

## Mapping out Future Strategies to Combat land Degradation Effectively

**\*Dr. Mamta Choudhary**

### **Abstract**

The UN Convention to Combat Desertification (UNCCD) was created in 1994 as a result of the 1992 Earth Summit, whereby it was acknowledged that one of the major environmental issues impeding sustainable development is desertification. With 197 Parties as of right now, the United Nations Convention on Climate Change (UNCCD) is a legally binding global agreement that attempts to combine solutions for sustainable land management with challenges related to development and the environment. Every year on June 17, the world observes Desertification and Drought Day to commemorate the day of its adoption. The degradation of land in drylands is referred to as desertification. The two billion people who live in these arid, semi-arid, and sub-humid regions—mostly in developing nations—make up 40% of the world's land area. There are drylands on every continent, but they are most common in Asia and Africa. A number of human actions, including deforestation and inappropriate land use, contribute to the degradation of drylands, in addition to variations in the climate. This has serious consequences; for instance, it causes the annual loss of 24 billion tons of fertile soil, endangering the lives and livelihoods of people.

**Keywords:** drylands, future, land degradation, desertification, reforestation, sustainable, combating

### **Introduction**

Resolving desertification is critical because healthy drylands benefit people and the environment in many significant ways. According to the New Climate Economy research, 200 million more people may have access to food and over USD 30 billion in additional revenue from the restoration of 150 million hectares of agricultural land. Restoration is essential to a green recovery from the COVID-19 epidemic and offers significant additional environmental advantages, like as carbon storage and biodiversity protection.

Reforestation, including tree regeneration, is one of the numerous strategies to aid in the restoration of damaged land. Among these is agroforestry, a method of managing natural resources in which trees are planted on the same land that is used for farming. Agroforestry holds promise in tackling several significant environmental, economic, and social concerns, including the preservation of the environment and meeting the world's increasing food needs. Agroforestry alone can improve food security for 1.3 billion people by repairing degraded land, according to a recently released UNEP research on ecosystem restoration. Additionally, in agroforestry systems, tree plantations serve as both habitats and a buffer zone against deforestation, allowing species to migrate.

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The connections between desertification, climate change, and biodiversity loss are highlighted by initiatives to recover degraded land through reforestation and agroforestry systems. The Convention on Biological Diversity (CBD) and the United Nations Framework Convention on Climate Change (UNFCCC), the other two Rio Conventions, share significant areas of overlap with the UNCCD. Abisha Mapendembe, a UNEP-WCMC Programme Officer, spoke on this subject while assisting Namibia's sustainable development by putting the three Rio Conventions into practice in a coordinated manner. He says that, "There isn't time to handle these urgent issues sequentially at this critical juncture for the global disaster of biodiversity loss, climate change, desertification, and inequality—all of which are covered under the three Rio treaties adopted in 1992. These pressing issues require our simultaneous attention as we look for coordinated solutions and synergies. In order to address major development and environmental concerns in a coordinated way that benefits both people and the environment, the Sustainable Development Agenda and its accompanying Sustainable Development Goals offer a ready-made set of objectives. On the other hand, this calls for coordinated government policy development and execution."

Reducing Emissions from Deforestation and Forest Degradation (REDD+) is one initiative that exemplifies the efforts to address the connections between these principles. REDD+ initiatives combat climate change by increasing sequestration and lowering greenhouse gas emissions. They also lessen forest degradation and promote biodiversity conservation and sustainable usage. For instance, in Côte d'Ivoire, cocoa cultivation is both the primary cause of land degradation due to deforestation and the means of subsistence for a large number of smallholder farmers. Agroforestry initiatives might be launched in certain areas to support resilient agricultural ecosystems, increase food security, and mitigate climate change. This could be done through the use of spatial analysis work being led by UNEP-WCMC to map restoration opportunities throughout the nation. This effort supports the implementation of the UN-REDD Program and the cooperation amongst CocoaSoils.

### **Review of Literature**

The literature emphasizes the crucial necessity of addressing desertification and land degradation, leading to the creation of the UN Convention to Combat Desertification (UNCCD) after the Earth Summit in 1992. Research highlights the advantages of reforesting and agroforestry to restore degraded areas, hence enhancing food security, biodiversity, and climate resilience. Furthermore, programs such as REDD+ show coordinated attempts to improve sustainable land management and lessen climate change. The objectives of the UNCCD coincide with international initiatives to attain sustainable development and neutrality of land degradation.

### **Discussion**

Countries pledged at the 2017 UNCCD COP13 to attain degradation of land neutrality by 2030; the UNCCD 2018–2030 Strategic Framework fully addresses this objective. The UN Decade on Ecosystem Restoration will assist this and, over the next ten years, seek to encourage synergies between the three Rio Conventions. It is critically necessary to restore our planet's ecosystems, as 23% of its land area is no longer productive and 75% of it has been altered from its natural state. Let us

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commemorate this year's Desertification and Drought Day as the beginning of a decade of significant change, restoring over 2 billion hectares of damaged land and enhancing the standard of living for over 1.3 billion people worldwide. This will need government and civil society taking action at the local and national levels, utilizing the knowledge and resources now available to assist sustainable land management.

Encouraging land degradation neutrality—a strategy that balances the anticipated loss of agricultural land with the restoration of degraded areas—can aid in ensuring that issues related to food availability, demand for energy, ownership of land, gender equality, access to pure water, and biodiversity are taken into account and effectively addressed in tandem. According to paragraph 205 of *The Future We Want*, good land management is important for both the economy and society. This includes the soil and how it contributes to both social advancement and economic prosperity. In this regard, Member States voice their concern about the obstacles that drought, land degradation, and desertification pose to sustainable development, particularly for Africa and the LDCs. The United Nations Convention to Combat Desertification (UNCCD) and its 10-Year Strategic Plan and Framework (2008-2018) must be implemented, and Member States emphasize the need for national, regional, and global action to stop land degradation and to mobilize financial resources from public and private donors.

Moreover, Member States support and acknowledge the significance of collaborations and initiatives in sections 207 and 208 of the *Future We Want* in order to protect land resources and advance the creation and application of reliable, sound, and inclusive methods and metrics for tracking and evaluating the degree of desertification, land degradation, and drought. The UNCCD's efforts to combat desertification and drought are also discussed in relation to the importance of advancing scientific research and fortifying the scientific foundation of related activities.

The Commission on Sustainable Development had multiple sessions to discuss combating drought and deserts. Within the context of CSD 16–17's multiyear work program, the interconnected themes of land, farming, rural development, and Africa were the emphasis of 2008 and 2009, respectively, along with desertification and drought. CSD-8 examined integrated management and planning of natural assets as its sectoral focus in 2000, in line with its multi-year work program. In the resolution 8/3 on the integrated strategy and management of resources related to land, the Commission on Sustainable Development stated that in order to effectively address the pressing issues of drought and desertification, sustainable mountain development, the avoidance and reduction of land degradation, coastal zones, forest destruction, climate change, land use in both rural and urban areas, urban growth, and biological diversity conservation, a comprehensive approach, including ecosystem management, is necessary.

CSD-3 examined the sectoral cluster of land, biodiversity, forests, desertification, and mountains (chapters 10–13 and 15 of Agenda 21) in 1995 and once more during the five-year review in 1997. In order to prepare an international convention to combat desertification in those countries experiencing serious drought and/or desertification, particularly in Africa, by June 1994, the United Nations General Assembly was known as onto by the UN Conference on Environment and

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Development (UNCED) to create an Intergovernmental Negotiating Committee (INCED). On June 17, 1994, the Convention was adopted in Paris, and on October 14 and 15, 1994, it was made available for signature. It became operative on December 26, 1996.

A chapter dedicated to "combating desertification and drought" discusses deserts, one of the "fragile ecosystems" included by Agenda 21. Desertification is the term used to describe the degradation of land caused by a variety of factors, such as weather fluctuations and human activity, in dry sub-humid, semi-arid, and arid places. Up to 25% of the world's land area, 70% of all drylands, and one-sixth of the world's population are all impacted by desertification. It causes billions of hectares of crops and rangeland to degrade and causes widespread poverty.

Chapter 10 of Agenda 21 addresses the cross-sectoral aspects of decision-making for the sustainable use and development of natural resources, including the soils, minerals, water, and biota that make up land. It focuses on integrated planning and management of land resources. The foundation of Agenda 21's and the Commission on Sustainable Development's discussions of land concerns is this comprehensive integrated perspective of land resources, which are vital for life-supporting systems and the environment's potential for production. Growing population demands and economic activity are putting ever-greater strain on land resources, fostering rivalry and conflict and leading to less-than-ideal resource utilization. It is feasible to reduce conflicts, make the best trade-offs, and connect social and economic development with environmental preservation and enhancement by looking at all uses of land holistically. All of these things contribute to the goals of sustainable development. Paragraph 10.1 of Agenda 21 Chapter 10 of Agenda 21 is under the task managership of the Food and Agriculture Organization of the United Nations (FAO).

### **Outcomes**

Globally, land degradation is happening quickly. Healthy land resources and thriving ecosystems are necessary to guarantee food security for the world's expanding population. However, the way we now farm is degrading soils across the globe up to 100 times faster than the rate at which nature replenishes them. Almost 3.2 billion people have already been impacted by the changes we have made to 70% of all ice-free land. By 2050, ninety percent of the land will be impacted by human activity. The majority of people on Earth will be impacted by land deterioration. In addition, land degradation intensifies extreme weather events like droughts and floods, modifies and disrupts rainfall patterns, and accelerates climate change. It leads to political and social instability, which fuels migration, poverty, and conflict.

This worrying forecast of the future can be stopped and then reversed by the UNCCD's land degradation neutrality (LDN) objective. Of the 196 nations in the world that have promised (or plan to) stop land degradation by 2030, we are already assisting 129 of them. The Changwon Initiative, which promotes national voluntary target-setting processes to attain land degradation neutrality (LDN), has more than 100 participating countries. According to our definition, LDN is "a state in which, within specific temporal and spatial scales and ecosystems, the amount and quality of land resources necessary to support ecosystem functions and services to enhance food security remain

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stable, or increase."

To attain LDN, three simultaneous acts are necessary:

First, preserving healthy land will prevent further land degradation; second, implementing sustainable land management techniques will lessen current land degradation and increase biodiversity, soil health, and food production; and third, stepping up efforts will restore and return degraded lands to a natural or more productive state.

The following are the LDN goals of the UNCCD:

- Preserving or enhancing the ecosystem services' sustainable delivery
- Preserving or increasing land production to boost food security worldwide
- Strengthening the resilience of the land and the people who depend on it
- Attempting to create synergies with other environmental, social, and economic goals.
- Supporting and encouraging equitable, responsible land management.

Extreme weather, especially drought, is one of the many factors that contribute to land degradation. Additionally, human activity that contaminates or diminishes the condition of soil and land utility is the source of it. Producing food, livelihoods, and the creation and delivery of other ecological goods and services are all adversely impacted. Fertile terrain can turn into a desert through a process known as desertification. The production of livestock and agriculture (over-cultivation, overgrazing, conversion of forests), development, deforestation, and severe weather like droughts and coastal surges that salinate land have all contributed to an acceleration of land degradation in the 20th and 21st centuries. Arable land and pastures around the world, which are necessary for the supply of water, food, and clean air, are under stress due to societal and environmental forces.

Human health can be impacted by desertification and land degradation in a number of ways. Populations are under pressure to relocate to more hospitable areas as a result of decreased food production, drying up water sources, and desertification of certain territory. Desertification may have the following possible effects on health:

- Decreased food and water supply increase the risk of malnutrition.
- More food- and water-borne illnesses brought on by inadequate sanitation and contaminated water sources.
- Respiratory conditions brought on by various air contaminants and dust in the atmosphere from wind erosion.
- Infectious disease transmission caused by population migration.

### **Conclusion**

In order to facilitate the exchange of locally pertinent knowledge that supports sustainable crop and animal management decisions, farmers and extension service providers have been holding periodic conferences known as Forums for Integrated Resource Management since 1996. The decision

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supporting tool known as "local level monitoring," which helps farmers identify and keep an eye on important factors like rainfall, animal health, and fodder supply, is essential to the forums' success. Government agricultural extension professionals used the event to deliver additional information on rangeland management practices, animal nutrition and health, rotational grazing, and marketing of cattle. When combined, these data have helped local farmers manage their natural resources sustainably by enabling them to make the right choices.

Generally speaking, the forums have been successful in not just increasing social capital and institutional capacity at the local level but also in fostering an atmosphere of trust and inclusivity between central government and isolated rural areas. The strategy has worked because it empowers regional approaches to land management problems by transferring ownership to individuals concerned. The program has, however, not yet had a major influence on regulations at the federal level, despite the fact that it has significantly increased communication between policymakers and regional farmers. The forums' reliance on donations for funding makes them unsustainable in the event that funding stops coming in, so funding is another problem.

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