



Environmental Literacy in Science and Society: From Knowledge to Decisions

By Roland W. Scholz

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In an era where humans affect virtually all of the earth's processes, questions arise about whether we have sufficient knowledge of human-environment interactions. How can we sustain the Earth's ecosystems to prevent collapses and what roles should practitioners and scientists play in this process? These are the issues central to the concept of environmental literacy. This unique book provides a comprehensive review and analysis of environmental literacy within the context of environmental science and sustainable development. Approaching the topic from multiple perspectives, it explores the development of human understanding of the environment and human-environment interactions in the fields of biology, psychology, sociology, economics and industrial ecology. The discussion emphasises the importance of knowledge integration and transdisciplinary processes as key strategies for understanding complex human-environment systems (HES). In addition, the author defines the HES framework as a template for investigating sustainably coupled human-environment systems in the 21st century.

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Editorial Review

Review

"Roland Scholz has written a visionary book that for the first time comprehensively approaches modern sustainability challenges by recognizing the critical role of integrated human, natural, and built domains in the complex systems that characterize the Anthropocene. It is an important step forward in our ability to understand, and respond ethically and rationally to the demands of environment, technology, and society in a context of complexity that is increasingly beyond traditional disciplinary and policy approaches for linking theory and practice."

Braden Allenby, Lincoln Professor of Engineering and Ethics and Professor of Law, Department of Civil and Environmental Engineering, Ira A. Fulton School of Engineering, Arizona State University, USA

"In this brilliant work, Roland Scholz addresses how society may make the 'great transition' toward sustainability in a remarkably open and honest exploration of human-environment systems. Scholz argues that we need new knowledge and new science to tackle these challenges: the 'environment' must be redefined as a co-evolving system coupled to human systems. Furthermore, he demonstrates that interdisciplinary research is not enough - we need transdisciplinary research to integrate our scientific knowledge in a way that results in sustainable decision making. The book is critically important in providing a roadmap to begin the transition to a sustainable world; the reader experiences an unforgettable journey toward ecological literacy, achieving a sufficient understanding of human-environment interactions to manage the earth's biogeochemical cycling in a sustainable way... This is a must-read for anyone who relies on planetary resources and ecosystem services."

Cliff Davidson, Thomas C. and Colleen L. Wilmot Professor of Engineering and Director of the Center for Sustainable Engineering, Center for Energy and Environmental Systems and Department of Civil and Environmental Engineering, Syracuse University, USA

"Developing adequate solutions for human-environmental problems requires both substantive expertise and a deeply interdisciplinary perspective. Anyone who doubts this assertion need spend but a few minutes reading almost any part of Roland W. Scholz' monumental work on Environmental Literacy to have their doubts erased. In addition to thoughtful theoretical discussion they will find case after case of detailed worked-out examples that illustrate both the complexity, and the exciting intellectual challenges, that face students and professionals working to create a better and more sustainable world."

M. Granger Morgan, Lord Chair Professor in Engineering; Professor and Department Head, Engineering and Public Policy; Professor, Electrical and Computer Engineering and Heinz College, Carnegie Mellon University, USA

"Summarizing Scholz' magnum opus is both an advanced textbook and an inspirational source of insights and knowledge concerning environmental issues. It also provides a thorough framework for decision making aimed at bringing about sustainable solutions to environmental problems. It is a lasting hallmark of environmental literacy."

Ton Schoot Uiterkamp, Journal of Integrative Environmental Sciences

"Collective environmental and social problems constitute the dark side of increasing wealth for growing human populations. Roland Scholz strongly pleads for broad, multi- and interdisciplinary thinking about human-environment interactions. In the author's view, human and environmental systems cannot be separated. Rather, their interaction should be the central topic of our visions, methodologies and strategies."

For natural scientists and technologists this requires a basic familiarity with how human individuals and societies function. For behavioral and social scientists it demands a solid appreciation of specific environmental problem domains. By consequence, actual policy-making should rest upon integrative teamwork. Scholz's book provides for an inspiring boost to our own environmental literacy, what it is and how it historically developed. It's a fruitful basis for extensive student courses. And it may well serve as a reference book for scientists, policy-makers and other key actors who want to improve and reflect on sustainable transitions."

Charles Vlek, Professor of Environmental Psychology and Decision Research, Department of Behavioural and Social Sciences. University of Groningen, The Netherlands

"With his book, Roland W. Scholz is likely to have initiated a strand of literature dealing with how mankind can become more literate with regard to solving environmental problems and creating sustainable development through multi-perspective approaches of transdisciplinarity."

Stefan Schaltegger, Ecological Economics

"lucid and inspiring ... a treasury of information and a very useful heuristic tool."

Su-Mia Akin, Reina Pasma, Pim Martens, Environmental Science & Policy

"Thus, Environmental Literacy in Science and Society provides a potential basis for research and conceptual revisions in coming decades."

Harald A. Mieg, Science

"... a valuable, intelligible and well structured teaching resource for university courses in a broad array of studies, including environmental and sustainability sciences, ecology, planning, engineering, management and environmentally oriented branches of sociology, economics, psychology, behavioral biology and similar fields. The book is suitable, too, for enhancing the environmental literacy of non-professional readers who are politically and environmentally engaged, intellectually capable and open-minded; who have an interest in sustainability science; and who are interested in the theory, history and philosophy of natural, environmental and behavioral sciences."

Ralph Hansmann, Sustainability

"Environmental Literacy [in Science and Society] provides a blueprint for transformative science and shows on what high level ... today's research may be performed."

Uwe Schneidewind & O. Smekar, Gaia

About the Author

Roland W. Scholz chairs the Natural and Social Science Interface in the Department of Environmental Sciences at the ETH (Swiss Federal Institute of Technology), Zürich. A mathematician, psychologist and decision theorist by training, he is particularly interested in environmental systems analysis, human-environment interactions, environmental decisions and risk assessment. He has led numerous large-scale transdisciplinary processes to foster sustainable transitions of urban and regional systems.

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The reason? Because this Environmental Literacy in Science and Society: From Knowledge to Decisions is an unordinary book that the inside of the reserve waiting for you to snap it but latter it will shock you with the secret the idea inside. Reading this book adjacent to it was fantastic author who all write the book in such wonderful way makes the content inside easier to understand, entertaining technique but still convey the meaning fully. So , it is good for you because of not hesitating having this any longer or you going to regret it. This excellent book will give you a lot of gains than the other book have got such as help improving your talent and your critical thinking approach. So , still want to delay having that book? If I were you I will go to the book store hurriedly.

John Herrera:

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