

# **Desertification**

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## **Abstract**

Desertification, and land degradation, are considered to be major environmental problems in the Arab countries and are creeping in Lebanon. The major causes for desertification were recognized as human activities, such as, mismanagement of land resources overgrazing and natural environmental factors such as global climate change, drought and soil erosion.

Unsustainable irrigation practices, overgrazing, uncontrolled agriculture, logging for fuel, salinity and bad water management are main factors that highly contribute to the degradation of land area in the region, thus the loss of biodiversity

The loss of biodiversity reduces the productivity of ecosystems, thereby shrinking the basis of sustainable livelihoods for billions of people. Furthermore it destabilizes ecosystems and weakens their ability to deal with natural disasters, such as droughts or human-caused stresses, such as desertification.

Desertification is a very important natural asset that is facing many areas in Lebanon due to climate changes and is challenging the livelihood of the population As mentioned before the causes of desertification here in Lebanon are mainly man made due to poor planning, mismanagement of resources, and poor application of policies and lack of effective extension.

In this paper I will focus on water management to alleviate the burden of desertification.

The concept of water management is to let supply and demand meet, and thus we need to change water demand if the renewable resources are changing and decreasing.

Some of these measures to combat desertification when droughts occur are:

1. Water harvesting on micro and medium and macro scale
2. Selecting drought resistant crops that can give an economical product to sustain livelihood;
3. Practice supplemental irrigation at the critical growth stage of the crop, thus a better understanding of the Soil-Water-Plant-Climate is necessary;
4. Practice deficit irrigation depending on water scarcity and root system distribution of crops.
5. Use modern irrigation techniques that will minimize water losses and have high irrigation efficiency.

The ultimate aim is to give farmers with a sustainable livelihood because if they desert their land desertification will occur.