

Expert Consultation Meeting on South Asia Drought Monitoring System (SADMS) with focus on Sri Lanka

26 September 2017

International Water Management Institute (IWMI) in Colombo, Sri Lanka

The meeting was organised by Sri Lanka Water Partnership (SLWP) with the collaboration of IWMI, CGIAR Research Program on Water, Land and Ecosystems (WLE) and Japan's Ministry of Agriculture, Forestry and Fisheries (MAFF) with the intension of making the system more user friendly at Sri Lankan condition and bringing it into the operational decision making platforms of country's agriculture, water management and disaster management agencies.

Experts representing Ministries of Agriculture, Irrigation and Water Resources, Mahaweli Development and Environment, Disaster management, Departments of Irrigation, Meteorology and National Planning, Ceylon Electricity Board, National Water Supply and Drainage Board, Disaster Management Centre, United Nations agencies including UNCEF, UNDP and non-governmental organisations were gathered for the meeting. The total number of participants was 28 including resource persons from IWMI and SLWP.

The given brief only contains the discussions held between resources persons and participants in each session of the meeting.

Session-I: National Perspectives

Moderator: Herath Manthrithilake, IWMI Sri Lanka Country Representative

In this session, stakeholders from various agencies briefly introduced their current drought monitoring and early warning mechanisms and gaps and challenges in drought preparedness and mitigation measures.

Watsala from UNICEF mentioned that in referring remote sensing images, Sri Lanka is presented in green indicating having a wet climate most of the time, whereas in reality it is completely different. Therefore, the agencies working on drought are expecting to get data, which goes beyond Normalized Difference Vegetation Index (NDVI).

A representative from Mahaweli Authority of Sri Lanka (MASL) mentioned that, some of the farmer communities have developed their own seasonal plans, as the monsoonal/dry seasonal predictions are not accurate. Therefore, MASL is happy to accommodate a system that provides accurate data that can be shared with this selected group of knowledgeable farmers who then could adjust their farming practices accordingly.

The representative from Japan International Cooperation Agency (Jica) mentioned that the SADMS would be a good data platform for them. Bringing an example he said, the ongoing drinking water project established in Kilinochchi was developed based on the available data and system was developed with a slow sand filter. Whereas, if accurate and updated climate data are freely available it would facilitate Jica to develop drinking water projects more efficiently in the future.

Alena from USAID mentioned that although number of weather forecasting systems are in place the most important thing is how we are going to use those in smarter way. Most importantly, the country has ample amount of water and the water managers need to figure out the way to manage water with available tools and capacity. Further, she said, this is a useful discussion as representatives from different sectors are attending the meeting.

The official from Ministry of National Planning mentioned providing aid and compensations to farmers affected with flood and droughts has become a heavy burden to the cash flow of the National Treasury. As a result, the government at the Policy level is considering the feasibility of transferring funds to water resources management, in terms of improving storage capacity of existing storage tanks and constructing new reservoirs. They also have taken steps to encourage the line ministries to practice smarter agriculture systems. Therefore, the given SADMS could be used as a tool for the Ministry of National Planning to take their decisions.

There was a question from Giriraj on the responsible authority in Sri Lanka who is consolidating all the information related to natural disasters, impacts and adaptation measures and sharing with the government to make appropriate decisions. The group informed that, the Ministry of Disaster Management is the information management and coordination hub for natural calamities. Further, World Food Programme (WFP) is assisting the government in this process.

There was another comment from the representative from National Water Resources Development Board. He mentioned, getting access to data is important but the most important thing is utilising the data at the field level. The data needs to be analysed and presented in an understandable manner – to develop sustainable solutions – develop disaster management plans – should introduce the scientific approach to farmers and empower them.

Session-II: Current updates on SADMS and future plans

Presenter: Giriraj Amarnath, Research Group Leader: Water Risks and Disasters (WRD), IWMI

Giriraj introduced the potential application of SADMS as an integral part of drought management efforts. The presentation covered the aspect of system developing including various drought indices, validation at various levels, operational platform and its relevance to drought contingency plans with case studies in India and Sri Lanka.

Department of Irrigation raised a question and asked whether there is an application in drought monitor to measure the relationship of water/availability of reservoirs with drought. Giriraj answering the question said, at the moment the system does not carry such a tool. Further, IWMI is planning a pilot project to analyse a similar situation in one of the regions in India where the same results can be applied to Sri Lanka.

There was a comment from Meteorological Department that department is interested in collaborating with SADMS data validation as Sri Lanka having different topographies the accuracy of the satellite data is questionable. Giriraj mentioned though the system used original data sets developed by various departments and also used long-term (2001-2014) anomalies in developing the maps. Still, IWMI is happy and willing to work closely with the Meteorology Department and adjust the monitor accordingly.

Ministry of National Planning raised whether the SADMS contains a system to measure the country's production loss in a given forecasted drought. He further said that if the Min. Planning can get the crop yield predication data in advance, it would help the government to adjust the import and export tariff as well as goods. Giriraj said that, although the results cannot be extracted directly from the system, the projection to crop loss could be generated using IWMI's specialised programme called crop advisory service. The production loss can be derived utilising the forecast taken from drought monitor, long-term vegetation index and current/past production data. Ultimately, based on derived information the governments can decide on the deficits. There is also another method developed by FAO. Giriraj further said that this is one of the advantage of the SADMS, whereas this decision support tool is not present with weather forecast.

Watsala from UNICEF informed that WFP is currently managing a disaster management information system called PRISM¹ and collaborating with the Ministry of Disaster Management. Therefore, there is an avenue for IWMI to collaborate with WFP. Manthrithilake responding said IWMI is open for possible collaboration with WFP and also there was some amount of discussions went on and stopped at a certain level.

Next, she said, SADMS is only looking at the aspects of hazard and exposure. Giriraj confirming her statement said that adaptive capacity and vulnerability has to be introduced to the system and the team is looking for comprehensive set of information on these parameters. Further Giriraj said, SADMS is started as a regional monitoring programme and we are now at the stage of adjusting that to the national requirements. Therefore, at this stage the team is looking for

¹ The Platform for Real-time Information and Situation Monitoring (PRISM), a disaster management information system, was recently developed and is being installed in the Ministry of Disaster Management of the Government of Sri Lanka, based on a similar system in Indonesia known as the Vulnerability Analysis Monitoring Platform for the Impact of Regional Events (VAMPIRE). Both systems were developed alongside the domain experts from the World Food Programme offices in these countries.

national focal points to move forward. He informed IWMI is also looking for possible synergies, assimilation and comparison with other products developed by the actors in Sri Lanka i.e. and ultimately to support the government to make accurate decisions.

At the end of the session, Jica mentioned that they are currently conducting a Water Quality Monitoring Project in Kelaniya River Basin and this information can be used to improve the project. Giriraj appreciated it and invited Jica for further discussions.

Session-III: Panel discussion with key experts for SADMS implementation in Sri Lanka

Moderator: Ranjith Ratnayake, SLWP

Experts discussed on the way forward in the implementation of SADMS including capacity building, internalisation of the system, fund raising and development of a road map by covering these aspects with all participants and target donors.

Ranjith further mentioned that this is the time for the Sri Lankan experts to measure the comparative advantage of newly developed SADMS and to see whether the value addition is worthwhile. In the future, SLWP will communicate with the agencies about the product and on resource mobilisation.

Department of Meteorology indicated the gap in capacity if they are to incorporate the tool in their daily operations.

Natural Resources Management Centre (NEMC) representative mentioned that although the ministry has already started information dissemination regarding upcoming disasters through SMS system (1920) to the farmers, the information which can be gathered from the new system would definitely improve the communication and would give strength to the ongoing programme. In addition, he also showed their willingness to share information with the Ministry of National Planning as NRMC gathers information at field level and having a data pool.

Giriraj submitting his suggestion said, he prefers to do an outlook/bulletin by involving all the stakeholders (meteorology, irrigation, agriculture and disaster management). The bulletin would carry scientific knowledge – no need to be 100% accurate, as farmers are knowledgeable enough to decide accordingly – and should be simple. After deciding on the interested parties, then all can decide on a template, a focal point and later can check for the usability of the bulletin. Almost all the participants confirmed the submission.

There was another comment from Ranjith, on a Vulnerability Profiling for every AGA division developed by (Asian Development Bank (ADB) in 2010. Unfortunately, this has not been

continued and stopped with the closure of the particular project – we need to look into the existing products he mentioned.

Watsala from UNICEF answering the question from Giriraj on prospects of using the tool in the future by UN, she said UN will definitely using the tool with given improvements. They expect IWMI to improve the product with an in-depth analysis of how the data can be transferred to measure the humanitarian impact. Therefore, it is preferable if IWMI could incorporate the crop advisory information as suggested earlier. In the perspective of donors, now donors are exhausted by funding the annual natural disasters occurring in SL and complaining that they are not willing to support the humanitarian needs in the future. They are explaining flood and droughts as more of development issues and the government is responsible to absorb the shock. Whereas, the SADMS shows the potential of influencing the changes at the policy level, which is helpful and the UN would be using SADMS with the given amendments are in place.

In further explaining the private sector collaboration for fund raising, the private sector is having a specific interest on long-term drought mitigation. Therefore, they will also be interested on this product and IWMI could explore the possibility of working with the Private Sector Network that the UN is also working with.

Watsala further commenting said, UN and some other INGOs are conducting research on vulnerability index-which IWMI can extract data for further improve the product. Therefore, it is recommended to the team to interact more with UNICEF and WFP in the future. She also thanked the organisers for inviting UN for this important gathering and providing the opportunity to meet all the sectors involve in disaster mitigation in the country.

The representative from Mahaweli Authority thanking and appreciating the hard work suggested, in considering the high variability of hydrological and special conditions of the country, it is better improve the resolution of data. Giriraj reminded again that this was initiated as a regional system and now only planning to adjust to the needs of the countries said, the changes can be done according to the demand of each country and looking forward to develop more partnerships in the future. Further, he mentioned that, IWMI is planning to develop and refine the data sets for Sri Lanka upto 10-30m resolution in six months' time.

IWMI outgoing Director General and current Director General attended the meeting towards the end of the discussions. The meeting concluded successfully having had interactions with stakeholders involved in disaster response in different sectors of the country and with the hope of negotiations, collaborations and with prospects of improving the tool based on the needs of the country.