

The role of the United Nations Convention to Combat Desertification (UNCCD) in the UN Decade on Ecosystem Restoration

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Key messages

- I Healthy ecosystems and land resources (soil, water and biodiversity) are the foundation for sustainable development and global prosperity. Ecosystem restoration enables safeguarding the services they provide and thus meet the growing demand for food, water, fuels and other raw materials, even under a rapidly changing climate.
- II The UN Decade on Ecosystem Restoration represents a significant opportunity to halt land degradation worldwide. The UNCCD has the mandate and can act as a trailblazer in this context. The UNCCD's key objective of achieving land degradation neutrality (LDN) links the UNCCD with the concerns and objectives of the UN Decade.
- III Sustainable land management (SLM) prevents the degradation of land resources and is a key measure for restoring terrestrial ecosystems. As such, it is perhaps the most effective instrument to attain the objectives of the UN Decade.
- IV Despite ambitious goals and the greater political relevance of this issue, challenges persist. More funding and capacity development are required, with industrialised nations needing to step up their support to poorer countries affected by land degradation. In the process to restore ecosystems, it is crucial to consistently pursue human-rights-based, gender-responsive and participatory approaches, not least to foster local acceptance and civic engagement. In addition, synergies with the UN Convention on Biological Diversity (CBD) and the UN Framework Convention on Climate Change (UNFCCC) should be harnessed to a greater extent.

This paper is part of a policy paper series on the UN Decade for Ecosystem Restoration. The UN Decade links issues and challenges that have mostly been considered separately in the past, most notably: climate change, biodiversity loss and land degradation. It examines their interactions and identifies solutions. The Policy Paper series contributes to this, providing ideas and recommendations for joint implementation. We thank the UNCCD Secretariat for their valuable contributions.



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Introduction

Over recent decades the loss of natural capital, including land resources, has increased dramatically as a result of worldwide overexploitation. Three quarters of the planet's terrestrial ecosystems have been significantly altered by human actions (IPBES, 2019) and between 20% and 40% of its land is degraded¹ (UNCCD, 2022). This results in a loss of ecosystem services² and in declining land productivity.³ Ecosystem degradation therefore has a direct impact on the well-being and livelihoods of billions of people worldwide.⁴ At least 169 of the 197 parties to the [United Nations Convention to Combat Desertification \(UNCCD\)](#) are affected by land degradation (Wischniewski, 2015). Continued desertification, land degradation and drought are mutually reinforcing as part of a vicious circle, bringing food and water shortages, poverty and the risk of conflict in affected nations (UNCCD, 2022).⁵

Unsustainable land management practices and land use changes are responsible for 80% of deforestation and 70% of freshwater consumption worldwide and are the main cause of the degradation of terrestrial ecosystems (WWF, 2020; Chatham House, 2021).⁶ The degradation and conversion of ecosystems also results in biodiversity loss and the associated loss of ecosystem services.⁷ In turn, this reduces soil fertility and productivity and impacts adversely on the important role soil plays in storing water and carbon (Kopittke et al., 2019). Changes to natural ecosystems, including soil degradation, cause the bulk of carbon emissions in the agriculture, forestry and other land use (AFOLU) sector (UNCCD, 2022). Agricultural activities to meet rising demand for food, feed, fibres and biofuels are responsible for the lion's share of changes in land use (Tilman et al., 2011).

Ecosystem restoration is an effective and cost-efficient nature-based solution (NbS) to address climate change, land degradation and biodiversity loss (see Policy Paper no. 1). Restoration measures can counterbalance the degradation of land and soils and enhance biodiversity and key ecosystem services of terrestrial ecosystems, thus reducing the risk, magnitude, frequency and intensity of disasters such as droughts and floods (Keesstra et al., 2018). Restoring ecosystems and the services they provide secures livelihoods and the natural resources that people depend on. This makes for a better quality of life in the long term, with a diverse range of societal sectors and groups – including local and indigenous communities, young people and the private sector – able to benefit from an improved availability of food and water as well as from higher incomes.

Alongside restoring terrestrial ecosystems, **sustainable land management** (SLM; see box on page 4) is a key factor in achieving many of the 17 SDGs, in particular SDG 15.3⁸ (Thomas et al., 2018; Chasek et al., 2019). This makes SLM one of the most effective means of achieving the objectives of the **UN Decade on Ecosystem Restoration**.

The interlinkages between the UN Decade on Ecosystem Restoration and the mandate and objectives of the UNCCD – focusing in particular on the concept of **land degradation neutrality (LDN; SDG 15.3)** – are discussed in this Policy Paper.

¹ 'Degradation' is often a gradual process that is difficult to measure, which is why figures are often based on estimates. 'Degradation' is frequently used as an umbrella term, covering a large number of changes including desertification, salinisation, erosion, compression and the encroachment of invasive species (Gibbs and Salmon, 2015).

² Between 1997 and 2011, changes in land use led to the loss of ecosystem services that were worth on average USD 20 trillion per annum (Constanza et al., 2014). Every year, land degradation costs around 10% of global GDP in lost ecosystem services (IPBES, 2018).

³ Between 1998 and 2013, there was a persistent downward trend in the productivity of 20–30% of the planet's vegetation-covered land (IPBES, 2018).

⁴ Poverty could be significantly reduced if a larger share of the rural population were to farm agricultural land that is improving rather than degrading (ELD, 2014).

⁵ Land degradation is estimated to affect the well-being of more than one third of the world's population adversely, including by triggering mass migration and increasing conflicts. Furthermore, it causes species extinction and exacerbates the impacts of climate change (IPBES, 2018).

⁶ Today, more than one third of global land and almost 75% of freshwater resources are used for crop growing or livestock farming (IPBES, 2018).

⁷ In Europe, agriculture is the primary driver of the deteriorating status of species and habitats under the EU Nature Directives (EEA, 2020).

⁸ SDG 15.3 is the key goal of national action plans under the UNCCD. It includes the restoration of degraded land and soils and aims to achieve LDN or no net loss of land resources.

Policy context

The **UN Decade on Ecosystem Restoration (2021–2030)** is mobilising governments, the private sector and civil society as part of a global movement that aims to prevent, halt and reverse ecosystem degradation worldwide and, at the same time, address social challenges including poverty, hunger and malnutrition.⁹ It therefore builds on the same ‘triad’ or hierarchy of interventions as the UNCCD and the LDN concept (avoid, reduce, reverse). The aim of the UN Decade is not to establish new international agreements, but rather to put in place a new framework for implementation that supports existing pledges and efforts. It is in this way that the targets set out under the SDGs, as well as those under the UNCCD, UNFCCC, CBD and other initiatives such as the Bonn Challenge, are to be achieved.

The **Great Green Wall** in the Sahel region is not only the largest initiative under the UNCCD and one of the first **flagship initiative** of the UN Decade, it also contributes to achieving the objectives of both the UN Decade and LDN. The initiative is an example of the UN Decade’s enormous potential to unite the objectives of the Rio Conventions in the context of ecosystem restoration (see also Policy Paper no. 1). The previous decade (2010–2020) was declared the UN Decade for Deserts and the Fight against Desertification in order to attract international attention to land degradation and desertification and demonstrate how land degradation can, in fact, be reversed.

One important achievement of the previous UN Decade was the aforementioned concept of **land degradation neutrality** (LDN), which offers a practical framework and flexible planning instruments for the sustainable management of land and water systems. LDN, which is the central objective of the UNCCD, provides a global framework for stepping up efforts to fight the degradation of terrestrial

ecosystems (including farmland, forests, grazing land, wetlands).¹⁰

The key elements of LDN are as follows:

- No net loss of healthy and productive land resources (neutrality)
- The LDN response hierarchy of
 - (1) avoiding,
 - (2) reducing, and
 - (3) reversing land degradation

LDN is firmly anchored in SDG 15 (SDG target 15.3) and contributes to a number of other SDGs. In all, 129 countries have already adopted voluntary LDN targets to avoid (protection), reduce (sustainable land management) and reverse (restoration) the net loss of land resources. These LDN targets¹¹ cover 250 million hectares of agricultural land and therefore account for a quarter of all the quantitative land-related commitments made by countries worldwide by the end of 2021.¹² LDN therefore offers several possibilities for generating synergies between the Rio Conventions – for instance, by targeting overlaps and integration with Nationally Determined Contributions (NDCs) and National Biodiversity Strategies and Action Plans (NBSAPs) (see Figure 1; UNCCD, 2022, and Chasek et al., 2019).

The final declaration of the 15th session of the Conference of the Parties (COP 15) of the UNCCD, held in May 2022, also called for more cooperation and synergies with regard to the UN Decade and the role of Nbs.¹³ In a 2020 resolution, the United Nations General Assembly reiterated the need to combat desertification and restore degraded land and soil in order to ensure food, nutrition and water security, reduce greenhouse gas emissions and avert future health and environmental threats (UN, 2021).¹⁴ At the European Union level, the new **EU Soil Strategy** emphasises the link between restoration and LDN.

⁹ See Policy Paper no. 1 for a detailed definition of ecosystem restoration as a broad continuum of practices.

¹⁰ The UNCCD brings together various interest groups, including governments, academics, the farming community, the private sector and local communities, to support specific initiatives that protect and restore the health and productivity of land resources. The UNCCD uses and develops a wide range of evidence-based strategies and practices that are specially tailored to local contexts and capable of being replicated at different levels.

¹¹ The contribution to achieving LDN by 2030 through voluntary national LDN targets is incorporated in the UNCCD 2018–2030 Strategic Framework.

¹² The total area of all commitments is one billion hectares of farmland, forest and grazing lands – an area greater than that of the United States of America.

¹³ <https://www.unccd.int/sites/default/files/2022-06/cop23-advance.pdf>

¹⁴ Resolution A/RES/75/220 of the United Nations General Assembly: <https://digitallibrary.un.org/record/3848293?ln=en>

Sustainable land management – challenges and opportunities

- The UNCCD sees the restoration of degraded areas as a key factor in achieving the central goal of land degradation neutrality (LDN), primarily through sustainable land management (SLM) and restoration measures such as forest landscape restoration (see Policy Paper no. 1).
- SLM is defined as ‘the use of land resources, including soils, water, animals and plants, for the production of goods to meet changing human needs, while simultaneously ensuring the long-term productive potential of these resources and the maintenance of their environmental functions’ (WOCAT, 2022).
- SLM aims first and foremost to halt **land degradation**, while simultaneously bringing about positive side effects (e.g. enhancing soil fertility). SLM practices help improve living conditions, enhance food and nutrition security and create jobs by ensuring that food and resource production is nature-positive (Giger et al., 2018). They also serve to safeguard ecosystem services on cultivated land. For instance, regenerative agriculture practices that promote soil health or recharge groundwater also help towards the management of drought, flooding, forest fires, and sand and dust storms (Kent et al., 2016). SLM embraces a number of practices that can be used in all eight of the ecosystem types set out in the UN Decade on Ecosystem Restoration (Critchley et al., 2021). The [WOCAT Global Database on SLM](#) is UNCCD’s reference database for tried-and-tested SLM practices.
- Inadequate policies, rules and guidelines relating to LDN can present challenges that exacerbate the risk of land degradation (Chasek et al., 2018). **Land tenure rights** are one such challenge. While secure land tenure rights will not, in and of themselves, prevent land degradation, the lack of a secured tenure may prevent farmers from adopting SLM (Dallimer et al., 2018).
- Large-scale investments exert increasing pressure on land as a resource. In the absence of protective measures, transparent planning and appropriate mechanisms to prevent and resolve conflicts, such investments frequently result in conflicts, compulsory expropriation and expulsion.
- In 2019 the UNCCD adopted a resolution calling on parties to the Convention to ensure the non-discriminatory and participatory implementation of measures to tackle desertification, land degradation and drought so as to promote equal tenure rights and access to land for all, especially vulnerable groups (UNCCD, 2019).
- The restoration of land offers unique opportunities to **implement human-rights-based approaches**. In 2021 the United Nations Human Rights Council adopted a resolution that ‘calls upon all States to conserve, protect and restore healthy ecosystems and biodiversity and to ensure their sustainable management and use by applying a human rights-based approach that emphasizes participation, inclusion, transparency and accountability in natural resource management’ (UN Human Rights Council, 2021).

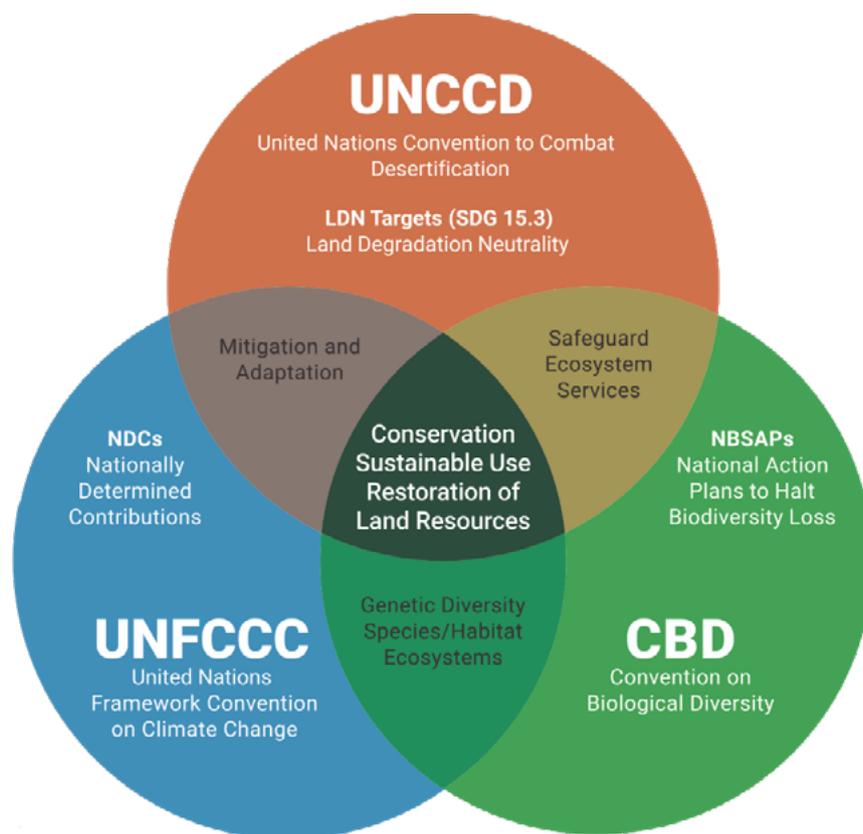


Figure 1: Schematic representation of the three Rio Conventions, describing the respective central goals of the national action plans (NBSAPs, NDCs, LDN goals) and the overlapping elements/synergies (climate mitigation and adaptation, conservation of ecosystem services, conservation of biodiversity and ecosystems). This highlights the importance of the conservation and sustainable use of land resources for achieving the goals of all three Conventions (UNCCD, 2022).

Note: The authors consider the protection of biodiversity also to be part of combating land degradation and thus of the UNCCD, even if this is not explicitly mentioned.

Recommendations for action and strategic proposals

- **An overall transformation of land use** – particularly in agriculture, but also along entire supply chains – towards sustainable land use and management (SLM) practices is needed. This would contribute greatly to food and nutrition security and to the success of the global land, biodiversity and climate agendas. In this way, dangerous environmental tipping points and the progressive overstepping of planetary boundaries could be avoided (Watson et al., 2021) as agricultural and food systems are transformed.
- **Ambitious goals for the restoration of land resources** need to be better underpinned by clear (national) action plans and sustainable financing. Countries that bear a disproportionate share of responsibility for the climate, biodiversity and environmental crisis (including Germany) must offer developing countries more vigorous support in efforts to restore their land resources. These activities must be central to the establishment of healthy and resilient societies.

- To establish coherent policies, it is crucial to strengthen and join up national UNCCD focal points because, in many countries, these focal points lack sufficient resources and capacities and their brief often does not cover the UNFCCC and CBD, at least to the same level.¹⁵
 - Linking national action plans under the Rio Conventions and thereby moving away from entrenched silo-thinking offers significant, direct opportunities to restore land resources, reap co-benefits and maximise the return on investment (UNCCD, 2022).
- **Responsible and integrated governance and land use planning**, along with trustworthy institutions and networks, are essential to protecting healthy and productive soils and to restoring species- and carbon-rich ecosystems. Greater transparency and accountability are prerequisites for the integrated land use planning and other policy instruments that can help achieve multiple benefits and

manage trade-offs. For example, using integrated landscape approaches can lead to food and nutrition security, improvements in health, better livelihoods and the reduction of poverty while reducing conflicts and trade-offs (see next point).

- **Trade-offs and unintended outcomes need to be avoided.** For example, when planning forest restoration measures (the adoption of which is now being heavily promoted around the world, given forests' impact on the climate), care must be taken to ensure that no natural or ecologically valuable semi-natural grasslands or savannah are lost (Dudley et al., 2020). After all, restoration is not just about planting trees. Rather, it is about restoring the productivity of ecosystems including, for example, grasslands, which play a positive role in water systems. In this regard, more research is needed to gather precise data on the extent and dynamics of all terrestrial ecosystems.

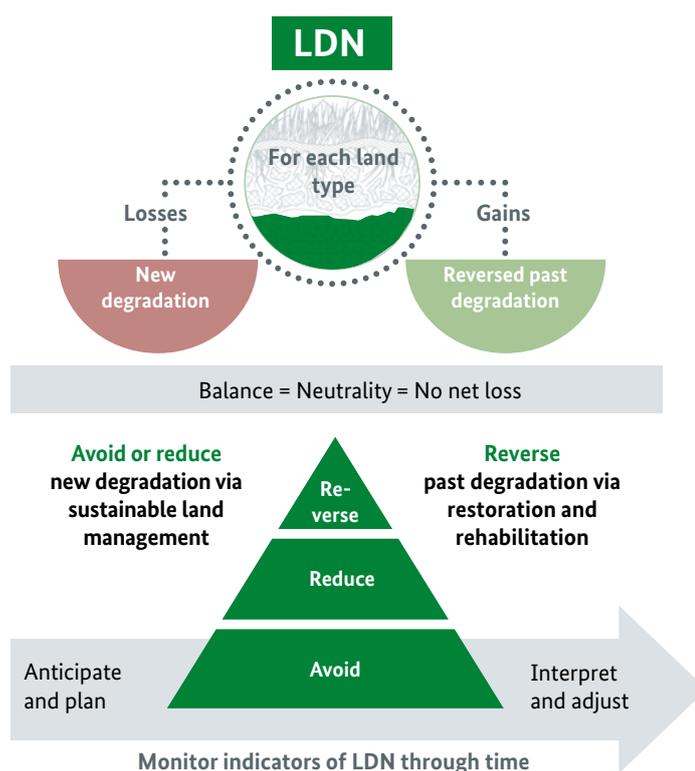


Figure 2: Land degradation neutrality (LDN) as the framework strategy for SDG target 15.3 (based on UNCCD, 2017)

¹⁵ A number of countries have no central body at the national level responsible for coordinating integrated land use planning and thus they also have no central body for the implementation of LDN (Chasek et al., 2019).

- **Greater capacity building at the local implementation level** through donor-country cooperation geared to short-, medium- and long-term needs can support areas facing particular challenges in achieving LDN (in partner countries), while facilitating the precise monitoring of changes (see Figure 2). It is imperative that the restoration of ecosystems take into account various types of land use, rather than concentrating exclusively on restoring ecological functions to the detriment of agricultural productivity. Adopting a landscape approach allows for a holistic view in line with the development agenda. The UNCCD is the only Rio Convention that fully adopts such a holistic approach by focusing on both environmental protection and the economic and social development of affected areas and local communities.
- **The greater involvement of interest groups** and the securing of land tenure and human rights (see box on page 4) should be preferred over top-down solutions when it comes to preventing or reducing land degradation and water shortages. The UNCCD has substantial experience and expertise in the fields of human and land rights, which it could contribute to the UN Decade through, for example, its active participation in the UN Decade Task Forces (see the recommendations for action below).

The following specific **recommendations for action** indicate potential avenues for cooperation and the harnessing of synergies between the UNCCD and UN Decade:

- Continued promotion of communication and knowledge-sharing between the two initiatives, given the UNCCD has a wealth of knowledge on SLM, human and land

tenure rights, and monitoring approaches. This could comprise publications (see, for example Critchley et al., 2021 and Sims et al., 2021), jointly organised events, and the linking of the WOCAT platform with UN Decade’s knowledge platform, the [FERM Registry](#).

- Ongoing and enhanced participation in and cooperation with the UN Decade Task Forces by, for example:
 - involving the Task Forces in the preparation and staging of COP16 (in particular the Task Forces on Monitoring and Best Practices, taking advantage of [UNCCD’s National reporting process](#));
 - initiating other possible Task Forces for the UN Decade, such as for indigenous peoples and local communities (IPLC);
 - providing continued support to the UN Decade Monitoring Task Force by sharing UNCCD’s experiences and monitoring approaches for SDG target 15.3;
 - ensuring close coordination on the development of the FERM Registry (e.g. on its dashboard, which shows UN Decade’s progress towards meeting the one billion hectares target),
 - using and strengthening synergies, e.g. by using the great platform for exchange between the different Rio Conventions that the UN Decade Task Forces offers.
- Close coordination and joint communications on all aspects of the Great Green Wall initiative, especially in terms of its role as a flagship project of the UN Decade.
- Close coordination between the two initiatives in the context of the cooperation with the [AFR 100](#) Initiative.



Sustainable land management practice in the drylands of Mali

Conclusion

The additional momentum generated by the UN Decade initiative is an opportunity for the UNCCD to focus more heavily on promoting sustainable land management and soil protection's central place in national policy and on the international agenda. With its goal of restoring ecosystems, the UN Decade also represents an excellent opportunity to drive the LDN agenda forward. It will help the UNCCD to achieve its own goals (including LDN) and to draw benefit from the areas it has in common with the UN Decade and also with the UNFCCC and CBD (see the overlapping elements in Figure 1). Furthermore, by harnessing and highlighting the synergies that emerge, the UNCCD can raise its own profile and, in return, can contribute its extensive expertise to the UN Decade.

Ensuring food and nutrition security for over nine billion people by 2050, while simultaneously achieving the other goals of the 2030 Agenda and the three Rio Conventions, will only be possible by shifting to sustainable land use. Prerequisite to this is the restoration of land resources, which, in turn, will require the transformation of our

agricultural and food systems through the strengthening of sustainable land use, promotion of coherent policies in all sectors and involvement of a wide range of actors (Le Mouél et al., 2018).

There is evidence that many ecosystems can be restored, even if they are seriously degraded (Dudley et al., 2020). The cost-effectiveness of restoration measures for the environment and society has also been determined.¹⁶ This is why it is crucial to fully harness the momentum generated by the UN Decade on Ecosystem Restoration to conserve and restore land resources by 2030.

Sustainable land management requires the building of relevant capacities and increased funding, especially in developing countries. When delivered as part of responsible development and environmental policies, this capacity building and enhanced funding can help break the 'poverty trap', which otherwise stands in the way of sustainable socio-economic development in environmentally fragile areas (Cao et al., 2021).



Livestock farming in Ethiopia

¹⁶ Investment in preventing land degradation and in ecosystem restoration is economically viable: The restoration of 350 million hectares of damaged terrestrial and aquatic ecosystems could generate USD 9 trillion in ecosystem services. Restoration could also remove between 13 and 26 gigatonnes of

greenhouse gases from the atmosphere. The economic benefits of these measures will be ten times the cost of investment, whereas the cost of inaction will be at least three times as high as the cost of restoring ecosystems (IPBES, 2018; <https://www.decadeonrestoration.org/>).

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