



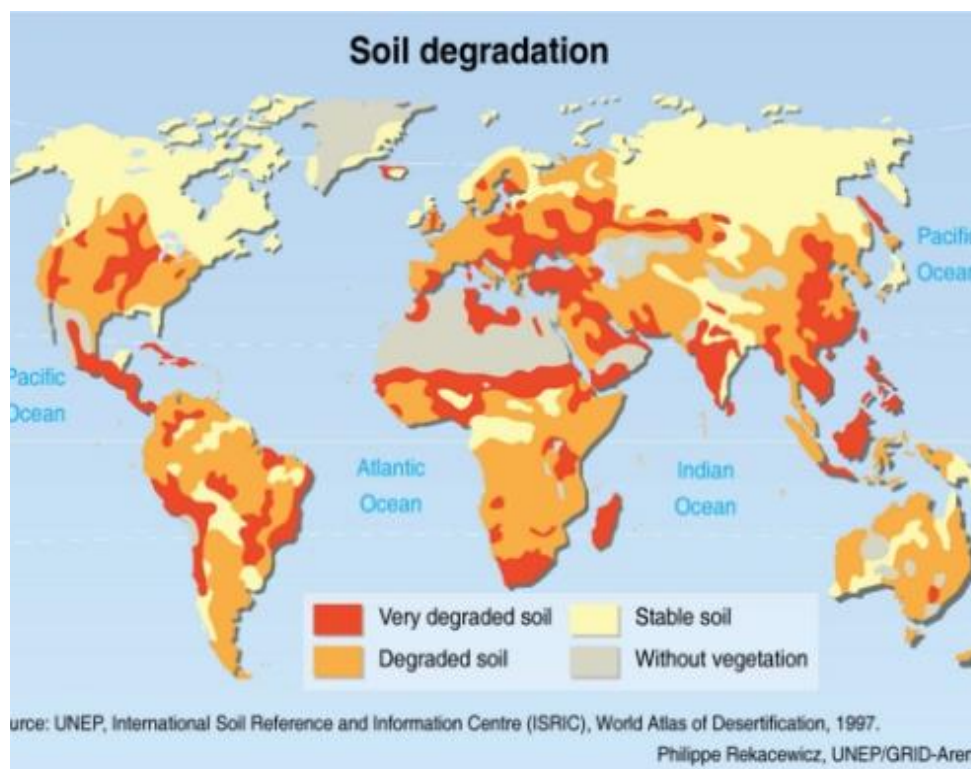
Greening Degraded Soils to Reverse Global Warming and Feed the World

#5 in a series of

Climate Restoration Solutions

A partnership of the Moral Action on Climate
and Biodiversity for a Livable Climate

(see www.bio4climate.org/solutions for others)



Land around the world is turning to desert as more and more healthy soils are degraded. About 2/3 of the world's soils are becoming desertified, with the very degraded soils in the worst condition, mostly deserts. Many grasslands hide degraded soils that can easily become deserts. In both areas, rainwater runs off the land and/or evaporates. It does not soak into the soils. Many areas of the world receive enough rain to grow plants but they are unable to retain the water. In addition, the soils need carbon to sustain life but dead soils emit carbon into the atmosphere.

Desertification is not a natural process; it is the result of human practices. Grasslands worldwide are decreasing in size and turn to deserts. Forests are cut down to grow crops but forest soils are very poor and they too become degraded. Farmers worldwide till soils and leave soils barren for a large portion of the year. All of these practices release huge amounts of carbon into the atmosphere and lead to soils that can no longer absorb rainfall.

One solution is the *holistic management and planned grazing system*, which was developed by Allan Savory, an ecologist working on desertification and climate change for decades. Savory advocates for ruminants such as cattle and sheep to graze in an enclosed area for a few days in order to mimic the group behavior of buffalo, elephants and other herd animals that lived in the millions several centuries ago. Herd animals leave behind dung and urine and tramped soils, which are then left to grow for months before grazing again. More information about this system is available from the Savory Institute at <http://savory.global/>.

Another solution calls for *year round crops, including cover crops, and untilled soil*. This system includes cover crops during months when crops are not grown and crimping cover crops onto the soil before they flower. Cash crops are then planted in rows cut in a line through the cover crops and into the soil for the seeds. The cover crops are left to biodegrade and help build healthy soils and retain increased amounts of moisture.

Large-scale, government-supported land restoration projects are often necessary to reverse desertification. Over 2.5 million Chinese people were lifted out of poverty and dry, degraded soils were turned into productive farmlands in the Loess Plateau through government and international support. Thousands of people no longer receive food aid and are forced to migrate through the Ethiopian and international program to turn desertified lands into green farmlands. Projects like these, affecting millions of lives, can only be accomplished with governmental support.

What can you do? It is important to **share this information** with everyone who is concerned about climate change. Although most people are aware of the work being done to reduce carbon emissions, very few people have heard about the incredible potential of soils to store carbon, to positively affect water cycles, and to reverse climate change.

You can **write letters to newspapers and magazines and speak with community groups**. It is especially important to ensure that all discussions about climate change include information about how to reverse global warming. Simply reducing carbon emissions, although important, will do nothing to reverse global warming.

It is important for you to **speak with your local, state and federal representatives** about these issues and ask them to take a leadership role in producing laws and programs to support restoration of degraded lands, whether private or public lands --such as state or national parklands.

For further viewing:

- Allan Savory: How to green the world's deserts and reverse climate change
<https://www.youtube.com/watch?v=vpTHi7O66pI&feature=youtu.be>
- Abaháui - The Father of Fire. Sustainable Land Management in Tigray, Ethiopia
<https://www.youtube.com/watch?v=S67GaY-VwS4>
- Hope in a Changing Climate [Loess Plateau]
- <https://www.youtube.com/watch?v=kK8z0qDtE2g&feature=youtu.be>

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