
FOUNDATION FOR ENVIRONMENT CLIMATE AND TECHNOLOGY

Summary of Progress for 2009

Personnel : Susanthi Liyanaarachchi left FECT. Ranmalee Bandara commenced post-graduate studies. Eng. Badra Nawarathna of the Mahaweli Authority continued with us on secondment. Sumudu Adhikari joined FECT as a Junior Research Scientist. Madhura Weeraskera and Mohamed Nasly were also recruited to FECT as Junior Research Scientists.

Papers published

- *B. Lyon, L. Zubair, V. Ralapanawe and Z. Yahiya*, Fine scale evaluation of drought hazard for tropical climates, *Journal of Applied Meteorology and Climatology*. 48 (1): 77-88, 2009.
- *Qian, J.-H., and L. Zubair*, The effects of grid-resolution and domain choice on the quality of simulations of the South Asian northeast monsoon rainfall. *Monthly Weather Review*, 138(7): 2780-2802.
- *S. Gadgil, M. Rajeevan, L. Zubair and P. Yadav*. South Asian Monsoon: Inter Annual Variability, In Eds., Ding et al., Global Monsoon System, Research and Forecast, *World Scientific Publications and World Meteorological Organization*. 2009, in press.

Papers under review

- *Zubair, L., et al.*, Atlantic Influences on Inter-Annual Variations of January to March Sri Lankan rainfall, *Monthly Weather Review*, in review.
- *S. Liyanarachchi, B. Nawaratne, R. Bandara, S. Adhikari, Z. Yahiya, J. Chandimala, and L. Zubair*. Modulation of Quarterly Rainfall by El Niño and La Niña in Sri Lanka. *Journal of the National Science Foundation*, in review.

Feature articles

- "Language of Climate" appeared in the Daily News (with their own title and illustration) on April 28, 2009. - <http://www.dailynews.lk/2009/04/28/fea20.asp>
- SciDev.org Feature on climate and coconuts: April 15th of Project outputs, by T.Gamage. <http://www.scidev.net/en/news/global-warming-might-hinder-coconut-production.html>

Reports

- **Zubair, L., S.J. Connor, N. Ward, G.N.L. Galapaththy, S. Mahanama, H.M. Faizal, Z. Yahiya, M. Siriwardhana, U. Tennakoon, J. Chandimala, S. Razick, B. Nawarathna, J. Shaman, O. Ndiaye and H. Yang.** *Analysis of Impacts of Climate Variability on Malaria Transmission and the development of an early warning system*, IRI Technical Report, Jan 2010.
- **Zubair, L., B. Blumenthal, O. Ndiaye, R. Perera, N. Ward, Z. Yahiya, J. Chandimala, V. Ralapanawe, U. Tennakoon, M.R.A. Siraj, H. Manthirithillake and W.L. Hendawitharana.** *Evaluation of Climate and Habitat Interactions Affecting the Conservation and Management of Asian Elephants in South-East Sri Lanka*, IRI Technical Report 10-02, Feb 2010.
- **Zubair, L., V. Ralapanawe, Z. Yahiya, R. Perera, U. Tennakoon, J. Chandimala, S. Razick and B. Lyon,** *Fine Scale Natural Hazard Risk and Vulnerability Identification Informed by Climate in Sri Lanka*, Project Report: IRI Technical Report 10-02, Feb 2010.
- **Zubair, L., J. Hansen, Z. Yahiya, M. Siriwardhana, J. Chandimala, S. Razick, U. Tennakoon, K. Ariyaratne, I. Bandara, H. Bulathsinhala, T. Abeyratne and T.D.M.A. Samuel;** *Impact Assessment and Adaptation to Climate Change of Plantations in Sri Lanka*: IRI Technical Report, 2010

Workshops and Visitors

- A one day workshop on ‘Environment & Infectious Diseases in Kandy District’ was conducted by FECT on 01-08-2009 with the participation of Prof. Manel Wijesundera, Prof. Tudor De Silva, Prof. P. Wickramagamage, Dr. P.H.D. Kusumawathie, Dr. Chandana Wijesinghe, Mr. Jagath Alahakoon, Public Health Officials, Community Based Organizations, Plantation Human Development Trust. Aug. 2009.
- Andres Sanchez of the International Development Research Centre in Canada visited FECT for the development of a new project; His 3 day visits included examination of potential community based work at Akurana, Pussellawa and Hasalaka, July 2009.
- Lareef Zubair contributed to developing the proposal to the McArthur Foundation under the TOKTEN program of the UNDP. March to May 2009.
- Launch Workshop of the Masters in Development Practice at the University of Peradeniya, presentation by Lareef Zubair. December 2009.

Workshop Participation

- Susanthi Liyanaarachchi attended a workshop on water and climate at ICTP – Trieste, Italy.
- Janaki Chandimala attended a training workshop on writing papers in Kathmandu funded by International Foundation for Science.
- Lareef Zubair attended an APN training workshop at the UN in New York.
- Ranmalee Bandara presented the work on the Rain Water Harvesting at the First National Symposium on Natural Resources Management held at Sabragamuwa University. Her contribution was adjudged the best presentation and she was awarded a gold medal.
- Lareef Zubair presented a seminar on Climate Adaptation at the Maldives Ministry of Environment.

Partnerships

- Weekly expert input for Hydro-meteorological Assessment for Mahaweli Authority in Sri Lanka. Made available via <http://www.mahaweli.gov.lk> and <http://www.climate.lk/> and <http://fectsl.wordpress.com/>
- Meetings with Ministry of Environment, Maldives and Department of Meteorology, Male, August 09.

Web Development

Monitoring tool for water resources for Sri Lanka

<http://ingrid.ldeo.columbia.edu/expert/home/.mbell/.SL/.Regional/.WaterResources/>

Monitoring tool by Administrative Region

<http://ingrid.ldeo.columbia.edu/expert/home/.mbell/.SL/.Regional/.Rainfall/>

Monitoring tool for Maldives

<http://iridl.ldeo.columbia.edu/expert/home/.mbell/.Maldives/.Regional/.Rainfall/>

Grants Awarded

- Developing a Masters in (Sustainable) Development Practice at the University of Peradeniya – Program on Global Security and Sustainability, MacArthur Foundation, USA, 2009. Program led by Department of Economics, University of Peradeniya with FECT. FECT is responsible for practicum placements, curriculum development for courses including Climate Change in South Asia and in developing research networks. Dileni Gunewardena (PI), L. Zubair and Zeenas Yahiya (Investigators)
- Subcontract to produce streamflow estimates for Sri Lanka for UNESCO-IHE project, “Climate change impacts on seasonally and intermittently open tidal inlets in Sri Lanka and Thailand”, R. Ranasinghe (PI), S. Mahanama (Investigator)

Concept Notes Submitted

- (i) Changes in Temperature Trends and Extreme Values in Sri Lanka, (ii) Changes in Rainfall Trends and Extreme Values in Sri Lanka, Concept notes to CDM (*Clean Development Mechanism*), Ministry of Environment and Natural Resources – 2009

- Proposal to document climate and climate change and its impacts in Sri Lanka. UNDP (*United Nations Development Program*), 2009
- Analysis of Regional and Seasonal Impacts of Weather and Climate on Dengue Risk in Sri Lanka – NDC (*National Dengue Control unit*) – 2009
- Adaptation to Climate Change through River Basin Management and Coping with Climate Variability: Demonstration in Mahaweli Basin. (UNDP Energy and Environment – June 2009)

Pre-Proposals submitted

- APN (*Asia-Pacific Network for Global Change*) program on Scientific Capacity Building for Climate Impacts and Vulnerability Assessment (SCIBIA): Water Resources and Food Production in the Mahaweli River Basin of Sri Lanka – APN 2009
- Ecohealth Program of IDRC (*International Development Research Centre*), Enabling the use of epidemiological, environmental and societal information by the public and stakeholders to anticipate, manage and mitigate emerging and re-emerging infectious diseases in Kandy.

Proposals submitted

- Regional and Seasonal variation of Dengue Risk in Sri Lanka and its relationship to Climate –SEARO (*South-East Asia Regional Office*) – WHO – 2009
- Economic analysis of impacts of declining streamflow in Southwestern Sri Lanka and mitigation options – SANDEE (*South Asian Network for Development and Environmental Economics*) – 2009
- Multi-hazard risk assessment, prediction and communication for resource management and climate adaptation – Development Marketplace competition by the World Bank – 2009
- Adaptation to Climate Change, Disaster Risk Reduction and Climate Change Mitigation through improved management of Energy, Water and Coastal resources in Sri Lanka and Maldives - European Commission- 2009

Administration: Financial management of bank accounts at Peoples Bank and Hatton National Bank has been smooth. The accounts were drawn up by Rimza Muhulees and Zeenas Yahiya. Our Auditors, Anzari and Co., has reported on a health state of financial management in the last Audit conducted in March 2009.

Collaborations: We collaborated with personnel attached to Mahaweli Authority of Sri Lanka (MASL), International Research Institute for Climate and Society (IRI), University of Peradeniya (UOP), Open University of Sri Lanka (OUSL), Anti Malaria Campaign (AMC), National Aeronautics and Space Agency (NASA), the International Water Management Institute (IWMI), the Maldivian Ministry of Housing, Transport and Environment (MHTE).

Acknowledgements: We thank the IRI data library team, Michael Bell, Benno Blumenthal, Remi Cousins and John Del Corral for assistance. We thank Mr. Ahmed Saleem, Mr. Amjad Abdulla, Mr. Hussain Naeem and Ms. Fathimath Reema of MHTE Ms. Shimana and Mr. Muslim of the Department of Meteorology. We thank Shaky Sherpas and Ramany Sritharan for data set development. We thank Mr.G.S.S. Jayaweera, Director Headworks (MASL), Eng. N. Wickramaratna, and H. Herath Banda (MASL) for sustained support at the Mahaweli Authority in many ways. Our affiliate scientists, Neil Devadasan, S. Mahanama, Vidhura Ralapanawe and M. Manobhavan continue to support us in many ways. We also acknowledge the support of Prof. C.M. Madduma Bandara, Prof. P. Wickramagamage. Prof. Lakshman Dissanayake (UOP), Dr. Dileni Gunewardena, Dr. Nalani Hennayake, Dr. Ananda Jayawickrama, Dr. O.G. Dayaratne Banda (Dept. of Econ & Stat. – UOP), and Dr. D.H.S. Maithripala (UOR), N. Wickramanayake, Dr. S. Aluvihare, (OUSL), Dr. P. Amerasinghe (IWMI), H.M. Faizal, and Dr. P.H.D. Kusumawathie. K.B. Jayasundera assisted us in several ways. Finally, we thank the staff of the Maintenance Unit of the MASL HAO&M.

FECT

c/o, Maintenance office
Mahaweli Authority
Digana Village, Rajawella
Kandy, Sri Lanka

PHONE (+94) 81-2376746, 4922992,
FAX (+94) 81-23764746
E-MAIL climate@slitnet.lk
WEB SITE <http://www.climate.lk>