SOLUTION BRIEF

United Nations
Convention to Combat Desertification

Restored Land, Healthy People, Green Recovery

Build Forward Better with Land-Centered Solutions

May 2021

Key messages

Protecting and restoring nature can help drive a green recovery and prevent future pandemics. Investing in nature-based solutions, specifically land restoration, will allow us to build forward better, greener, healthier, stronger, and more sustainably.

Covid-19 has revealed how vulnerable our societies and economies are to global, systemic risk. Its root causes - land degradation, biodiversity loss, and climate change – are inter-linked. Furthermore, they are planetary crises in themselves.

The pandemic, rooted as it is in exploitation of the environment, has been a devastating but timely wake up call. It has shown that if we continue to abuse nature, waves of crises will cascade across our economies and societies.

On the other hand, it has also shown that ***we can respond decisively when political will, collective action and sustained investment are aligned.***

Today, more than ever, societies are ready for change; there is broad consensus ***that it is not only desirable but possible to build forward better,*** towards sustainable development anchored in multilateralism and global solidarity.

Land restoration is an essential component of any building forward strategy.

Without land restoration, we will continue to face global crises. Ensuring food and water security, reducing emissions, and conserving biodiversity will not be possible without concerted efforts to regenerate our natural capital and transform our food systems.

Land is the foundation of our societies. Over half of global GDP relies on what the land gives us. 99.9% of the food we consume comes from land. Land degradation already threatens the livelihoods and security of over 3 billion people.

More than 125 countries have committed to targets and measures to restore the land, which is a strong start.

It can be much stronger if Covid-19 stimulus packages are targeted more towards it. But only an approximate of 2.5 percent of such spending so far has green objectives.

We have the tools to create healthier and more resilient societies and economies. These include more responsible land governance, investments that protect and restore land and nature, and long-term strategic planning.

The pandemic has given us a rare and small opportunity to review and rethink the future we can create, a future of healthier citizens, secure livelihoods and greater equality and opportunity for all.

We can seize that opportunity now.

1. The Scale of the Challenge – Reversing Course

All of us - individuals, businesses, governments, and organizations – are responsible for the health of the land through our spending and investment decisions.[1]

The way we produce and consume food, feed, fiber, water, energy, and raw materials is rapidly depleting Earth's finite stock of 'natural capital'.

This loss of soil, species, and ecosystems drives the intertwined crises of desertification, land degradation, drought, biodiversity collapse, and climate change. It also increases the risk of new diseases like COVID-19 and Ebola.

- ***A million species face extinction*** due to habitat loss.[2]
- ***We are losing more value than we produce.*** Between 1997 and 2011, land-use change caused losses averaging USD 20 trillion worth of ecosystem services every year.[3] Land degradation alone accounted for 30% of that, three times the global market value of agricultural products.[4]
- ***Over a quarter of greenhouse gases*** arise from agriculture, forestry, and other land uses.[5]
- ***By 2025, an estimated 1.8 billion people will suffer absolute water scarcity*** and two-thirds of the world will be living under water shortages.[6]

Our ability to provide stable food and nutritional security for a growing population is at serious risk. Science and current agriculture have increased productivity in the short-term, but resulting soil degradation has reduced the concentrations of vitamins and nutrients in our food.[7]

By 2050, on our present course, global crop yields are estimated to fall 10%, with some regions suffering up to a 50% reduction.[8] As a result, world food prices are expected to rise by an estimated 30%.[9]

Ensuring food security for 9.7 billion people by 2050 while meeting the other goals of the Paris Agreement will be possible only if we scale up land restoration and regeneration to transform our food systems.

1 https://www.gov.uk/government/publications/final-report-the-economics-of-biodiversity-the-dasgupta-review
2 https://www.ipbes.net/global-assessment
3 https://www.sciencedirect.com/science/article/abs/pii/S0959378014000685
4 https://www.sciencedirect.com/science/article/abs/pii/S0921800915301725
5 https://www.ipcc.ch/srccl/
6 https://www.unwater.org/publications/un-water-policy-brief-water-quality/
7 https://www.scientificamerican.com/article/soil-depletion-and-nutrition-loss/
8 https://www.ipbes.net/sites/default/files/2018_ldr_full_report_book_v4_pages.pdf
9 https://www.eld-initiative.org/fileadmin/pdf/ELD-pm-report_08_web_72dpi.pdf

Figure 1 Our increasing demands on land drive our behavior but this must now all be focused on land restoration so the land can continue to support us

(Adapted from UNCCD GLO 2017, IPBES LDRA 2018, IPCC SRCCL 2019)

Pressures on land resources

Indirect

- Population growth, migration
- Consumer demand
- Governance and institutions
- Climate change

Direct

- Policies, incentives
- Markets, trade, supply chains
- Investments

Drivers of land degeneration

Land use and management

- Agriculture
- Forestry
- Urbanization
- Mining, fossil fuels
- Infrastructure

Place-based restoration

Local solutions

- Urban greening
- Urban-rural linkages
- Regenerating rural landscapes
- Ecosystem restoration
- Protected areas

Methods and practices

Protecting, sustainably managing and restoring...

- Soil
- Water
- Biodiversity

Benefits for people

Ecosystem goods

- Food
- Fiber, wood, minerals
- Water
- Energy

Ecosystem services

- Regulating
- Supporting
- Cultural

2. Land Restoration for a Green Recovery – The Solution

Land restoration is a proven and cost-effective strategy that can jumpstart a green economic recovery. It creates green jobs, uplifts rural communities, and delivers significant co-benefits for human health, biodiversity, and climate change.[10]

Land restoration offers multiple pathways towards a green recovery and achieving the Sustainable Development Goals.

We have the tools to achieve this - responsible land governance, investments that protect and restore nature, and coherent, long-term policies and incentives – ***but we must learn from of the past.***

COVID-19 is causing enormous damage and developing countries are among those hardest hit, compounding existing challenges of poverty, conflict, food and water shortages, and climate emergencies.[11]

But COVID-19 economic stimulus and recovery packages introduced around the world are on a scale never before seen.

This presents policy makers with the golden opportunity to build forward better together, to recover from the virus and at the same time forge a more equitable and sustainable world to mitigate the crises of the future.

However, it is calculated that that only 2.5 percent of all Covid-19 recovery spending will have "positive green characteristics," such as reducing greenhouse gas emissions and restoring natural capital.[12]

Efforts to green a recovery after the 2008 financial crisis did not succeed well, mainly due to a focus on reviving the economy we already have, rather than instituting policies aimed at building the type of economy we want.[13]

Today, green stimulus spending is still concentrated in wealthier countries, threatening to reinforce dangerous pre-pandemic inequities unless we change.

Damaged lands aggravate drought, floods, food and water loss, extinctions, disease, refugee flight and conflict. Restoring them is a most cost-effective solution.

For an estimated USD 2.7 trillion per year – comfortably within the scope of the proposed COVID spending – we could transform the world's economies through restoring natural ecosystems, rewarding agriculture that keeps soils healthy, and incentivizing business models that prioritize renewable, recyclable or biodegradable products and services.

Within a decade, the global economy could create 395 million new jobs, generating over USD 10 trillion in annual business value.[14] For example:

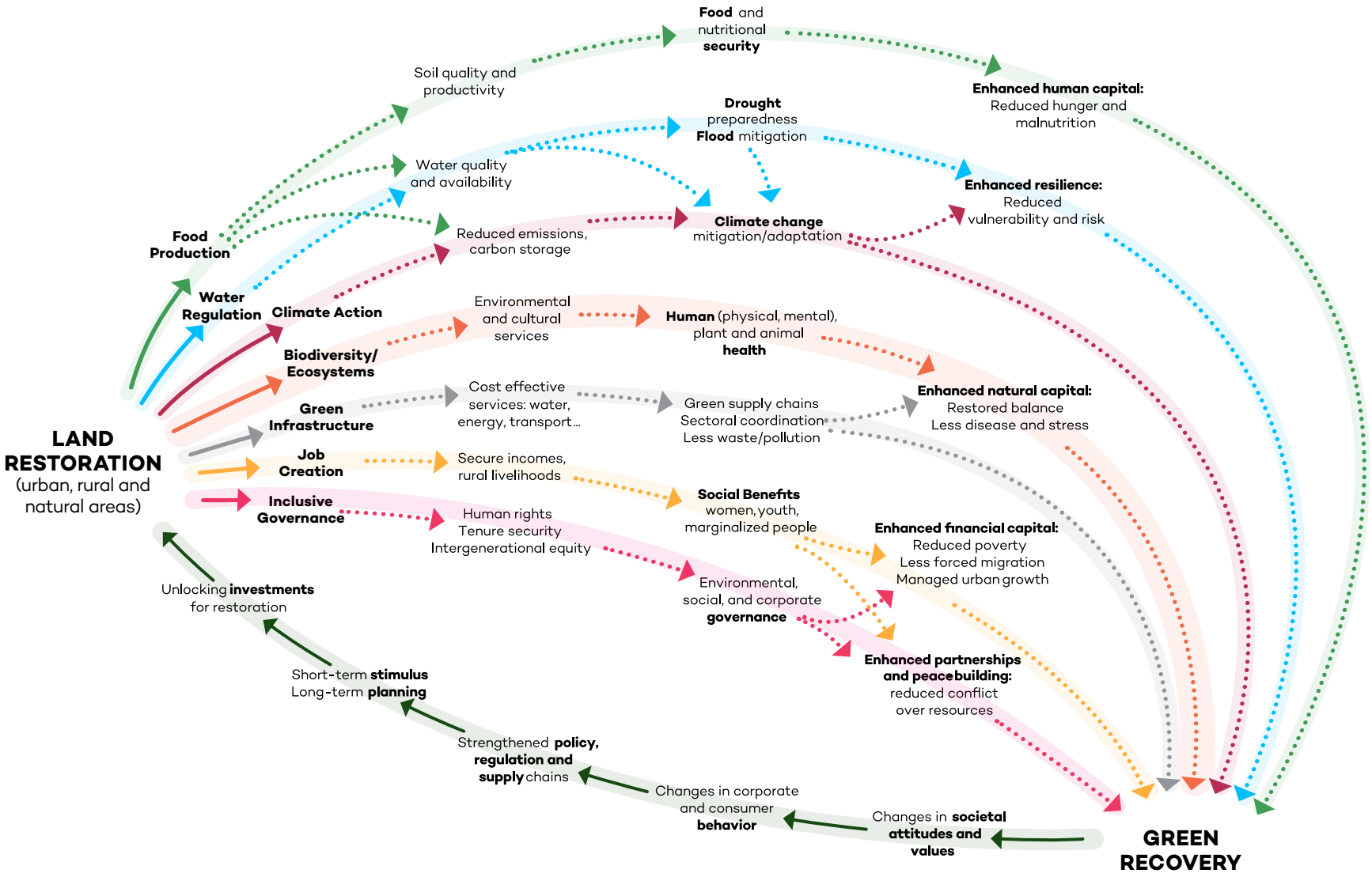
- ***Every USD 1 invested*** in restoring degraded forests can yield USD 7–30 in economic benefits.[15]
- ***Restoring 150 million hectares of degraded agricultural land*** could generate USD 85 billion for national and local economies, USD 30–40 billion a year in additional income for smallholder farmers and increased food security for close to 200 million people.[16]
- ***Preventing topsoil loss*** could create nearly USD 1 trillion of benefits over the next 15 years in Africa alone. Doing nothing would cost double that.[17]

The key to successful policy is coherence, alignment and cooperation.

Policy responses can be captured into three inter-linked areas: Jobs, Finance, and Governance.

10 https://www.iucn.org/theme/ecosystem-management/our-work/agriculture-and-land-health/common-ground-report
11 http://www.oecd.org/coronavirus/policy-responses/building-a-coherent-response-for-a-sustainable-post-covid-19-recovery-d67eab68/
12 https://wedocs.unep.org/bitstream/handle/20.500.11822/35281/AWBBB.pdf
13 https://link.springer.com/article/10.1007/s10640-020-00437-w
14 http://www3.weforum.org/docs/WEF_The_Future_Of_Nature_And_Business_2020.pdf
15 https://onlinelibrary.wiley.com/doi/abs/10.1111/rec.12512
16 https://www.wri.org/publication/roots-of-prosperity
17 https://www.eld-initiative.org/fileadmin/pdf/Quick_guide_-_The_Value_of_Land2015.pdf

Figure 2 Land restoration pathways to a green recovery. Restoring land creates numerous benefits in terms of food production, water regulation, climate, biodiversity and ecosystems, employment, infrastructure, and governance. Positive feedback loops would initiate and scale up land restoration.



3. New Jobs – Working towards Restored Lands

Regenerative agriculture and restoring natural systems need a combination of traditional and modern practices, which offers great potential for job creation.

This requires old skills to be more widely learned and new skills to be widely introduced for emerging jobs and those being repurposed for greener outcomes.

Taking advantage of quick-start initiatives and shovel-ready projects will create jobs that will help jumpstart recovery efforts. This provides a quick-start solution.

Creating permanent work in protected areas management, regenerative agriculture and agroforestry, green infrastructure and ecosystem restoration would then create many more stable, decent jobs for people, especially the young, and women.

Organic farms, for example, require more labor than conventional farms but generate greater returns. They need fewer external inputs, less mechanization, have more diversity and complex rotation practices.

- ***In the USA, farms with regenerative practices*** were estimated to be 78% more profitable than those with only conventional practices.[18]
- ***In the USA, landscape restoration*** creates between 10 and 39 jobs per USD 1 million of investment, at least twice that of the oil and gas sector.[19]
- ***A Pakistan investment*** of PKR 10 billion (USD 63 million) has already delivered 85,000 jobs innursery raising, plant care, forest protection, and fire-fighting activities, expected to rise to 200,000 in the next few months.[20]

Ghana's green jobs strategy meanwhile provides an example of four aligned, cooperative projects that fast track environmentally sustainable growth.[21]

- ***Green Jobs Coordination and Capacity Development t***o mainstream green jobs in government planning at sectoral and sub-national level.
- ***Green Jobs Skills Development*** promotes skills development for green jobs within priority sectors.
- ***Green Enterprise Development and Access to Markets for Green Products*** for small and medium enterprises to expand in green business through finance, business development, tax incentives and technology.
- ***Green Enterprise Finance*** mobilizes public and private sector resources to support enterprises, start-ups and existing businesses going green.

18 https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5831153/
19 https://curs.unc.edu/wp-content/uploads/sites/400/2014/01/RestorationEconomy.pdf
20 https://www.weforum.org/agenda/2021/02/pakistan-green-recovery/
21 https://saiia.org.za/research/green-recovery-and-green-jobs-in-africa-the-case-of-ghana/

4. Financing Land Restoration - Making the Stimulus Green

Countries are responding to the economic impacts of the pandemic with the greatest expenditure of public resources the world has ever seen, so it is only right that this spending goes to ensure that everyone in society benefits.

The greatest benefit to all people is to reduce the impacts of the land, climate and biodiversity crises by spending on land restoration, renewable energy, biodiversity, water and waste management, infrastructure and resource efficiency.

- ***South Korea's*** new deal aims to boost economic recovery through green initiatives. Restoring land, marine, and urban ecosystems are a key feature, including more urban green spaces, rehabilitating tidal marshland, and ecosystem restoration projects in 16 national parks.[22]

This requires coherent policy that aligns project planning, investment, subsidies and tax incentives directly towards these goals. Both large and small-scale finance initiatives are required to meet different needs.

Many low-tech, cost-effective practices are available to implement land restoration activities. Small investments to stop the causes of land and natural systems damage can generate outsized benefits to local communities.

Schemes such as REDD+ and payments for ecosystem services can help overcome the financial barriers that many smaller, rural communities face.

- ***In 2000, Quito launched the first water fund*** in Latin America, restoring grassland and watersheds to provide clean water to millions of urban residents. A USD 21,000 investment grew to 13 million in just a decade.[23]

There is considerable scope for repurposing current subsidies, investments, and other financial mechanisms to reward land users and communities for protecting and regenerating natural capital.

Donors and the private sector play a major role and governments can help make land restoration attractive to private investors through regulations and incentives that reward enhancement of biodiversity and ecosystem services and, where appropriate help to de-risk investments. (see Performance Bonds box below)

Greater certainty over pipelines of potential projects would allow investors to take calculated risks, invest in capacity building, and help nurture capital markets for green infrastructure investment on the medium to large scale.[24]

Performance Bonds for Land

Traditional debt-for-nature swaps were designed to relieve debts for low-income countries while safeguarding nature. But they have been on too small a scale to address today's overarching crises. Attention is turning to larger scale financial instruments like nature performance bonds. These could reduce debt payments so governments can use the savings on pressing priorities that fulfill environmental criteria, while creating jobs and contributing directly to expansion of conservation areas, land restoration and sustainable land management. Such a major international effort is needed but it will have to be coordinated and standardized, if it is to be efficient and effective.[25]

22 https://www.forbes.com/sites/donaldkirk/2020/07/14/koreas-reveals-new-deal-designed-to-boost-jobs-revive-sagging-economy/
23 https://water.nature.org/waterblueprint/city/quito/#/c=9:-0.79731:-78.40208
24 https://www.oecd.org/coronavirus/policy-responses/making-the-green-recovery-work-for-jobs-income-and-growth-a505f3e7/
25 https://www.weforum.org/agenda/2021/03/rescheduling-debt-climate-sustainable-recovery/

Green business solutions include public–private partnerships and innovative finance mechanisms such as private equity, bankable nature solutions, debt swaps and blended finance.[26]

The demand for greater green investments is there. Global green bond issuance reached a record USD 269.5 billion by the end of last year and could reach 400-450 billion this year, the Climate Bonds Initiative (CBI) reported.[27]

Pakistan's green stimulus package gives an example of how traditional and innovative financial tools can be deployed to target different scale priorities.[28]

- ***Ecosystem Restoration Fund*** - expands tree planting to increase protected areas by 50%. It creates 5,000 jobs for youth, who will be trained to become guardians and custodians of nature.
- ***Debt for nature swap scheme*** - targets USD 1 billion in funding from renegotiating Pakistan's debt to support green economic recovery efforts. It will pilot an impact-based nature bond linked to verified biodiversity protection.
- ***Green euro bond*** - USD 500 million bond on international capital markets to shift from coal towards renewable energy for a 60% clean energy mix by 2030.

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5. Land Governance – Strengthening Land Tenure

Healthy and productive land is the foundation of livelihoods, human health, social stability, and often the most important asset held by the rural poor.

The land degradation crisis has a disproportionate impact on disenfranchised populations, marginalized and vulnerable communities.

Strengthening land tenure and rights is a major step to environmental security.

For the rural poor, land is often the sole source of livelihoods and the only safety net during crises and times of stress. As poverty deepens, people are either forced to migrate or respond in ways that cause even more damage to nature and diminish the productive capacity of the land.

Many individuals and communities in developing countries have little or no tenure security in current land administration systems.

- ***Less than a quarter of countries*** maintain complete land administration systems. An estimated 4 billion of the world's 6 billion tenures remain outside any formal governance arrangements.[29]
- ***More than 70% of the world's farmland*** is controlled by 1% of farms, primarily large agribusinesses. Over 80% of farms are subsistence smallholdings of less than two hectares, covering only 12% of total farmland.[30]

Lack of tenure security and the accelerating consolidation of land limits access to resources, extension services, and production inputs (e.g., technologies, credit, markets) as well as the ability to have a say in land use and management decisions.

Women and landless households are particularly disadvantaged.

Better governance of tenure for vulnerable land users through customary or locally developed tenure arrangements would quickly create new "green" jobs through value addition, economies of scale, and greater market access.

Successfully restoring land also requires recognizing diversity in landscapes and cultures. Indigenous peoples and local communities often lead the way in environmental stewardship, promoting collective land rights, democratic inclusion, and women's leadership.[31]

26 https://www.globallandscapesforum.org/publication/mobilising-private-capital-for-land-and-restoration-ecosystem-white-paper/
27 https://www.reuters.com/article/us-greenbonds-issuance/global-green-bond-issuance-hit-new-record-high-last-year-idUSKBN29U013
28 https://www.weforum.org/agenda/2021/02/pakistan-green-recovery/
29 https://www.taylorfrancis.com/books/edit/10.1201/b18988/advances-responsible-land-administration-jaap-zevenbergen-walter-de-vries-rohan-mark-bennett
30 https://www.landcoalition.org/en/uneven-ground/
31 https://onlinelibrary.wiley.com/doi/abs/10.1111/1745-5871.12362

6. The International Response – Restoring Planetary Balance

Countries recognize the urgent need for land restoration. At the start of the United Nations Decade on Ecosystem Restoration (2021–2030), national pledges to act already cover over 1 billion hectares.[32]

The UN General Assembly recently affirmed that combating desertification, land degradation and drought – and achieving land degradation neutrality – is a pathway to accelerate progress towards achieving multiple Sustainable Development Goals.[33]

Land degradation neutrality is defined by the UNCCD Conference of the Parties 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.[34]

To date, over 125 countries have committed to set targets and measures to:[35]

- ***Avoid*** land degradation through regulation and planning.
- ***Reduce*** the impacts of land degradation through sustainable land and water management strategies and practices.
- ***Reverse*** the processes and impacts of land degradation by restoring biodiversity and ecosystem functions.

Launched in 2020, the G20 Global Initiative on Reducing Land Degradation and Enhancing Conservation of Terrestrial Habitats also seeks to enhance collaboration among member and non-member countries to support current commitments for land protection, sustainable land management, and restoration. It seeks additional voluntary commitments to contribute to Sustainable Development Goal (SDG) 15, and target 15.3 to achieve land degradation neutrality.[36]

- ***SDG 15: Life on land:*** Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss.
- ***SDG Target 15.3:*** By 2030, combat desertification, restore degraded land and soil, including land affected by desertification, drought and floods, and strive to achieve a land degradation-neutral world.

The new, potentially game-changing opportunity, therefore, is to integrate land degradation neutrality initiatives into national COVID-19 recovery packages as well as existing international processes, such as the Nationally Determined Contributions to combat climate change and the post-2020 global biodiversity framework. This could include:

- ***Strengthening planning and allocation of public finances*** – shifting funds away from environmentally damaging subsidies towards land and ecosystem restoration, nature-friendly food production, and green infrastructure.
- ***Formalizing or explicitly recognizing land tenure rights,*** particularly for marginalized communities and small-scale producers, including female farmers, pastoralists, and forest dwellers.
- ***Supporting national and subnational planning*** to manage drought and water scarcity, floods and wildfires, including watershed restoration, reforestation, and sustainable land and water management practices.
- ***Assisting countries, donors, and the private sector*** to develop a pipeline of bankable projects that provide multiple benefits both for people and the economy, nature and the climate.

32 https://www.pbl.nl/en/publications/goals-and-commitments-for-the-restoration-decade
33 https://digitallibrary.un.org/record/3896583?ln=en
34 https://www.unccd.int/actions/achieving-land-degradation-neutrality
35 https://www.unccd.int/actions/ldn-target-setting-programme
36 https://www.unccd.int/news-events/g-20-announces-new-initiative-save-degrading-land

Multilateral cooperation is essential so that all these great initiatives work as closely and smoothly as possible towards the main objectives.

Partnerships will allow us to share experiences and best practices, cutting-edge technologies, and innovative business models.

This includes a new social contract that engages with civil society, NGOs and the media, influencers, and campaigners to heighten awareness and to mobilize collective action.

Figure 3 How Land Restoration action cuts across and impacts sectors

PLACE	 **Cities/urban areas**	 **Urban–rural interface**	 **Rural/agricultural landscapes**	 **Natural ecosystems/ protected areas**
APPROACHES	Green spaces and water management	Sustainable territorial development	Regenerative food and commodity production	Conservation and restoration of nature
ENABLERS	**Rights** (tenure security) / **Rewards** (incentives/investments) / **Responsibilities** (long term planning)			
ACTIONS	» Community gardens and urban farming » Tree planting and wetland restoration » Green belts and buildings (roofs/walls)	» Land use planning Protect watersheds and fertile farmland » Manage urbanization » Sectoral coordination for green infrastructure and supply chains	» Integrated farming (crops/trees/livestock) » Rangeland management » Sustainable intensification and agroecological practices	» Ecological restoration » Wildlife corridors and buffer zones » Indigenous/ community management » Sustainable harvesting in protected areas
BENEFITS	» Human health (quality of life) » Clean air and water » Flood control and wastewater management » Parks and recreation Cooler temperatures	» Water availability for urban residents » Local and regional food security » Biodiversity conservation Reduced urban sprawl	» Food security and rural livelihoods » Healthy soils and ecosystem functions » Reduced emissions » Water storage/recharge » Biodiversity conservation	» Nature's contribution to people » Global public goods (climate stability/ biodiversity) » Ecotourism and cultural landscapes

- In **urban areas,** the focus is on increasing green spaces to improve residents' quality of life with the improved delivery of ecosystem services.
- At the **urban–rural interface** on the edge of towns and cities, land use planning guides urban development and protects watersheds and productive farmland.
- In **rural areas,** the aim is to make farming more productive and environmentally sustainable.
- In **natural and protected areas**, the focus is on conserving biodiversity and safeguarding supporting and regulating services.

Everyone has much to gain.
Everyone has a role to play.
Our collective future is at stake.