1. Record Nr. UNINA9910141216403321

Titolo	Soil carbon in sensitive European ecosystems [[electronic resource]] : from science to land management / / [edited by] Robert Jandl, Mirco Rodeghiero, Mats Olsson
Pubbl/distr/stampa	Chichester, West Sussex ; ; Hoboken, NJ, : Wiley-Blackwell, 2011
ISBN	1-299-31444-9 1-119-97025-3 1-119-97767-3 1-119-97024-5
Descrizione fisica	1 online resource (302 p.)
Altri autori (Persone)	JandlR RodeghieroMirco OlssonMats <1947->
Disciplina	577.144 577/.144
Soggetti	Soils - Carbon content - Europe Biotic communities - Europe Soil management - Europe Forest ecology - Europe Agricultural ecology - Europe Forest ecology - Mediterranean Region Agricultural ecology - Mediterranean Region Alpine regions - Europe Peatlands - Europe Europe Environmental conditions
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Description based upon print version of record.
Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	Soil Carbon in Sensitive European Ecosystems; Contents; Contributors; 1 Introduction to carbon in sensitive European ecosystems: from science to land management; 1.1 Rationale for this book; 1.2 What do we need to know about soils for reporting purposes?; 1.3 Objectives and overview of COST Action 639; 1.4 Working Groups of COST Action

639; 1.5 Regional coverage; Appendix 1.A Management Committee of COST Action 639; References; 2 Hot spots and hot moments for greenhouse gas emissions from soils; 2.1 Introduction; 2.2 Hot spots: where are they?; 2.3 How to quantify hot spots?
2.4 Mapping soil carbon at the local and regional scale 2.5 Case study: assessing soil carbon changes across England and Wales; 2.6 Quantifying hot moments; 2.7 Reporting of hot spots and hot moments; 2.8 Conclusions; References; 3 Land-use change effects on soil carbon stocks in temperate regions - development of carbon response functions; 3.1 Introduction; 3.2 Previous synthesis studies on land use change effects on SOC; 3.3 The concept of carbon response functions; 3.4 Temporal dynamics of SOC after land use change in temperate regions; 3.5 Implication for greenhouse gas reporting
3.6 Conclusions References; 4 Carbon in European soils; 4.1 Existing soil carbon inventories in Europe; 4.2 Detectability of change from soil inventories; 4.3 Assessment of baseline carbon stocks in Europe; 4.4 Pattern detection and predictors for carbon storage at landscape and continental scale; 4.5 Conclusions about soil carbon baselines and change detection in Europe; References; 5 Ecosystem disturbance and soil organic carbon - a review; 5.1 Introduction; 5.2 The carbon cycle and disturbance; 5.3 Anthropogenic disturbance due to forest harvesting; 5.4 Natural disturbances
5.5 Summary and conclusions References; 6 Mountain soils in a changing climate - vulnerability of carbon stocks and ecosystem feed backs; 6.1 Introduction; 6.2 Carbon stocks and their quality; 6.3 The role of erosion for carbon fluxes; 6.4 Climate change in European mountains; 6.5 Future threats to high altitude carbon storage; 6.6 Conclusions; Acknowledgement; References; 7 Greenhouse gas balance in disturbed peatlands; 7.1 Origins, distribution and current use of peatlands in Europe; 7.2 Disturbances in undrained mires; 7.3 Disturbances due to peatland management
7.4 Reporting emissions of greenhouse gases from managed peatlands 7.5 Recovery from peat loss: restoration, afforestation or energy crops?; 7.6 Conclusions; References; 8 Soil carbon in Mediterranean ecosystems and related management problems; 8.1 Introduction; 8.2 Mediterranean soil; 8.3 Soil carbon stocks in the major Mediterranean ecosystems; 8.4 Effects of wildfires on soil carbon dioxide efflux in Mediterranean ecosystems; 8.5 Dehesas; 8.6 Mediterranean rangelands; 8.7 Agricultural practices and SOC; 8.8 Soil carbon accumulated as charcoal
8.9 The role of soil inorganic carbon in the carbon cycle

Sommario/riassunto

Soil Carbon in Sensitive European Ecosystems - From Science to Land Management is a comprehensive overview of the latest research in this field drawn together by a network of scientists from across Europe. Soil carbon assessments are crucial at present to our understanding of the dynamics of terrestrial ecosystems and our ability to assess implications for the global carbon exchange and its consequences on the future climate. This book focuses primarily on ecosystems and their soil carbon stocks. The book identifies three key sensitive ecosystems within Europe: Mediterranean