Sustaining Soil Productivity in Response to Global Climate Change: Science, Policy, and Ethics


Sustaining soil productivity to alleviate food insecurity and adapt to projected climate change is a high priority. Linking this issue with ethical, social, and policy implications from a broader perspective is both timely and unique. This book, *Sustaining Soil Productivity in Response to Global Climate Change: Science, Policy, and Ethics*, edited by Sauer, Norman, and Sivakumar, is written to meet the above objectives. It brings together a wide range of topics, exploring climate change and soil response relations to address the importance of managing and enhancing soil productivity under future climate scenarios. The book is a compilation of discussion topics presented by speakers at the 2009 Organization for Economic Cooperation and Development’s conference held in Madison, WI.

This book is intended for scientists, policymakers, and a general audience. The topics covered are quite broad. It is written by scientists from different disciplines including soil and environmental science, agriculture, climatology, geology, biology, biochemistry, food science, history, wildlife, philosophy, ecology, chemistry, economics, law, and others. The interdisciplinary participation of scientists has contributed to a broad range of discussions including climate change impacts in relation to soil productivity, human health, ethics, soil ecosystem services, soil microbiology, history of soil conservation, soil biochemistry, and others. The wide scope of topics discussed generates a global awareness in the importance and challenges of sustaining soil productivity for supplying food, improving human health, and mitigating climate change.

The technical level of this book is relevant and informative. The book is organized into 16 easy-to-read chapters addressing land ethics, policy, and climate change impacts. The first 10 chapters mainly discuss ethical and policy considerations concerning soil degradation, soil conservation, ecosystem services, land stewardship, and approaches for the mitigation of climate change. The last four chapters deal with the potential implications of climate change on soil carbon pools and microbial respiration under different land use systems. The book provides background information on land ethics and reasons for sustaining soil and land productivity.

The reference to Aldo Leopold, a great leader and one of the fathers of soil management and conservation, is particularly a notable addition to this book. Lessons on land ethics by Aldo Leopold have undoubtedly furthered our understanding and changed perceptions of conservation and management of soil and land resources. Discussing soil productivity in response to climate change based on the ecological principles of Aldo Leopold is the right approach to address concerns of soil degradation and advance strategies to mitigate climate change. Another valuable feature in this book is the discussion of intellectual inertia. This is an important concept that has received little previous attention. It can have significant implications for the advancement of science and acceptance of new research ideas to sustaining soil and water resources in light of climate shifts.

While the overall content of the book is within the objectives, the main title *Sustaining Soil Productivity in Response to Global Climate Change* appears not to fully reflect the content of the book. The content has more emphasis on land ethics, policy, and climate change implications, and less on specific strategies to sustain soil productivity in response to global climate change.