

Ipsita Kumar

ipsitakumar@gmail.com, ik2350@columbia.edu | +1 917 834 2963

EDUCATION

PhD Candidate, University of Maryland, College Park	2018 - Present
M. A. Climate & Society, Columbia University in the City of New York	2013- 2014
M. Sc. Economics (Environment & Resources) TERI University, Delhi	2009-2011
B. A. Economics Honors, Lady Shri Ram College, Delhi University	2006-2009

RELEVANT EXPERIENCE

Center for Social Science and Humanities, New Delhi May 2018 – July, 2018
Part time Research Assistant

- Working on estimating feed availability for livestock in India
 - Compiling data for estimating the availability feed in the past
 - Developing a model to estimate the availability in the past and present

Columbia University, New York Feb 2015 – Mar 2018
Staff Associate

- Reservoir Optimization Model for Pernambuco, Brazil: Developed a model to minimize cost of water delivery through reservoir optimization models for the state of Pernambuco, targeting major reservoirs in the state. Using Nonhomogeneous Hidden Markov Models (NHMM) to produce precipitation predictions to use in the reservoir optimization model.
 - Developed an online user interface for the reservoir optimization model, available at https://columbia-water-center.shinyapps.io/hydrobid_opt_reservoir_optimization/
- Previously worked on climate change and water issues in the North Eastern United States, targeting in particular, drinking water utilities in Philadelphia. Assessing risks of drinking water quality, and quantity, and infrastructural risks they may face with a changing climate.

Columbia University, New York Dec 2014 – Feb 2015

Volunteer – Editorial Assistant, Prof. John C. Mutter (Department of Earth and Environmental Sciences; International Public Affairs)

- Editorial Assistant to Prof. Mutter on his book “Disaster Profiteers: How Natural Disasters Make the Rich Richer and the Poor Even Poorer” (St. Martin's Press).

University of West Indies, Jamaica and Columbia University June 2014 – July 2014
Intern

- Worked on a research with University of Arizona, Government of Jamaica and the University of Uruguay on climate services and needs of different stakeholders, focusing on agriculture.

NASA Goddard Institute for Space Studies Sep 2013 – June 2014

Research Assistant, Urban Climate Change Risk Assessment

- Conducted a survey for impact assessment of the First Assessment Report of the Urban Climate Change Research Network (ARC3)

Columbia University, New York Dec 2013 – June 2014

Research Assistant, Prof. John C. Mutter

- Performed regression analysis for a link between Disasters and Development.
- Addressed socio-economic aspects of Disasters and Development

The Energy and Resources Institute (TERI), Delhi June 2011 – Aug 2013

Research Associate

- Principal Investigator

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TERI Environmental Survey: Survey to look at the perception, behaviour, attitude, etc. of people towards the environment in six cities in India with a sample of over 4000.

Sustainable Development Goals (SDGs): Researched and conducted stakeholder dialogue for an optional design and framework for the Sustainable Development Goals (SDGs).

- **Other Select Research**

BIOCORE Research for the European Union: Studied the social, political and legal aspects of 2nd generation bio-refineries in France, Germany, Hungary and India.

Organic Agriculture: Analysed pathways for sustainability of organic agriculture.

Resource Efficiency in India: Handled research on middle class consumption, Indian policies related to resource efficiency (in particular minerals).

United Nations Development Programme (UNDP), India

Jan 2011 – June 2011

Internship/Master's Thesis

- Conducted research on the topic Gender and Climate Change, in particular the link between gender and climate change, MDGs, and the National Action Plan for Climate Change, India

PUBLICATIONS

Kumar I, Josset, L, Silva, EC, Possas, JMC, Asfora, MC, Lall, U (2017) "*Financial Risk Reduction and Management of Water Reservoirs Using Forecasts: A Case for Pernambuco, Brazil*" Abstract [Number: H11J-1340] presented at 2017 Fall Meeting, AGU, New Orleans, L.A., 11-15 Dec.

Kumar, I, Josset, L, Lall, U, Silva, EC, Possas, JMC, Asfora MC (2017) "*Cost Optimization of Water Resources in Pernambuco, Brazil: Valuing Future Infrastructure and Climate Forecasts*" Geophysical Research Abstracts Vol. 19, EGU2017-10147, 2017. EGU General Assembly 2017

Kumar, I, Zhu, S (2015) *Water Management and Climate Change – The Case for Newark and Philadelphia*. Columbia Water Center White Paper. Available at: <http://water.columbia.edu/files/2015/10/White-paper-Ipsita-Kumar-Siquan-Zhu-FINAL-22-Oct.pdf>

Gannon, C, Kandy, D, Turner, J, **Kumar, I**, Pilli-Sihvola, K, Chanda, F S (2014) *Near-term climate change in Zambia. What the research tells us*. Red Cross/Red Crescent Climate Centre, Hague.

Kapur, S. K., **Kumar, I.** (2013) India and Sustainable Development Goals (SDGs). TERI Policy Brief Issue 10 November 2013. *New Delhi*.

IFEU-Institut et. al., TERI, GIZ (2013), *India's Future Needs for Resources, Dimensions, Challenges and Possible Solutions*. TERI, GIZ, IFEU Heidelberg, Delhi (**Consortium Member**) Available at: https://www.ifeu.de/abfallwirtschaft/pdf/ResourceEfficiency_Final%20Report_lowres.pdf

WORKING PAPERS

- "Forecast based reservoir system operation as a climate change adaptation strategy" (with Josset, L, Silva, EC, Possas, JMC, Asfora, MC, Lall, U)

OTHERS

- Awarded \$30,000 scholarship from the Department of Earth and Environmental Science, Columbia University for MA in Climate and Society

SKILLS (In order of fluency)

Programming Skills – R, R Shiny, Matlab | Languages: English, Hindi, Nepali