*ONE WORLD, ONE MEDICINE, ONE HEALTH*

# One Health Intellectual Exchange

***Weekly Discussions / Course: Philosophy to Practical Integration of Human, Animal and Environmental Health***

(Available each spring for credit if desired)

12th 2014 Weekly Session - Tuesday, April 1st
5:30 – 7:30 p.m.

## How can stimulating adoption of improved cookstoves (and other environmental health improvements) be so complicated?

Marc Jeuland, PhD
Assistant Professor of Public Policy, Global Health, Environment, and Civil and Environmental Engineering
Duke University

AND

## How clean is clean energy? Fuel, air pollution and health impacts of cookstoves

Jessica Lewis, MSPH
Doctoral Student, Nicholas School of the Environment
Duke University

Meets Tuesdays, 5:30 – 7:30 p.m. at the North Carolina Biotechnology Center
15 T.W. Alexander Drive Research Triangle Park, NC 27709 Directions: www.ncbiotech.org/directions

For more information on the course option, suggestions, or ideas contact NC OHC: nconehealth@gmail.com

For Speaker Cancellation notices and additional background on One Health and the NC OHC:
http://nconehealthcollaborative.weebly.com/index.htm http://onehealtheducation.blogspot.com/

Triangle Global Health Consortium

North Carolina Biotechnology Center

CCMTR

**Marc Jeuland** joined the faculty of the Sanford School of Public Policy at Duke University in July 2010. His research interests include nonmarket valuation, water and sanitation, environmental health, the planning and management of trans-boundary water resources and the impacts and economics of climate change.

Jeuland's recent research projects include analysis of the economic implications of climate change for water resources projects on transboundary river systems, and modeling of the costs and benefits of environmental health interventions in developing countries. He has managed a field experiment on the role of water quality information in affecting household water and hygiene behaviors in rural Andhra Pradesh, India, and conducted fieldwork on preferences for cholera vaccines in Beira, Mozambique and water treatment in peri-urban communities in Cambodia. He has also worked on evaluation of the sustainability and performance of rural water supply systems in Ghana and Bolivia.

Jeuland has worked in the past with the World Bank on projects involving economic modeling in the Ganges Basin in Asia, economic planning in the eastern Nile river basin, rural sanitation in Egypt, and wastewater reuse in the Middle East and Northern Africa.

As part of this work, Professor Jeuland recently completed an economic analysis of possible dams in the Blue Nile gorge, for the World Bank (with Dale Whittington at UNC-Chapel Hill). The report, entitled Eastern Nile Strategic Economic Assessment: A Scoping-level Economic Analysis of Multipurpose Dams in the Blue Nile Gorge, examines the economic benefits of the Renaissance Dam, as well as other dam options, to Ethiopia and the downstream riparians. Primary data collection activities were conducted in Sudan to estimate the downstream impacts. When completed, the Renaissance Dam will be 145 meters high, about one third taller than the Aswan High Dam. It will have slightly less than half of the gross storage of Aswan High Dam Reservoir, more than the annual flow at the site. After filling, the Renaissance Dam will generate about 50% more hydropower annually than the Aswan High Dam power station. The report explores some of the likely implications for basin-wide cooperation of Ethiopia's decision to build the Renaissance Dam.

Prior to his graduate studies and work with the World Bank, Jeuland was a Peace Corps volunteer in Mali, West Africa, where he designed and monitored construction of a pilot wastewater treatment system and trained management personnel at the plant's managing firm.

**Jessica Lewis** is a third year PhD student in the Nicholas School of the Environment at Duke University, where she is an EPA STAR Doctoral Fellow. Her research focuses on household energy and health, particularly relating to traditional cooking in developing countries. She currently studies the adoption of environmental health interventions to reduce household air pollution, as well as the impacts of these technologies on air quality and health. Prior to joining Duke, Lewis worked in the Federal Aviation Administration's Office of Environment and Energy, as well as the US EPA (in RTP, Region 4 Atlanta, and Cincinnati).

**Recommended Reading:**

Anenberg, Susan C., et al. "Cleaner cooking solutions to achieve health, climate, and economic cobenefits." *Environmental science & technology* 47.9 (2013): 3944-3952. http://pubs.acs.org/doi/pdf/10.1021/es304942e

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