

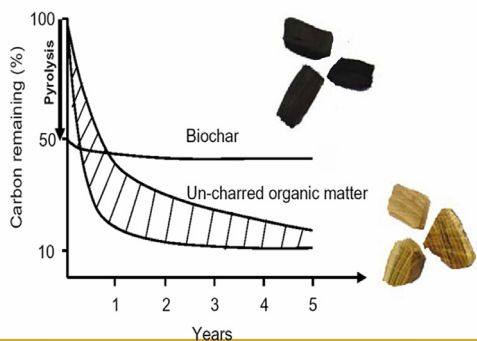


ENVIRONMENTAL BENEFITS OF BIOCHAR

The application of biochar can effectively address some of the most urgent environmental problems of our time:

Climate change: Biochar and bioenergy coproduction from biomass residues can help combat global climate change by sequestering carbon in stable soil carbon pools and by displacing fossil fuel use. Research shows that the stability of biochar in soil greatly exceeds that of un-charred organic matter.

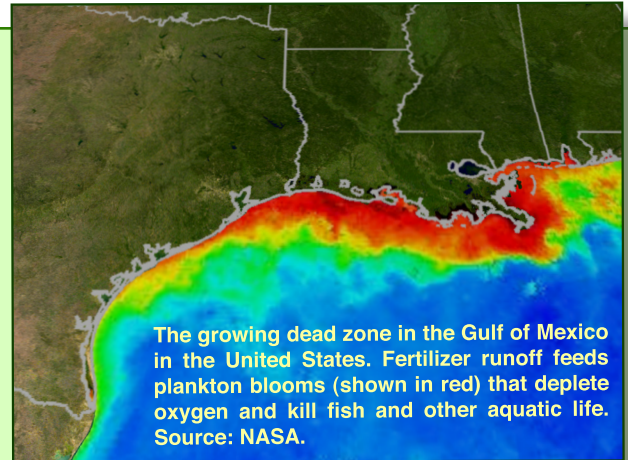
The essential stability of biochar



Lehmann et al., 2006, *Mitigation and Adaptation Strategies for Global Change* 11, 403-427

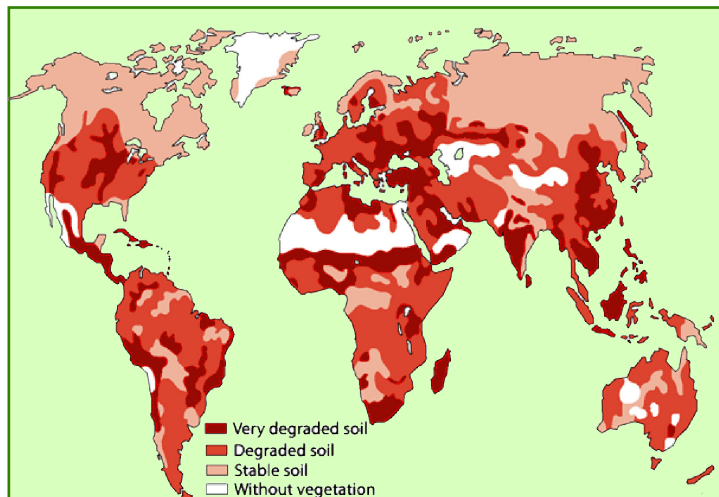


Water pollution by agro-chemicals: Biochar improves water quality by helping to retain nutrients and agro-chemicals in soils for use by plants and crops, resulting in less pollution.



Waste Management: Biochar production offers an exciting perspective on managing green or brown wastes. A combination of waste management, bioenergy production, and sustainable soil management can succeed with an approach involving biochar.

Soil degradation and food insecurity: As a soil amendment, biochar helps to improve the Earth's soil resource by increasing crop yields and productivity, by reducing soil acidity, and by reducing the need for some chemical and fertilizer inputs.



Map shows the extent of areas of degraded land in the world and the location of degraded soils. Source: UNEP 1992 and GRID Arendal 2001.



"If we want to tackle climate change challenges, we must look to the untapped potential of the soil to sequester carbon. By doing that, we are improving biodiversity of the soil ecosystem and improving the productivity of the soil, therefore impacting the livelihoods of affected populations."

~ Luc Gnacadja

Executive Secretary of the UN Convention to Combat Desertification (UNCCD)



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