

WILLIAM LAURANCE**Distinguished Research Professor at James Cook University in Cairns**

William Laurance is a Distinguished Research Professor at James Cook University in Cairns, Australia, and also holds an Australian Laureate fellowship, one of Australia's highest scientific awards. He is the director of two major research organizations, the Centre for Tropical Environmental and Sustainability Science at James Cook University, and ALERT—the Alliance of Leading Environmental Researchers and Thinkers.

He is also the Prince Bernhard Chair in International Nature Conservation at Utrecht University, Netherlands, and a research associate at the Smithsonian Institution and Harvard University.

His research focuses on the impacts of intensive land-uses, such as habitat fragmentation, logging, and wildfires, on tropical forests and their biodiversity. He is also keenly interested in climatic change and conservation policy. His research over the past 35 years spans the tropical world, including the Amazon, Africa, and the Asia-Pacific region. He has published eight books and over 400 scientific and popular articles.

He received his Ph.D. from the University of California, Berkeley in 1989. After postdoctoral research he spent 14 years as a Senior Staff Scientist with the Smithsonian Institution, based in Brazil and Panama.

A leading voice for conservation, he believes that scientists must actively engage policy makers and the general public, as well as other scientists. He is a fellow of the American Association of the Advancement of Sciences and the Australian Academy of Science, and former president of the Association for Tropical Biology and Conservation. He has received many scientific honors including the BBVA Frontiers in Ecology and Conservation Biology Award, a Distinguished Service Award from the Society for Conservation Biology, the Heineken Environment Prize, and the Zoological Society of London's Outstanding Contributions to Conservation Award.

Silent tsunami: Limiting the environmental impacts of tropical infrastructure expansion

The 21st century will see an unprecedented expansion of roads, dams, power lines, and gas lines, as well as massive investments in mining and fossil fuel projects. At least 25 million kilometers of new roads are anticipated by 2050. Nine-tenths of all road construction is projected to occur in developing nations, including many tropical regions that sustain exceptional biodiversity and vital ecosystem services. The penetration of roads and other infrastructure into

remote or frontier areas are a major proximate driver of habitat loss and fragmentation, wildfires, overhunting, and other environmental degradation, often with irreversible impacts on native ecosystems. Unfortunately, much infrastructure proliferation is chaotic or poorly planned and the rate of expansion is so great that it often overwhelms the capacity of environmental planners and managers. I will highlight ongoing efforts to plan, prioritize, and mitigate rapid road and infrastructure expansion, focusing predominantly on the tropics.