

## ***Curriculum Vitae***

### **Ruth S. DeFries**

Department of Ecology, Evolution, and Environmental Biology  
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### **Current Appointment**

Denning Family Professor of Sustainable Development, Columbia University, New York

### **Previous Appointments**

Associate Professor and Professor (1999 - 2008), University of Maryland, College Park

Joint appointment in Department of Geography and Earth System Science Interdisciplinary Center

Associate Research Scientist (1992-1999), Department of Geography, University of Maryland, College Park

Senior Project Officer (1983 - 1992), National Research Council, Washington, D.C.

Research Associate (1981 - 1983), Environmental Science and Engineering Group, Indian Institute of Technology, Bombay, India

Hydrologist (Oct 1979 - Oct 1980), United States Geological Survey, Baltimore, MD

### **Education**

Ph.D. (1980), Dept of Geography and Environmental Engineering, Johns Hopkins University, Baltimore, MD

B.A., *summa cum laude* (1976), Washington University, St. Louis, MO (major in earth science)

### **Areas of Expertise**

Role of tropical landscapes in climate adaptation and mitigation, conservation, food security, and human livelihoods; Ecosystem services from tropical agriculture and forests; Characterization of deforestation and anthropogenic land use change with remote sensing; Application of science to policy for sustainable development.

### **Fellowships and Honors**

MacArthur Fellowship (2007)

Member, National Academy of Sciences (elected 2006)

Fellow, Ecological Society of America (elected 2012)

Distinguished Scholar Award, American Association of Geographers (2015)

Breakthrough Paradigm Award (2014)

Fellow, American Academy of Arts and Sciences (elected 2010)

Fellow, American Geophysical Union (2009)

Fellow, American Association for the Advancement of Science (elected 2008)

Fellow, Aldo Leopold Leadership Program of the Ecological Society of America (2001)

Fulbright Award for Research in India (2007)

### **Representative Recent Publications**

DeFries, R., J. Fanzo, R. Remans, C. Palm, S. Wood, and T. Anderman. 2015. Metrics for land-scarce agriculture: Nutrient content must be better integrated into planning. *Science* **349**:238-240.

DeFries, R., M. Herold, L. Verchot, M. Macedo, and Y. Shimabukuro. 2013. Export-oriented deforestation in Mato Grosso: Harbinger or exception for other tropical forests? *Philosophical Transactions of the Royal Society B* **368**.

DeFries, R., E. C. Ellis, F. S. I. Chapin, P. A. Matson, B. L. Turner II, A. Agrawal, P. J. Crutzen, C. Field, P. Gleick, P. Kareiva, E. Lambin, D. Liverman, E. Ostrom, P. Sanchez, and J. Syvitski. 2012. Planetary opportunities: A social contract for global change science to contribute to a sustainable future. *BioScience* **62**:603-606.

DeFries, R. and C. Rosenzweig. 2010. Toward a whole-landscape approach for sustainable land use in the tropics. *Proceedings of the National Academy of Sciences* **107**(46): 19627-19632.

DeFries, R., Rudel, T.K., Uriarte, M., and Hansen, M., 2010. Deforestation driven by urban population growth and agricultural trade in the twenty-first century. *Nature Geoscience*, **3**, 178-181.

DeFries, R., and D. Pandey. 2010. Urbanization, the energy ladder and forest transitions in India's emerging economy. *Land Use Policy*. **27**(2): 130-138.

### **Books for Popular Audience**

DeFries, R. 2014. *The Big Ratchet: How Humanity Thrives in the Face of Natural Crisis*. Basic Books. 288 pp.

Silver, C and DeFries, R. 1990. *One Earth, One Future: Our Changing Global Environment*. National Academy Press. Washington, D.C. 196 pp. (translated into French, Portuguese, Arabic, and Japanese)