Record Nr. UNINA9910963134703321

Autore Gray J. M.

Titolo Geodiversity: valuing and conserving abiotic nature / / Murray Gray

Pubbl/distr/stampa Chichester, West Sussex, UK, : John Wiley & Sons Inc., 2014

ISBN 9781118525081

1118525086

Edizione [2e.]

Descrizione fisica xi, 495 p

Disciplina 551

Soggetti Biodiversity

Conservation of natural resources

Geodiversity

Lingua di pubblicazione Inglese

Formato Materiale a stampa

Livello bibliografico Monografia

Nota di bibliografia Includes bibliographical references and index.

Nota di contenuto Cover -- Title Page -- Copyright -- Contents -- Preface to Second

Edition -- Preface to First Edition -- Part I What is Geodiversity? --

Chapter 1 Defining Geodiversity -- 1.1 A diverse world -- 1.2

Biodiversity -- 1.3 Geodiversity -- 1.4 Aims and structure of the book -- Chapter 2 Geodiversity: the Global Scale -- 2.1 Origin the Earth --

2.2 Early history of the Earth -- 2.3 Plate tectonics -- 2.4 Landscapes

of plate interiors -- 2.5 Evolution of biodiversity and geodiversity -- 2.6 Conclusions -- Chapter 3 Geodiversity: the Local Scale -- 3.1 Earth materials -- 3.2 Processes and landforms -- 3.3 Conclusions -- Part II

Values and Threats -- Chapter 4 Valuing Geodiversity in an `Ecosystem

Services' Context -- 4.1 Introduction -- 4.2 Intrinsic or existence value

-- 4.3 Regulating services -- 4.4 Supporting services -- 4.5

Provisioning services -- 4.6 Cultural services -- 4.7 Knowledge

services -- 4.8 Geodiversity and the 'ecosystem services' approach -- 4.9 Conclusions -- Chapter 5 Threats to Geodiversity -- 5.1 The

Nature of the threats -- 5.2 Mineral extraction -- 5.3 Landfill and

quarry restoration -- 5.4 Land development and urban expansion -- 5.5 Coastal management and engineering -- 5.6 River management,

hydrology and engineering -- 5.7 Forestry, vegetation growth and

removal -- 5.8 Agriculture -- 5.9 Other land management changes --

5.10 Recreation/tourism pressures -- 5.11 Removal of geological

specimens -- 5.12 Climate and sea-level change -- 5.13 Fire -- 5.14 Military activity -- 5.15 Lack of information/education -- 5.16 Cumulative impacts and sensitivity to change -- 5.17 Conclusions -- Part III Geoconservation: the 'Protected Area' Approach -- Chapter 6 International Geoconservation: an Introduction -- 6.1 Beginnings of the conservation movement in North America -- 6.2 Early British experience.

6.3 The 'Protected Area' and legislative approaches -- 6.4 The UN --6.5 The IUCN -- 6.6 Geosites -- 6.7 Geomorphosites -- 6.8 GSSPs --6.9 PaleoParks -- 6.10 The European dimension -- 6.11 Other International agreements -- 6.12 Conclusions -- Chapter 7 World Heritage Sites -- 7.1 The World Heritage Convention -- 7.2 Nomination and inscription of sites -- 7.3 Criteria for selection -- 7.4 Endangered sites -- 7.5 Towards a 'representative, balanced and credible' list --7.6 Validity of inscription criteria -- 7.7 Case studies -- 7.8 Conclusions -- Chapter 8 Global Geoparks -- 8.1 History -- 8.2 Principles -- 8.3 The European Geopark Network (EGN) -- 8.4 Other 'geoparks' -- 8.5 Geoparks and geodiversity -- 8.6 Other geopark case studies -- 8.7 Conclusions -- Chapter 9 National Geoconservation --9.1 Introduction -- 9.2 United States -- 9.3 Canada -- 9.4 United Kingdom -- 9.5 Republic of Ireland -- 9.6 The rest of Europe -- 9.7 Australia -- 9.8 New Zealand -- 9.9 The rest of the world -- 9.10 Conclusions on protected area geoconservation -- Part IV Geoconservation: the 'Wider Landscape' Approach -- Chapter 10 Geoconservation in the 'Wider Landscape' -- 10.1 The need for a 'wider landscape' approach -- 10.2 The physical landscape layer --10.3 Geoconservation initiatives in 'the wider landscape' -- 10.4 Georestoration -- 10.5 Landform design -- 10.6 Conclusions --Chapter 11 Geoconservation and Land-use Planning -- 11.1 Land-use planning systems -- 11.2 Environmental Impact Assessment -- 11.3 Conclusions -- Chapter 12 Geoconservation and Policy -- 12.1 Sustainable mining and mineral policies -- 12.2 Agricultural Policy --12.3 Soil Policy -- 12.4 Geoconservation and climate change -- 12.5 Geodiversity audits and action plans -- 12.6 Strategies, codes and charters -- 12.7 Conclusions -- Part V Putting It All Together. Chapter 13 Geodiversity and Geoconservation: an Overview -- 13.1 Geodiversity as a basis for geoconservation -- 13.2 Geoconservation Management Aims and Methods -- 13.3 'Point' and 'diffuse' threats and their management -- 13.4 Conclusions -- Chapter 14 Comparing and integrating geodiversity and biodiversity -- 14.1 Criticisms of 'geodiversity' -- 14.2 Measuring geodiversity -- 14.3 Integrating geodiversity and biodiversity -- 14.4 Integrated land management --14.5 Potential geodiversity/biodiversity conflicts -- 14.6 Conclusions -- Chapter 15 A Future for Geodiversity? -- 15.1 Valuing and conserving geodiversity -- 15.2 Predictions reassessed -- 15.3 The benefits of geodiversity -- 15.4 The future -- References -- Index --Supplemental Images.

Sommario/riassunto

The first book to focus exclusively on the subject, Geodiversity, Second Edition describes the interrelationships between geodiversity and biodiversity, the value of geodiversity to society, as well as current threats to its existence. Illustrated with global case studies throughout, the book examines traditional approaches to protecting geodiversity and the new management agenda now being implemented. The Second Edition of this successful textbook continues to build on the success of the first edition which is still the standard reference for the subject. Fully revised and updated throughout, the Second Edition now includes new material on geoparks, geotourism and implications of climate change for geoconservation. Reviews of previous edition: "Murray

Gray's new book is the first widely available text to bring together and analyse some of these emerging ideas....The result is a book that should be in the library of every land manager and one that is likely to lead many practicing geoscientists and quaternarists to a new view of the importance of their field for nature conservation and environmental management... (Journal of Quaternary Science, Vol.19, No.8, December 2004) "It is strange that it is necessary to justify the importance of geodiversity.... Murray Gray does it with brilliance, not only to convince 'non-believers', but giving inspiration to us that have worked in geoconservation for a long time" (ProGEO News, 3 & 4, 2003) "...The author provides a timely review of recent advances in the integration of geodiversity into wider conservation and planning strategies..."" (Journal of Quaternary Science, Vol.19, No.8, December 2004) "...the book is well-written and follows a clear and concise outline." (Environmental Geology, Vol. 48, No. 2, July 2005).