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## **Electronic Green Journal**

### **Title**

Human Footprints on the Global Environment

### **Permalink**

<https://escholarship.org/uc/item/6zv3p127>

### **Journal**

Electronic Green Journal, 1(31)

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### **Publication Date**

2011

### **DOI**

10.5070/G313110852

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Peer reviewed

Review Human Footprints on the Global Environment.  
By Rosa A. Eugene, Andreas Diekmann, Thomas Dietz, and Carlo C. Jaeger, (Eds.)

**Reviewed by Enzo Ferrara**

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Rosa A. Eugene, Andreas Diekmann, Thomas Dietz, and Carlo C. Jaeger, (Eds.).  
Human Footprints on the Global Environment. MIT Press, 2010. xi + 329 pp., 11 illus.  
ISBN: 978-0-262-01315-4. US \$27.00 paperback, alkaline paper.

Environmental sociology explains that societies are at the same time collective human enterprises and complex ecosystems, each one depending upon the other. Societies cannot function without ecosystem resources as well as ecosystems cannot remain viable indefinitely if humankind stands unmindful of its own impact on the environment that surrounds its extension. Yet, most theories of ecological impact dogmatically assume that exploitation of the environment provides in any case benefits to human well-being. As a result, while the colossal human footprint actually threatens the sustainability of the entire planet, the conventional indicators of human development – such as GDP – still inform policy on the base only of economic growth, which has proved to be largely inadequate to meet the challenges of the 21<sup>st</sup> century. Thus, new meters of human well-being should be favoured along with instruments to evaluate how far we are from achieving sustainable and socially inclusive economies, and to let the welfare provided with human activities fit with a healthy planet in our days and in the future.

Although it is the subject to much empirical discipline, the question of how to assess the concept of sustainability remains vexing. One point is clear: scale matters, and scientists, policymakers, and other observers know that any understanding of the causes of the ecological decay is a function of appreciating the range of human choices and actions that affect the environment. “Human Footprints on the Global Environment”, tackles this challenge and offers a state-of-the-art assessment of research on the human dimensions of the global risks.

After reminding how the concept of human footprint emerged – from the “Brundtland Report” (1987) and the foundation of the IPCC (1988) to the novel notion of “Coupled Human and Natural Systems” (2007) –, the introductory chapter, “Global transformations”, defines the book rationale, i.e. assessing knowledge about the dynamics of coupled human and natural systems with an emphasis on their human dimension. Five major social variables are identified as key human forces affecting the environment, namely population change, economic growth, technological choices, political-economic institutions, attitudes and beliefs.

Subsequent contributions offer interpretive frameworks for appreciating the global crisis. For example, the “Progress in the study of land use change” (Ch.4) reviews such notions as population, consumption, institutional actions, and culture about land cover and use with an outlook for the next decades. “The effectiveness of

international environmental regimes" (Ch.5) surveys with some scepticism the rise in public interest concerning large-scale environmental problems. "World risk society as cosmopolitan society" (Ch.2) focuses on the contemporary threats to global sustainability that are addressed as transitions from a first form of modernity, when environmental risks were quantifiable and subject to management, to a second form of modernity in which manufactured endangerments are running out of control. In "Human driving forces of global change" (Ch.3) authors discuss the dominant forces that affect the environment at a planetary level (GHGs, ozone depletion) and the systemic forces that, although having a local impact (deforestation, biodiversity loss), nevertheless are happening throughout the globe with cumulative effects. Since global and local ecological problems are often explained in terms of the tragedy of the open-access commons, the concept of the commons is also analysed in "Critical perspectives on common property" (Ch.6) to underline how understanding, respecting, and building upon the social and political capacities of communities are key steps in the struggle to govern them. Finally, as environmental changes constitute a profound challenge to human health both as direct threats and as promoters of other risks, the comparative vulnerability of societies around the world is discussed in "Vulnerability of coupled human-ecological systems" (Ch.7) with references to widely different situations and dissimilar socio-political and community contexts (climate change, poverty, famine, over exploitation, wastes, disasters). The last essay, dedicated to the "Human dimensions of coupled human-natural systems" (Ch.8), discusses the inextricably interconnected cycles of reciprocal exchange that cause the human components to influence each other and the natural systems.

Conventional indicators are fine for measuring the pace of economy showing how quickly we are earning money, but they do not differentiate the extent to which any new income delivers useful services or causes damage to people and the environment. With the intention of switching to a policy determined by social and environmental factors, rather than exclusively based on economic growth, "Human Footprints on the Global Environment" is successful in discussing which paths may prove most promising to find mitigation and adaptation to the global ecological imperilments. This collection provides insightful references for researcher and policymakers who struggle to examine the challenges set down by the human impact on the planet but also the opportunities to develop ecological awareness and call for the implementation of policies able to provide tangible incentives to more sustainable products and services.

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