
FOUNDATION FOR ENVIRONMENT CLIMATE AND TECHNOLOGY

Progress for 2012

Summary: This was a year of transformation for FECT in our work portfolio. The work on projects for WHO-SEARO, FAO-SEARCA and UNESCO-IHE wound down and projects with CCAFS, AgMIP and PEER started up. Our program on Higher Education (primarily the Masters on Sustainable Development at the University of Peradeniya), Climate Services for the Mahaweli Authority and the Maldives continued operationally. To accommodate an expansion of staff, we established a satellite office in Akurana. Our staff has had training in APCC, ICRISAT, and at International workshops in Colombo. We have had an adequate portfolio of contributions to dissemination. However our journal publications for 2012 were disappointing considering how many are still pending.

Papers

Rosenzweig, C., J.W. Jones, J.L. Hatfield, C.Z. Mutter, S.G.K. Adiku, A. Ahmad, Y. Beletse, B. Gangwar, D. Guntuku, J. Kihara, P. Masikati, P. Paramasivan, K.P.C. Rao, and **L. Zubair**, 2012: The Agricultural Model Intercomparison and Improvement Project (AgMIP): Integrated regional assessment projects. In *Handbook of Climate Change and Agroecosystems: Global and Regional Aspects and Implications*. D. Hillel and C. Rosenzweig, Eds., ICP Series on Climate Change Impacts, Adaptation, and Mitigation Vol. 2. Imperial College Press, 263-280. http://www.worldscientific.com/doi/abs/10.1142/9781848169845_0014

A.K. Srivastava, M. Rajeevan, **L. Zubair** and J. Revadekar, South Asia, in Blunden, Jessica, Derek S. Arndt, 2012: State of the climate in 2011. *Bull. Amer. Meteor. Soc.*, **93**, S1–S282. <http://dx.doi.org/10.1175/2012BAMSSStateoftheClimate.1>

Abstracts/Meetings

- Zubair, L. and P. Agalawatte, Skill Assessment of Intra-Seasonal Rainfall Prediction for Sri Lanka. *The First International conference on Oceanography in the Bay of Bengal*, Hotel Taj Samudra, Colombo, Sri Lanka. November 28-29, 2012 (pp 14).
- Zubair, L., Z. Yahiya, P. Agalawatte and D. Herath. Meteorology and Predictability of Tropical Storm ARB-04 in the Equatorial Indian Ocean during November 2011. *The First International conference on Oceanography in the Bay of Bengal*, Hotel Taj Samudra, Colombo, Sri Lanka. November 28-29, 2012 (pp 29).
- Sanjaya Ratnayake, Sewwandhi Chandrasekara and Lareef Zubair. Statistical downscaling global climate models to fine-scales over Sri Lanka for applications in the fisheries sector. Proceedings of the National Aquatic Resources Research and Development Agency (NARA) Scientific Sessions 2012 (pp.63).
- Chandrasekara S.S.K. Stream reservation encroachment in Sri Lanka: Can it be solved by improving the existing communication channels? International Conference on Climate, Water and Policy (ICCWP) 2012. Busan, Republic of Korea. September 11-13, 2012 (pp 142-143).

Feature articles

December 2012: *The Present and Future of Man-made Flooding in Akurana* (Lareef Zubair, Zeenas Yahiya, Eng. M.Z. M. Hilal) – News View, Akuruna

Reports

Project reports submitted to the Masters in Development Practice at the University of Peradeniya:-

- Zubair, L., Yahiya, Z., Chandimala, J., Siraj, M.R.A., Siriwardhana, M., Tennakoon, U., Weeraskera, M., Chandrasekara, S., Ratnayake, S., Ariyaratne, K., Bandara, I., Bulathsinhala, H., Abeyratne, T., Samuel, T.D.M.A. and Hansen, J. Adaptation and Impact Assessment to Climate Change of Plantation Sector in Sri Lanka.
- 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.
- Zubair, L., Connor, S.J., Ward, N., Galapaththy, G.N.L., Mahanama, S., Faizal, H.M., Yahiya, Z., Siriwardhana, M., Tennakoon, M., Chandimal, J., Razick, S., Nawarathna, B., Shaman, J., Ndiaye, O. and Yang, H. Analysis of Impacts of Climate Variability on Malaria Transmission and the Development of Early Warning System.
- Zubair, L., J. Chandimala, V. Ralapanawe, U. Tennakoon, M. R. A. Siraj, and Z. Yahiya. Evaluation of Climate and Habitat Interactions Affecting the Conservation and Management of Asian Elephants in Southeast Sri Lanka.
- Sanjaya Ratnayake. Downscaling Global Climate Model Outputs to Fine Scales over Sri Lanka for Assessing Drought Impacts, APCC Young Scientist Support Program 2012, Asia-Pacific Economic Corporation (APEC) Climate Center (APCC), Busan, S.Korea
- Sewwandhi Chandrasekera. MJO and ENSO Interactions on Monsoonal Rainfall over Sri Lanka, APCC Young Scientist Support Program 2012, Asia-Pacific Economic Corporation (APEC) Climate Center (APCC), Busan, S.Korea

Grants Ongoing

- Launching a Masters in Sustainable Development Practice at the University of Peradeniya, *MacArthur Foundation*, FECT component - FECT shall develop curricula for the course on Climate and Society; support teaching; and work with government, non-governmental, development, and private sector organizations in support of placement of students and graduates. Investigators – Lareef Zubair, Zeenas Yahiya. (2010-2013)

Grants Awarded

- “Development, evaluation and application of a toolkit for regional crop yield forecasting and climate change impact assessment for Sri Lanka”, Investigators, Lareef Zubair. Contribution to the Department of Agriculture (NRMC) CCAFS (Climate Change, Agriculture and Food Security) project.
- Project on “Modeling the impacts of a variable and changing climate on rice and sugarcane agricultural systems in Sri Lanka”. An activity under the initiative “The Agricultural Modeling Intercomparison and Improvement Project in Sub-Saharan Africa and South Asia”, and sponsored by Department of International Development (DFID), UK and the United States Department of Agriculture – Agricultural Research Service (USDA-ARS); and executed by The Trustees of Columbia University in the City of New York, USA (CU). Investigators – Lareef Zubair, P. Wickramagamage, V. Ralapanawe, S. Ratnayake, Zeenas Yahiya, Sewwandhi Chandrasekera, Ranamalee Bandara in collaboration with the University of Peradeniya, University of Ruhuna, Sugarcane Research Institute, Udawalawe

- Grant for “Intra-seasonal climate predictions for Sri Lanka and Maldives for water resources management” from the US National Academy of Sciences awarded. Investigators – Lareef Zubair and P. Wickramagamage (2012 -2013).

Workshops

- January 2012 – Sewwandhi Chandrasekera, "Technology Grant 2012 -Workshop on Effective Proposal Writing", 30 January, 2012, NSF, Colombo.
- February 2012 - Zeenas Yahiya "Social Sciences research and comprehensive research proposal development" 24 - 25 February 2012, NSF, Colombo.
- November 2012 – Lareef Zubair, Prabodha Agalawatte, Dumindu Herath, Yasas Harischandra, Erandika Wijekoon, and Zeenas Yahiya participated at the AgMIP South Asia Regional Projects Kickoff Workshop, from 12-16 November 2012, Cinnamon Lakeside Hotel, Colombo, Sri Lanka.
- November – December 2012 – Zeenas Yahiya, Scenarios development workshop CGIAR Research Program on Climate Change, Agriculture and Food Security (CCAFS), Nov 29th - Dec 1st, Cinnamon Lakeside Hotel, Colombo, Sri Lanka.

Conferences

- October 2012 – Prabodha Agalawatte & Zeenas Yahiya, Water professionals day symposium, Faculty of Agriculture, University Of Peradeniya, Oct 1, 2012.
- November 2012- Lareef Zubair and Prabodha Agalawatte, ONR-NARA conference on Oceanography of the Bay of Bengal, Hotel Taj Samudra, Colombo, Nov 17-18, 2012.
- December 2012- Sewwandhi Chandrasekara and Yasas Harischandra, "Meeting Challenges in Fisheries and Aquatic Resources Development", National Aquatic Resources Research and Development Agency (NARA), Colombo, Dec 4, 2012.

Discussions

- April 2012 – Lareef Zubair, Madura Weerasekera, Sewwandhi Chandrasekara, Meeting on the sidelines of the CCAFS on crop modeling, Jetwings Sea Hotel, Negombo, 19-4-2012
- November 2012 – Zeenas Yahiya roundtable discussion on “Strengthening Responses to Climate Variability in South Asia” International Alert, Colombo Hilton Residences, 14-11-2012

Training

- September 2012 – Sewwandhi Chandrasekara, Young Scientist Support Program 2012, September –November to the Asia Pacific Climate Centre in Busan, South Korea
- October 2012 – Sanjaya Ratnayake left Young Scientist Support Program 2012, October-December, Asia Pacific Climate Centre in Busan, South Korea

Presentations

- Lareef Zubair, “Climate services for Sugarcane in Sri Lanka” Sugarcane Research Institute, Annual Sessions, Udawalawe, 15-16 March, 2012
- Lareef Zubair, Climate and Agriculture in Sri Lanka, AgMIP South Asia Launch workshop, ICRISAT, Hyderabad, India, February, 2012
- Lareef Zubair, “Crop yield forecasting for Sri Lanka” CCAFS Theme 3 conference on Crop Yield Forecasting, Negombo, April 19, 2012
- Lareef Zubair, “Climate Science for Adaptation” at the Department of Environmental Sciences, Sunny Albany, New York, July 2012.

Personnel: Rashid Zubair joined FECT as a Web Developer, Prabodha Agalawatte was recruited to FECT as Junior Scientist, Dumindu Herath joined as an Intermediate Research Scientist, Erandika De

Alwis joined as a Junior Research Economist & Yasas Harischandra joined as a Junior Research Scientist. Madura Weerasekera left FECT in late 2012.

Internship begins to the first batch of students in the Masters in Development Practice (MDP) course - 4 or 5 of the interns shall be directed through FECT on their internships.

Proposals and concept notes

February / March 2012 – “*Modeling the impacts of a variable and changing climate on rice and sugarcane agricultural systems in Sri Lanka*” under the “The Agricultural Modeling Inter comparison and Improvement Project (AgMIP) in Sub-Saharan Africa and South Asia”, to AGMIP. (Lareef Zubair (PI), Investigators: S. Ratnayake, Ms. Ranmalee Bandara)

March 2012 – “*Developing Hydro-meteorological Services to Support Planning, Design and Management of Mini-Hydropower Production*”, Technology Division of National Science Foundation. ((Lareef Zubair (PI), Co-PIs: Janaki Chandimala, Sanjaya Ratnayake, Co-Investigators: Madura Weerasekera, Sewwandhi Chandrasekara, Zeenas Yahiya)

May 2012 - “*Intra-seasonal climate predictions for Sri Lanka and Maldives for water resources management*” was one of the 42 selected from among the 488 applications submitted to receive a grant under the Partnerships for Enhanced Engagement in Research (PEER) Program. (Lareef Zubair (PI))

May 2012 – Expression of Interest to NRC on “*Enhancing the commercial viability of mini-hydropower generation through improving efficiencies of generation using advanced climate services and optimization of its export to the electrical grid*”. Concept Note encouraged for further development but with a requirement of 50% co-financing. Proposal not developed. (Lareef Zubair (PI))

July 2012 – “*Assessing Water Scarcity and Alternative Mitigation options for the Maldives*” to Sustainable Development Department, South Asia Region, World Bank. Although the proposal was accepted it was not undertaken due to inadequate budget. (Lareef Zubair (PI))

Partnership Services

- 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/>
- Continued to support the 30-day predictions for 6 Regions.
- Continued various rainfall estimation tools.
- Collaboration with the Maldivian Meteorological Department on Plans for Capacity Building
- Collaboration with Renewable Energy Maldives on Proposal Development.
- Monthly Hydro-meteorological Advisory services to Maldives

Web Development

We updated our website <http://www.climate.lk>.

<http://fectsl.wordpress.com/> which is linked to our main website.

Maldives website - <http://www.tropicalclimate.org/maldives>

fectmv.blogspot.com is being regularly updated

Maintained the MDP website - <http://www.tropicalclimate.org/mdp/>

www.tropicalclimate.net/maldives Maldives work is being kept up to date.

Documentation

- Flyers on FECT contribution to the Masters in Development Practice at the University of Peradeniya
- Updated the FECT brochure

Administration: Financial management of bank accounts at Peoples Bank and Hatton National Bank has been smooth. Deposits at Ceylinco Group continue to be frozen with 70% of the amount now released. Our Auditors, Anzari and Co., has reported on a healthy state of financial management in the last Audit conducted until March 2012.

Collaborations: We had productive collaborations with personnel attached to Mahaweli Authority of Sri Lanka (MASL), University of Peradeniya (UOP), Open University of Sri Lanka (OUSL), and the Institute of Fundamental Studies (IFS), Kandy. Internationally, we collaborated with NASA Goddard Space Flight Centre, Columbia University, Indiana University Purdue University, University of Massachusetts, Lowell, International Research Institute for Climate and Society (IRI), State University of New York (Albany), and International Crops Research Institute for the Semi-Arid Tropics (CGIAR), India. APEC Climate Centre (APCC), Renewable Energy Maldives, Land and Marine Environmental Resource Group Pvt Ltd., Maldives, Lanka Transformers (Pvt) Ltd., Sugarcane Research Institute, Uda Walawe, Gemidiriya (Gamanagama), MAS Intimates, Hydrodynamics (Pvt) Ltd., Anti Malaria Campaign, Kotmale International Training Institute, Rice Research and Development Institute, Batalagoda, Natural Resources Management Centre of the Department of Agriculture.

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