
FOUNDATION FOR ENVIRONMENT CLIMATE AND TECHNOLOGY

Progress – 2005

We had established FECT in the Digana offices at the Mahaweli Authority premises, and enhanced the office in Akurana with telephone, computer and office support.

Projects Completed:

- Climate Change and Variability and Tea and Coconut Plantations in Sri Lanka (2002 – 2005) - This project is a collaborative undertaking between five Sri Lankan organizations with funding from the Global Environmental Facility. The project objectives include climatic analysis, impact assessment, development of adaptation strategies and capacity building.
- Climate and Human-Elephant Conflict (2001 – 2005) - We established the climate influences on human elephant conflict. We seek to use climate information, seasonal climate prediction, remote sensing and spatial-analytic techniques to assist wildlife, natural resources, environmental and water management. This was funded by a grant from Columbia University.

Ongoing projects:

- Malaria and Dengue and Predictive Risk Mapping and Early Warning Systems (2003 – 2006) - We have undertaken a project on climate and malaria and dengue in Sri Lanka in collaboration with the International Water Management Institute and other partners to develop an early warning system for malaria risk in the *Uva* Province as a prototype. This effort is funded by the US National Oceanic and Atmospheric Administration.
- Climate and Natural Disaster Risk (2002 – 2006) - The risks posed by multiple natural hazards in Sri Lanka were explicitly identified. We identified the potential for mitigation and response approaches that take into account the interactions among different hazards and vulnerabilities. We compared Sri Lankan and global scales of information for usability. This work was funded by the Earth Institute at Columbia University.

Proposals:

Malaria Early Warning Systems - We have collaborated with the RMO, Kandy on a grant proposal to the National Science Foundation to elaborate on the impact of climate change on highland malaria. We have also initiated discussions with RMO, Kurunegala on work regarding malaria control program in Sri Lanka. Work on understanding hydrological variability in Sri Lanka Rivers and developing a rainfall monitoring system for Sri Lanka is in progress.

Climate Impacts on Dengue - In consultation with the Coordinator of the National Dengue Control Unit, we have prepared posters of seasonality and spatial distribution of Dengue in Sri Lanka. We have also provided her with a grant proposal to undertake further studies.

Water Resources Management - We are undertaking proposal development in the areas of rain water harvesting and climate change impacts and adaptation. A proposal has been submitted for this in collaboration with University of Ruhuna and the Lanka Rainwater Harvesting Forum. A proposal on

hydrological prediction for the Mahaweli Basin was submitted to the International Foundation for Science with J. Chandimala as Principal Investigator.

We continued to maintain the internet resource centers for Tsunami Relief at <http://www.recoverlanka.net> and <http://www.geolanka.net>.

Publishing:

Catalogue of FECT activities; FECT Climate Calendar (Poster); Sri Lanka Meteorology, Oceanography and Hydrology Network Newsletter; Book of Posters; Newspaper and Magazine articles; Journal articles and conference proceedings.

Journal articles and books

March 2006: Lareef Zubair, M. Siriwardhana and J. Chandimala, The predictability of Sri Lanka Climate based on ENSO, Lareef Zubair, under second review, *International Journal of Climatology*

December 2005: Lareef Zubair and Janaki Chandimala, Epochal Changes in ENSO-Stream flow relations in Sri Lanka, in press, *Journal of Hydrometeorology*

October 2005: Janaki Chandimala and Lareef Zubair, Predictability of Stream Flow and Rainfall for Water Resources Management in Sri Lanka based on ENSO, in second revision, *Journal of Hydrology*

October 2005: Lareef Zubair, Ruvini Perera and Zeenas Yahiya, Was the 2002/03 Maha's Bumper Paddy Harvest due to El Nino?, *Journal of the Institution of Engineers, Sri Lanka*, Vol: XXXVIII, No: 4.

Project Reports

June 2006: Lareef Zubair, Ralapanawe V., Tennakone, U., Yahiya, Z., and Perera, R., Natural Disaster Risks in Sri Lanka: Mapping Hazards and Risk Hotspots, Chapter 4, in Eds: Margaret Arnold, Robert Chen, Uwe Deichmann, Maxx Dilley and Arthur Lerner-Lam, Randolph E. Pullen, Zoe Trohanis, Natural Disaster Hotspots Case Studies, Washington, DC: World Bank 2006.

June 2005: Lareef Zubair (PI), Kusalika Ariyaratne, Irugal Bandara, Heli Bulathsinhala, Janaki Chandimala, M.R.A. Siraj, Manjula Siriwardhana, Upamala Tennakoon and Zeenas Yahiya, Current Climate and Climate Change Assessments for Coconut and Tea Plantations in Sri Lanka, *AIACC/FECT report*, Submitted to IRI.

June 2006: Lareef Zubair et al., Climate and Malaria, Year 3 Project Report on Progress, submitted to NOAA, *OGP*.

Feature Articles

August 2005: Lareef Zubair, Neil Devadasan, D.H.S. Maithripala, Manoharan Philips and Vidhura Ralapanawe, Six Months On – An Editorial from the GeoLanka/RecoverLanka administrators, *The Island*, 5 August 2005.

August 2005: Lareef Zubair, Facing risks in Sri Lanka from the Indian Canal, *Daily Mirror*, 5 August, 2005.

August 2005: Lareef Zubair, Sethusamudram Canal: Sri Lanka and Tamil Nadu at risk, *Daily Mirror*, 1

August, 2005, Island, 5 October 2005

Conference Proceedings/Abstracts

March 2006: Lareef Zubair, Progress in Developing a Climate based Malaria Early Warning System in Sri Lanka, Climate Predictions and Applications Sciences Workshop, Tucson, Arizona, 21-24 March 2006.

February 2006: Lareef Zubair, Using Climate Information for River Basin Management in Sri Lanka, Invited Presentation, Annual Meeting of the American Meteorological Society, Atlanta, February 2, 2006.

January 2006: Lareef Zubair, Advances in Climate for River Basin Management, Mahaweli Authority of Sri Lanka, Headworks Administration and Operations Management Division, Digana, Sri Lanka, January 4, 2006.

June 2005: Lareef Zubair Climate Risk Management: Case Studies in Public Health, Natural Disasters and Renewable Energy, *Biennial Congress of the Association of Environmental Engineering and Science Professors*, Potsdam, New York

Collaborations: We had productive collaborations with personnel attached to Mahaweli Authority of Sri Lanka (MASL), International Research Institute for Climate and Society (IRI), University of Peradeniya (UOP), Natural Resources Management Services (NRMS), National Water Resources Authority (Interim), Department of Meteorology, International Water Management Institute (IWMI), Sri Lanka Department of Wildlife Conservation, Coconut Research Institute, and the Tea Research Institute

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