage land conversion⁹.
- **[CHAPTER 10] Significant Forest Finance Gap:** Forest investments often face long time horizons, high perceived risks, and limited access to upfront capital, fragmented funding sources, complex project development requirements, and uncertainty around long-term revenue streams. As a result, financing remains far below what is needed. To meet 2030 climate and biodiversity goals, annual forest investments must triple to US\$ 300 billion, leaving an annual funding gap of US\$ 216 billion.¹⁰
- **[CHAPTER 10] Uneven Domestic Spending:** Domestic government spending represents the largest share of forest finance (US\$75 billion in 2023), but the majority is concentrated in advanced economies, while tropical forest countries invested only US\$12.9 billion.¹¹ These countries also face considerable budget pressures driven by social priorities and infrastructure development.
- **[CHAPTER 03, 10] Indigenous Peoples and Local Communities Financing Gap:** Approximately US\$362 million of international forest finance in 2023 targeted projects involving Indigenous Peoples and local communities, representing around 20% of the US\$1.7 billion IP&LC Forest Tenure Pledge for 2021–2025, with only a small share reaching initiatives directly led by these groups.¹²
- **[CHAPTER 11] Legitimacy and Reciprocity Issues in International Climate Finance (ICF):** Recipient countries often perceive ICF as an infringement on

national sovereignty when it focuses on global climate benefits while ignoring domestic poverty reduction or development priorities.¹³

- **[CHAPTER 04] Insecure Land Tenure:** A major structural barrier is the lack of secure land and property rights for local communities, which facilitates illegal encroachment on public lands.^{14 15}
- **[CHAPTER 10] High Transaction and Monitoring Costs:** The technical requirements associated with carbon accounting and voluntary certifications can entail significant costs, which may limit the participation of smallholders.^{16 17}
- **[CHAPTER 04] Illicit and Informal Activities:** Unreported activities like illicit mining and coca cultivation (e.g. which increased by 43% in Colombia between 2020 and 2021) are rarely captured in official datasets, making them difficult to govern.¹⁸
- **[CHAPTER 06] Chronic Underestimation of Long-term Costs:** Large-scale restoration projects, for example, frequently focus on initial planting costs while underfunding long-term (+10-year) maintenance and monitoring periods required for success.²⁰ In addition, restoration efforts need to align with the ecosystem type, for forested peatlands, drainage blocking and rewetting must accompany reforestation, as well as monoculture should be limited due to sustainability issues. Similarly, although a number of countries have been able to access ‘readiness’ funds for REDD+ and eventually results-based payments, ongoing finance for the safeguards, monitoring and reporting systems needed as well as ex-ante financing to support countries to implement activities to generate emissions reduction results has been limited.²¹

(b) What potential levers, whether economic, financial, institutional, social or technological, exist for accelerating the implementation of the commitment to halt and reverse deforestation and forest degradation?

- **[CHAPTER 04] Law as a structural enabler or barrier to halting deforestation:** In many countries, deforestation is driven by fragmented, outdated, or weakly enforced legal frameworks, such as conflicting land-use regulations, unclear land and resource tenure, and insufficient control over agricultural expansion, logging, and infrastructure. Strengthened legal frameworks can address these structural drivers by establishing clear land-use rules, securing tenure rights, embedding environmental safeguards, and enabling effective monitoring, compliance, and sanctions.
- **[CHAPTER 08, 10] Strategic Allocation of Forest Finance:** Prioritizing Forest protection is key due to its cost-effectiveness and biodiversity benefits, while restoration complements by addressing forest degradation and enabling carbon removal. Public finance should anchor protection, while restoration and agroforestry can attract private investment, supported by regulation and incentives. This balance is essential for long-term forest conservation and recovery.²²
- **[CHAPTER 08] Co-benefits of forest protection:** Protecting high-risk forests offers a powerful several benefits, as it can avoid up to 1 GtCO₂e in annual emissions while safeguarding the ecosystem services that sustain water quality, food security, rural livelihoods and community incomes, and climate resilience. These benefits directly support the well-being of millions of people, especially the 53 million who live closest to these forests and depend on them most for their daily survival and resilience. In addition, taking note of the importance of forested peatlands within the

high-risk forest landscape is important to ensure investment levels are suited to the co-benefits delivered of tropical peatland ecosystems.

- **[CHAPTER 08] Cost-Effectiveness of Forest Protection:** Forest protection represents one of the most cost-effective strategies for achieving global land-use climate and biodiversity targets, requiring approximately US\$32 billion of additional annual finance by 2030 while covering around 80% of the total land area required.²³
- **[CHAPTER 06, 10] Reforestation Investment Potential:** Reforestation could attract up to US\$96 billion annually by 2030, although it would cover only around 10% of the required land area, reflecting the high costs associated with forest degradation, restoration, and opportunity costs per hectare.²⁴
- **[CHAPTER 07, 10] Agroforestry Financing Needs:** Agroforestry systems, including silvopastoral and silvoarable practices, represent a major growth opportunity in sustainable land use, with additional annual investment needs estimated at US\$87 billion by 2030.²⁵
- **[CHAPTER 10, 11] Compulsory Demand-Side Regulation:** A global shift is occurring from voluntary standards to binding public regulations (e.g. the EU Deforestation Regulation - EUDR).²⁶
- **[CHAPTER 10] Repurposing Harmful Finance:** Examples such as *Plano Safra* (Brazil) outline potential pathways to work around negative flows by enhancing positive subsidies (e.g. lower interest rates) to promote sustainable agriculture. Redirecting "negative flows" into forest-positive production is a major lever.^{27 28}
- **[CHAPTER 10] Strengthening Jurisdictional REDD+:** Advancing Jurisdictional REDD+ (JREDD+) programmes can help create the conditions for accessing high-integrity private sector finance, while supporting the application of robust social and environmental safeguards and equitable benefit-sharing systems.²⁹ UNEP, through the UN-REDD Programme, supported 17 tropical countries in establishing social and environmental safeguards—key prerequisites for accessing a combined US\$3 billion in results-based finance for jurisdictional REDD+ efforts to protect forests. This work could help prevent the release of 300 million tonnes of carbon dioxide, equivalent to the annual emissions of 80 coal-fired power plants.
- **[CHAPTER 09] Technological Monitoring Innovations:** Tools like drones with LiDAR, high-resolution satellite imagery, and machine learning enable faster, more accurate data collection across vast landscapes.^{31 32}
- **[CHAPTER 10] Innovative and blended forest finance instruments:** Leveraging tools such as sovereign green bonds, carbon and biodiversity markets, impact investing, carbon insurance and debt-for-nature swaps, together with mechanisms like JREDD+, TFFF, targeted public finance, sustainable bioeconomy and value chain finance, can de-risk investments, mobilise private capital at scale and potentially generate up to USD 47.7 billion for forests.^{33 34 35}
- **[CHAPTER 10] The TFFF and Global Financial Redistribution:** The proposed Tropical Forest Forever Facility (TFFF) has the potential to provide predictable funding by rewarding countries for hectares of tropical forest conserved rather than reduced GHG emissions and enhanced carbon removals. Creating a landscape of complementarity for forest finance flowing through JREDD+.^{36 37 38}

(c) What country, regional or sector experiences, best practices, and lessons learned can be shared regarding forest conservation and restoration?

- **[CHAPTER 08] Nepal's Community Forestry:** Reversing deforestation by empowering 1.6 million households to manage a quarter of the country's forest area, which also increased annual incomes for participants by 61%.³⁹
- **[CHAPTER 04] Brazil's National Plans to Tackle Deforestation in the Amazon (PPCDAMs) Priority List:** Targeted policies that focused on specific high-risk municipalities successfully reduced deforestation without undermining the soybean sector's performance. By 2025, the Brazilian Amazon had the lowest deforestation in 11 years.^{40 41}
- **[CHAPTER 08] Costa Rica's Pollination Services:** Maintaining small forest patches near coffee farms boosted yields by 20% through wild pollination, providing an additional US\$ 380 in income per hectare of forest.⁴²
- **[CHAPTER 08] Costa Rica's Payments for Ecosystem Services (PES):** Since its establishment in 1997, Costa Rica's national PES programme has played a central role in reversing deforestation trends by providing financial incentives for forest conservation, restoration, and sustainable management. Combined with strong regulatory frameworks, the programme contributed to an increase in forest cover from around 25% in the 1980s to over 50% by 2021. As one of the most established nationwide PES schemes, it demonstrates how sustained public financing and institutional coordination can align economic incentives with conservation outcomes at scale.⁴³
- **[CHAPTER 04] Indonesia's Licensing Moratoria:** Implementation of national moratoria on new logging and oil palm licenses in primary forests and peatlands has contributed to record-low deforestation rates.^{44 45}
- **[CHAPTER 07] Ecuador's Gender-Responsive Finance:** Women are essential to forest management, yet they face structural barriers to land tenure, participation, and access to finance. Targeted initiatives can address these gaps: by 2023 Ecuador launched a credit line that directed US\$ 3.9 million to 228 women producers for deforestation-free, sustainable agriculture.⁴⁶
- **[CHAPTER 07] Vietnam's Payment for Forest Environmental Services (PFES):** Vietnam's PFES programme, implemented nationwide since 2010, is one of the largest operational PES schemes globally, mobilizing significant domestic financing for forest conservation. The programme channels payments from hydropower producers, water utilities, and tourism operators to forest managers, and has generated nearly US\$400 million since its inception while supporting thousands of communities. PFES now accounts for a substantial share of the country's forest sector financing and has been associated with improved forest protection and enhanced rural livelihoods, including increased household income and employment opportunities.⁴⁷
- **[CHAPTER 07] Restoring Mediterranean Forests Initiative:** Encompassing nations such as Lebanon, Morocco, Tunisia, and Türkiye – it has been recognised by the UN as one of the World Restoration Flagships. The initiative has already restored an area of around two million hectares across the region since 2017, more than 500 times the size of Athens. Eight million hectares are planned for restoration by 2030, including targeting wildfire-affected areas, under the Agadir Commitment. The initiative is shifting away from a traditional focus on fighting wildfires and

addressing their aftermath, towards prevention through better forest management. As part of risk mitigation techniques, visitors to reserves are educated and local forestry-dependent communities are included instead of keeping them out. During reforestation efforts, biodiverse and heat-resilient plant species are selected for diverse ecosystems, including forests, grasslands and shrublands.ⁱ

- **[CHAPTER 09, 11] Model Forest Act Initiative (MoFAI) as an implementation tool:** The Model Forest Act Initiative (developed by partners including ADB, IUCN WCEL, UNEP, UNDP, the World Bank, and UNEPFI) provides a modular model law that countries can adapt to modernize forest governance. It supports the establishment of coherent institutional arrangements (e.g. national forest authorities), integrates forest governance across sectors such as agriculture, land-use planning and finance, embeds financial mechanisms such as PES and benefit-sharing into legal frameworks, strengthens monitoring and enforcement systems, and ensures the recognition and participation of Indigenous Peoples and local communities, including access to grievance and redress mechanisms.

(d) How can forest conservation, sustainable management, and restoration best reflect the diverse realities of countries at different stages of development, the rights and knowledge of indigenous peoples and local communities, and different degrees of forest cover?

- **[CHAPTER 11] Ensuring Robust Social and Environmental Safeguards:** Forest conservation, sustainable management, and restoration actions should be implemented in line with social and environmental safeguards, including respect for the rights and traditional knowledge of Indigenous Peoples and local communities, their full and effective participation in decision-making, the protection of natural forests and biodiversity, and the promotion of additional environmental and social benefits.⁴⁹
- **[CHAPTER 10] Direct Access to Finance for IPs and LCs:** Dedicated finance windows must be created for Indigenous-led mechanisms, ensuring that communities (who safeguard 36% of the world's intact forests) receive direct funding.^{50 51}
- **[CHAPTER 11] Gender-Sensitive Governance and Financial Products:** Monitoring and finance systems must address structural barriers to land ownership and credit that disproportionately affect women.^{52 53}
- **[CHAPTER 04] Adopting Territorial Approaches:** Moving beyond narrow value-chain regulations to territorial strategies that address the context-specific drivers of forest loss on the ground.^{54 55 56}
- **[CHAPTER 10] Aligning with National "Just Transitions":** Finance for forests must align global climate goals with local social justice and poverty reduction agendas to ensure enduring outcomes.^{57 58}
- **[CHAPTER 09] Stepwise Monitoring Improvements:** Developing countries should be supported in creating safeguards and MRV systems through a stepwise approach that allows for gradual improvements commensurate with national capacity.⁵⁹
- **[CHAPTER 08] Reframing Forests Beyond Carbon:** Acknowledging the socio-cultural, ecological, food security and justice dimensions of forests, reframing them

away from just "commodities" or "carbon sinks", is essential to unlock and scale forest finance.^{60 61}

- **[CHAPTER 06] Avoiding "One-Size-Fits-All" Restoration:** Discouraging "plant and abandon" tree-planting targets in favour of adaptive management that respects naturally treeless environments and local biodiversity landscapes.⁶²

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