

GEOMORPHOLOGY IN THE ANTHROPOCENE

The Anthropocene – referring to the epoch that began when human activities started to have a significant impact on Earth’s systems – is a major new concept in the Earth sciences. This book examines the effects on geomorphology during this latest period of Earth’s history. Drawing on examples from many different environments around the world, this comprehensive volume demonstrates that the human impact on landforms and land-forming processes has and continues to be profound, driven by a number of forces, including: the use of fire; the extinction of fauna; the development of agriculture, urbanization, and globalization; and new methods of harnessing energy. This human impact has accelerated since the Industrial Revolution and – in particular – since the Second World War. The book explores the ways in which future climate change in response to anthropogenic causes may further magnify the human effect on geomorphology, with respect to future hazards such as floods and landslides, the state of the cryosphere, and global sea levels. The book concludes with a consideration of the ways in which landforms are now being managed and protected. Covering all major aspects of geomorphology, this book is ideal for undergraduate and graduate students taking courses in geomorphology, environmental science, and physical geography, and for all researchers of geomorphology.

ANDREW S. GOUDIE is Emeritus Professor of Geography at the University of Oxford. He specializes in the study of desert processes and climate change, and has worked in the Middle East, India and Pakistan, East Africa, Southern Africa, Australia, and the United States. From 2005 to 2009, Professor Goudie was President of the International Association of Geomorphologists and he has also been President of the Geographical Association, President of Section E of the British Association, and Chairman of the British Geomorphological Research Group. He was the recipient of the Farouk El-Baz Prize for Desert Research from the Geological Society of America in 2007, and the Founder’s Medal of the Royal Geographical Society in 1991.

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“Among contemporary physical geographers, there are none who are the equal of Andrew Goudie and Heather Viles in their ability to synthesize vast areas of the literature and to bring out new meanings from the avalanche of data that is published each week. . . This is the first book that explores, in depth, the relation between the Anthropocene epoch and landscape science (geomorphology). . . [It] can be recommended to any serious student of the global implications of human modification of Earth’s surface. . . [as well as to the] geoscience and environmental science communities, from geographers to geologists and geophysicists”

- *Olav Slaymaker, University of British Columbia*

“What an interesting topic! What a good book! It presents the geomorphological evidence for the concept of the Anthropocene. . . With great clarity the authors give a wonderful review of the issues and a very clear account of the problems involved in selection of the start point and character of the possible new stratigraphical unit. Breathtaking in scope, it also gives a fine account of geomorphological processes and landforms linked to human achievements.”

- *Denys Brunsden, King’s College, London*

“In this comprehensive examination of human impacts on diverse landscapes, Goudie and Viles provide numerous examples and details of how human activities have altered and continue to alter Earth’s surface. This book provides a valuable reference and thorough overview for students and professionals.”

- *Ellen Wohl, Colorado State University*

“In today’s climate of media-induced alarm about what mankind is doing to our planet, this book stands out as a calm and considered appraisal of human impacts on Earth resources and natural systems. Few are better placed than these authors to interpret the scientific data on human and natural forces driving those rapid changes currently challenging sustainability of Earth systems.”

- *Michael Crozier, Victoria University of Wellington*

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