



United Nations
Convention to Combat
Desertification



FORESTS AND TREES

AT THE HEART OF LAND DEGRADATION NEUTRALITY







The Government of the Republic of Korea, as the host of COP10, launched the Changwon Initiative to complement the UNCCD Strategy through target setting and the consolidation of effective partnerships to enhance the implementation of the Convention. The Initiative promoted Land Degradation Neutrality as a global target to promote sustainable development. It was formulated to enhance the scientific process of the UNCCD and to provide advice on desertification, land degradation and drought (DLDD) processes; mobilize additional resources and facilitate partnership arrangements; and support a global framework for the promotion of best practices.



The Ankara Initiative was launched at the COP12 in Ankara by the Government of the Republic of Turkey to strengthen implementation of the Convention. It aims to support the global sustainable development agenda and leverage the lessons learned from Turkey's experience and approaches to land management. As a predominantly arid and semi-arid country, Turkey has invested heavily in land rehabilitation and restoration. Based on its own experience, Turkey has been supporting other affected countries, particularly African countries, to build capacity through training and skills development. The Ankara Initiative leverages the full range of these skills, expertise and experience to provide practical support for the achievement of Land Degradation Neutrality.



By the end of COP13 in Ordos, China, 113 countries had agreed to define concrete targets with clear indicators, to rehabilitate more land and reverse degradation, which currently affects over a third of the world's land resources. To reaffirm the progress made at COP, more than 80 Ministers from around the world issued the Ordos Declaration urging countries to step up efforts on all fronts to tackle desertification – one of the planet's most pressing global challenges.



Forest and land degradation undermines the foundation of human prosperity and well-being. It threatens our food and water supplies, our climate, and the biodiversity that underpins the ecosystems that sustain us. Land degradation is one of the critical elements in the gathering environmental crisis that humanity must address. Only human agency can trigger landscape regeneration by working in harmony with natural systems, shifting from an extractive to a regenerative mindset. Instead of just taking from the land, we can take and give back in equal measure.

Forests and trees are central to both the causes of land degradation and the urgent actions needed to achieve sustainable development. The loss of forests and trees is one of the biggest concerns of countries seeking to combat desertification, land degradation and drought (DLDD). Virtually all countries who have set their land degradation neutrality (LDN) targets recognize the need to increase and enhance forest cover. Ideally, this entails the permanent regeneration or re-establishment of natural and intact forests where they existed before. However, there is a role for agroforestry, silvo-pastoralism and even tree plantations to help alleviate poverty in low-income regions, particularly on crop and grazing lands.

Protecting and restoring forests to achieve LDN will bring many of the Sustainable Development Goals (SDGs) within reach. It will boost livelihoods, secure food and water supplies, store vast amounts of carbon and conserve biodiversity while helping meet many other SDGs. Poor rural communities in developing countries stand to gain the most. Ultimately, the LDN approach aims to achieve a functional balance between our natural and working landscapes, and its rationale is well understood as a responsibility to future generations.

LDN provides a flexible platform for integrated policymaking in the pursuit of multiple environmental and socio-economic objectives. The LDN framework provides a means to verify the status of land and forest degradation, understand its magnitude, and evaluate its current and potential impact on the environment and livelihoods. Stakeholders can use the LDN framework to identify an optimal mix of policies and interventions that are aligned with existing international agreements and initiatives. Countries with very different economic and geographical conditions are now successfully integrating voluntary LDN targets and measures into their planning systems.

Investment in forests and other degraded landscapes must rise dramatically to achieve LDN and other SDGs. Much more funding is needed for transformative projects that address the decline in tree cover and other causes of land degradation. Private funding, including through blended finance, is urgently needed along with traditional funding from governments and international donors. As there is no fixed path for financing, investments will look very different across countries and regions, even within countries there will be significant diversity. Investments in local innovation and human ingenuity will be a key driver of change supported by policy, other incentives and infrastructure.



Our degradation of the Earth's lands and waters is arguably the most fundamental challenge facing humanity today. The loss of rich natural ecosystems, and the over-exploitation of the human-modified landscapes that are replacing them, are fuelling multiple environmental problems from desertification and drought to climate change and biodiversity loss that threaten a sustainable future.

The forms of environmental degradation are many: soil erosion and falling yields in over-used fields and pastures; rivers and lakes pumped dry or polluted; decimated stocks of once-plentiful fish, to name a few. But one stands out for its centrality to both the problem we face, and the solutions we must develop: the loss of forests and trees.

The clearing of forests to make way for agriculture and settlements goes back millennia. Even for recent generations, the resources provided by nature seemed boundless. But those days, along with huge swaths of the tree cover that once blanketed much of the planet, are gone. Now, deforestation, forest degradation and the loss of trees in our landscapes, are undermining rural livelihoods, and putting development goals such as eradicating hunger and poverty in jeopardy.

Forest loss and degradation is a major cause of greenhouse gas emissions. The disappearance of forests and other natural habitats is the primary driver of biodiversity loss. Deforestation in upland areas leads to the erosion of soils, disrupts local rainfall patterns, and reduces the quantity and quality of water reaching many fast-growing cities downstream.

More and more countries, leaders, communities and businesses are waking up to this existential threat. An effective response requires action at all levels, from global to local. The concept of Land Degradation Neutrality (LDN) is an important part of the international response. Supported by the United Nations Convention to Combat Desertification (UNCCD) and embedded in the 2030 Agenda for Sustainable Development under SDG target 15.3, LDN provides a unique framework for governments to measure degradation, design appropriate responses, and monitor progress.

Forests and trees are central to many of the over 120 countries who have committed to setting voluntary targets for LDN. These include protecting natural forests rich in carbon and biodiversity and improving forest management to ensure that the flow of goods and services -- from timber and fodder to medicines and genetic resources -- is sustainable. On agricultural land, it includes agroforestry and other agro-ecological approaches where trees reduce erosion, improve fertility and provide economic benefits.

A key lesson from the LDN target setting programme is that measures to achieve neutrality – where unavoidable degradation is offset by restoration elsewhere – are most effective when they are planned in an integrated way. This ensures that achieving LDN will also directly contribute to global goals and commitments. For example, increasing tree cover sequesters carbon and helps meet climate pledges under the Paris Agreement. Intact and healthy forests are also vital to meeting the targets set under the Convention on Biological Diversity (CBD) and furthering progress under the UN Strategic Plan for Forests and toward the restoration goals of the Bonn Challenge and the New York Declaration on Forests.

Perhaps most significant, and cutting across all these important objectives, is that protecting and restoring forests and trees in the landscape is critical to equitable development. Forests and their goods and services are vital to the livelihoods of some of the world's poorest communities. So maintaining and improving the health and productivity of those landscapes is fundamental to putting the planet on a clear path toward sustainable development that leaves nobody behind.

With this in mind I would like to thank China, the Republic of Korea and Turkey for their sustained support following their successful COP presidencies.



Ibrahim Thiaw
UNCCD Executive Secretary



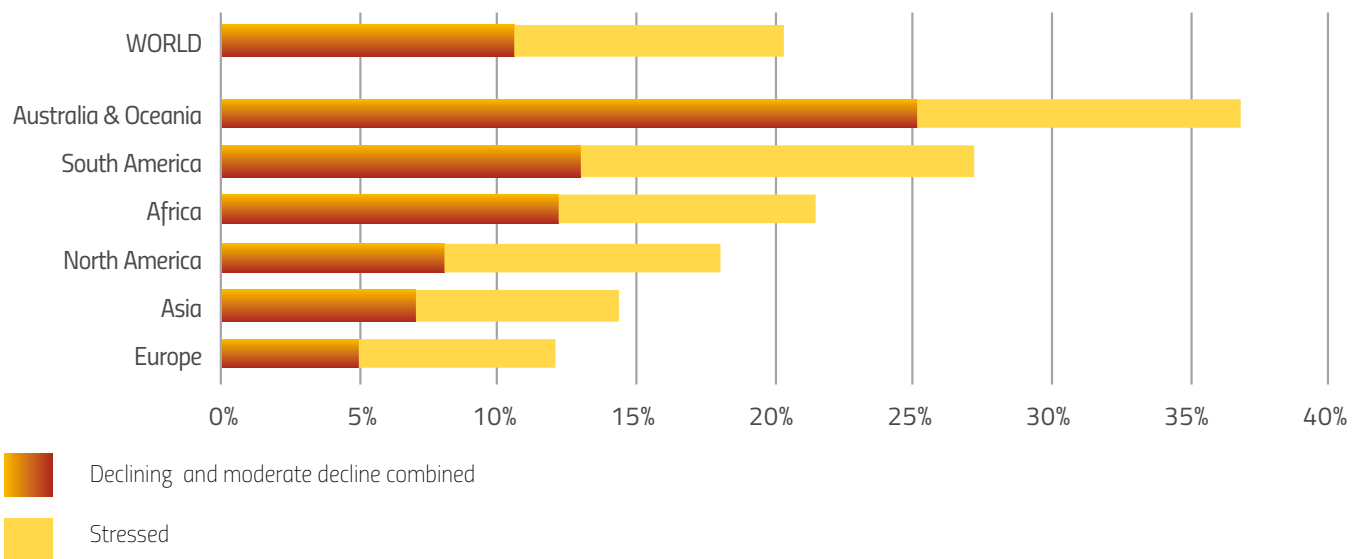
THE DANGERS OF DEGRADATION

Degradation is often the result of the poor or short-sighted management of our land, forests and water resources. It takes many forms and works over long and short timescales. In farmland, intensive cultivation and grazing can leave soil depleted of nutrients and vulnerable to erosion, especially where tree cover has been removed. Forests are being cleared and over-exploited, often for short-term gain and to the detriment of local communities. Wetlands are being drained and freshwater resources rapidly depleted. Urban areas, infrastructure and industry are expanding rapidly, often at the cost of our most productive farmland or natural landscapes.

As a result, degraded ecosystems are losing their ability to provide basic services from the provision of food, water and energy to the regulation of climate and disease. Global warming and rising human demands on the planet’s finite resources are making things worse. Higher temperatures, altered rainfall patterns, soil erosion, biodiversity loss and water scarcity are undermining the ability of entire regions to sustain human populations. The world’s poorest are particularly vulnerable to land degradation impacts as they depend most heavily on natural resources. Intensifying competition for those resources risks significant increases in migration, instability and conflict.

The scale of the problem is global: an estimated 20 per cent of the Earth’s vegetated surface shows persistent declining trends or stress on productivity, mainly as a result of poor management practices and intensive use (Figure 1)¹. Land degradation is already impacting the lives of at least 3.2 billion people, raising concern about a mass species extinction and costing more than 10 per cent of global gross domestic product in lost ecosystem services. By 2050, degradation and climate change could reduce crop yields by 10 per cent globally and by as much as half in some regions.²

Figure 1: Land degradation affects all continents. Source: UNCCD, 2017. The Global Land Outlook.



A FRAMEWORK FOR ACTION

Increasingly, governments are recognizing the threat from degradation and embracing sustainable land management and landscape-scale restoration as part of their response. In farmlands, this includes techniques such as no-till agriculture, increased crop rotation and less reliance on agro-chemicals. It can mean increasing tree cover to protect soils and waterways, improve nutrient cycling and support pollinators. In forests and abandoned lands, it can involve natural regeneration or enrichment planting as well as the sustainable harvesting of forest products. In wetlands and watersheds, integrated water resource management policies can promote a suite of complementary practices among stakeholders that do not threaten fragile aquatic ecosystems or supplies to downstream settlements. Combining multiple approaches within different land uses across a landscape can restore many of its ecological functions.

THE UNCCD DEFINES LAND DEGRADATION NEUTRALITY AS:

A state whereby the amount and quality of land resources, necessary to support ecosystem functions and services and enhance food security, remains stable or increases within specified temporal and spatial scales and ecosystems.

LDN is a powerful concept designed to help people understand land degradation and how to respond effectively (see box). Actions to achieve LDN follow a response hierarchy of “Avoid>Reduce>Reverse”.³ The top priority is to avoid the degradation of still-intact landscapes and ecosystems. Second-tier actions reduce the impacts of degrading land use through, for instance, the sustainable management of land and forests. Thirdly, where feasible, interventions can restore some or all of the productive potential of already degraded land. Ideally, restoration and rehabilitation will offset unavoidable degradation so that the net balance is neutral or even positive.





3. Setting LDN targets & associated measures

LDN targets define a country's ambitions in terms of combatting land degradation. LDN measures comprise a whole range of interventions to avoid, reduce or reverse land degradation.

4. Achieving LDN

An enabling environment is a prerequisite for achieving LDN. It makes integrating the LDN concept into national policies easier, and identifying transformative LDN programmes and projects possible.

1. Leveraging LDN

LDN target setting is not a stand-alone process but provides opportunities for coordination across ministries and sectors involved in land management. By finding common answers to: Why does LDN matter? What should we leverage? Who should be engaged? countries can succeed in leveraging LDN.

2. Assessing LDN

Assessing the current state of land degradation and its drivers is the basis for setting LDN targets, making informed decisions on what action to take, and tracking progress.



Figure 2: Four building blocks form the basis of the LDN target setting process. Source: UNCCD, 2016. Achieving Land Degradation Neutrality at the country level: Building blocks for LDN target setting.

The UNCCD provides comprehensive guidance, capacity building and support for the achievement of LDN at the national level. Based on scientific principles and experience from pilot projects, the LDN target setting process (Figure 2) helps countries assess degradation, set targets, identify the measures and resources needed to achieve them, and monitor progress. It encourages the integration of LDN into national policy-making to promote planning decisions and investments that maximize the economic, social and environmental benefits of avoiding, reducing and reversing land degradation.

FORESTS AND TREES: THE CRITICAL COMPONENT

In most countries, forests and trees will play a pivotal role in making progress towards LDN. Deforestation and the removal of trees from agricultural and pastoral landscapes have been key drivers of degradation dating back centuries. While deforestation trends have slowed in recent decades, the conversion of forest cover to other land uses continues to be the main source of land degradation, and forests and the benefits they provide continue to shrink. About 129 million hectares of forest – an area the size of Peru – was lost between 1990 and 2015.⁴

Preventing or at least reducing the further loss of forests and tree cover across all other land uses are effective LDN strategies. Common measures include the promotion of sustainable land and forest management as well as strengthening of protected areas and setting up more community forests.

But, just as the scale of forest loss is vast, so are the opportunities for rehabilitation and restoration. An expert assessment has identified more than 2 billion hectares of land worldwide that offer opportunities for restoration. Most of that land is best-suited for “mosaic” restoration, where forests and trees are combined with other land uses, such as smallholder agriculture; with another half-billion hectares suited for the wide-scale restoration of closed forests. Beyond that, cities and intensively-farmed areas would benefit from more trees.⁵



Figure 3: SDG 15 aims to “Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss.”

National efforts to protect and enhance forest and tree cover can be easily accommodated within the “building blocks” of the LDN target setting process. For instance:

Africa has the greatest land area with forest and landscape restoration opportunities.

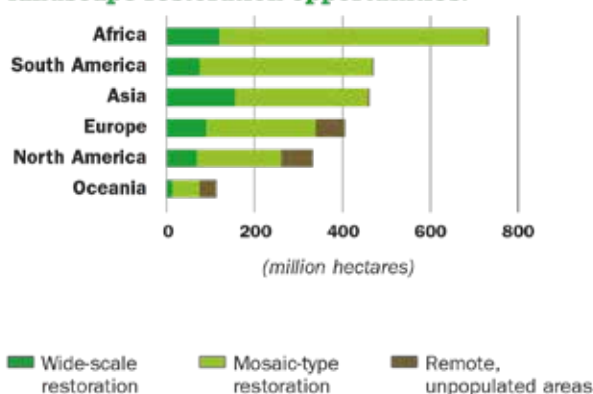


Figure 4: There are significant opportunities for forest restoration across all continents. Source: WRI, 2011. A World of Opportunity.

- “Leveraging LDN” presents an opportunity to bring stakeholders from different sectors, including foresters, smallholders and communities whose livelihoods depend on forest resources into processes to identify opportunities for sustainable forest management as well as restoration and to ensure the resulting plans have wide support.
- The “Assessing LDN” building block includes consideration of the extent and condition of forests and other tree cover as well as the direct and indirect drivers of deforestation and forest degradation. This can involve examining forest tenure issues and identifying deforestation hotspots.
- At the stage of “Setting LDN targets and associated measures”, objectives can be set to address deforestation trends in pursuit of national and sub-national LDN targets; a wide range of forest-related measures – from policies to technical interventions – are available to help avoid, reduce and reverse the loss of forests and trees (see “LDN in action for forests”).

- In “Achieving LDN”, the integration of LDN into national and sub-national policies, programmes and financing arrangements can help governments to mainstream forestlandscape restoration and engage with international initiatives and funding sources focused on forests and trees (see “Acting as one”).

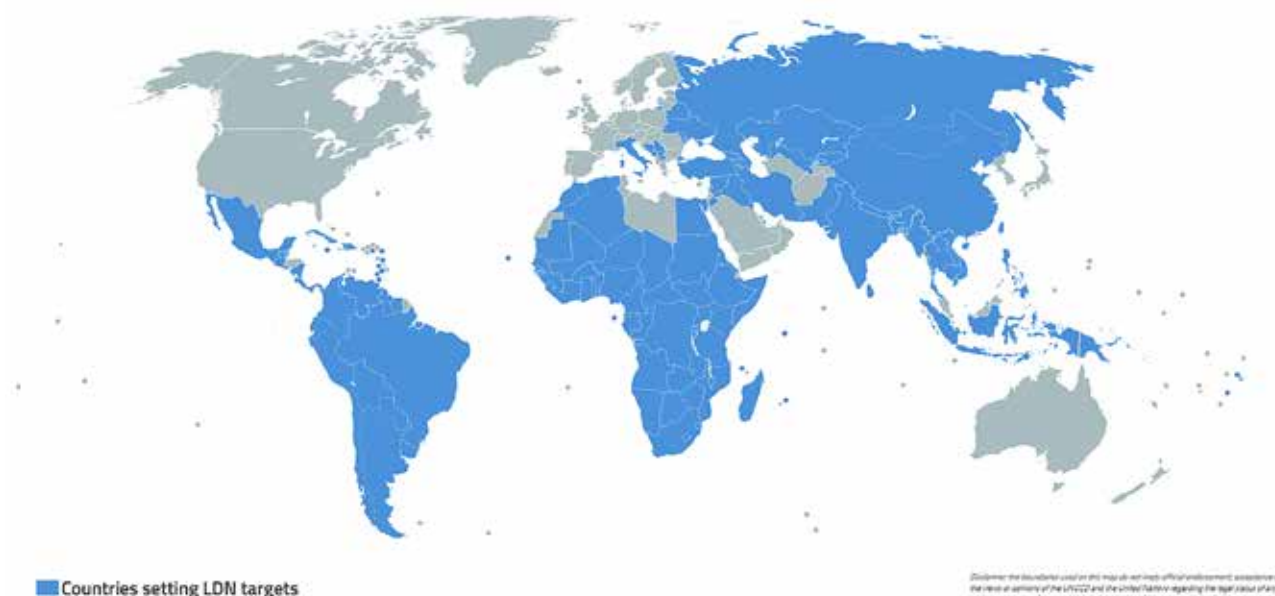
As of June 2019, more than 120 countries have engaged with the LDN Target Setting Programme, which helps them to define baselines, set targets and design interventions for forests and former forest landscapes as well as other categories of land (Figure 5). These countries have widely different climates, forest resources and development needs, demonstrating how the LDN framework can be useful in many different contexts. Several examples are included as case studies in this brochure.

Many restoration programmes and projects and other efforts to protect the productivity of our forests and land are underway across the globe. They range from improvements in governance and the creation of an enabling environment for the prevention, reduction and reversal of forest degradation to large and small-scale projects rehabilitating and restoring forested landscapes and ecosystems.

Governance improvements can include strengthening land tenure and access rights for forest-dependent communities as well as creating mechanisms for integrated land-use planning and platforms for stakeholders to jointly plan, implement and monitor interventions. Policies can incentivize sustainable forest management or promote agro-ecological farming approaches such as agroforestry.

Successful forest restoration projects typically build on many of the elements described in the LDN target setting process, including wide stakeholder participation and the application of safeguards to ensure, for instance, that vulnerable forest communities are not displaced from lands earmarked for restoration. Projects should also ensure that the interests and knowledge of women are fully represented (see “Equal access and benefit sharing” below). Some of the key sustainable land management approaches available for LDN interventions are listed below.

Figure 5: More than 120 countries have engaged with the LDN process. More than 80 have already set targets, many of them addressing forest restoration and rehabilitation



Of the countries committed to LDN, more than 80 have already completed baseline assessments of the degradation status of their lands and forests, identified key trends and drivers of degradation, and set clear targets as part of a strategy to achieve LDN by 2030. In the LDN country reports, deforestation – along with population pressure and poor agricultural practices – is the most frequently mentioned cause of degradation. As a result, virtually all countries pinpoint measures relating to forests in their response strategies. These include direct measures such as forest restoration and/or conservation as well as indirect measures like raising agricultural productivity to reduce pressures to convert more forest to farmland. Case studies in this brochure illustrate the importance of forests and trees to countries' plans to combat land degradation, promote restoration and achieve LDN. They also highlight the variety of measures available to decision-makers in different contexts.

KEY APPROACHES



Sustainable land management. This broad term encompasses approaches that seek to maximize the economic and social benefits from land resources while maintaining or enhancing the ecological support functions that they provide. Sustainable land management arguably includes all of the other approaches listed here and many others.

Sustainable forest management. Managing forests in order to maintain and increase the social and environmental benefits they provide, boosting food security and livelihoods while also sequestering carbon and conserving water, soil and biodiversity for current and future generations. Achieving this goal can require changes in forest policies, legislation, institutional frameworks and incentives.

Forest restoration and rehabilitation. Reversing the overexploitation or clearance of naturally forested landscapes and re-establishing their original productivity. Restoration aims for the

full return of a forest's biodiversity, while rehabilitation targets the return of at least part of the natural array of species. Both can be achieved through natural regeneration and/or deliberate planting and management. This can suit marginal land, such as farmland abandoned following erosion or soil depletion.

Afforestation. The creation of forests on land not previously forested, using similar techniques in similar circumstances to those noted under forest restoration. Afforestation could, for example, be part of an integrated land-use plan designed to widen the resource base and add resilience to an otherwise intensively farmed landscape, although its impacts on biodiversity and livelihoods may need careful evaluation.

Agroforestry. The deliberate inclusion of trees in diversified farming systems, yielding resources including food, timber and fuel as well as benefits such as improved soil fertility, erosion protection and carbon sequestration. Traditionally practiced in many regions, agroforestry techniques are a focus of research into the design of more resilient systems capable of adapting to climate change.

Silvopastoralism. A form of agroforestry that integrates the simultaneous production of tree crops, forage and domesticated animals. Also a traditional practice, it involves the management of livestock grazing to maximize the long-term benefits of this diversified farming system.

Forest landscape restoration. Combining sustainable management and restoration approaches in different land uses across deforested or degraded forest landscapes. Through planning at the landscape scale, it aims to better balance ecological, social and economic priorities.

Conservation and protected areas. The protection, care, management and maintenance of ecosystems, habitats, wildlife species and populations, within or outside of their natural environments, in order to safeguard the natural conditions for their long-term permanence.

Projects and programmes using the above approaches and others are making a huge contribution toward sustainable development, particularly where they are planned and coordinated within a wider framework of action such as LDN.



EQUAL ACCESS AND BENEFIT SHARING

Across the globe, indigenous and rural women already make invaluable contributions to their communities while sustainably managing natural resources. They use, manage, and conserve territories that comprise over 50 per cent of the world's land⁶ and support up to 2.5 billion men, women and children. About one in three people is dependent on communal land for their wellbeing and livelihoods. Yet, in most parts of the world, there is less than full participation of indigenous and rural women in decision-making, land tenure rights and equitable benefit sharing.

GENDER

The fate of forests and the success of any forest-related LDN initiative is inextricably linked to gender issues. Women play critical roles within forests as both users and custodians: women's knowledge and management practices sustain household economies and healthy ecosystems alike. Yet forestry is a male-dominated sector,⁷ with men making many of the key economic and policy decisions related to forests. There are persistent socio-economic, cultural and legal barriers that prevent women from fully participating in, contributing to, and benefiting from forest policy and management efforts.⁸



To re-dress this imbalance and leverage women's knowledge of how to harvest and manage forest resources sustainably, women need to have an equal say, particularly about the resources on which they most depend. Moreover, empowering women in the forestry sector can create significant development opportunities and generate important additional benefits for their households and communities, particularly in rural areas.⁹ In countries, such as Uganda and India, the role of women in local forest governance and access to financial services and new technologies has been strengthened, but much more needs to be done.

To empower women in the forestry sector it is necessary to: advocate for good governance systems which provide secure tenure for women; collect disaggregated data to monitor gender roles in the sector; mainstream gender in capacity building activities; analyze the potential entry points for gender components in projects and programmes; and disseminate important data and facts related to gender in the forests and forestry sector.¹⁰ Agencies providing technical assistance in the design and implementation of LDN projects as well as donors giving financial support should insist that projects be designed and put into practice in a way that reflects the interest and concerns of women.¹¹



INDIGENOUS AND LOCAL COMMUNITIES

Indigenous and local communities have long been responsible stewards of the environment, and today about 40 per cent of protected and ecologically-intact landscapes are under indigenous peoples' custodianship.¹² While the full extent of their contribution to sustainable management is unknown, recent studies find that indigenous and local communities manage nearly 300 billion tons of carbon in their forestlands.¹³ Globally, these communities are investing a fraction of the amount spent by governments and others donors combined on conservation¹⁴ while achieving outcomes that are at least equivalent to those of government administered protected areas.¹⁵

Like rural women, the ability of many indigenous and local communities to pursue locally adapted livelihoods and protect important ecosystems continues to be hampered by the limited recognition and often disregard of their tenure rights. Despite customary rights to more than half of the world's land mass, indigenous and local communities are legally or formally recognized as owning only 10 per cent of global lands.¹⁶ As a result, these communities face increasing threats of criminalization and violence due to appropriation and encroachment.¹⁷ The UN Special Rapporteur on the Rights of Indigenous Peoples has reported receiving numerous allegations of large-scale violations of the

rights of indigenous peoples in the context of conservation measures, including forced evictions from protected areas.¹⁸

The protection, sustainable use and restoration of forest landscapes through LDN measures requires planning, engagement and safeguards to ensure equal access and benefit sharing for women and indigenous and local communities. Improving security of land tenure, strengthening and enforcing governance regimes, and applying the numerous international instruments that protect the rights of these valuable stakeholders¹⁹ will be critical to enhancing resilience, securing livelihoods and achieving LDN.

TURKEY: AN LDN CHAMPION



Improved forests to stop erosion and flooding and keep an increasingly urban population fit and healthy are at the heart of Turkey's vision of LDN.

With much farmland vulnerable to erosion from heavy rain and flooding, Turkey has been a strong supporter of UNCCD efforts to combat desertification, land degradation and drought. Long before its participation as a pilot country in the LDN TSP, Turkey began expanding its forests to harness the many benefits they provide.

The country has now set an array of LDN targets including several related to forests. They include a 5 per cent increase in forest cover by 2030, partly through afforestation in erosion-prone areas. That would take total forest cover to at least 30 per cent, from 28.5 per cent in 2015. Turkey also aims to rehabilitate existing forests, improve pest control and prevent wildfires.

These targets are among the main results of Turkey's early participation in the LDN TSP. The goals are included in a comprehensive national report that Turkey submitted in 2016.²¹ Turkey was among 14 countries that took part in the LDN pilot project in 2014-2015 and is helping other countries implement the Convention and achieve LDN through its Ankara Initiative, one of the main funding sources of the LDN TSP.

Turkey developed its LDN measures after analysing degradation drivers including a hot and dry climate, limited water availability and unsustainable farming activities. It studied degradation indicators – land cover, land productivity and soil carbon stocks – and drivers in three river basins identified as hotspots of degradation.

Insights from remote sensing together with national data inform Turkey's analysis of land cover and land use that lies behind its targets. These data sources also power a system to monitor progress toward LDN in the years to come.

The forest-related targets include the afforestation of 15,000 km² of land and the rehabilitation of a further 15,000 km². Increasing and improving forest cover is important to counter water erosion because of the climate, soils and hilly topography. Of its forest land, 54 per cent is affected by soil erosion. Greenbelt afforestation will provide recreational opportunities and health benefits for city dwellers as well as protecting soil.

About 60 per cent of the total forest area is located in highly fire-sensitive regions, including those close to the Mediterranean Sea, making the prevention and suppression of fire a top priority for forest conservation. Turkey aims to keep the much-improved average response time of fire-fighters at less than 15 minutes through 2030.

PHILIPPINES: INTEGRATING FOREST PROTECTION WITH BIODIVERSITY AND CLIMATE GOALS

With forests and trees at the forefront, the Philippines hopes the close integration of its land degradation, climate and biodiversity strategies will attract the international funds it needs to implement its LDN vision.

The country aims to prevent and reverse conversion and degradation in forests, grasslands and wetlands covering over 4 million hectares by 2030. It aims to do the same over 2.2 million hectares of croplands in the same period.

The Philippines wants to achieve these targets by implementing three strategic programs: the action plans developed under both the United Nations Framework Convention on Climate Change and the Convention on Biological Diversity as well as a plan for climate-resilient forest development.

LDN target setting is to be integrated into several national programs where trees can play an important role. As well as watershed protection under its agriculture program, these include two forest restoration programs in the environment and natural resources sector.

The National Greening Program includes reforestation at community and farm level. According to the Philippines' report to the UNCCD, LDN approaches including agroforestry and community-based management could be incorporated into the program's targets.

In its report to the UNCCD,²² the Philippines points to the low valuation of forest ecosystem services and weak enforcement in protected areas among the underlying drivers of deforestation. The area covered by forest fell by almost 3 per cent between 2003 and 2010.

Specific measures to bring degrading forests back into equilibrium include payments for ecosystem services, incentives for responsible investments in forest ecosystem conservation, and improved management of forests and Ancestral Domains.



GHANA: TRANSFORMATIVE PROJECTS TO REVERSE A DECADE OF DEGRADATION

Ghana is rolling out transformative projects designed to protect and enhance forest lands and livelihoods from the highlands to the drylands. The projects are central to meeting the West African country's LDN target of reversing a full decade of degradation, while also meeting its development goals and climate commitments.

The projects, which enjoy substantial support from international donors, address some of the direct drivers of land degradation identified in the LDN target setting process: agriculture expansion into forest land, wood harvesting, fire, and unsustainable grazing. Ghana is also targeting indirect drivers of degradation, including issues around land and tree tenure.

To achieve LDN, Ghana is aiming high: its targets match the results of its baseline assessment showing degradation in the period 2000-2010. The goals include reforesting 882 km² of formerly forested land, rehabilitating 5,108 km² of forest cover, and restoring the productivity and carbon stocks of more than 18,000 km² of cropland.

Many of the measures Ghana has identified to prevent, reduce and reverse degradation are forest-related. Technical approaches include sustainable forest management as well as natural regeneration and enrichment planting to restore forest lands. Policy measures include reforms to tree tenure and access rights, better enforcement of forestry and mining laws, and making it easier for people to establish fuelwood plantations.

These approaches are being put into practice through several large-scale and long-term projects. They include "Reversing Land Degradation in Africa through Scaling-Up EverGreen Agriculture". This European Union-funded project across eight countries emphasizes agroforestry as a means of integrating sustainable land management with biodiversity conservation as well as climate mitigation and adaptation goals.

Ghana is also leveraging the support of the World Bank's Forest Investment Program to reduce greenhouse gas emissions from deforestation and forest degradation. Projects aim to increase wood production and carbon stocks by working with cocoa farmers and communities to protect and rehabilitate natural forest and by developing sustainable plantations in partnership with the private sector. In addition, the World Bank recently approved support for reclamation work at artisanal mining sites.



COLOMBIA: VALUING FORESTS AND TREES, REGION BY REGION

In planning for LDN, Colombia has recognized the diversity of the country's geography and rural economies. The result is a set of targets and measures tailored to regional opportunities and needs. Adding more trees to farmland and creating new protected areas are key to their implementation.

Native forest species will be planted to raise the productivity of at least 9,000 hectares of pasture lands in the Sucre department of its Caribbean region by 2030, and to restore deforested areas. Stretching inland to the Andes mountain range, the extension of agroforestry – with cocoa and fruit trees – will help improve another 2,000 hectares of farmland.

Also in the Caribbean region, Colombia aims to reforest at least 9,000 hectares of land from which the trees had been cleared to create pasture. The restoration effort targets aquifer recharge zones and areas where deforestation has resulted in degraded soils.



To preserve biodiversity-rich tropical dry forests, Colombia aims to include 18,000 hectares of this ecosystem in regional and local protected areas and conservation agreements across seven departments. Thousands more hectares of dry forest will be restored or included in conservation zones.

Colombia is integrating its LDN strategy with those designed to meet related environmental objectives. For instance, the creation of more protected areas is part of a project supported by the GEF. Other goals of the project include the reduction of greenhouse gas emissions from deforestation and forest degradation, and the conservation and sustainable use of biodiversity. Colombia also aims to restore at least 100,000 hectares of degraded land under Initiative 20x20,²³ a regional restoration effort in support of the Bonn Challenge.

CHINESE FOREST MOVES FROM 'NEUTRAL' TO 'PLUS'



Forests and trees are not only helping China achieve a balance between degradation and restoration, but also powering an overall improvement in the stock and productivity of the country's natural resources.

After combating land degradation for decades, China's forest cover is expanding and its grasslands are recovering. While LDN has been achieved in the drylands, China plans to go further by leveraging the LDN framework to protect and restore even more land and forest. This effort is central to its long-term drive toward sustainable development as well as achieving the SDGs and other international objectives.

To set the objectives in its report on the LDN TSP, China drew on national plans covering sectors including land use planning, desertification control and forest management. Wind and water erosion are major drivers of land degradation, and forests and trees are an important part of the solution.

For instance, China aims to steadily improve both the extent and quality of its forests. Total forest cover reached 22.96 per cent in 2018, up from 16.55 per cent two decades earlier. The country is now targeting an increase in forest cover of over 23.04 per cent by 2020 and 26 per cent by 2035.

China aims to strengthen forest management planning from the national to the county level. Other measures include increased government subsidies and other financial support for forestry and forest management, and the promotion of private sector engagement and carbon markets. It purposes to revise laws and regulations governing forest and harvesting management.

Protecting and restoring forest vegetation is an important element in China's ongoing soil and water conservation measures expected to cover an area of 940,000 km² by 2030. This may take the form of adding hedgerows, shelterbelts and grid forests to the landscape as well as agroforestry practices. Among the measures to intensify China's fight against desertification are afforestation projects, strict protections for dryland forests and controls on firewood collection, mining, and land reclamation in the drylands.

China has launched numerous large projects that are contributing to its LDN targets, including the 'Great Green Wall' project which is growing a shelter belt forest in the North, Northeast and Northwest of the country (1978-2050). In

dryland areas vulnerable to erosion and desertification, this project has preserved an area of 30.14 million ha over the past 40 years (1978-2018). By 2020, China expects to have increased by nearly 1 million ha the forest area across 13 provinces in the north including the restoration of degraded forest stands. The longer-term afforestation target for 2050 in the "Three North" project plans to preserve an area of 35 million ha, including tree planting near homes, roads and canals.

Another significant project is focused on conserving and restoring natural forest ecosystems in areas including the Yangtze and Yellow River watersheds and important state-owned forest areas. This includes reduced logging in natural forests and the development of plantation forests.

China is also engaged in a project to rehabilitate erosion-prone and sandified farmland covering an area of 13.26 million ha. This includes measures on steep terraces and sloping arable land (from 15-25 degrees) in important water source areas as well as contaminated farming land and other arable lands with low efficiency and productivity.

Finally, the Sand Source Control project around Beijing and Tianjin, launched in 2000, includes afforestation, sand dune fixation with engineering measures, grassland treatment, bans on overgrazing, micro-watershed management, and organized migration for ecological benefit. In total the project has afforested about 8.84 million ha, improved the ecological condition in the project area, and contained the expansion of sandification. As a result, sand and dust storms have been reduced markedly making this project one of the most successful ecological construction models in the domain of combating desertification in China.



BELARUS: PROTECTING THE MULTIPLE BENEFITS OF PEATLAND FORESTS



Belarus is restoring thousands of hectares of peatland forest under its plans for LDN,²⁵ part of a wider drive to reverse degradation, combat climate change and safeguard biodiversity through integrated projects.

The focus on peatlands in Belarus, a land-locked Eastern European country with extensive forests and wetlands, shows how the LDN framework can be used to address specific needs and ambitions in very different parts of the world.

Peat extraction, drainage and intensive farming have degraded large areas of peatland in Belarus, and the government wants to stop the decline and achieve LDN by 2030. With international assistance, it has already restored some 51,000 hectares and is pressing ahead with the current “Wetlands” project.

Funded by the GEF and implemented by the United Nations Development Programme, the project is restoring another 12,000 hectares of disturbed, inefficiently drained

peatland forest. The experience gained will inform plans for the more sustainable use to all of the country’s 260,000 hectares of drained peatland forests.

“Ecological” restoration in peatlands typically involves rewetting the peat. Healthy peatlands absorb, rather than emit, greenhouse gases. Restoration can stabilize water tables, prevent the soil mineralization that releases greenhouse gases, improve the ecological conditions of nearby rivers and meadows, and reduce the risk of fire.

Lessons from the “Wetlands” project are expected to help Belarusian authorities craft a new law on protecting peatlands – reflecting the LDN framework’s emphasis on preventing and reducing degradation as well as on restoration.

Belarus has embraced LDN to reduce the estimated \$360 million annual cost of degradation, equivalent to 9.5 per cent of the country's agricultural GDP. Economists have estimated that every dollar invested in action against degradation in the country yields a seven-fold return.

A pilot country for the LDN TSP, Belarus has set forest-related targets including restoring 60,000 hectares of peatlands and reducing the area of degraded reclaimed land with peat soils by up to 190,000 hectares by 2030.

Belarus aims to increase its – already large - total forest area from 39.1 per cent in 2013 to 41 per cent in 2030. With help from the World Bank, it is implementing a project to improve its forestry practices, including through the promotion of reforestation and afforestation.

Increasing the area of forests and woodlands will help it meet the target of raising the proportion of “environment-stabilizing land types” (which also includes meadows and wetlands) to at least 60 per cent of national territory, from 55.9 per cent in 2014.

In Belarus, peatland rehabilitation over the last 20 years has avoided emissions equivalent to about 3 million tons of CO₂. Recognizing the mitigation potential of peatlands, Belarusian experts plan to improve the methodology of emissions assessments to tap into carbon market mechanisms and boost investments in rehabilitation.



LDN provides a unique framework for integrated policymaking and the planning, implementation and assessment of interventions to halt and reverse land degradation. Many countries are putting this into practice at the national and sub-national level to protect and restore forests and landscapes.

Below are some of the recent international agreements and commitments relevant to forests and forest landscapes whose goals and activities can be effectively accommodated and coordinated within the LDN framework. Doing so can help countries to identify policies and actions that produce synergies, reduce costs and administrative burdens, and accelerate their compliance with their multilateral commitments.

2030 AGENDA FOR SUSTAINABLE DEVELOPMENT

SDG target 15.3 commits countries to, by 2030, “combat desertification, restore degraded land and soil ... and strive to achieve a land degradation-neutral world.” In 2015, country Parties to the UNCCD linked the implementation of the Convention to the SDGs in general, and SDG target 15.3 in particular. The target has become a strong vehicle for driving UNCCD implementation while contributing to and accelerating the achievement of multiple SDGs, including those related to climate change, biodiversity, food and water security, disaster risk reduction, and poverty reduction (Figure 6). Protecting forests and improving their productivity for both people and biodiversity as well as enriching tree cover in other landscapes will be vital to reaching these objectives.



Figure 6: Meeting Target 15.3 by achieving LDN will bring help put many other SDGs within reach

UN STRATEGIC PLAN FOR FORESTS

Adopted in 2017, the UN Strategic Plan for Forests serves as a global action framework for sustainable forest management across the United Nations system and beyond. The Strategic Plan includes six specific Global Forest Goals and 26 associated targets. Their attainment by 2030 would contribute significantly to the implementation of both the Paris Agreement and the SDGs. The Strategic Plan includes a target to increase forest area by 3 per cent worldwide equal to an increase of 120 million hectares, an area twice the size of France.

THE BONN CHALLENGE AND THE NEW YORK DECLARATION ON FORESTS

Launched in 2011, the Bonn Challenge aims to bring 150 million hectares of degraded landscapes into restoration by 2020. Leaders meeting in New York in 2014 called for the restoration of an additional 200 million hectares by 2030. Regional restoration initiatives are supporting the Bonn Challenge. They include: Initiative 20x20, a country-led effort to bring 20 million hectares of land in Latin America and the Caribbean into restoration by 2020; AFR100, which aims to bring 100 million hectares of degraded forest landscapes in Africa into restoration by 2030; and other ministerial dialogues and roundtables in the Mediterranean, Asia-Pacific, and Caucasus and Central Asia regions. So far, 57 countries, sub-national governments and private organizations have committed to bringing over 170 million hectares under restoration.

PARIS AGREEMENT

The importance of trees and forests in addressing climate change is anchored in the landmark Paris Agreement of 2015. The Paris Agreement explicitly endorses efforts to reduce greenhouse gas emissions from deforestation and forest degradation (also known as REDD+), recognizes the role of sustainable forest management, and calls for more funding to help implement policies that promote such management. Combating deforestation and forest degradation is a core component of the Nationally Determined Contributions submitted by many countries who have signed the agreement. The sustainable management of forests and trees is also a cornerstone of many countries' climate change adaptation strategies. By one estimate, natural climate solutions, including the restoration and sustainable management of forests, could offer more than one third of the solution to the climate crisis.²⁶

CONVENTION ON BIOLOGICAL DIVERSITY

Tackling land and forest degradation contributes to meeting many of the objectives of the CBD, including targets set under the Strategic Plan for Biodiversity 2011-2020. For instance, Aichi Biodiversity Target 5 seeks to reduce the destruction and degradation of natural habitats, the most important driver of biodiversity loss. Target 15 calls for the large-scale restoration of degraded ecosystems, also to help mitigate and adapt to climate change and reverse desertification. Progress on Targets 5 and 15 would help achieve other Aichi targets, including those on protected areas and preventing extinctions, as well as the post-2020 global biodiversity framework.

OPPORTUNITY

Awareness of the risk that land and forest degradation poses to livelihoods and development around the world has never been higher. The gravity of the multiple environmental challenges that we face is hastening the search for solutions. Action to prevent deforestation and forest degradation where it is most acute, and to expand tree cover within other land uses, is recognized as a cost-effective way to reverse land degradation trends in many countries.

Ecosystem services losses from the degradation of forests and other lands cost as much as \$10.6 trillion a year, or 17 per cent of global GDP. That is over \$1,400 per person across the world.²⁷ Where degradation has already occurred, restoration can make clear economic sense. For instance, according to one estimate, meeting the global forest and landscape restoration target of 350 million hectares could create up to \$9 trillion in net benefits.²⁸ Globally, the costs of inaction outweigh the costs of action by about five-to-one.²⁹

Under the LDN framework, more than 80 countries have already set targets for the prevention, reduction and reversal of land degradation, almost all of them contain forest-related targets. As well as implementing measures to attain their goals, these countries have the opportunity to refine their targets and measures as their knowledge and capacities evolve. Countries still working through the LDN target setting process can draw on the experience of those who have already set their goals as well as rapidly advancing scientific knowledge and understanding of degradation and restoration in forests and other landscapes. Countries not yet engaged with the LDN process are invited to join.



SUPPORT

The UNCCD including the Global Mechanism are already providing comprehensive advisory services and work together with developing countries, the private sector and donors to mobilize resources for the implementation of LDN. Through the TSP, the Global Mechanism has helped scores of countries to set their LDN targets. Countries pursuing LDN can draw on a wide range of information resources to understand better the extent, pace and causes of degradation in forested and non-forested lands, and to organize an integrated response. Online resources in the UNCCD's Knowledge Hub include a guide to LDN's scientific conceptual framework³⁰ and a checklist for the preparation of transformative projects and programmes³¹ that can make LDN a reality.

LDN: FROM TARGETS TO ACTION ON THE GROUND

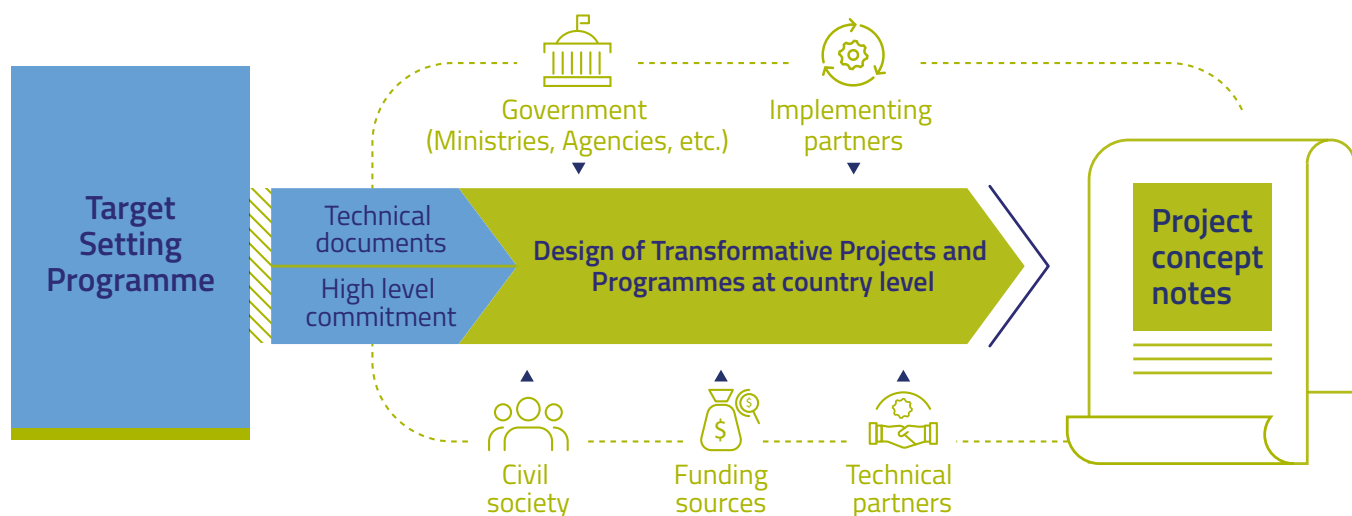


Figure 7: The UNCCD assists countries to set LDN targets and to design and implement the programmes they need to achieve LDN

UN DECADE ON ECOSYSTEM RESTORATION 2021-2030

Recognizing the urgency of combating degradation, the United Nations has declared the period 2021-2030 as the UN Decade on Ecosystem Restoration. The Decade is intended to draw together political support, scientific research and financial muscle to scale up restoration activities from pilot initiatives to areas in the millions of hectares. UN Environment and the FAO will lead its implementation,³² in collaboration with partners such as the UNCCD and joint initiatives such as the Global Partnership on Forest and Landscape Restoration and the Collaborative Partnership on Forests.

FUNDING

Funding for ecosystem restoration, including sustainable forest management and forest landscape restoration, is increasing. Agencies including the GEF and the World Bank are backing major programmes and projects that promote LDN around the world. However, much more financial support will be required to reach the goals for 2030 and beyond. According to a recent assessment, about \$837 billion will be needed to reach the global restoration target of 350 million hectares in the New York Declaration on Forests. Achieving LDN globally – including measures beyond forests and trees – would cost an estimated \$4,780 billion.³³

Governments and international financial bodies will have a key role in scaling up investment. However, given the size of the funding gap, engaging private capital – whether as classical, social or impact investors - will be essential. Blended finance, which mixes public and private funds in a common investment scheme, is an increasingly important source of funds for development projects, including the drive to meet the SDGs.³⁴

THE LAND DEGRADATION NEUTRALITY FUND

To strengthen support for LDN activities, the UNCCD has spearheaded the establishment of the Land Degradation Neutrality Fund (LDN Fund), an impact investment fund that blends resources from the public, private and philanthropic sectors to catalyse sustainable land management and restoration projects undertaken by the private sector.

The LDN Fund seeks to support the sustainable management of 500,000 hectares of land, to reduce CO₂ emissions by 35 million tons, and to create jobs or improve livelihoods for over 100,000 people. Eligible projects are those that generate clear environmental and socio-economic benefits as well as financial returns. Backed by the European Investment Bank and the French Development Agency, the fund this year finalized its first transaction with a programme to restore degraded land in Peru through sustainable agroforestry practices.

Transformative LDN proposals will often need to secure multiple sources of finance. Given their ability to meet multiple goals, including livelihood support and environmental protection, forest restoration initiatives have the potential to tap funding earmarked for climate mitigation and adaptation as well as for broader social development purposes.

Forest-related projects can also enjoy more targeted support. For example, the Global Forest Financing Facilitation Network and the Collaborative Partnership on Forests have helped build the capacity of forest-related government agencies in numerous developing countries.

Governments can help unlock private investment in sustainable land and forest management by redirecting incentives such as subsidies so that they discourage degradation and encourage restoration. They can also create innovative sources of funding for forest and landscape restoration through the development of national forest funds.

A VISION OF 2030

With increased political commitment, carefully-designed and evidence-based policymaking, expanded technical capacity and stepped-up investment, the global drive to prevent and reduce land and forest degradation and restore degraded areas will ultimately be successful.

The improved management of forests and trees will stand out among the successes. By striving for LDN, countries around the world will have halted deforestation and forest degradation; they will have reduced the loss of trees to agricultural expansion and urbanization. And they will have restored millions of hectares of forests and forest lands, woodlands and mangroves in the process.

They will have helped:

- increase the productivity of farmlands and coastal fisheries as well as forests, improving livelihoods and making them more resilient in the face of climate change, drought and other natural disasters;
- expand tree cover, which will absorb more carbon from the air, slowing the warming of the atmosphere and helping to mitigate climate change and the extreme and destructive weather that it brings;
- improve biodiversity, from endangered primates to pollinating bees, which will find more refuge in forest ecosystems, and continue to support the delivery of ecosystem services upon which we depend in so many ways.

Governments will take credit for meeting the commitments they had made to their own people. Forests will have helped the world achieve SDGs related to poverty alleviation, food and water security. Nature-based solutions will dominate action to mitigate climate change and adapt to its impacts. Progress toward biodiversity targets related to forests will be significant.

In short, we will have understood the value of forests and other natural systems to the health of the planet and the well-being of all people, and found innovative ways to protect and restore them, enabling and powering the sustainable development that will secure our collective future.

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