



## Navin Ramankutty (1970-Present)

Assistant Professor of Geography

**McGill University**

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### Overview

Navin Ramankutty joined UBC IRES in July 2014 as a Professor in Global Food Security and Sustainability. Navin's research concerns global land use change and its implications, focusing on agricultural practice and the implications for environmental change and food security. He employs data and models to address the question of how to feed 9-10 billion people while reducing agriculture's environmental footprint. His research interests include global agriculture and food security, land use and cover change, global environmental change, global climate change, earth system science, ecosystem services, climate-vegetation interactions, and global biogeochemical cycles. Some of his selected publications include:

- Martellozzo, F., J. S. Landry, D. Plouffe, V. Seufert, P. Rowhani, and N. Ramankutty, Urban agriculture: a global analysis of the space constraint to meet urban vegetable demand, *Environmental Research Letters*, 9(6), 064025, 2014.
- Ray, D. K., N. Ramankutty, N. D. Mueller, P. C. West, and J. A. Foley, Recent patterns of crop yield growth and stagnation, *Nature Communications*, 3, 1293, 2012.
- Ramankutty, N., and J. Rhemtulla, Can intensive farming save nature?, Guest Editorial, *Front. Ecol. Environ.*, 10(9), 455-455, 2012.
- Seufert, V., N. Ramankutty, and J. A. Foley, Comparing the yields of organic and conventional agriculture, *Nature*, 485(7397), 229-232, 2012.
- Foley, J. A., N. Ramankutty, K. A. Brauman, E. Cassidy, J. Gerber, M. Johnston, N. D. Mueller, C. O'Connell, D. K. Ray, P. C. West, C. Balzer, E. M. Bennett, S. R. Carpenter, J. Hill, C. Monfreda, S. Polasky, J. Rockström, J. Sheehan, S. Siebert, D. Tilman, and D. P. M. Zaks, Solutions for a Cultivated Planet, *Nature*, 478(7369), 337-342, 2011.

*This interview was conducted in 2010.*

## Early Life and Education

When Navin Ramankutty began his post with McGill University's Geography department in June 2006, he joined a host of other environmental professionals in their creation of an undergraduate program in Earth systems science. He also added another chapter to an already accomplished career in the environmental field.

Ramankutty traces his desire to work in the environmental field back to his youth in India. His ancestors were farmers and many of his relatives continue to live in a village in Kerala. Ramankutty has fond memories of the beautiful landscapes of Kerala, and his attachment to those landscapes sparked an initial interest in the environment. He grew up in Coimbatore, a city well known for its educational institutions. "We weren't a wealthy family growing up, so my dad decided that education was the way to progress for us and we moved to Coimbatore. My father stressed education a lot, and I was very fortunate to grow up in the city and have the opportunity to receive the education that I did there," Ramankutty recalls. His mother stayed at home and coached the children through school; Ramankutty credits her with introducing him to a wide range of reading, and broadening the scope of his education. His older brothers also played a crucial role as role models in his early life.

Ramankutty graduated from the PSG College of Technology with a Bachelor of Science in mechanical engineering and then moved to the United States to attend graduate school. He went on to receive his Master of Science in atmospheric science from the University of Illinois, and his doctorate in land resources from the Nelson Institute for Environmental Studies at the University of Wisconsin (UW) - Madison. After finishing his doctorate, Ramankutty's professor, Jonathan Foley, offered him a job at UW's Center for Sustainability and the Global Environment, where he spent six years as a research scientist. While at the center, Ramankutty led research on global land use change, and ultimately gained the freedom to write his own grants, bring money to the program, and work with students and his colleagues on campus.

## Importance of Mentoring to Career

Ramankutty has enjoyed the benefits of having mentors guide him throughout his career. He recalls his first mentor, an English teacher in sixth or seventh grade, who was one of the first people to spark his interest in literature. This teacher was also interested in math and would sometimes skip the reading syllabus to talk about math problems. "He was a very exciting person, and I enjoyed our interactions," Ramankutty says. In high school, Ramankutty was also very inspired by a math teacher who also did a lot of social work in the community and he continues to visit him whenever he returns to India.

More recently, Ramankutty's graduate mentors have given him valuable advice and helped him to get to where he is today. He mentions Professor Michael Schlesinger from Illinois, who saw something in the young student and took him on as a research assistant. "That was the stepping stone to my career," he says. Jonathan Foley, a professor, friend, and colleague whom Ramankutty has known for twelve years, has also had an invaluable influence on his career.

## Highlights

The highlight of Ramankutty's career thus far has been his doctoral program. "It has been the most joyful part of my career," he explains. He found it especially interesting because his studies did not get as narrow as many other doctoral programs tend to; in fact, he received the most comprehensive portion of his education at UW. "My program emphasized interdisciplinary training and research, and I took classes in sociology, philosophy, geography and ethics. I enjoyed the entire process, and I had wonderful professors and colleagues. I remember having a lot of fun—I really lived those six years very well. In some ways I wish I could go back," Ramankutty says. His dissertation focused on understanding global patterns of agricultural land use, how those patterns have changed over the last 100 years, and the consequences those changes have had on the global environment.

Ramankutty notes two accomplishments as being the highlights of his career thus far. The first was when his map of agricultural land made it into one of *National Geographic's* pullouts; that same map is now used in classrooms around the world. "To know that it is widely used for teaching is one of the most fulfilling parts of my work," he says. "Getting my current faculty position [at McGill] is [another] one I am most proud of right now."

Ramankutty plans to remain in the environmental field because he enjoys his colleagues and believes their work addresses critical issues. "These [environmental issues] are important problems. I strongly believe that they are one of the greatest challenges we face as a society these days," he says. Ramankutty also notes that the environmental field is one that offers myriad opportunities for minorities to get involved and contribute. "Environmental science—in fact the sciences in general—are often criticized as having a Western worldview, one that is predominantly white, male and Christian," he says. "We are sorely in need of other views and perspectives. The environmental field is burgeoning, and there is a great need for bright, passionate people."