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# FOUNDATION FOR ENVIRONMENT CLIMATE AND TECHNOLOGY

## Progress – 2008

### Grants Completed:

*NOAA*: Our collaborative work with the International Research Institute for Climate and Society (IRI) continued on the *Climate and Malaria Project* funded by NOAA and this was brought to a close. We contributed to papers and reports that were published, final conferences, and in engagement with the personnel of the Anti-Malaria Campaign.

### Grants Received:

*Provention Consortium* : Project proposal to the Provention Consortium on “*Assessing Drought and Enabling Adaptation through Rain Water Harvesting*” was funded. The objective of this project is to link climate adaptation and disaster risk reduction efforts. We are evaluating the spatial and seasonal variability and long-term variability of drought for the Hanguranketa sub district in South-Eastern Sri Lanka.

*International Foundation for Science*: The project proposal to the International Foundation for Science on “*Assessing Predictability of Seasonal Rainfall in the Kelani River Basin in Sri Lanka*” was funded. We have demonstrated the potential of using El Nino/Southern Oscillation (ENSO) tele-connections with Sri Lankan climate to provide predictions of seasonal rainfall and stream flow for its major basins. We are hoping to improve this prediction, and to build capacity for extending research further in Sri Lanka.

*International Research Institute for Climate and Society*: We were provided a sub-contract to hire a Research Assistant from the IRI in support of continuing work on climate and malaria.

### Proposals submitted:

*National Science Foundation of Sri Lanka* (favourable reviewed but not funded due to budget shortfalls).

- Collaborative proposal with University of Ruhuna (Faculty of Agriculture) on Rainwater harvesting
- Collaborative proposal with Faculties of Engineering, Open University and University of Ruhuna on streamflow prediction
- Collaborative proposal with Regional Malaria Office, Anti-Malaria Campaign, Kandy

*Sri Lanka Country Coordinating Mechanism to GFATM round 7*

We submitted a proposal on prediction of malaria outbreaks based on climate and environmental conditions.

*International Research Institute for Climate and Society*

We supported a proposal led by IRI to the National Oceanic and Atmospheric Agency (NOAA) on drought monitoring and prediction. This was not funded.

### Papers published:

- Jan 2008: Zubair, L., Siriwardhana, J. Chandimala, and Z. Yahiya, Predictability of Sri Lankan Rainfall based on ENSO, *International Journal of Climatology*, 28 (1) : 91-101.
- Jan 2008: S. Peiris, J. Hansen, and L. Zubair, Use of Seasonal Climate Information to Predict Coconut Production in Sri Lanka, *International Journal of Climatology*. 28 (1): 103-110.
- Aug 2008: Mahanama, S., Koster, R., Riehl, & R. Zubair, L. (2008). The role of soil moisture in seasonal streamflow predictability - case study in Sri Lanka, *Advances in Water Resources*.31 (3): 1333-1343

- Aug 2008: Zubair, L., Gawrie N Galappaththy, Hyemin Yang, Janaki, Chandimala, Zeenas Yahiya, Priyanie Amerasinghe, Neil Ward and Stephen J. Connor, Epochal changes in the association between malaria epidemics and El Nino in Sri Lanka Lareef Zubair, *Malaria Journal* 2008, 7:140
- Aug 2008: B. Lyon, L. Zubair, V. Ralapanawe and Z. Yahiya, Fine scale evaluation of drought hazard for tropical climates, *Journal of Applied Meteorology and Climatology*, in early release.

#### **Papers Under Review:**

- Quality Evaluation of Surface Temperature Data in Sri Lanka", *International Journal of Climatology*.
- Sri Lanka Rainfall Climate and Its Modulation by El Nino and La Nina Episodes – *Journal of the Institution of Engineers, Sri Lanka*
- Engendering Multi-disciplinarity and Quality: Environmental Education at the University of Peradeniya, *Journal of the Institution of Engineers, Sri Lanka*

#### **Unpublished Reports**

Mid-term report submitted to the Provention Consortium Research and Action Grants for Disaster Risk Reduction - "Assessing Drought and Enabling Adaptation through Rain Water Harvesting"

#### **Posters:**

- Rainfall Monitoring for Malaria Early warning for Uva and Sri Lanka – Michael Bell, John Del Corral, Benno Blumental, Badra Nawarathna, Janaki Chandimala, Lareef Zubair
- Average Annual and Monthly Malaria (Pv) Incidence at MOH scale – Michael Bell, Syd Partridge, John Dell Corral, Gawrie Galappaththy, Benno Bluemental, Upamala Tennakoon, Manjula Siriwardhena, Valentina Giannini, Lareef Zubair

**Website maintenance:** We continue to maintain <http://www.climate.lk>, <http://www.tropicalclimate.org>, <http://www.recoverlanka.net> and <http://www.climate.lk> websites.

#### **Conference Proceedings/Abstracts:**

- J. Chandimala and Z. Yahiya, Discussion on 'Adapting to Climate Change in Sri Lanka' organized by the Institute of Social and Environmental Transition, and the Practical Action (ITDG), held to feed into and shape the research programme undertaken by IDRC and DfID
- L. Zubair, S Mahanama, J Chandimala, MN Ward: Soil Moisture Memory and Predictability of Seasonal Streamflow in Sri Lanka, Western Pacific Geophysics Conference, 2008, Cairns, Australia.
- L. Zubair, J Chandimala, M Siriwardhana: Inter-Annual Variability and Decadal Change of the North-East Monsoon Rainfall over South Asia, Western Pacific Geophysics Conference, July 2008, Cairns, Australia
- Zeenas Yahiya et al., Analysis of Impacts of Climate on Malaria in Sri Lanka for malaria risk predictions, International EcoHealth Forum 2008, December 1-5, 2008, Mérida, Yucatán México.

**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), Open University of Sri Lanka (OUSL), and the Natural Resources Management Services (NRMS).

**Staff Updates:** Amila Karunaratne left for employment overseas at the end of June. While he continues to provide some remote support, we have advertised for his replacement.

**Immediate Plans:** Work proceeds on the two new grants that have been awarded on seasonal climate and streamflow predictions and planning for rainwater harvesting as a means of drought mitigation. The publication of findings from previous grants related to Malaria, Plantations, Human-Elephant conflict shall be a priority.

**FECT**

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