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COMBATTING LAND DEGRADATION

SECURING A SUSTAINABLE FUTURE

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GREEN CLIMATE FUND

Global Challenge of Land Degradation

Recent research and debates on land degradation have put a spotlight on the role of industrial agriculture and unsustainable management of cropland and grazing land as key drivers of land degradation.[1] The findings of the IPBES assessment report on Land Degradation and Restoration show that 'the main direct drivers of land degradation and associated biodiversity loss are expansion of crop and grazing lands into native vegetation, unsustainable agricultural and forestry practices, climate change, and, in specific areas, urban expansion, infrastructure development and extractive industry.'[2]

The Global Land Outlook, published by the UNCCD, reveals that 'pressures on global land resources are greater than at any other time in human history. From 1998 to 2013, approximately 20 per cent of the Earth's vegetated land surface showed persistent declining trends in productivity, apparent in 20 per cent of cropland, 16 per cent of forest land, 19 per cent of grassland, and 27 per cent of rangeland. These trends are especially alarming in the face of the increased demand for land-intensive crops and livestock'.[3]

The most recent IPCC report on Climate Change and Land[4] presents a consensus among the scientific community, that land use and changes to land use, driven largely by commercial agricultural expansion, forestry, and consumption patterns, have not only contributed to food availability for a growing population, but also to an increase in greenhouse gas emissions, loss of natural ecosystems and declining biodiversity. This report describes the role of land in climate change, as both a sink and a source of CO2, due to anthropogenic and natural drivers. Recent estimates show, with high levels of confidence, that agricultural production, forest and other land uses account for 23% of anthropogenic

1. International Panel of Experts on Sustainable Food Systems (iPES Food), 2016. From Uniformity to Diversity: A paradigm shift from industrial agriculture to diversified agroecological systems.
2. Intergovernmental Science-Policy Platform on Ecosystems and Biodiversity (IPBES), 2018. Assessment on Land Degradation and Restoration - Summary for Policy Makers
3. UN Convention to Combat Desertification. 2017. Global Land Outlook
4. Intergovernmental Panel on Climate Change, 2019. Climate Change and Land: An IPCC special report on climate change, desertification, land degradation, sustainable land management, food security, and greenhouse gas fluxes in terrestrial ecosystems. Summary for Policymakers.

emissions, and these are expected to increase, driven largely by population and income growth, and changes in consumption patterns.

Responses to land degradation must, therefore, confront these challenges, and promote interventions that avoid, reduce and reverse land degradation, while at the same time meeting food production and economic growth demands, which are on the rise. These approaches and practices include, among others, agroecology, conservation measures, agroforestry and integrated animal and crop production systems that promote soil organic matter accumulation and nutrient cycling, restoration of degraded forests, rangelands and wetlands, and measures that enhance soil carbon storage in managed landscapes.

As an international agreement on good land stewardship, the UNCCD is leading the way on land degradation neutrality to help countries halt and reverse land degradation by 2030.

The Scientific Conceptual Framework for Land Degradation Neutrality (LDN), developed by the UNCCD, provides a scientific foundation for understanding, implementing and monitoring LDN.[4] Achieving land degradation neutrality will be a stepping stone towards land-based sustainable development, growth and prosperity beyond 2030.

Over the last few years, the implementation of the UNCCD's objectives has broadened beyond the focus on drylands, to draw attention to the major drivers of land degradation in other ecosystems across the globe. The UNCCD therefore addresses challenges that other global conventions seek to address. As the IPBES assessment report notes[2], the various conventions that address land and environmental degradation, including the UNCCD, UNCBD, UNFCCC and the Ramsar Convention 'have found a focus in target 15.3 of the Sustainable Development Goals, taking into account, among others, the scientific conceptual framework for land degradation neutrality.'

LAND DEGRADATION: A BARRIER TO SUSTAINABLE DEVELOPMENT

SOURCES: UN Convention to Combat Desertification. 2017. Global Land Outlook; Intergovernmental Science-Policy Platform on Ecosystems and Biodiversity (IPBES), 2018. Assessment on Land Degradation and Restoration - Summary for Policy Makers; Economics of Land Degradation Initiative, 2015. Report for Policy and Decision Makers: Reaping Economic and Environmental benefits from Sustainable Land Management.

40%

of world's degraded lands are found in areas with the highest incidence of poverty, which remains overwhelmingly rural

Over **1.3 billion people** relying on land for their livelihoods are trapped on degrading agricultural land

By 2050, the combination of land degradation and climate change is predicted to reduce global crop yields by an average of **10%** and by up to 50% in some regions

By 2050,

50 to 700 million people

are projected to have migrated as a result of the combination of land degradation and climate change

The global community is losing up to 5% of potential agricultural gross domestic product (GDP) due to land degradation, costing some USD 490 billion per year in lost income

Avoiding land degradation through sustainable land management and restoration can generate up to **USD 1.4 trillion** per year of economic benefits

UNCCD 2018-2030 Strategic Framework

The UNCCD 2018-2030 Strategic Framework was adopted by the Conference of the Parties to the Convention at its thirteenth session held in Ordos, China, in September 2017. The Framework will contribute to achieving the objectives of the Convention and the 2030 Agenda for Sustainable Development, in particular regarding Sustainable Development Goal 15 and target 15.3: "by 2030, combat desertification, restore degraded land, including land affected by desertification, drought and floods, and strive to achieve a land degradation-neutral world".

Land Degradation Neutrality (LDN) is a positive aspirational goal that entails: adopting sustainable land management (SLM) policies and practices to minimize current, and avoid future, land degradation; and restoring degraded and abandoned lands. The innovative aspect of LDN, that differentiates it from previous efforts to tackle land degradation, is the adoption of neutrality as the goal. Success in achieving LDN within the framework of SDG 15 may be measured based on whether biodiversity, ecosystem functions and services are stable or increasing in each of the focal ecosystems compared to their state in 2015.[3]

The UNCCD defines LDN 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".[5]

Meeting these long-term objectives will contribute to achieving the vision of the Strategic Framework of "striving to achieve a land degradation-neutral world consistent with the 2030 Agenda for Sustainable Development, within the scope of the Convention".

UNDP contributed to the Convention's preparatory work on LDN, leading to its adoption as a guiding principle for the implementation of the UNCCD in 2018-2030. This included support to the organization of regional capacity building workshops to introduce the "Scientific Conceptual Framework for Land Degradation Neutrality", piloting LDN target setting in selected countries and supporting national efforts on sustainable land management, sustainable agriculture and landscape restoration.

5. UN Convention to Combat Desertification (UNCCD), 2017, Scientific Conceptual Framework for Land Degradation Neutrality

The following strategic objectives will guide the actions of all UNCCD stakeholders and partners in the period 2018-2030:

Strategic Objective 1

To improve the conditions of affected ecosystems, combat desertification/land degradation, promote sustainable land management and contribute to land degradation neutrality

Strategic Objective 2

To improve the living conditions of affected populations

Strategic Objective 3

To mitigate, adapt to, and manage the effects of drought in order to enhance resilience of vulnerable populations and ecosystems

Strategic Objective 4

To generate global environmental benefits through effective implementation of the UNCCD

Strategic Objective 5

To mobilize substantial and additional financial and non-financial resources to support the implementation of the Convention by building effective partnerships at global and national level

UNDP Response to the Global Land Degradation Challenge

UNDP recognizes that land degradation is a barrier to sustainable development. Population growth, climate change, urban expansion, and unsustainable farming, mining and grazing practices are increasing pressure on land, leading to the degradation of productive land resources including water, generating greenhouse gas emissions, worsening inequalities among groups and nations and increasingly leading to major global challenges such as internal displacement and migration.

Drawing on over 40 years of experience, UNDP assists countries to integrate land and related environmental concerns into national and sectoral development plans and strategies, secure resources, and implement programmes that advance inclusive, sustainable growth and development. This work supports governments to implement Multilateral Environmental Agreements and the 2030 Agenda for Sustainable Development. The support to the countries is guided by UNDP's own strategic vision and goals, as outlined in its Strategic Plan (2018-2021), which sets out the six signature solutions for addressing development challenges, with poverty eradication as the highest priority. Signature solution 4 – Promote nature-based solutions for a sustainable planet – responds to challenges presented by environmental degradation, and seeks to tackle market, policy and governance failures that lead to ecosystem degradation, and recognizes that strengthened ecosystem management and nature-based solutions can help achieve food and water security and sustainable livelihoods.

Nexus Approach to Addressing Land Degradation

At the global level, UNDP is elevating the delivery of the goals of its Strategic Plan, by taking a nexus approach on the themes of climate change, inequality and migration and food system as entry points for supporting countries to address the most pressing development challenges but also in order to achieve the SDGs. Taking this nexus approach for addressing land degradation presents an opportunity to strengthen UNDP responses and support to countries at the most impactful level. For example, through its work on climate change, UNDP will demonstrate and upscale nature-based solutions for climate change mitigation and adaptation, including restoration of degraded lands and SLM actions, which can achieve multiple development and climate dividends. UNDP will provide comprehensive support for tackling problems in the global food system, promoting SLM and landscape management and safeguard biodiversity, while reforming global commodities supply chains to incentivize building of resilient agroecosystems.

UNDP's support to countries in addressing land degradation and its impacts on human development contributes to the achievement of multiple SDGs, beyond SDG 15 (Life on Land), to include others such as SDG 1 (No Poverty), SDG 2 (Zero Hunger), SDG 5 (Gender Equality), SDG 12 (Responsible Production and Consumption), SDG 13 (Climate Action). It also directly contributes to the implementation of the UNCCD and its vision as outlined in the 2018-2030 Strategic Framework, and its five strategic objectives as agreed by member states. This support is designed to enhance livelihoods, secure food and water, promote equity and human rights, build resilience and increase carbon sequestration of soils in agricultural landscapes, and respond to the major environmental challenges that the global food system is placing on landscapes, ecosystems and farming communities around the world.

A three-pronged approach underpins UNDP's support to developing countries on land degradation and UNCCD implementation:

- **Developing individual, institutional and systemic capacity** for SLM and restoration at landscape, national and regional levels and catalyzing upscaling of the actions through connecting local actions to national and international policies, finance and technical support and facilitating partnerships;
- **Undertaking applied policy research and analysis and providing evidence** on policies and good practices in SLM and restoration that optimize livelihoods, jobs and food security;
- **Assisting countries to identify, access, combine and sequence environmental finance**, including from the Global Environment Facility (GEF) Trust Fund and GEF-managed funds, including the Special Climate Change Fund (SCCF), the Least Developed Countries Fund (LDCF) and the Adaptation Fund (AF); and the Green Climate Fund (GCF) and other bilateral donor and private sector funding, for SLM, sustainable agriculture and food production and landscape restoration.

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UNDP's Support to the UNCCD 2018-2030 Strategic Framework

UNDP's support to the UNCCD 2018-2030 Strategic Framework aims to advance the global drive towards land degradation neutrality and contribute to the strategic objectives of the Framework as highlighted below. It is delivered through UNDP's global network of country offices, with support from the UNDP regional hubs and centers, the Global Environmental Finance Unit and the Global Policy Centre on Resilient Ecosystems and Desertification. UNDP's 199 national projects in over 84 countries tackling land degradation, combined with global policy support, generate comprehensive results for addressing causes and barriers at global, national and local levels in an integrated manner.

STRATEGIC OBJECTIVE 1
Halting and Reversing Land Degradation

UNDP is currently supporting a number of global and regional policy initiatives to inform national and regional level policy-making on SLM, sustainable agriculture and landscape restoration. These initiatives are designed to support capacity development, access to data and information, participatory assessments and consultative decision-making processes, to help countries design legislative, policy and regulatory tools to avoid, reduce and reverse land degradation and desertification through sectoral and cross-sectoral interventions.

Future Perspectives on Land for Eastern Africa

This initiative is designed to assess the order of magnitude of potential future changes to land in Eastern Africa up to 2050. Initially, it aims to enable East-African policy-makers to integrate scenario analyses in policy development. Ultimately, it envisions the development of robust policy responses in the wake of land degradation challenges. The initiative is a joint undertaking by UNDP, the Netherlands Environmental Assessment Agency and the Joint Research Centre of the European Commission. It is implemented within the framework of the African Initiative for Combating Desertification, starting with a pilot phase in 2019-2020 focusing on Kenya and Ethiopia.

Economics of Land Degradation (ELD)

A global assessment on the economic benefits of land and land-based ecosystems. The ELD Initiative highlights the value of SLM and provides a global approach for analyzing the economics of land degradation. It aims to make the economics of land degradation an integral part of policy strategies and decision-making. UNDP supported the introduction of the ELD approach in selected countries to generate practical feedback and guidance regarding its application on the ground. In partnership with the Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ)-ELD Initiative, UNDP is currently supporting a study on the costs of land degradation and economic benefits of investing in SLM and evergreen agriculture in Somalia.

Biodiversity and Ecosystems Network (BES-Net)

BES-Net is a capacity sharing "network of networks" that promotes dialogue between science, policy and practice sectors for more effective management of biodiversity and ecosystems, contributing to long-term human well-being and sustainable development. BES-Net facilitates communication between the three sectors around the themes highlighted by the IPBES global thematic assessments through Trialogues, a state-of-the-art methodology of face-to-face multi-stakeholder dialogue. The Anglophone Africa Trialogue in 2019, for example, provided leading policymakers, scientists and practitioners with an opportunity to jointly assess the status, trends and future scenarios of biodiversity and ecosystem services in the region based on IPBES's assessment on Land Degradation and Restoration and deliberate critically on their impacts on ongoing LDN implementation efforts in their respective countries.

LDN Target Setting Programme

UNDP is an active partner of this UNCCD-led initiative. It supported the organization of regional capacity building workshops to introduce the Scientific Conceptual Framework for Land Degradation Neutrality and initiate the piloting of LDN target setting in selected countries in Africa and Asia. This multi-partner initiative led to significant progress towards LDN implementation: 119 countries are currently engaged in LDN target setting; 74 countries have established national LDN targets and measures to achieve them; and 46 countries have formally adopted their LDN targets (Ref. UNCCD, January 2019). The LDN targets are instrumental for informing national policy and practice on SLM and restoration, as well as on SDG target 15.3, up to 2030.

The Scaling-up Agroecology Initiative

In 2018, UNDP joined the FAO-led Scaling-up Agroecology Initiative, which 'aims to accompany and support national agroecology transition processes through policy and technical capacity that builds synergies between countries. It will build alliances among different stakeholders, strengthen networks and allow co-creation of knowledge and knowledge sharing. The Initiative will develop, implement and continuously improve tools, instruments and guidance documents for guiding national agroecological transitions.' UNDP is a member of the UN Partners Advisory Mechanism for the Initiative, constituted to guide implementation of the Initiative and its programme of work in three areas: Knowledge and Innovation for Sustainable Food and Agricultural Systems; Policy Processes for Transformation of Food and Agricultural Systems; and Building Connections for Transformative Change. An implementation programme for this Initiative is the emerging 1000 Landscapes for 1 Billion People (1KL) initiative. Through alliance with Ecoagriculture Partners, Rainforest Alliance, FAO and other partners, this initiative aims to catalyze hundreds of landscape partnerships for SLM, restoration of degraded land and ecosystem services, producing significant co-benefits including improvement of rural livelihoods and income, gender mainstreaming and youth employment.

GEF Small Grants Program (SGP)

Funded by the GEF as a flagship programme, the GEF Small Grants Programme (SGP), implemented by UNDP, was launched in 1992. The SGP supports activities of non-governmental and community-based organizations in developing countries aimed at biodiversity conservation, climate change mitigation and adaptation, protection of international waters, reduction of the impact of chemicals and prevention of land degradation, while generating sustainable livelihoods. In the last four years, SGP has supported 909 community-led projects in 125 countries, which brought total 1.6 million hectares of land under improved management practices and benefitted over 992,370 community members.

Equator Initiative

The Equator Initiative awards the Equator Prize to recognize and advance local sustainable development solutions for people, nature and resilient communities, including actions related to SLM and restoration. It also acts as a knowledge hub for local best practice, promoting peer-to-peer learning, knowledge exchange and replication of best practices.

Financing Inclusive Nature-based Development-oriented Enterprises (FINDERs)

Recognizing that Nature-based small- and medium-enterprises can drive prosperity, innovation and impact, FINDER aims to leverage new finance from private and public sources for nature-based small- and medium enterprises that accelerate climate and sustainable development dividends including those working on SLM and restoration.

At the national level, in addition to contributing to the development of scientific decision-support tools and policy solutions to land degradation challenges, UNDP is supporting countries to design practical interventions for implementation in degraded landscapes, working with national and sub-national institutions and land users across a diverse set of sectors to pilot and upscale technologies and approaches to avoid, reduce and reverse land degradation. Through partnerships with government and non-government actors across sectors such as agriculture, water, forestry, energy, planning, and land managers and users such as farmers and pastoralists, water-user associations, agricultural extension agents, local authorities, financing institutions, research and academia and NGOs, UNDP supports work on sustainable management of land and ecosystems which generates multiple social and environmental benefits at local, regional and global levels, and cuts across various priority development issues. Here we categorize this work into three broad areas: SLM in Agroecological Landscapes for Food Production; Landscape Restoration for Increased Flow of Agroecosystem Services and Building Resilience to Climate Change; and Integrated Landscape Management for Scaling-up SLM.

A SLM IN AGROECOLOGICAL LANDSCAPES FOR FOOD PRODUCTION

There is growing consensus about the damaging effects of conventional and large-scare industrial agriculture on landscapes and ecosystems, and the need to transition and transform food systems and agricultural value chains to become more environmentally-sustainable and socially-inclusive. The production of staple crops such as maize, rice, wheat and globally-traded commodities such as soy, coffee, cacao and beef, have resulted in large-scale degradation of ecosystems, loss of natural forests and biodiversity, pollution of water sources due to overuse of agrochemicals and decreasing yields and loss of agricultural income for millions of smallholder farmers around the world. Declining soil quality has led to poor crop performance and high risk of crop failure. Lack of investments in SLM, due in part to low levels of rural development and unclear land governance and insecure tenure, have discouraged farmers from investing in soil fertility improvements and sound agricultural practices. Soil nutrient removal and other forms of soil degradation have therefore reduced agricultural productivity, and many farming households remain nutrition and food insecure.

UNDP-supported interventions to address these challenges are aimed at improving the flow of agro-ecosystem services to enhance productivity in agricultural production landscapes. These interventions focus mainly on managing soil moisture and improving soil fertility by adopting technologies to increase soil organic matter (e.g. conservation agriculture, reduced tillage, continuous soil cover, composting); and increasing fertility by integrating legumes into farming systems (grain-legume crop rotation, cover crops, relay crops, integration of leguminous trees on farms). Supported technologies vary from capturing rainwater (e.g. ridge

tillage, planting pits and catchment ponds) and retaining soil moisture (e.g. mulching, permanent soil cover) to increasing productivity through irrigation.

At a system level, UNDP is supporting countries to shift their agricultural systems to halt and avoid further degradation of natural habitats and ecosystems. The entry point for this is through influencing land use planning decisions, investment decisions, value chains and markets to integrate social and environmental sustainability practices into the production process and to promote SLM investments, including soil fertility management, rehabilitation of degraded cropland and forest and landscape restoration as key components of the agriculture and food production process.

Through the GEF Trust Fund, GEF-managed funds such as Least Developed Countries Fund (LDCF) and Special Climate Change Fund (SCCF), GEF Small Grants Programme (GEF-SGP), the Adaptation Fund (AF) and GCF support, UNDP is supporting a number of countries and communities to implement sustainable agriculture initiatives that are geared at not only producing food but rehabilitating degraded landscapes and reclaiming them for agriculture and food production, while adopting practices that avoid further degradation.

Community-Based SLM and Restoration

In **Ghana**, through GEF-SGP, 6 community land management groups, each made up of 30 members, were formed, trained and empowered as community educators in sustainable land management practices. Important aspects of land management were enhanced in the project area, notably, the formulation of participatory land use plans, establishment of SLM committees, and increased wildfire management capacity. Agroecological practices were implemented including composting and alley cropping which served the dual purpose of improving agricultural productivity while helping retain soil moisture. 160 farmers were involved in water conservation improvement practices through the construction of stone bunds. The bunds prevent water from flowing down the slopes and help retain soil moisture. The project helped restore 30 ha of degraded woodland and placed them under SLM. It established 35 ha of woodlot using Cassia Siamea and Teak (Tectona grandis). 75 Charcoal producers (80 per cent women) adopted efficient charcoal production skills and 40 households acquired improved clean woodstoves.

For instance, through UNDP support, **Ethiopia**, **Nigeria** and **Uganda** are participating in a GEF-financed program to promote sustainability and resilience among smallholder farmers through the sustainable management of natural resources – land, water, soils, among others – that are crucial for food and nutrition security. An important element of natural resources management is the evidence-base for informing decisions about what degradation in the landscape entails, what it looks like and where it is located, to be able to design appropriate solutions. The Ethiopia initiative has embraced the use of earth observation-based information[6] on land cover and land cover change to inform SLM and restoration investments and to monitor the impact of these investments.

Building on previous work, under the GEF 7 programming cycle, UNDP will support several countries across Europe (Kazakhstan, Ukraine), Asia-Pacific (Indonesia, Papua New Guinea, Malaysia), Africa (Cote D'Ivoire, Ethiopia) and Latin America (Guatemala, Peru), to design and implement programmes that contribute to a transformation of global food systems and commodity production towards sustainability, by tackling unsustainable agricultural and food value chain practices that lead to deforestation and large-scale degradation of ecosystems and landscapes.

©UNDP Uganda

©UNDP Ethiopia

6. Support for this was provided by the Earth Observation for Sustainable Development initiative. http://eo4sd.esa.int/2017/07/24/eo4sd-project-supports-resilient-food-security-activities-for-smallholder-farmers-in-sub-saharan-africa/

B LANDSCAPE RESTORATION FOR INCREASED FLOW OF AGROECOSYSTEM SERVICES AND BUILDING RESILIENCE TO CLIMATE CHANGE

Restoring degraded landscapes is aimed at improving the functionality of ecosystems and landscapes to continue providing ecosystem goods and services and offers proven and cost-effective solutions to land and ecosystem degradation. This work focuses on landscapes and communities that are highly vulnerable to climate-induced impacts such as droughts and floods and those significantly affected by degradation, such as soil and water erosion, deforestation, overgrazing and invasion by alien species. It also seeks to rebuild natural infrastructure to enhance resilience against climate shocks and stresses and to strengthen capacity to recover following disasters. Some of the approaches and interventions include: protection of natural forest and peatland carbon stocks; use of native assemblages of forest species in reforestation activities; restoration of degraded wetlands, watersheds and grazing lands; and sustainable agricultural practices to protect soil carbon and rebuild soil fertility.

Through the GEF-LDCF, the Adaptation Fund, and increasingly through the GCF, UNDP is supporting a large number of countries to access financing for programmes and projects on ecosystem-based adaptation (EbA), through which landscapes are restored to build their resilience against the impacts of climate change, including droughts and floods, and to mainstream climate risks into the management of landscapes and natural resources and ecosystems, such as watersheds, forests, grasslands and agricultural land.

In **Lesotho**, where sustainable management of grasslands in mountainous landscapes is key for one of the country's most important resources, water, a GEF-LDCF initiative is supporting the restoration of degraded landscapes as a climate change adaptation solution. The initiative mainstreams climate risk into the national Land Rehabilitation Programme of Lesotho and agricultural practices of farmers across the varied landscapes. Through the initiative, farmers and land users are supported with practical skills to adopt and maintain climate-smart land rehabilitation techniques that increase resilience of the individual farms, community projects and landscapes to climate shocks, while improving the productivity of the land. Communities are also supported to maintain soil and water conservation technologies and infrastructure on individual farms and landscapes and to monitor trends in weather variation and using the information in decision-making.

A GEF-SGP initiative in **Mongolia** is supporting 3 projects working synergistically with each other to halt and reverse land degradation, namely: "Groves in Taragt"; "Protection of Water Springs"; and "Increasing Household Firewood Supply in Gobi". Considering the increased frequency and intensity of drought in the country, the protection of natural water bodies and springs is an extremely important task. The first two grants were given to support the restoration of local ecosystems by establishing fencing and tree planting activities around a number of water bodies, including several life-sustaining springs. Over 200 herders and local residents benefited from both grants which also included tree planting around vegetable fields to create wind shields. The third grant was used to establish a tree nursery in a remote Gobi area which is subject to severe desertification leading to the degradation of pastures. The tree nursery was intended to produce fast growing tree seedlings including willow trees that can be used for fodder and fuel woods to replace saxaul.

C INTEGRATED LAND USE PLANNING AND LANDSCAPE MANAGEMENT TO REDUCE COMPETITION AND CONFLICT OVER NATURAL RESOURCES

Integrated Landscape Management (ILM) fosters joint land use and management planning among different groups of land managers and stakeholders to ensure optimal configuration of land uses and management regimes, leading to continuous flow of ecosystem services while achieving optimal benefits to livelihoods and well-being of people in the given landscape. ILM is key in supporting countries' efforts towards achieving LDN. Taking a landscape approach, UNDP supports the creation of an enabling environment and development of necessary capacities for integrating SLM and restoration into land use planning processes. This includes development of tools for integrating the value of ecosystems and biodiversity into land use planning and decision making, and development of sector-specific standards, safeguards and incentives to protect ecosystem health and promote a landscape approach to managing and utilising natural resources.

ILM also promotes land use planning processes that enable multi-stakeholder and participatory dialogue to reach land allocation and use decisions that reduce competition and conflict over land and natural resources, and mitigate the impacts of these on society, livelihoods and the environment. Through integrated land use planning

processes, all land use and non-use values are considered to ensure that current and future needs are catered for. Evidence and decision-support tools are employed to arrive at land use and allocation decisions that maximise benefits, reduce impacts and mitigate negative outcomes on society and environment.

In **Uzbekistan**, a GEF-financed initiative is supporting improved, sustainable and resilient land use management of arid desert, steppe and mountain landscapes, which constitute the vast majority of its territory, to reduce competitive pressures between different land uses, particularly pasture use and forestry. ILM is being promoted through facilitating the up-scaling of existing best practices for land management within two ecologically and socio-economically representative districts (Zaamin and Karakul) and providing a model for undertaking district level integrated land use planning. The initiative is supporting land use capacity development at all levels, from national decision-makers to farmers, for enhanced implementation of national land use policy and legislation.

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In **South Africa**, another GEF-financed initiative is supporting the mainstreaming of SLM into national and sub-national land use planning and decision-making. It is supporting the creation of an enabling environment to guide interventions on land and ecosystem rehabilitation by leveraging scientific understanding, institutional and human capacities to put in place land management, livestock and agricultural production systems that simultaneously increase primary productivity, rehabilitate land and ecosystems and build resilience of natural resource-dependent communities. In the Qaraoun Catchment in **Lebanon**, In the Qaraoun Catchment in Lebanon, an on-going initiative promotes an integrated approach towards fostering SLM – seeking to balance environmental management with development needs by among others, setting up a multi-sector planning platform to balance competing environmental, social and economic objectives in district development plans and associated investments. This is to reduce conflicting land-uses and improve the sustainability of land management so as to maintain the flow of vital ecosystem services and sustain the livelihoods of local and downstream communities. Land

use plans will be underpinned by a robust decision-support system, including a Strategic Environmental Assessment, and a monitoring framework which will inform the planning process, development investments and enforcement. This will help determine where development should be avoided (in the most ecologically sensitive areas), where and how impacts should be reduced, and where and how land should be rehabilitated. The project will also adapt land use practices in different economic sectors – testing new land management measures to reduce environmental stress.

STRATEGIC OBJECTIVE 2
Improving the Living Conditions of Affected Populations

UNDP's support to countries in addressing land degradation and its impacts on human development is designed to enhance livelihoods, secure food and water, promote equity and human rights and build the resilience of affected communities. This support is provided to countries and communities across a variety of landscapes and agroecological zones, including arid, semi-arid landscapes (ASALs) where the focus is on building the resilience of communities and livelihoods, especially rain-fed agriculture and pastoralism, against land degradation, desertification and climate-induced impacts, especially droughts and floods. This support helps to build arable and pastoral communities to manage resources in a sustainable manner, to reduce degradation of ecosystems and landscapes, such as forests, watersheds and cropland, and also enhance their productivity, by adopting good agricultural practices and SLM practices.

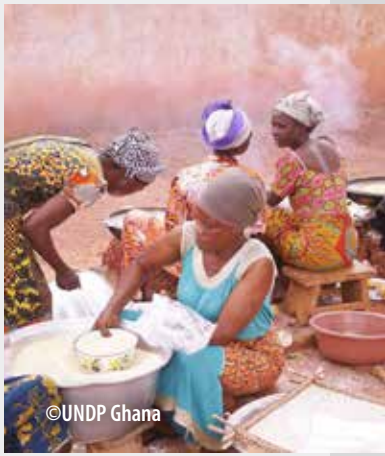
In **Ghana**, the adoption of agroecological practices such as composting, alley cropping, and construction of stone bunds helped improve agricultural productivity, enhance water conservation, restore degraded woodlots and promote efficient charcoal production for household use. In **Mongolia**, the restoration of degraded rangelands and protection of water bodies provided much needed fodder and water to local herders affected by severe desertification and drought. In **Jamaica**, UNDP's support helped local communities increase

water availability for crops, livestock and household use. A vulnerability reduction assessment revealed a significant reduction of vulnerability to drought, including enhanced food security and increased average income, as a result of UNDP-supported interventions. In **Cuba**, the introduction of climate-smart farming practices helped local communities cope with frequent and recurring drought, raise the productivity of their land, and increase average annual income by 25 per cent due to increased production and quality of crops.

Women's Empowerment in Drylands

During 2015-2018, UNDP invested significant efforts to advance the gender agenda of the Convention. In 2015, UNDP, in partnership with UNCCD and NRI, published a series of thematic papers on "Women's Empowerment in Drylands" to propose strategic actions in the policy, institutional and capacity spheres to reduce gender inequalities in drylands with respect to land rights, governance and resilience. These papers, along with a set of policy briefs, served to inform the policy dialogue on promoting gender equality and women empowerment in the implementation of the Convention, leading to the adoption of the UNCCD Gender Action Plan (GAP) by the Conference of the Parties in September 2017. In collaboration with UNCCD, UN Women and IUCN, UNDP is currently supporting the GAP to ensure that the implementation of the 2018-2030 Strategic Framework is gender-responsive and transformative, and thus more effective, efficient and successful. Gender mainstreaming is also a key part of UNDP's support to the design of SLM, agriculture and restoration interventions at farm and landscape levels in affected communities to improve the outcomes for the most marginalized groups and individuals, including women, unemployed youth and the poorest, including poor men.

UNCCD Gender Action Plan



STRATEGIC OBJECTIVE 3

Building Resilience to Drought

The Convention stipulates that the objective of mitigating the effects of drought involves long-term integrated strategies that focus simultaneously on the rehabilitation, conservation and sustainable management of land and water resources, leading to improved living conditions, particularly at the community level (Article 2). Affected parties are expected to address the underlying causes of drought through the: a) establishment and/or strengthening, as appropriate, of early warning systems; b) strengthening of drought preparedness and management, including drought contingency plans; c) establishment and/or strengthening, as appropriate, of food security systems including storage and marketing facilities; and (d) establishment of alternative livelihood projects that could provide incomes in drought prone areas (Article 5).

In 2018, the Convention launched the UNCCD Drought Initiative to assist affected countries in achieving Objective 3 of the Strategic Framework on "mitigating, adapting to and managing the effects of drought". This initiative aims to boost the resilience of people and ecosystems to drought by: a) supporting the development of national drought action plans; b) providing a toolbox to drought stakeholders including tools, case studies and resources to support the design of the drought plans; and c) supporting regional efforts to reduce drought vulnerability and risks.

UNDP is supporting the implementation of the UNCCD Drought Initiative through the development of drought action plans in selected countries (**Iran**, **Somalia** and **Morocco**). These countries already have some elements in place on how to respond to drought. However, the approaches are often not comprehensive, and the elements tend not to function well together. The drought action plan aims to: a) put all these elements together and identify the gaps hindering timely and effective response; and b) define what needs to happen as soon as the possibility of drought is signaled by the meteorological services (normally at least 3 months in advance). The plan is designed to help policymakers prioritize practical steps to mitigate the effects of drought.

Through financial support from the GEF Trust Fund, GEF-LDCF, SCCF, AF and GCF, UNDP is supporting countries to address the impacts of drought on livelihoods of drylands and drought-vulnerable communities by targeting key sectors such as water, rain-fed agriculture and livestock production. Many of the initiatives are designed to build the resilience of the vulnerable communities and their livelihoods and assets, against the devastating impacts of droughts, such as water scarcity, food insecurity and famine, which can lead to loss of life and assets. In particularly vulnerable regions of the world, such as the Horn of Africa and the Sahel, the focus of this work complements post-disaster humanitarian work and is couched within the broader work of disaster risk reduction and resilience.

Water scarcity is a serious threat to **Somalia** and is hindering the country's economic and social development. Throughout Somalia, trends of reduced surface water and groundwater reserves and increased occurrences of droughts and floods are predicted to worsen. UNDP is supporting the country, with financing from the GEF-LDCF, to enhance adaptation of the water sector to drought challenges. The LDCF-financed initiative will support integrated water resources development and management for over 350,000 agro-pastoralists across Somalia. The development of a multi-sectorial Integrated Water Resources Management (IWRM) Strategy as well as technical and operational capacity building will support Somalia in planning sustainable water resources development schemes for all states down to local levels, particularly for states that were formed as recently as 2015 and 2016. Investments in monitoring infrastructure will provide critical data for early warning dissemination to improve water resources management and contingency planning for agro-pastoralists, including nomadic pastoralists. Water mobilization from a diversified source of groundwater and surface water sources as well as

construction of water diversion infrastructure will promote rural water supply and increased resilience in flood prone areas. Rural population's resilience will be further enforced by enabling them to exploit their agro-pastoral value chains and increase their asset bases.

In **Jamaica**, two GEF-SGP projects targeting 1700 community members in Jacob's Ladder in Kingston and Ewarton in northwestern St. Catherine were implemented to build resilience to the effects of drought. Project interventions included greenhouse farming, rainwater harvesting, drip irrigation and installation of submersible water pumps powered by renewable energy. They helped local communities in achieving self-sufficiency in terms of making water available for crops, animals and household use. The increased water availability and improved quality of crops enhanced the food security of beneficiaries. Additionally, community members reported a 68 per cent increase in their average income from USD117 to USD197. A UNDP

Vulnerability Reduction Assessment conducted in Jacob's Ladder revealed that the community's vulnerability had been significantly reduced after the project, plummeting 163 per cent from 1.75 (with one being the most vulnerable) to 4.6 (with five being the least vulnerable).

In **Timor-Leste**, community adaptation projects supported by GEF-SGP have improved the capacities and knowledge of approximately 300 people (87 households) on the use of drought-resistant crops and environmentally-friendly farming practices applied in home gardening and vegetable cultivation. As such, maize cultivation can now be performed year-round as opposed to just one wet season, thereby increasing production yields from 2 tons/hectare to 4-5 tons/hectare. The average weekly income of farmers has increased by 43 per cent (i.e. USD 35/week to USD 50/week) and parents have been able to meet their family's basic dietary and hygiene needs as well as afford school uniforms and shoes for their children, which has boosted children's confidence and is decreasing absence rates.

During 2014-2017, **Cuba** experienced one of the most extensive droughts in 115 years, affecting 80 per cent of the country, including crop and livestock production. Years of poor agricultural practices have also contributed to the deterioration of soil quality, increased incidence of pests and diseases, and soil salinization. To address these problems the agricultural corporative- "Cooperativa Agrícola Niceto Pérez (CANP)"- embarked, with the support of GEF-SGP, on a project to build the adaptive capacity of its farmlands to climate change. Activities involved working with research centers in Cuba that have developed varieties of crops that are resistant to extreme weather, including tomato, onion, garlic, chili, banana, sweet potato and taro. The farmers were trained on the use of these new varieties and supported in using them on their farms to increase production during drought periods. Sustainable farming practices were also introduced such as planting along contour lines to reduce soil erosion, crop rotation, and reducing the use of heavy machinery to prevent soil compaction. A total of 210 hectares of farmlands have come under sustainable management using climate-smart measures, with 90 per cent of beneficiaries applying these techniques on their land. The production rate increased from 12 tonnes per hectare in 2014 to 29 tonnes per hectare in 2018 as a result of these interventions. The farmers also experienced a 25 per cent increase in their average yearly income due to increased production and quality of crops.

STRATEGIC OBJECTIVE 4

Generating Global Environmental Benefits

Combatting land degradation and desertification is an important precondition for protecting biodiversity, mitigating the impacts of climate change, and enhancing capacity for climate change adaptation. SLM investments and practices in agricultural landscapes and forests directly contribute to enhancement of ecosystem services, through protection of soil organic matter and soil organic carbon. Approaches to management of grasslands, croplands, grazing lands and forests is a key determinant of health of such landscapes and ecosystems and their ability to generate ecosystems goods and services. Research shows, for instance, that diversification of agricultural landscapes may benefit both ecosystem service delivery, including soil carbon sequestration and biological diversity.[7] SLM interventions that promote diversification may include practices like silvopastoral systems, mixed crop-livestock systems and agroforestry. The combination of grazed grasslands and silvopastoral systems can provide a wide range of ecosystem services including the regulation of nutrient and water in soils, aboveground sequestration of atmospheric CO2 in woody plants and in soils.[8]

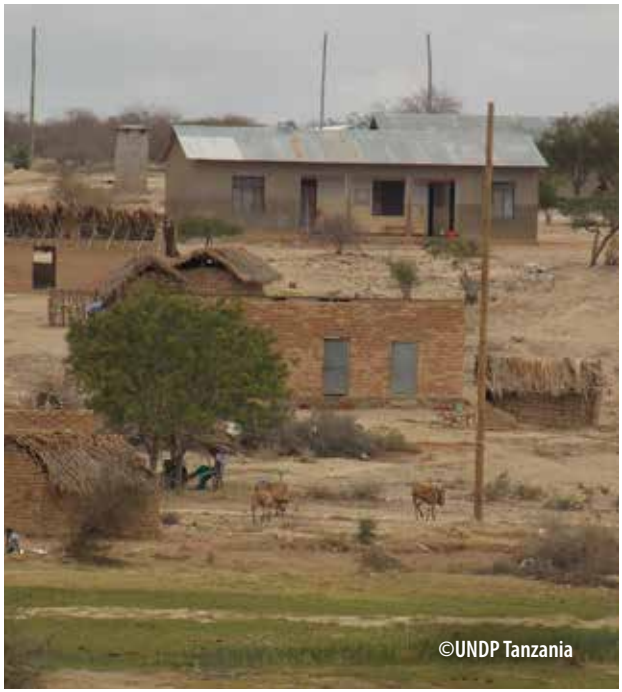
As demonstrated in the many of the examples discussed above, many of the UNDP-supported initiatives addressing ecosystem degradation are designed as integrated solutions, purposely intended to generate multiple global environmental benefits, including to combat land degradation, protect and conserve biodiversity, and build resilience of landscapes, ecosystems and livelihoods to adapt to the impacts of climate change. GEF-financed projects often combine multiple resources targeting biodiversity conservation, climate change mitigation and combatting land degradation through innovative, multi-focal initiatives that generate multiple environmental benefits and help countries meet multilateral environmental obligations as outlined in the Rio conventions (UNCCD, UNCBD, UNFCCC) and other multilateral environmental agreements (MEAs). Following the global agreement on targets under these MEAs, including UNCBD's Aichi targets, UNCCD's Land Degradation Neutrality Targets and UNFCC's National Determined Contributions (NDCs), almost all UNDP-supported initiatives align and contribute to two or more of these targets, therefore by design, contributing to the generation of multiple global environmental benefits and therefore the achievement of multiple sustainable development goals (SDGs).

7. FAO. 2018. Measuring and modelling soil carbon stocks and stock changes in livestock production systems – Guidelines for assessment (Draft for public review). Livestock Environmental Assessment and Performance (LEAP) Partnership. FAO, Rome, Italy.
8. Ibid.

STRATEGIC OBJECTIVE 5

Mobilizing Resources for UNCCD Implementation

As an Implementing Agency for the Global Environment Facility (GEF), the financial mechanism for the UNCCD, UNDP is supporting countries to identify, access, combine and sequence environmental finance from the GEF Trust Fund and GEF-managed funds, including the Least Developed Country Fund (LDCF), the Special Climate Change Fund (SCCF), as well the Adaptation Fund and the Green Climate Fund (GCF). UNDP supports countries to program and implement these funds to generate local and global environmental benefits and tackle key environmental challenges through small, medium and large-sized programmes and projects.



These projects are designed to address challenges such as loss of productivity of agricultural land, including crop and grazing land, forest degradation and loss, soil and water erosion, desertification and the impacts of droughts and floods on the livelihoods and economies of farmers, communities and countries. Recent and evolving work is responding to the major land degradation challenges posed by industrial agriculture which is leading to large-scale deforestation and conversion of land for monocrops and livestock and is resulting in downstream environmental problems such as increasing greenhouse gas emissions, water contamination and over-use, biodiversity loss and erosion of genetic pool, and even hunger, food and nutrition insecurity and other health risks.[9]

The UNDP-supported portfolio of projects addressing land degradation impacts currently includes projects in 84 countries under design or implementation. The estimated total portfolio financing from the GEF and GCF is about

9. See the IPES-Food report 'From Uniformity to Diversity' on the need to diversify food and agricultural production systems in order to address current environmental degradation and improve economic and social equity.

$1.5 billion, leveraging $4.9 billion in co-financing from the recipient governments and other partners such as local and international civil society organizations, academic and research institutions, bilateral partners, beneficiary communities and the private sector. Collaboration with the private sector is becoming increasingly important in this area of work. UNDP supports increasing private investments in SLM by small scale farmers, sustainable agriculture production practices, responsible sourcing, inclusive and environmentally-sustainable value chains and forest and landscape restoration.

Moreover, UNDP supports policy advocacy and capacity building initiatives led by the UNCCD to advance the implementation of the Convention. This includes technical and financial support to initiatives like the Global Land Outlook, Land Degradation Neutrality Target Setting Programme, UNCCD Drought Initiative and UNCCD Gender Action Plan. UNDP contributed to the preparatory work leading to the adoption of the UNCCD 2018-2030 Strategic Framework, including the organization of regional capacity building workshops to introduce the "Scientific Conceptual Framework for Land Degradation Neutrality" and facilitated the elaboration of country workplans for developing voluntary LDN targets. In total 58 countries benefited from this support including 33 in Africa, 16 in Asia and the Pacific and 9 in Eastern Europe, Caucasus and Central Asia.

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Looking Ahead

The evidence presented in the Global Land Outlook shows that "informed and responsible decision-making, improved land management policies and practices, and simple changes in our everyday lives, can help to reverse the current worrying trends of land degradation". Moreover, the IPCC report on Climate Change and Land demonstrates that land-related responses that contribute to climate change adaptation and mitigation can also combat desertification and land degradation and enhance food security, and that examples of these responses are already underway in several parts of the world.

UNDP concurs with the findings and conclusions of these studies and considers that a reversal of current trends of land degradation is indeed possible, if the appropriate enabling conditions are in place. As highlighted in the examples of UNDP-supported interventions in this publication, the response options can contribute positively to several sustainable development goals beyond that of sustainable land management, including climate change adaptation and mitigation, biodiversity conservation and food security.

UNDP will continue to promote an integrated approach to tackling land degradation and desertification, with entry points for food systems, climate, inequality and migration. UNDP believes that an integrated approach between the three Rio Conventions and other related conventions is essential to tackle the planetary challenges the world is facing, including the need for achieving sustainable global food systems, and addressing water resource scarcity and ecosystem degradation. UNDP will connect local level actions to the sub-national, national, regional and global policy and system level change and amplify and upscale local efforts. Furthermore, UNDP will leverage finance for micro, small and medium-scale enterprises working on SLM and restoration, as well as generate lessons and best practices for application and upscaling.

Through the above-mentioned offers, UNDP will contribute to the global restoration goal of 350 million hectares of deforested and degraded lands and will support the conservation and sustainable management of another 500 million hectares by 2030, with an emphasis on land that can achieve multiple development and climate dividends. UNDP will support at least 30 countries in effectively addressing the drivers and the root causes of migration and forced displacement, including climate change and land degradation. Moreover, it will support a cohort of 20+ countries to address inequality and discrimination, including lack of land rights and poor access to credit and technology in marginalized land-dependent communities. UNDP will continue assisting countries to identify, access, combine and sequence environmental finance, including from the GEF Trust Fund and GEF-managed funds, LDCF, AF, GCF and other bilateral donor and private sector funding, for SLM, sustainable agriculture and food production and landscape restoration.

With its comprehensive policy and programme offering on land degradation, UNDP is well positioned to advance the global drive towards land degradation neutrality and the implementation of the UNCCD 2018-2030 Strategic Framework. UNDP will continue to pursue its support to the UNCCD 2018-2030 Strategic Framework through the provision of capacity building and policy solutions to land degradation challenges, and supporting countries to design practical interventions in degraded landscapes to pilot and upscale technologies and approaches to avoid, reduce and

reverse land degradation. This support is designed to help countries achieve the vision and strategic objectives of the Framework and help them meet their LDN targets by 2030.

As the global community continues to grapple with major development challenges, including the social and environmental crises that have received much attention recently, as highlighted in the publication of global assessments, including the IPCC Special Report on Global Warming of 1.5°C, the IPBES Assessment Report on Land Degradation and Restoration, the IPBES Assessment Report on Biodiversity and Ecosystem Services, the UNCCD Global Land Outlook and the IPCC Report on Climate Change and Land, UNDP commits to the global call for taking bold moves to tackle these problems, as part of its contribution to the achievement of the 2030 Agenda for Sustainable Development.

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