

Monitoring Drought and Assessing Climate Change In Sri Lanka and Maldives

Foundation for Environment, Climate, and Technology [FECT];

Maldives National University [MNU]; Male' Water & Sewerage Company, Mahaweli Authority of Sri Lanka [MASL]; University of Peradeniya [UoP]; Columbia University, USA. Sponsors: US National Academy of Sciences and USAID.

Summary: Scientists from the Foundation for Environment, Climate and Technology, Maldives National University, Columbia University are collaborating with regional Universities, Water Supply and Meteorological Services to develop monitoring and predictive tools for drought risk and to address a phenomenon in climate change projections which predict a wetter climate although what has been experienced is sustained drying. This project is sponsored under the PEER program of the US National Academy of Sciences and USAID program in Sri Lanka and Maldives.

Duration: 2014-2017

Our goal is to develop an operational, state of the art drought assessments using climate information and to assess the climate change impacts on drought risk in Sri Lanka and the Maldives more reliably in the next decades.

Objectives:

1. Developing Drought hazard analysis and monitoring
2. Develop Assessment of near-term climate change
3. Undertake Drought and water scarcity projections for selected locations
4. Improve hydro-climatic advisories prepared by FECT for Dissemination and outreach including analysis of climate information by disaster experts
5. Capacity building through improving research infrastructure and training for research students

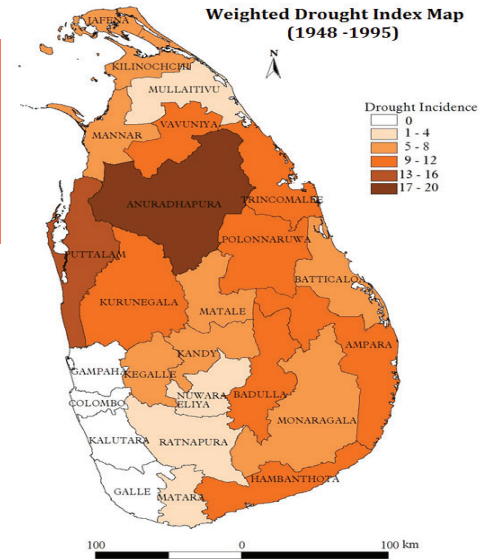
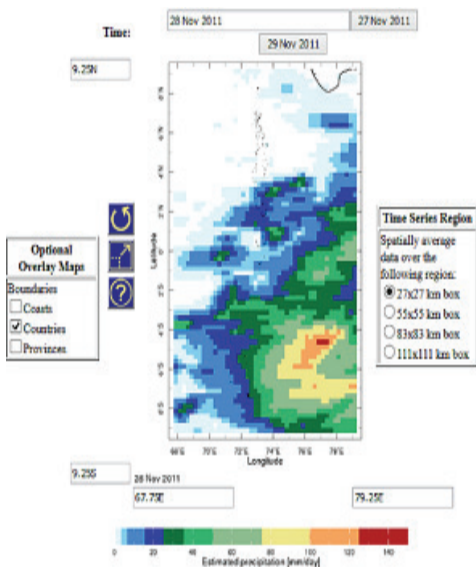


Figure: Drought disaster index with weighted drought disaster occurrence for the period 1948-1995, at District Level

Anticipated Development Outcomes

- i. Gains from improved water and drought risk management and policy making.
- ii. Demonstration in generation and use of climate information for disaster risk management
- iii. The provision of near-term climate change projections.
- iv. Development of expertise in application of drought and near-term climate change information.



Figures: Web tool for rainfall monitoring for Maldives

What has been done?

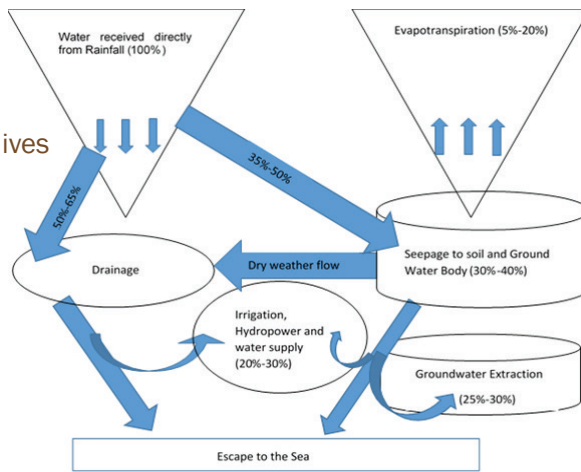
I. Climate Analysis & Tools - Progress

- * Developed tools for rainfall monitoring from Satellite data
- * Compilation of climate predictions
- * Ongoing weekly & monthly dissemination of climate reports
- * Developed tools for drought monitoring



II. Drought Risk Assessment

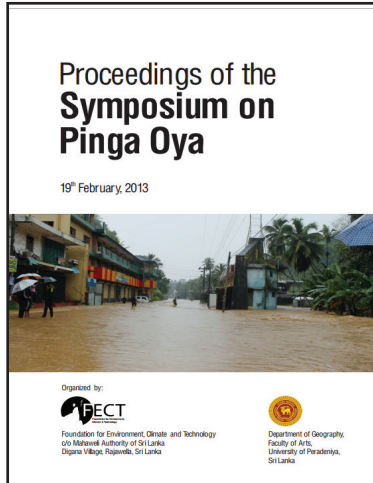
- *Estimating water scarcity in Greater Male' Maldives
- *Data analysis on disasters in Sri Lanka
- *Seasonal climate reports for Sri Lanka
- *Pinga Oya floods & environment assessment



Schematics of typical water balance for Maldives

III. Scientific Conferences & Publications

- *Conference contribution
- *Book publications
- *Journal publications
- *Pinga Oya symposium proceedings



Proceedings of the Symposium on Pinga Oya

IV. Dissemination and Training

- *Training of junior scientists
- *Contribution to University education
- *Web & social media dissemination of products
- *Workshops & media outreach



Mr. Abdul Matheen Mohamed (Minister of State for Environment & Energy), Ms. Nihani Riza (USAID), Ms. Zeenas Yahiya (FECT) and Ms. Shazla Mohamed (MNU) at the Climate & Water Security Workshop at MNU

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Left: Audience (Front row: Left -Paul Richards (USAID) Right - M. Rasheed (MWSC); Right: the panel comprising of Speakers (L-R: Dr. Mizna Mohamed (MNU), Dr. Zahid (MMS), Dr. Shazla Mohamed (MNU), Mr. M.R. Bari (Wate care, Water Safety), Dr. L. Zubair (FECT), and Mr. M. Rasheed (MWSC)