

## **Ecological Footprints and the Path to Sustainability**

Featuring Dr. Mathis Wackernagel, co-creator of The Ecological Footprint  
Frank H.T. Rhodes Visiting Professor

### **Abstract**

Overshoot is increasingly recognized as a growing risk to humanity in the 21st century. Symptoms of resource overuse include climate change, food security problems, and depletion of aquifers. But as a whole: how big is humanity's demand compared to nature's budget constraints? This question drives Ecological Footprint accounting, a resource accounting method that tracks both the planet's available ecological resources and human demand on those resources. By measuring the amount of nature we have versus the amount we use, the Footprint provides synthetic information on the use of natural resources by national economies, taking a global perspective and allowing spatial and temporal comparisons. Our discussion will address questions about how resource accounting in general, and Ecological Footprints in particular, contribute to the goal of transitioning to a sustainable society. How does the concept of a finite earth and resource limitations contribute to problem definition and proposed solutions? How can metrics such as the Ecological Footprint become more widely integrated into economic and policy decision-making systems?

### **More about Mathis Wackernagel, Executive Director of Global Ecological Footprint Network:**

Mathis is co-creator of the Ecological Footprint and has worked on sustainability issues for organizations in Europe, Latin America, North America, Asia and Australia, and has lectured for community groups, governments and their agencies, NGOs, and academic audiences at more than 100 universities around the world. Mathis has authored or contributed to over 50 peer-reviewed papers, numerous articles and reports and various books on sustainability that focus on the question of embracing limits and developing metrics for sustainability, including *Our Ecological Footprint: Reducing Human Impact on the Earth*; *Sharing Nature's Interest*; and WWF International's *Living Planet Report*. After earning a degree in mechanical engineering from the Swiss Federal Institute of Technology, he completed his Ph.D. in community and regional planning at the University of British Columbia in Vancouver, Canada. There, as his doctoral dissertation with Professor William Rees, he created the Ecological Footprint concept. Mathis' awards include an honorary doctorate from the University of Berne in 2007, a 2007 Skoll Award for Social Entrepreneurship, a 2006 WWF Award for Conservation Merit and the 2005 Herman Daly Award of the U.S. Society for Ecological Economics.

More about the Global Ecological Footprint Network:

<http://www.footprintnetwork.org/en/index.php/GFN/>

Some recent publications:

Moran, DD; Wackernagel, M; Kitzes, JA; et al. 2008. Measuring sustainable development - Nation by nation. *ECOLOGICAL ECONOMICS*, 64 (3): 470-474.

Kitzes, J; Wackernagel, M; Loh, J; et al. Shrink and share: humanity's present and future Ecological Footprint 2008. PHILOSOPHICAL TRANSACTIONS OF THE ROYAL SOCIETY B-BIOLOGICAL SCIENCES, 363 (1491): 467-475.

Wackernagel, M; Kitzes, J; Moran, D; et al. 2006. The Ecological Footprint of cities and regions: comparing resource availability with resource demand ENVIRONMENT AND URBANIZATION, 18 (1): 103-112.

Wackernagel, M; Schulz, NB; Deumling, D; et al. 2002. Tracking the ecological overshoot of the human economy. PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES OF AMERICA, 99 (14): 9266-9271.