
FOUNDATION FOR ENVIRONMENT CLIMATE AND TECHNOLOGY

Progress for 2013

Summary: The work on projects for the Agricultural Systems Modeling (AgMIP) and PEER continued vigorously. Our program on the Masters on Sustainable Development at the University of Peradeniya, Climate Services for the Mahaweli Authority and the Maldives continued operationally. We had a supporting role in the CCAFS project conducted by NRMC of the Department of Agriculture. Our staff has had training at Local and International workshops. Concept Notes were submitted to IDRC and USAID small grant programs and a proposal to the PEER program.

Abstracts/Meetings

- Herath, D, De Alwis, A.E.N., Agalawatte, A.S.M.P.M.B., Harischandra, Y.G., Chandrasekara, S.S.K., Yahiya, Z., Zubair, L. and Samaratunga, P.A. Simulating Socio-Economic Impacts of Climate change on Rice Farming Systems: Trialing a Novel Integrated Methodology for Kadawaramulla, Kurunegala. *Peradeniya Economics Research Symposium (PERS) 2013 Proceedings*. University of Peradeniya. 29 August, 2013 (pp 38 – 42).
- Zubair, L. Characterizing Climate Variability and Climate Change over Sri Lanka for Adaptation. *SLAAS – Theme Seminar “Adaptation and Mitigation Strategies for Climate Change, Ensuring Sustainable Socioeconomic Development”*. 3rd December, 2013.
- Chandrasekara, S.S.K., Yahiya, Z., Agalawatte, P., Weerasekera, M., Zubair, L., Nawaratna, B. and Bell, M. (2013). Experimental climate services for water management in Sri Lanka and Maldives. Sri Lanka Water Convention 2013. Conference Proceedings. National Water Supply & Drainage Board, Sri Lanka. ISBN 978-955-4731-00-4. P 37-41.
- Chandrasekara S.S.K. (2013). Institutional capacity to protect stream reservations in Sri Lanka: Case Study in Kalugamuwa Grama Niladari Division-GeliOya. Sri Lanka Water Convention 2013. Conference Proceedings. National Water Supply & Drainage Board, Sri Lanka. ISBN 978-955-4731-00-4. P 118-121.
- Zubair, L, Intraseasonal Climate Prediction for Water Management in Sri Lanka and Maldives, PEER PI conference, Bangkok, September 30, 2013
- Zubair, L, Building International Bridges and Taking on Global Challenges Through Science: Lessons Learned from PEER and related Projects in Sri Lanka and Maldives, PEER PI conference, Bangkok, September 30, 2013

Grants Ongoing

- **MDP:** 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. (2010-2014)
- **AgMIP:** 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 Columbia University. Investigators – Lareef Zubair, P. Wickramagamage, V. Ralapanawe, S. Ratnayake, Zeenas Yahiya, Sewwandhi Chandrasekera, Ranmalee Bandara in collaboration with the University of Peradeniya, University of Ruhuna, Sugarcane Research Institute, Udawalawe, Rajarata University (2012 – 2014).

- **PEER:** “*Intra-seasonal climate predictions for Sri Lanka and Maldives for water resources management*” from the US National Academy of Sciences. Investigators – Lareef Zubair (2012 -2015).
- **CCAFS:** “*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 (NRMCC) CCAFS (Climate Change, Agriculture and Food Security) project. (2012 – 2015).

Workshops

- March 2013 - Sewwandhi Chandrasekera and Yasas Harischandra, participated at the AgMIP Multiple Crop Model Training Program (DSSAT and APSIM crop models). From 25th -29th March 2013, at the International Crop Research Institute for Semi-Arid Tropics (ICRISAT), Hyderabad, India.
- April / May 2013 – Dumindu Herath and Erandika Wijekoon, participated at the AgMIP workshop for regional teams on TOA-MD modeling held in Dubai from 29th April to 3rd May 2013.
- May 10, 2013 - Yasas Harischandra, Lareef Zubair, K. Sanmuganathan participated at the workshop on Mainstreaming Climate Information Application for Enhancement of Agro – ecosystem Services and Functions in the Nilwala Basin. Organizers: Asian Disaster Preparedness Center (ADPC) and Faculty of Agriculture, University of Ruhuna, Matara.
- May 2013 - Lareef Zubair, Prabodha Agalawatte, Dumindu Herath, and Sewwandhi Chandrasekera participated at the training program on crop model “STICS” at Upper Hantana sponsored by University of Peradeniya and FECT held on 13th to 17th May 2013, at the Faculty of Agriculture, University of Peradeniya.
- July 2013 – Lareef Zubair, Prabodha Agalawatte, Dumindu Herath, Erandika Wijekoon, Sanjaya Ratnayake and P. Wickramagamage participated at the AgMIP South Asia regional research and coordination team midterm review workshop held from 22nd to 26th July 2013 at Hotel Annapurna, Kathmandu, Nepal.
- July 2013 – Lareef Zubair, Prabodha Agalawatte participated at the AgMIP Climate Training workshop at Acharya N. G. Ranga Agricultural University (ANGRAU), Hyderabad, India.

Conferences

- February 2013 - Symposium on Pinga-Oya was held on 19th Tuesday February 2013 Organized by Foundation for Environment , Climate & Technology and Department of Geography, Faculty of Arts, University of Peradeniya.
- March 2013 – Sewwandhi Chandrasekera and Prabodha Agalawatte participated at the Sri Lanka Water Convention 2013, organized by the Ministry of Water Supply & Drainage and National Water Supply & Drainage Board (NWSDB) held on 21st March 2013, at BMICH, Colombo,

- July 2013 – Sewwandhi Chandrasekera participated at the Extension Workshop on popularizing Bio-fertilizer. At Institute of Fundamental Studies (IFS) – Hantana, Kandy, Sri Lanka, on 11th July 2013.

Discussions / Meetings

- 11th Thursday, April 2013 - Agmip Project Review Meeting. This was organized by Foundation for Environment Climate and Technology with their AgMIP project collaborators in the Department of Geography Seminar Room, University of Peradeniya,
- 5th April 2013 - Dr. Sarith Mahanama, Scientist of NASA, Goddard space flight center in USA, who has helped FECT team to develop AgMIP Sri Lankan proposal visit to University of Peradeniya.
- 15th October 2013: Panel Meeting of Water Management Secretariat – Sri Lanka. Water Management Secretariat (WMS) MASL at Plant Genetic Resources Center (PGRC), Gannoruwa, Sri Lanka.

Training & Capacity Building

- Uthpala Mudalige, and S.H.Y Indrachapa joined FECT as interns from the Department of Geography and they were later recruited to FECT to complete the Proceedings of the Pinga Oya Symposium.
- Internship training was provided by FECT for two researchers from the Agricultural Faculty:- G.M.Pradeep Kumara, and Hasara Ratnasara joined FECT on their Industrial training assignment.
- G.M.P. Kumara completed his internship and thesis at FECT, December 2013 – BSc. Thesis on “Modeling the Effects of Water Stress on Paddy Yield using APSIM” by G.M.P. Kumara.
- August 2013 – Internship report on “Survey of Practices of Rice Farmers in the Meegalewa Block in System H of the Mahaweli River Basin Development Project” by Hasara Ratnasekera
- May. 2013 - L. Zubair contributed on climate issues for a training course on crop modeling held at the University of Ruhuna.

Dissemination

June 2013 – An Environment Day Program was held at Azhar Central College, Akurana to commemorate the Environment Week. The program was organized by the Akurana Pradeshiya Sabha (PS) with the collaboration of FECT. <http://www.tropicalclimate.org/envday/>

Farm Surveys

February 2013 – Conducted farm surveys in Kadawaramulla, Melsiripura,

July 2013 – Conducted a farm survey in Mahaweli System C (Mahawanawela)

November 2013 – Conducted farm surveys in Mahaweli System H (Meegalawa)

November 2013 – Conducted Farm surveys for Yala at Kadawaramulla)

Sep 2013 – Dec 2013 – Farm surveys on Sugarcane were conducted in Sevanagala, in Udawalawe.

Presentations

- Chandrasekara, S.S.K., - Experimental climate services for water management in Sri Lanka and Maldives. Sri Lanka Water Convention 2013. Conference Proceedings. National Water Supply & Drainage Board, Sri Lanka. (March, 2013)
- Poster presentations - Chandrasekara S.S.K. (2013). Institutional capacity to protect stream reservations in Sri Lanka: Case Study in Kalugamuwa Grama Niladari Division-GeliOya. Sri Lanka Water Convention 2013. Conference Proceedings. National Water Supply & Drainage Board, Sri Lanka.
- Chandrasekara S.S.K. (2013). Climate Services on Agricultural Decision Making in Sri Lanka. Extension Workshop on Popularizing Biofertilizer Inoculants, Institute of Fundamental Studies, Kandy.
- Chandrasekara S.S.K. (2013). Experimental Climate Services for Water Management in Sri Lanka and Maldives at Workshop on Mainstreaming Climate Information Application for Enhancement of Agro - ecosystem Services and functions In Nilwala Basin, University of Ruhuna. Matara.
- Zubair, L. (2012). Simulating Socio-Economic Impacts of Climate change on Rice Farming Systems: Trialing a Novel Integrated Methodology for Kadawaramulla, Kurunegala. At the *Peradeniya Economics Research Symposium (PERS) 2013 Proceedings*. University of Peradeniya.

Personnel: Janan Visanathan and Uthpala Mudalige joined FECT as IT Administrators, Darshana Wijesinghe was recruited to FECT as a Junior Research Scientist, and S.H.Y Inndrachapa joined as a Research Assistant. Wasantha Samarawickrema was recruited to FECT as an Administrative Assistant and Anjala Ratnam as Administrative Aide. Mr. Kanagaratnam Sanmuganathan was employed at FECT as a Senior Research Scientist under the AgMIP project. Uthpala Mudalige, Anjala Ratnam, Wasantha Samarawickrema, Darshana Wijesinghe and S.H.Y Indrachapa left FECT.

Proposals and concept notes

- December 2012 – “Delineating Near-Term Climate Change, Water Sustainability and Drought Risk for Adaptation and Risk Management in the Maldives” to Partnerships for Enhanced Engagement in Research (PEER) Program. (Zeenas Yahiya (PI), L. Zubair (co_PI))
- April 2013 - “Adapting to Climate Change in Vulnerable Coastal Communities in Southern Asia and Northern Africa” to Collaborative Adaptation Research Initiative in Africa and Asia (CARIAA). (Lareef Zubair (PI))
- May 2013 – “Investigating Recent Trends in Seasonal Climate for Sri Lanka and Maldives for Water Resources Management using a Regional Climate Model” to USAID Small Grants Program (JianHua Qian (PI), L. Zubair (co_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 Sri Lankan Regions.
- Continued various rainfall estimation tools.
- Collaboration with the Maldivian Meteorological Department Collaboration with Renewable Energy Maldives on Proposal Development.
- Monthly Hydro-meteorological Advisory services to Maldives

Web Development

We substantially updated our website <http://www.climate.lk> linking the blogs <http://fectsl.wordpress.com/> , www.peersl.wordpress.com , - www.agmipsl.wordpress.com and others listed below to our main website.

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

And the blog fectmv.blogspot.com is being regularly updated

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

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.

Staff

In January 2013, Janan Visanathan joined FECT as IT Administrator, Darshana Wijesinghe was recruited to FECT as a Junior Research Scientist working at UdaWalawe, Uthpala Mudalige and S.H.Y Indrachapa joined as a Research Assistants. Wasantha Samarawickrema was recruited as an Administrator and Anjala Ratnam as an Administrative Aide. Mr. Kanagaratnam Sanmuganathan was recruited to FECT as a part-time Research Scientist under the AgMIP project. S.M. Revathy was a visitor to FECT starting in December 2013. Uthpala Mudalige, Anjala Ratnam, Wasantha Samarawickrema, Darshana Wijesinghe and S.H.Y Inndrachapa left during the course of the year.

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 Massachussets, 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.

Acknowledgements: We are thankful to Mr.G.S.S. Jayaweera, Director Headworks (MASL), Eng. Thilaka Samaratunga, Director, Water Management Secretariat and their staff for sustained support at the Mahaweli Authority in many ways. In the Maldives, we thank Ms. Hudha Ahmed, Dr. Zahid, and Dr. Mizna Mohamed. Our affiliate scientists, Neil Devadasan, S. Mahanama, Vidhura Ralapanawe, P. Wickramagama, Ajith Gunaratne, Nalin Wickramanayake and Herath Manthirithillake continue to support us in many ways. We acknowledge the support of Dr. Kanthi Perera, Prof; Champa Navaratne and Prof. K.D.N. Weerasinghe (UoR), Dr. A.P. Keerthipala, Mr. Chandrajith De Silva, Ms. Sandya Ariyawansa (SRI, Udawalawe), Dr. Chamila Walgampaya, Mr. Sampath Deegalla (Faculty of Engineering, UoP), Dr. W.M.W. Weerakoon, Mr. Chamila Perera (DoA, Maha Illupallama), Dr. S.P. Nissanka (Department of Agriculture, UoP), Dr. B.R.V. Punyawardene (NRMC/Department of Agriculture), Dr. Anurudha Kankanamge (Econ Department, UoP), Eng. M.J.M.N. Marikkar (LTL Holdings), Eng. Ananda Weerasinghe (Hydrodynamics (Pvt) Ltd), Ms. Hudha Ahmed (Renewable Energy Maldives), Mr. Dammika Bandara (MASL). We

thank Dr. L. Galagedera and Dr. Shamala Kumar of the Faculty of Agriculture, University of Peradeniya for liasing with us. We thank Mr. Ranjith Senevirathne, and the staff of the HAO&M Unit of the MASL for their support extended.

We are grateful to Prof. P.Wickramagamage- Head, Department of Geography, Dr. M.T.M. Mahees- Senior Lecturer, Department of Sociology, University of Colombo; Ms. Lalitha Dissanayake- Lecturer, Department of Geography, University of Peradeniya. Dr. Gemunu Herath- Senior Lecturer, Department of Environmental Engineering, University of Peradeniya, Mr. Farook Nawas, Senior Lecturer, South-Eastern, University, Dr. Hemali Ampitiya, Eng. J.M. Samoon, and the non-academic staff of the Department of Geography for their support for the Symposium on Pinga-Oya. We are grateful to the officers of the Akurana AGA office, teachers from Akurana schools and to the staff of the Department of Geography for their support.

We are grateful to Mr. AMM Simsan the Chairman, Mr. Rajapakse, Administrator, Ms. Rupika Ekanayake, Environmental Officer, of the Akurana Pradeshiya Sabha (PS), staff of Environment Committee coordinated by Akurana PS, the Akurana Divisional Secretariat for their support. We thank Mr Simsan, Ms. Ekanayake, Mr. A.R.M. Uwais, Principal Akurana Central College, Eng. LLA Pieris - DGM (National Water Supply & Drainage Board), Mr. H.K. Kahawatte (Deputy Director Central Environment Authority), Dr. A. Chandrasekara of CIC Agri-business (Pvt) Ltd, Dr. P.H.D. Kusumawathie of the Anti-Malaria Campaign, and Ms. Lisa Fleming (Visiting Fulbright scholar, California, USA) for their presentations .We thanks the students and teachers of Alawatugoda National School, Akurana Balika Maha Vidyalaya, Akurana Central College for their performances. The Akurana Womens' Welfare Association (AWWA), Akurana Newsview, Azhar Central College – Akurana, Akurana Muslim Balika Maha Vidyalaya, Akurana Zahira Central College, Alawathugoda National School, AQL International College, Akurana Dippitiya Maha Vidyalaya, Dunuwila Rathanapala Maha Vidyalaya (Navodya)}, and the Young Friends Akurana for the support extended towards us in making the Environment Day a success.

We thank James Hansen, Amor Ines of the IRI for their support with the CCAFS and AgMIP programs. We thank Michael Bell, Benno Blumenthal and Remi Cousins of the IRI for their support in numerous ways. At Columbia University, we thank Profs. Adam Sobel, Upmanu Lall, Dr. Bradfield Lyon and Mr. Haibo Liu for various support including for the PEER grants. We thank Shaky Sherpas for his support with our various work. We thank the staff of the AgMIP program at Columbia University – Cynthia Rosenzweig, Andrew Thibodeau; and Alex Ruane, and Sonali McDermid of NASA GISS. We acknowledge the support of Profs. Jim Jones, Cheryl Porter and Ken Boote of the University of Florida; Prof. John Antle and Dr. Roberto Valdivia of University of Oregon State, Dr. Peter Thorburn and Dr. John Hargreaves of CSIRO and Dr. Balwinder Singh of IRRI. Kelly Robbins, Al Mattei, and Dalal Najib of USAID has been supporting us with the PEER project. We are grateful for the interactions of Ms. Mary Ackley and Eng. M. Auff of USAID, Sri Lanka.

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@slt.net.lk
WEB SITE <http://www.climate.lk>