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## PRESS RELEASE

### Satellite based early-warning system to bolster drought risk reduction

*Experts meet in Delhi to discuss how South Asian countries could adopt the new drought monitoring system to better prepare and mitigate drought risks*

**(Delhi, January 30):** The South Asia Drought Monitoring System (SADMS) and its newly launched online portal was demonstrated at a regional workshop held in New Delhi today. The SADMS expected to provide near-real information of drought onset and progression helping decision makers respond in time. The interactive SADMS online portal, <http://dms.iwmi.org/>, would help in data sharing and viewing of all available drought and related maps for the entire region instantly.

Speaking at the event, Dr. Trilochan Mohapatra, Secretary (DARE) & Director General of ICAR, Government of India said, “South Asia routinely suffers from drought and severe impact on agriculture production and livelihoods. Early warning and monitoring system are important but at the same time need to be robust as climatic variation is huge and location specific. If water is going to be more limited in the future and droughts more frequent, a drought monitoring system would be even more relevant going forward.”

Experts from South Asian countries including Afghanistan, Bangladesh, Bhutan, India, Nepal and Sri Lanka participated in the workshop and discussed ways of using satellite remote sensing data and ICT for drought monitoring, and develop mitigation strategies in South Asia. “Droughts have the ability to adversely affect the economic well-being of a region. However, the risk posed by it could be reduced by taking preventive action in time. The SADMS is a comprehensive early-warning drought monitoring system to provide information in easy-to-understand maps, which pinpoint locations under distress and provide regional to district scale information about drought's effect on agriculture. The online portal would further help us make valuable information available to larger audience in a timely manner. We welcome feedback and opinion on how to co-develop and strengthen the SADMS”. Said Dr Giriraj Amarnath, Project Lead and Sub-Theme Leader: Water-related Disaster Risk Management (WDRM) at IWMI.

Over one billion people of South Asia (SA), dependent on agriculture related livelihoods and predominantly poor, are highly vulnerable to drought. In 2016, South Asia reeled from one of the worst droughts in decades with severe water shortages and crop losses. In recent years South Asian countries have been suffering from increasing droughts as a consequence of delays and changing patterns of monsoon rainfall. Over 300 million people were affected in India alone due to two weak monsoons. “With

increased incidence of extreme climatic events like droughts, it is important we safeguard and better plan our limited water resources in an already water-scarce South-Asian region. Remote sensing and other advances in technology can be used to help forecast and prepare for such climatic shocks.” Said Dr Alok Sikka, IWMI-India Representative at New Delhi.

The outcome of a three year project, the SADMS tool was developed by the International Water Management Institute (IWMI) supported by the World Meteorological Organization (WMO), the Global Water Partnership (GWP), CGIAR Research Program on Water, Land and Ecosystems (WLE), CGIAR Research Program on Climate Change, Agriculture and Food Security (CCAFS) and the Ministry of Agriculture, Forestry and Fisheries (MAFF), Japan. The tool combines satellite images of vegetation with weather data, soil moisture levels and crop yield information. It helps predict the severity of coming dry spells and how long they might last.

“The SADMS has already been put to the test. This year, IWMI has collaborated with the Government of Sri Lanka to regularly provide maps with 16-day advance drought forecast information. Last year the system was used to generate maps for monitoring the drought situation in Maharashtra, in India,” said Dr Giriraj.

The workshop provided a platform not only to demonstrate the SADMS tool but also to gather crucial feedback from representatives on how the SADMS could be utilized for preparing drought management plans and developing drought risk reduction measures. Participants also discussed the potential of collaborating with the government agencies and ways in which the near real time drought monitoring information provided by SADMS could be used by member countries to link to current drought management plans at different levels.

Despite progress in identifying adaptation strategies, experts also highlighted the need for substantial investment to scale up such solutions. “To increase the resilience of countries, it is important to review institutional arrangements and the physical infrastructure of different agencies to deal with extreme incidents. Climate funds also need to be mobilized to help smallholders cope with global warming and keep food on the world’s table”, added Dr Giriraj at the workshop. Experts agreed that priority should be given to building the capacity of South Asian nations to adapt through both regional partnerships and South-South exchanges. Innovation and technology transfer should be supported by building policy frameworks that enable technology adoption.

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**Press release link -**

## Additional information

- The **International Water Management Institute (IWMI)** is a non-profit, scientific research organization focusing on the sustainable use of water and land resources in developing countries. It is headquartered in Colombo, Sri Lanka, with regional offices across Asia and Africa. IWMI works in partnership with governments, civil society and the private sector to develop scalable agricultural water management solutions that have a real impact on poverty reduction, food security and ecosystem health. [www.iwmi.org](http://www.iwmi.org)
- The **CGIAR Research Program on Climate Change, Agriculture and Food Security (CCAFS)** is a strategic partnership of CGIAR and Future Earth, led by the International Center for Tropical Agriculture (CIAT). CCAFS brings together the world's best researchers in agricultural science, development research, climate science and Earth System science, to identify and address the most important interactions, synergies and tradeoffs between climate change, agriculture and food security. [www.ccafs.cgiar.org](http://www.ccafs.cgiar.org).
- **CGIAR** is a global partnership that unites organizations engaged in research for a food secure future. CGIAR research is dedicated to reducing rural poverty, increasing food security, improving human health and nutrition, and ensuring more sustainable management of natural resources. It is carried out by the 15 centers who are members of the CGIAR Consortium in close collaboration with hundreds of partner organizations, including national and regional research institutes, civil society organizations, academia, and the private sector. [www.cgiar.org](http://www.cgiar.org)
- **The Ministry of Agriculture, Forestry and Fisheries (MAFF)**, is an important sector of Japan's economic structure, contribute outstandingly to the development of national economy and stabilization of national life through their role of providing stable supply of foods indispensable to our daily life. MAFF has continually supports the program of water-related disaster risk and enhancing agriculture resilience for smallholder's farmers in developing countries. <http://www.maff.go.jp/e/index.html>