



**UNITED NATIONS
FOOD SYSTEMS
SUMMIT 2021**



United Nations
Convention to Combat
Desertification



LAND DEGRADATION NEUTRALITY

For Sustainable Agriculture and Food Security

LEVERAGING LDN COMMITMENTS TO BOOST SUSTAINABLE AGRICULTURE AND FOOD SECURITY

The greatest prospects for reversing land degradation, and reducing greenhouse gas emissions and biodiversity loss lie in transforming how we use and manage human, financial and natural capital to produce, distribute, and consume food.

The UN Secretary-General's Food Systems Summit 2021 offers a timely opportunity for countries pursuing Land Degradation Neutrality (LDN) response actions to align with the Summit's game-changing solutions, new business models, and innovative partnerships.

This brochure provides a brief overview of the UNCCD's LDN target setting programme and an analysis of response actions identified by 86 countries, highlighting the potential for actionable synergies with the Food Systems Summit.



CONFRONTING GLOBAL LAND CHALLENGES

Many of the current global challenges are related to the food system, particularly the way that land is used and managed to produce food. Among the most pressing are the needs to mitigate and adapt to climate change, protect biodiversity, combat desertification and land degradation, and reduce yield gaps.

↓ 10% 

Is the estimated decrease in crop yields by 2050

↑ 30% 

Is the estimated increase in food prices by 2050

While supply chains and consumer choices are increasingly extravagant and wasteful, food production systems are also highly inefficient, contributing to more than a quarter of all greenhouse gas emissions while rapidly depleting the Earth's finite natural capital, namely soil, water, and biodiversity.

Land degradation directly undermines our ability to deliver food and nutritional security. By 2050, [crop yields are estimated to decrease by 10%](#) globally due to land degradation and climate change, with some regions suffering up to a 50% reduction. Furthermore, land degradation is projected to fuel an estimated [30% increase in world food prices over the next 25 years](#).

Given the expected growth in global population and food demand by 2050, conserving, sustainably managing, and restoring land resources will be essential in the transition to sustainable food production, requiring at least a [75% reduction in current yield gaps](#).

The amount and quality of agricultural land is under increasing pressure from multiple societal demands. Well documented [strategies for reducing these pressures](#) include:

- Shifting to plant-based diets and reducing food loss/waste,
- Increasing protection and land set-asides for nature,
- Boosting nature-positive food production.



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LAND DEGRADATION IN FOOD SYSTEMS

75% of the Earth's ice-free terrestrial ecosystems have been transformed from their natural state by humans

1 IN 5 hectares experiencing persistent declines in health and productivity over the last **15 years**

Consumption patterns – the food we eat, the clothes we wear – are by far the most significant driver of land use change and land degradation. Our dietary choices surge down the supply chain and govern where and how these land-intensive goods are produced.

Modern intensive agriculture and resulting soil degradation also reduces the nutritional value of food through lower concentrations of vitamins and micronutrients which is especially detrimental to children.

Numerous biophysical, institutional, and socio-economic factors interact, often resulting in poor land and water management practices used to produce food, including:

BIOPHYSICAL

- **Climate change impacts** such as reduced crop yields and increased soil erosion;
- **Conversion of natural ecosystems** to agricultural land, exposing soils to erosion and oxidation of soil organic carbon stores;
- **Loss of biodiversity and diverse landscapes** degrading ecosystem services and crop/livestock productivity due to increased pests and diseases.

INSTITUTIONAL

- **Lack of tenure security and access to resources**, particularly for women and marginalized groups;
- **Incentives and investment** driving unsustainable intensification of food production and resource use inefficiencies;
- **Inadequate policies and legislation**, and effective regulation and enforcement to safeguard environmental and social outcomes;
- **Land grabbing and leases to foreign entities**, often with water rights, undermining national efforts to ensure food and nutritional security;
- **Global telecoupling** with distant effects, including land degradation through export-oriented food and feed production.

SOCIO-ECONOMIC

- **Shifts in dietary trends** towards land-, water-, and carbon-intensive foods, such as meat and dairy;
- **Food loss and waste** intensifying pressures that drive agricultural expansion and harmful intensification;
- **Poor management practices** resulting in resource use in-efficiencies, yield gaps, and on- and off-farm pollution and biodiversity loss;
- **Competing societal demands for land** from the agricultural, urban, transport, mining, industrial, nature and energy sectors.

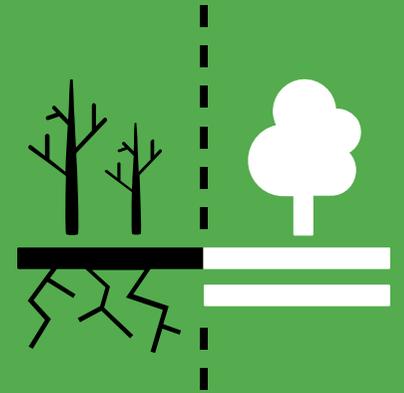
ACTION ON SDG TARGET 15.3

In 2015, the UNCCD adopted Sustainable Development Goal (SDG) target 15.3 which aims to combat desertification, restore degraded land and soil, including land affected by desertification, drought, and floods, and strive to achieve a land degradation neutral world by 2030. This SDG target is recognized as the central vehicle to drive implementation of the UNCCD as well as accelerate progress towards numerous other SDGs.

TARGET

15.3

End Desertification and Restore Degraded Land



WHAT IS LAND DEGRADATION NEUTRALITY?

The UNCCD defines [Land Degradation Neutrality \(LDN\)](#) as the:

"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 targets help countries to identify and adopt a **broad range of measures to avoid or reduce land degradation** while improving gender equality and livelihoods. These measures include sustainable land and water management practices as well as integrated land use planning.

When combined with localized action to reverse past degradation, through land rehabilitation and restoration, countries are more likely to achieve 'no net loss' in their healthy and productive land. Today, investing in land restoration offers great potential to create new jobs and initiate a green economic recovery.



Photo: ©CIAT/Neil Palmer

LDN TO TRANSFORM OUR FOOD SYSTEMS

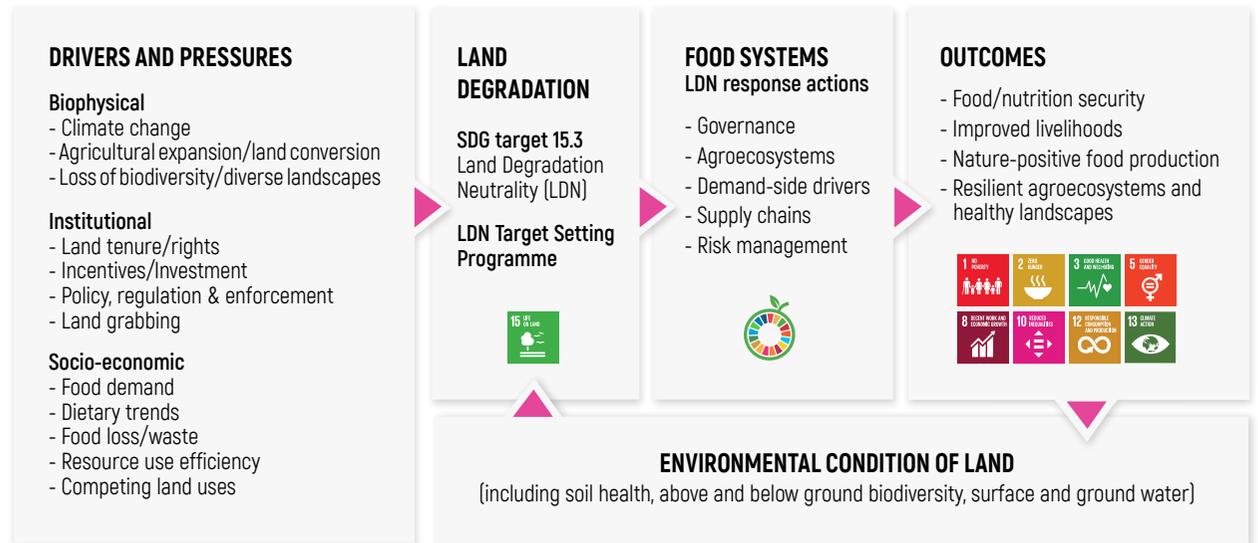


Our current food systems – activities from crop and meat production, through processing and distribution to the point of purchase and consumption – are often environmentally destructive, vulnerable to shocks and stresses, and surprisingly inefficient in meeting the nutritional needs of the global population.

The UNCCD has developed a scientific conceptual framework, technical guidance, and practical tools to help countries assess the current state of their land resources, identify the drivers of degradation, and formulate the most appropriate response actions.

Through the [LDN Target Setting Programme](#), the Global Mechanism and the secretariat of the UNCCD, in collaboration with 18 international partners, continue to assist countries with their national LDN targets and response actions, and accelerate on-the-ground implementation through policy integration and investments in gender-responsive transformative projects and programmes.

Delivering environmentally healthy landscapes and boosting nature-positive food production through LDN response actions is especially effective when they are focused on governance, agroecosystems, demand-side drivers, supply chains and risk management aspects of food systems as shown here:



The UN General Assembly reaffirmed that achieving LDN has the potential to act as an accelerator and integrator for achieving the SDGs and as a catalyst for attracting sustainable development and climate finance

UNITED NATIONS
FOOD SYSTEMS
SUMMIT 2021



The UN Secretary-General will convene the [Food Systems Summit 2021](#) to launch bold new actions to transform the way the world produces and consumes food, delivering progress on all 17 Sustainable Development Goals.

Many LDN targets and commitments are focused on healthy and nutritious food produced from sustainable agroecosystems. LDN response actions formulated by countries also offer tangible co-benefits for achieving multiple SDGs, most notably SDG 1 (No Poverty), SDG 2 (Zero Hunger), SDG 8 (Decent Work), SDG 12 (Responsible Consumption and Production), and SDG 13 (Climate Action).

Capitalizing on the synergies between LDN response actions and the objectives of the Food Systems

Summit will increase the technical capacity and financial resources available to meet multiple objectives. These include healthy landscapes, secure livelihoods, and more resilient agroecosystems. The three key levers below for transforming our food systems would also support LDN implementation.



Photo: @CIAT/Georgina Smith

OBJECTIVES OF FOOD SYSTEMS SUMMIT 2021

1. Affirming the centrality of food systems to the achievement of the 2030 Agenda for Sustainable Development
2. Aligning stakeholders involved in food systems transformation around a common practical framework
3. Strengthening the evidence base and developing tools for decision makers to negotiate trade-offs
4. Promoting a science-policy interface for more resilient food systems
5. Accelerating multi-stakeholder actions at different levels through innovative partnerships and game-changing solutions





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LEVER 1

Cross-cutting policy responses spanning multiple global agreements

By adopting a 'food systems lens', LDN response actions can further enhance the impact of existing policies and initiatives focused on environmental sustainability, inclusive economic growth, climate stability, and improved public health that are embedded in a range of key global agreements, most notably the SDGs and the Paris Agreement.

One of the advantages of this perspective is that it allows us to consider the system's multiple objectives. Food security is essential, but food systems also provide livelihoods and contribute to environmental and other socio-economic goals, such as building social capital and maintaining peace. It brings into focus the trade-offs between competing goals and reflects on ways policies and governance might better articulate across scales and frame priorities moving forward.

LEVER 2

Interdependence of food system demand-side drivers and supply chains

The interdependence of food system demand-side drivers and supply chains provides a singular focus for LDN response actions that simultaneously encourage the uptake of plant-based diets while at the same time reducing food loss and waste.

Addressing these two key land pressures offers the potential to overcome multiple food system 'lock-ins' that reduce its capacity to cope with the imminent crises of pandemics, resource scarcity, biodiversity loss, and climate change.

These lock-ins have historically driven agricultural expansion and land degradation resulting in harmful intensification practices, the destruction of natural ecosystems, and the transformation of landscapes. These are the most significant factors contributing to the increased emergence of zoonotic disease transmission.

LEVER 3

Capacity to deliver a coherent suite of on-the-ground actions

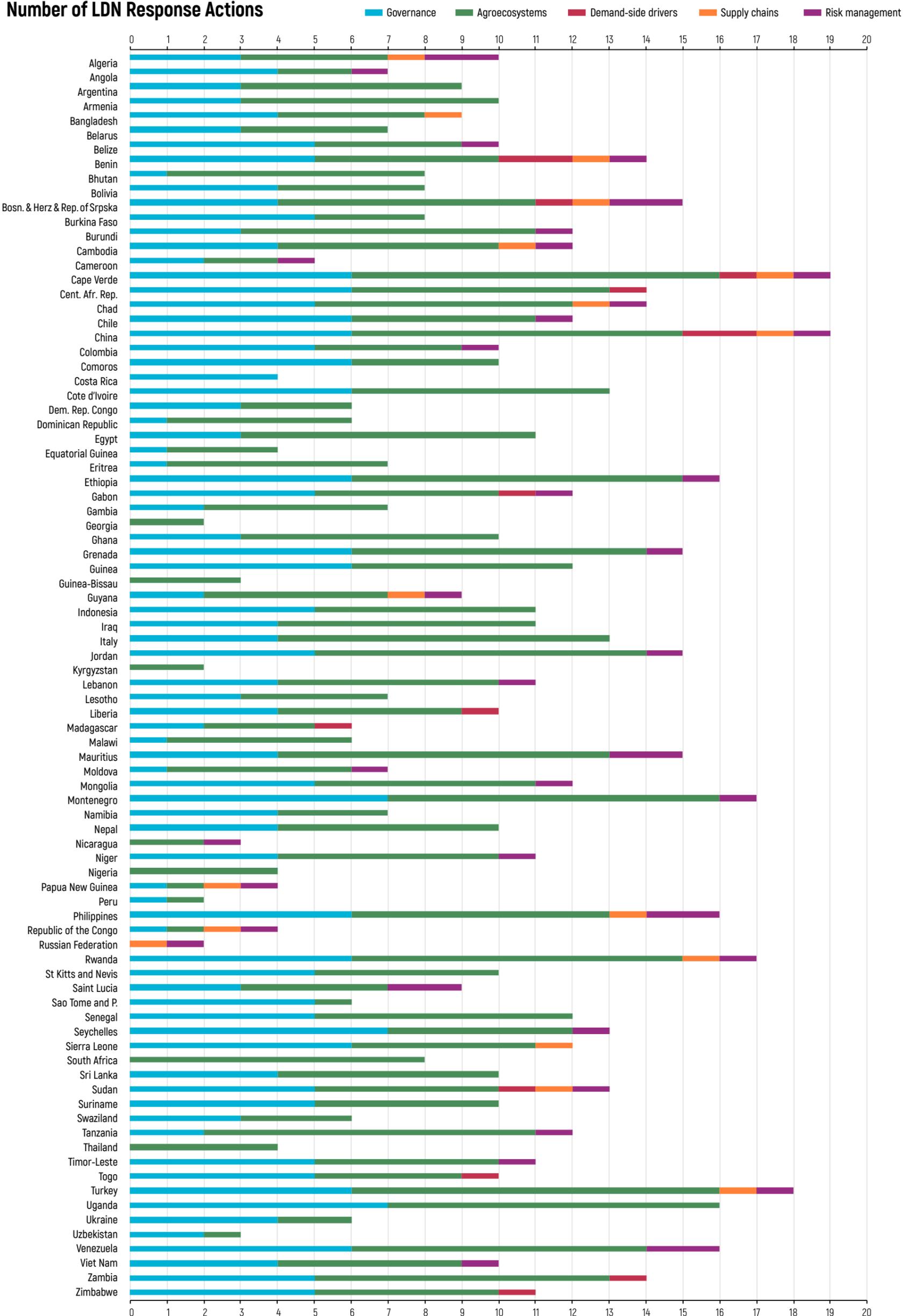
Nature-positive food policies that incentivize more sustainable practices and ensure supply chain transparency could help unlock the constraints in our current food systems. Developing the capacity to deliver a suite of coherent LDN response actions at the national level will necessarily include monitoring and evaluation protocols to guide future investment.

The outcomes of LDN response actions can help facilitate transformative change in global and national food systems. When coordinated with COVID-19 stimulus packages and other development priorities, such as job creation, social security, nature protection, and reducing food loss/waste, LDN can open up new pathways to translate global commitments into meaningful outcomes at the scale desired.

KEY FINDINGS: National LDN Targets and Response Actions

The table below shows the LDN response actions which directly contribute to avoiding, reducing, and reversing land degradation. Countries have recognized the importance of response actions that are designed to create an enabling environment by ensuring more effective land governance while simultaneously implementing land-based solutions in their agroecosystems. Many of these response actions aim to promote sustainable agricultural practices and enhance food security as well as address demand-side drivers, strengthen supply chains, and enhance risk management.

Number of LDN Response Actions



INTEGRATED LDN RESPONSE ACTIONS

LDN is driving the integrated approach needed to halt the loss of healthy and productive land, and sustainably manage agroecosystems for present and future generations

This analysis of national LDN reports identified a total of

842  in 86
Response Actions Countries

This analysis of national LDN reports, submitted as of the end of 2020, has identified a total of 842 response actions adopted by 86 countries.

These include 25 categories of response actions aimed at transforming food systems through implementing more responsible governance, building resilient agroecosystems, and improving the management of demand-side drivers, supply chains, and risk. Furthermore, these response actions would help countries to build back better after the COVID-19 pandemic and help mitigate the impacts of future crises.

1 LDN RESPONSE ACTIONS AIMED AT IMPROVING GOVERNANCE:

- **Strengthening land tenure rights and security** - crucial for promoting long-term investments in sustainable agriculture, particularly for vulnerable rural communities, smallholders, indigenous peoples, and women.
- **Promoting multi-stakeholder participation** - active involvement of stakeholders creates the necessary enabling environment and motivation for transforming food systems.
- **Building human, financial, and technical capacity** - essential for supporting effective responses at the local level to land management challenges.
- **Raising awareness** - increases and promotes actions for boosting nature-positive food production, promoting healthy and diverse diets, and reducing food loss and waste.



2 LDN RESPONSE ACTIONS AIMED AT BUILDING RESILIENT AGROECOSYSTEMS:

- **Increased food productivity** – enables more food to be grown with fewer inputs, on the same area of land, thereby reducing agricultural expansion.
- **Improved crop and livestock management** – all of which provide the potential to increase productivity and food production and reduce adverse environmental impacts.
- **Agroforestry and silvopasture** – well-planned, tree-based systems can enhance productivity and provide benefits to soil health and carbon stores.
- **Agricultural diversification**– supports the ecological functioning of soils, reduces erosion, provides the potential for nutritionally diverse diets, and creates more biologically diverse and locally adapted agroecosystems.
- **Integrated water management** – enables resource use efficiency, improved soil function, and enables more to be produced from less.
- **Increased soil fertility and organic matter, and reduced soil erosion** – improved management of soils offers potential increases in soil organic carbon, yields and enhanced food production as well as reducing off-site pollution.

3 LDN RESPONSE ACTIONS AIMED AT MANAGING DEMAND-SIDE DRIVERS:

- **Dietary change** – shifting to low-resource input foods (plant-based proteins) offers potential to decrease competition for land and agricultural expansion into natural ecosystems.
- **Reduced post-harvest losses** – productivity gains need to be protected by reducing food wasted through post-harvest activities and supply chains.
- **Reduced food waste** – encouraging consumers and retailers to reduce the global average of food waste to 30% will protect productivity gains.

4 LDN RESPONSE ACTIONS RELATED TO MORE EFFICIENT AND EQUITABLE SUPPLY CHAINS:

- **Development of alternative food sources and production technologies** – local or regional food systems offer the potential to provide food access to urban dwellers and shorten supply chains.
- **Use of local seeds and traditional practices** – conserves biodiversity and strengthens local and regional food systems, diverse and healthy diets and food sovereignty networks.

5 LDN RESPONSE ACTIONS RELATED TO MORE EFFECTIVE MANAGEMENT OF RISK:

- **Resilient livelihoods** – building skills and technologies helps farmers and land managers increase their resilience and capacity to adapt to shocks and stresses from markets, weather and climate change.
- **Navigating supply chain and market uncertainty** – technologies (e.g. mobile phones and apps distributed to women) offer small-scale food processors and traders opportunities to more effectively anticipate and manage fluctuations in prices, commodity supplies and market demands.

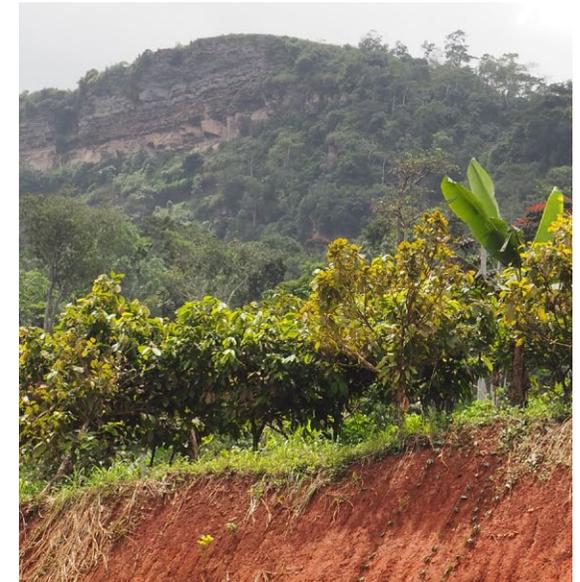
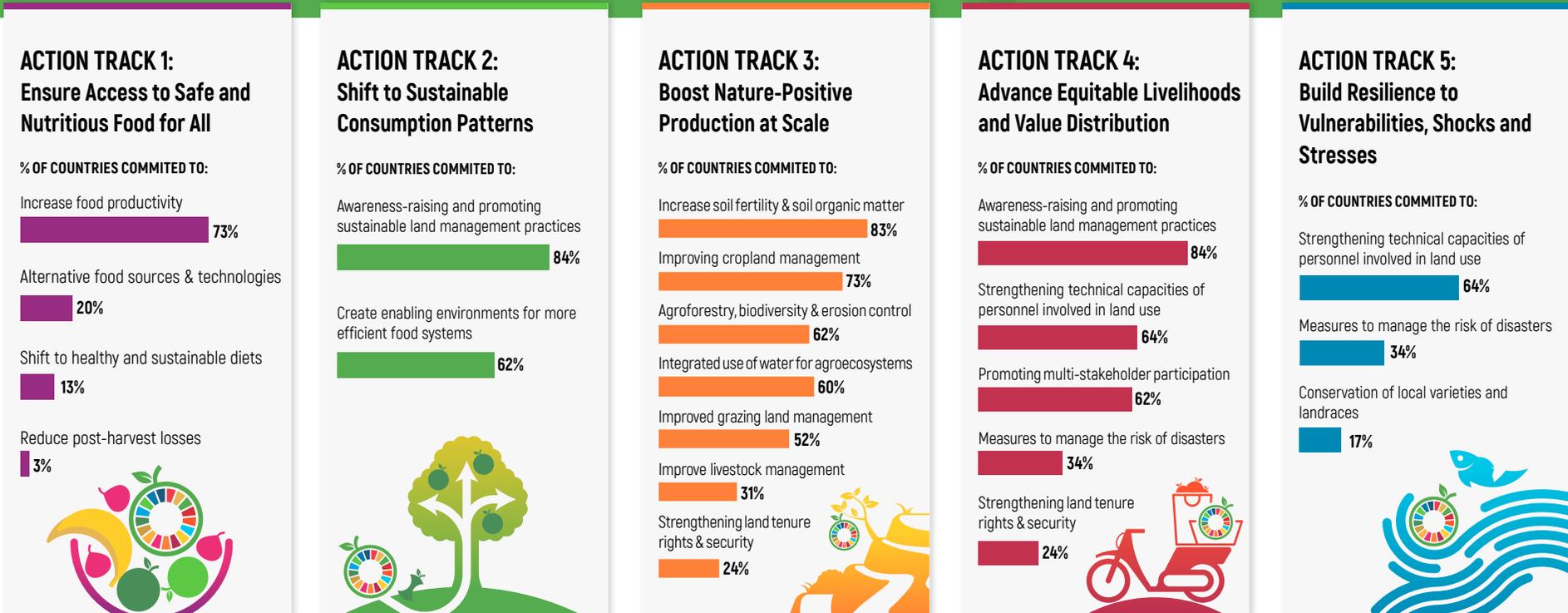


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LDN LINKAGES TO THE FOOD SYSTEMS SUMMIT 2021

Investments in LDN response actions will contribute to the Food Systems Summit agenda and objectives. Notably, by seeking synergies with the summit, LDN can play an important role in highlighting the need to tackle land degradation as a critical element in the creation of sustainable and resilient food systems. Furthermore, many LDN response actions will assist countries with COVID-19 recovery efforts and national development priorities to eliminate poverty and hunger, create jobs and livelihood stability, and restore planetary health.

The boxes below shows the **percentage of countries committed to specific LDN response actions** that support the objectives of the **Food Systems Summit's five Action Tracks**.



CALL TO IMMEDIATE ACTION

Country Parties, private sector, civil society organizations and other UNCCD stakeholders are strongly encouraged to engage in all aspects of the UN Secretary General's Food Systems Summit 2021 to explore how best to leverage new investments, business models and partnerships for achieving the 'no net loss' of healthy and productive land. This could include:

- Engaging in the **global, national and independent dialogues** as well as the **Action Tracks** to propose 'game changing solutions' as well as innovative and transformative ideas to take advantage of the potential synergies between LDN commitments and realizing more sustainable food systems.
- **Initiating national level discussions** with government, business, and civil society actors to align around a common practical framework, including LDN targets and related measures set by your country, that can contribute to national and local food system priorities.
- **Sharing examples of LDN experiences** and success stories to strengthen the evidence base to assist decisionmakers in leveraging synergies, negotiating trade-offs, and identifying monitoring and evaluation frameworks to track implementation on the ground.
- **Ensuring multi-stakeholder engagement**, including women, youth, and other marginalized communities, to further the development of LDN response actions that promote more equitable and gender-responsive contributions to the objectives of the Summit.



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Get involved

