



SER2011

WORLD CONFERENCE ON
ECOLOGICAL RESTORATION

CONCLUSIONS

SPECIAL SESSION

GEO THERAPY: GLOBAL RESTORATION NEEDS FOR STABILIZING CO₂ AND CLIMATE

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GEO THERAPY: GLOBAL RESTORATION TO STABILIZE CO₂ AND CLIMATE Thomas J. Goreau

Ecosystems regulate global atmospheric chemistry, climate, water resources, soil erosion, soil fertility, and marine productivity. Destruction or severe degradation of ecosystems has greatly reduced their capacity to regulate climate at safe levels. It was shown that IPCC climate models greatly underestimate the sensitivity of global temperature and sea level to CO₂, and that the safe level of CO₂ is around 260 ppm, more than one third less than current concentrations. Climate can only be stabilized at safe levels through large-scale restoration of soil carbon storage and ecosystem fertility, but restoration is absent from the UN Framework Convention on Climate Change. The Society for Ecological Restoration International, as the voice of the ecosystem restoration profession, should play a key role in pushing for ecosystem restoration on the scale needed to stabilize climate at safe levels.

BIOCHAR – THE OPTIMUM GEO THERAPY APPROACH?

Ronal W. Larson

Biochar, elemental carbon produced from biomass, was shown to be an important soil fertilizer that transfers atmospheric carbon dioxide to long term soil storage while greatly increasing agricultural and soil productivity, and producing large amounts of carbon-negative biomass energy. It is both feasible and practical to apply on the scale needed to remove excess CO₂ in the atmosphere, with enormous short, medium, and long-term economic benefits.