

Geotherapy: Global Restoration to stabilize CO2 and climate

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CO2, sea level, temperature, water, soil, agriculture, forestry, and fisheries cannot become sustainable at safe levels without restoring integrated biogeochemical functioning of global ecosystems. Large-scale restoration of degraded habitats is the only viable option: so little intact wild habitats remain that strict conservation is totally inadequate. Merida temperatures have risen for 170 years: minimum temperatures are now where the maxima were! This is only the start of much larger future changes unless we restore global ecosystems to stabilize our planet's critical life support systems. Restoration is completely missing from the UN Framework Convention on Climate Change negotiations, and continued failure guarantees runaway climate change. The long-term equilibrium sea level for TODAY'S CO2 levels is 23 m (75 feet) above today's sealevel (Merida elevation is 9 m), and equilibrium temperature is around 15 degrees C (27 F) above today's value. Both will be higher if CO2 rises further. Technologies needed to stabilize resources at safe levels: including sustainable energy and biochar to sequester carbon (increasing soil fertility, water-holding capacity, and forest and agricultural productivity) are mature and well known. But without large-scale global restoration efforts starting now, they will come too late to prevent catastrophic overshoot. SER, as the organization of the global restoration profession, must take the lead in getting world leaders to stop wasting time in futile talk and mutual blame and start immediate massive restoration efforts in all degraded ecosystems. These must maximize biodiversity, biogeochemical function, nutrient recycling, and natural carbon sequestration, not based on mono-cultures.



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