Prize-winner uses satellites to reveal human impact

The 2014 winner of the Volvo Environment Prize, Professor Eric Lambin, is a remote sensing pioneer using advanced data collection and satellite images to understand land use and the influence of humans on the planet.

Satellites catch sweeping images of Earth, every hour, day and night. Eric Lambin, who divides his time between Stanford University in California, and Université Catholique de Louvain in his native Belgium, has for decades developed methods of analysing these satellite images by linking them to socioeconomic data. By doing that, he and his research colleagues can track land use changes on the impact of trade and demand for biofuels or food crops. His research has focused on trying to bridge two disparate communities – remote sensing scientists and human ecologists.

This technique, sometimes called the people-to-pixels approach, can, with faster computers and improved data, make it possible for businesses, NGOs and governments to better monitor in almost real-time environmental impacts from human activities.

A world without forests would challenge life on earth. Deforestation was earlier mostly perceived as a result of population growth. In his research, Professor Lambin has demonstrated that it is not as simple as that. In reality there are intricate and complex patterns, even cascade effects of human activities that affect the forests and other natural resources. Eric Lambin points to statistics showing successful reforestation in Vietnam.

"It seemed like a success story. But when we looked at all the data and compiled all information locally and nationally, we discovered that use of wood had simply shifted to imported wood, increasing deforestation in neighbouring Cambodia and Laos." This type of research is vital in planning for a transition to sustainability and is a focus area for this year's Volvo Environment Prize laureate. Eric Lambin adopted the peopleto-pixels approach as young doctoral student in Sub-Saharan Africa in the mid-1980s and has expanded it throughout his career.

In the words of the Jury, "Eric Lambin has successfully bridged social, geographical and biophysical disciplines in order to advance the global understanding of land use change and what it means for human wellbeing".

Besides his academic research Eric Lambin is also reaching out to broader audiences. His most recent book, "*Ecology of Happiness*", asks us to take a look at the impact of nature on ourselves, rather than the conventional approach of discussing human impact on the planet. The natural world, he argues, is essential for human wellbeing and pleasure-seeking. Preserving nature is not only good for a portfolio of ecosystem services; it is essential for us in order to be happy.

Eric Lambin is professor at the Earth & Life Institute and School of Geography, Université Catholique de Louvain, Belgium and at Environmental Earth System Science, School of Earth Sciences and Woods Institute for the Environment, Stanford University, California.

For more information about the Volvo Environment Prize and this year's winner, please contact Professor Will Steffen, Fenner School of Environment and Society, Australian National University, e-mail: will.steffen@anu.edu.au

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The Volvo Environment Prize was founded in 1988 and has become one of the world's most prestigious environmental prizes. It is awarded annually to people who have made outstanding scientific discoveries within the area of the environment and sustainable development. The prize consists of a diploma, a glass sculpture and a cash sum of SEK 1.5 million and will be presented at a ceremony in Stockholm on 26 November 2014.

For more information about the 2014 laureate and the Volvo Environment Prize: www.environment-prize.com

/Caption #1/

Eric Lambin is the winner of the 2014 Volvo Environment Prize. He is a pioneer in bridging remote sensing and human ecology and is Professor of Earth Sciences at Stanford University, California and at Université Catholique de Louvain, Belgium,

/Caption #2/

The Volvo Environment Prize consists of a hand-crafted diploma, a glass sculpture and a cash award of 1.5 million SEK (approximately €165,000).

The Volvo Environment Prize is celebrating its 25th anniversary this year, and Professor Eric Lambin will receive the award at a ceremony in Stockholm, Nov 26.