

Lareef Zubair

Summary: Dr. Lareef Zubair has worked in the areas of tropical climate, climate change, climate risk management, climate adaptation, environmental and energy management, and technology policy for the last 20 years. He undertakes research on climate systems, and uses these for generating practical solutions in tropical venues (Sri Lanka, Botswana, Maldives and Comoros) with projects in partnership with decision makers and other researchers and educators. He undertakes advocacy such as on the Indian Ocean tsunami, better management of climate risk, preservation of meteorological observatories, better access to data for research, and the sethusamudaram project. He contributes to dissemination and public understanding through around 30 newspaper and magazine features and articles and through contributions to multiple blogs. He serves as the Principal Scientist at the Foundation for Environment, Climate and Technology, as a Researcher at the Columbia University Water Center and a Coordinator for the Masters in Development Practice program at the University of Peradeniya.

Previous Positions: He was at the International Research Institute for Climate and Society from 2000-2011 where he undertook research, project work, training and education on climate adaptation and risk management. He also served as a Post-Doctoral Associate in Mathematics and Engineering at Yale University, a Senior Lecturer and Researcher in Environmental Engineering and Computational Mathematics at the University of Peradeniya and Institute of Fundamental Studies in Sri Lanka and as a post-doctoral fellow at the University Consortium for Atmospheric Research at Boulder, Colorado.

Education: He received a B.Sc in Engineering from the University of Peradeniya, Sri Lanka and a M.S and a Ph.D. focusing on fluid turbulence, non-linear dynamics, and diagnostics from Yale University, U.S.A. .

Research: His research over the last 15 years is in the areas of tropical climate and hydrological diagnostics and modeling, climate impact analysis, climatic predictions and climate and hydrological change. He has published 35 papers in the peer-reviewed scientific literature many of them with his students and advisees. He has also undertaken research in fluid turbulence, wavelet analysis, environmental impact assessment, renewable energy and energy conservation.

Projects for Societal Benefit: He has led projects to use climate information for rice, tea and coconut agriculture, managing water resources in river basins, malaria and dengue early warning systems, disaster hazard assessment from weather and climate information, anticipating the risk of human-elephant-conflict and the potential impacts of climate change on the coastal zone.

Tertiary Education: He has served as a Lecturer, External Examiner and Mentor for Lecturers at several Universities in Sri Lanka and in the Maldives National University. He serves as a visiting faculty member for post-graduate courses in Water Resources Management, Environmental Science and Engineering, Atmospheric Sciences, Oceanography, Energy, Climate and Society in several Universities apart from Columbia University.

He was instrumental in establishing of a Masters in Development Practice at the University of Peradeniya as part of a 22 node network supported by the MacArthur Foundation. In 2012 he was attached to the University of Peradeniya as a Senior Scholar.

Institution Building: He set up the Foundation for Environment, Climate and Technology (FECT) with the assistance of the Mahaweli Riverbasin Authority of Sri Lanka and US partners including Columbia University in 2001. FECT was set up as a collaborative non-profit organization (www.climate.lk) and has now been sustained for 15 years and has provided employment, exposure and opportunity to state of the art research for over 50 younger and older scientists in Sri Lanka and Maldives. Many established geophysical scientists (particularly from the diaspora) have helped in developing its capacity. He has also set up FECT-Afrique in Comoros in collaboration with Hairu Fisheries (Comoros) and is in the process of setting up FECT-Maldives.

Research Mentorship: He has been a mentor in research and thesis supervisor for 30 undergraduate and 20 graduate students. Several of his students in the tropics have gone on to do doctoral and post-doctoral work and teaching at Universities such as University of Indiana, University of Texas, University of Sydney, University of Melbourne, Asian Institute of Technology, Yale University, University of Western Ontario, Iowa State University, University of North Dakota. He has also assisted scientists in research Institutions in Sri Lanka, Maldives, Botswana and Comoros obtain data, literature and analysis tools and for writing research grants. He has published a guidebook on research on Weather and Climate in Sri Lanka with support from Sri Lanka's National Science Foundation.

Advocacy and Dissemination: He undertakes advocacy related to geophysical issues such as on the Indian Ocean tsunami, better management of climate risk, preservation of meteorological observatories and better access to data for research, and the Sethusamudaram project. He contributes to dissemination and public understanding through around 30 newspaper and magazine features, through blogs and by assisting science and environmental journalists.

Professional Roles He has been participating in professional societies (AGU, AMS, AEESP, AISLS, SLAAS, IMS, ANCST) activities since 2000 while also being a member of meteorological and environmental engineering societies in India and the US. He served as an associate editor at the Journal of Energy Engineering of the American Society of Civil Engineers (focusing on climate) and as a reviewer for a dozen journals. He started a network of Sri Lankan scientists in Meteorology, Oceanography and Hydrology in 1999.