

SA4: Sustainability

Minimizing the Effects of Desertification on Land and Resources

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Forum: SA 4 - Sustainability Committee

Issue: Minimizing the Effects of Desertification on Land and Resources

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Introduction

Desertification is a result of many factors, including but not limited to climate change, unsustainable land use practices, and human activities. Climate change is among the primary causes of desertification, resulting in decreased rainfall and increased evaporation rates, leading to the drying of soil and limiting vegetation. Over 13 billion tons of natural resources are extracted from the land by 2023; while research for renewable energy sources is ongoing, the need for organic resources. It is crucial that the Member States give emphasis on cooperation to combat the effects of desertification on land and resources.

Definition of Key Terms

Agroforestry:

Collective name for land-use systems and technologies where woody perennials (trees, shrubs, palms, bamboos, etc.) are deliberately used on the same land-management units as agricultural crops and/or animals (1)

Climate change:

Long-term shifts in temperatures and weather patterns, such shifts may be natural, but since 1800s, human activities have been the main driver of climate change, primarily due to the burning of fossil fuels (like coal, oil and gas), which produces heat-trapping gases (2)

Conservation agriculture:

Farming system that promotes maintenance of a permanent soil cover, minimum soil disturbance, and diversification of plant species (3)

Desertification:

The process by which land changes into desert, for example because there has been too much farming activity on it or because a lot of trees have been cut down (4)

The Food and Agriculture Organization of the United Nations (FAO):

An international organization that leads international efforts to defeat hunger and improve nutrition and food security (5)

The United Nations Environmental Programme (UNEP):

The United Nations (UN) organ is responsible for coordinating responses to environmental issues within the United Nations system (6)

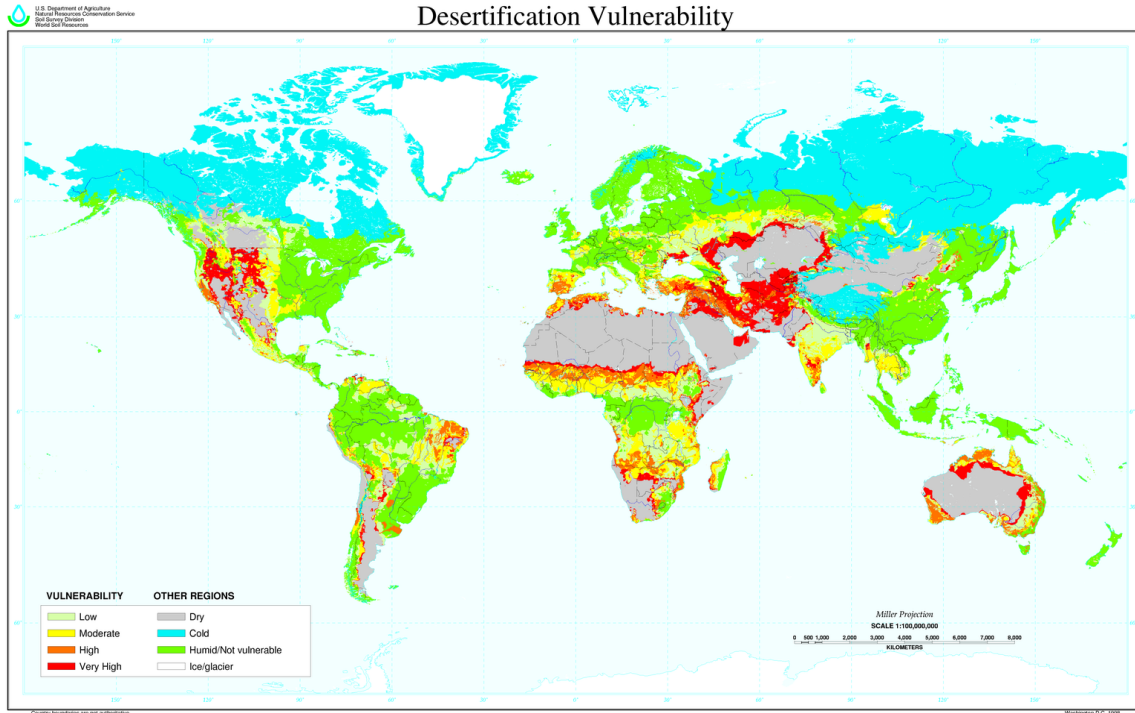
The United Nations Sustainable Development Goals (UN SDGs):

A collection of 17 objectives designed to serve as a shared pathway for peace and prosperity for people and the planet now and into the future (7)

General Overview

Desertification significantly impacts the society, the economy, and the environment. Food insecurity and hunger are possible, and common, results of barren soil. Moreover, desertification puts biodiversity in risk, having a negative impact on ecosystem services like pollination and soil fertility. Many communities all around the world are forced to relocate as a result of desertification to access natural resources. Also, as it impacts the livelihoods of farmers and rural people and lowers the productivity of agricultural land, desertification can result in increasing poverty.

While much of the world is taking steps to tackle desertification, including countries like the USA and China, UNEP and many NGOs are also supporting the work of governments. This issue, which is of critical importance for creating a healthy world in the slogan of the UN, “Peace, dignity and equality on a healthy planet.”, still requires the parties to work together and take faster and sharper actions despite the steps taken before.



Desertification Vulnerability Map (8)

Major Parties Involved

The United States of America:

Desertification has an impact on the United States as well, especially in the southwest. To combat desertification, the government has put in place a number of programs and laws, such as the "Conservation Reserve Program," which pays farmers to turn marginal farmland into grassland or forest.

China:

One of the nations that has been severely impacted by desertification is China, especially in the northwest. The "Grain for Green" program, which attempts to turn marginal farmland into forest and grassland, is one of many policies and initiatives the Chinese government has put into place to combat desertification.

Australia:

Australia's arid and semiarid regions, especially in the interior, are being damaged by desertification. The Australian government has put in place a number of programs to combat

desertification, like the "National Landcare Program," which attempts to enhance soil health and vegetation cover through sustainable land management techniques.

UNEP:

In order to promote sustainable land management practices and address the underlying causes of desertification, UNEP collaborates with governments and other stakeholders to establish policies and strategies. The program also promotes the significance of sustainable land management techniques and raises awareness of the causes and impacts of desertification. In order to solve global concerns related to desertification, UNEP coordinates and supports worldwide cooperation and collaboration.

Timeline of Events

August 29 - September 9, 1997	<i>The United Nations Conference on Desertification is conducted in Nairobi, Kenya.</i>
October 14, 1994	<i>The United Nations Convention to Combat Desertification (UNCCD) is adopted.</i>
August 26 - September 4, 2002	<i>The World Summit on Sustainable Development is held in Johannesburg, South Africa.</i>
January 2010	<i>The UN General Assembly declares 2010-2020 as the United Nations Decade for Deserts and the Fight Against Desertification.</i>
October 31 - November 13, 2021	<i>The United Nations Climate Change Conference (COP26) is held in Glasgow, Scotland. Conference topics: land degradation, desertification, climate change</i>

Evaluation of Previous Attempts to Resolve the Issue

The United Nations Convention to Combat Desertification (UNCCD) promotes sustainable land management practices and provides funding and technical support to affected countries. The UNCCD has been successful in raising awareness about desertification and promoting international cooperation; however, the treaty lacks legal enforcement mechanisms and does not provide enough funding for affected countries. (9)

Another type of attempt has been climate change mitigation measures. Such measures had the potential to benefit affected areas by reducing the severity of climate-related events. However, these measures may not directly address the underlying causes of desertification and may not be sufficient on their own. (10) Some examples include the climate change mitigation measures of UNEP and *Mitigation and Adaptation* statements of NASA. (11)

Possible Solutions

There are many methods to minimize the effects of desertification on land and resources. Most importantly, Member States should collaborate on legal matters acknowledging the current economic limitations due to the globality of the problem. The rule and penal systems that can be put forward to prevent desertification will form the basis of the legal solution, following the principles established by UN SDG 12: Responsible Consumption and Production. However, it is difficult to establish such a structure because countries adopt different policies.

Another way is to promote sustainable land use practices like agroforestry and conservation agriculture. These practices help to restore soil fertility, increase biodiversity, and reduce the risk of erosion. There are two reasons why these methods are not widely preferred: the unconsciousness of agricultural sector workers and their high expenses compared to conventional farming methods. FAO may raise public awareness on the issue focusing on local needs. Moreover, conservation agriculture involves the use of minimum tillage techniques, reducing soil disturbance and conserving soil moisture.

In addition, the promotion of sustainable land management practices can help to reduce the risk of desertification. This includes the implementation of policies and programs that promote the sustainable use of natural resources and the protection of the environment. The use of incentives such as subsidies and tax breaks can also encourage farmers and landowners to adopt sustainable land management practices.

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Useful Links

<https://news.un.org/en/tags/desertification>

<https://www.unccd.int/land-and-life/desertification/news-stories>

<https://www.bbc.com/news/topics/cxj4l470w8mt>

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