Decision Support System (DSS) for Understanding and Reducing Climate Risks

Introduction

Over 1.9 billion people living in South Asia share mountains, rivers, oceans, and energy sources on one hand, and climate change vulnerabilities on the other. A World Bank study has warned that, without climate change adaptation, 800 million or 44% people in South Asia will be living in moderate or severe climate hotspots by 2050, which will push millions of people below the poverty line.

The nexus of climate change in relation to agriculture, water, and transport calls for concerted efforts to increase investment in these sectors. Therefore, it is crucial to engage with these sectors, and provide them with information, tools and guidelines so that adequate risk assessments can become part of standard investment designs.

With support from the World Bank, the Regional Integrated Multi-Hazard Early Warning System for Africa and Asia (RIMES) and the Asian Disaster Preparedness Center (ADPC) are jointly implementing the Climate Adaptation and Resilience (CARE) for South Asia Project to contribute to an enabling environment for climate resilience policies and investments in South Asia.

Under the project, RIMES will support the development or enhancement of DSSs for the agriculture, water, transport, planning and finance sectors in Bangladesh, Nepal and Pakistan. These systems may be used to track climate-resilient initiatives and investments, assist in flood forecasting, or generate agro-meteorological advisory.

And to maximize the use of DSS for climate-informed planning and decision-making, RIMES is organizing webinars for users to understand the components and functionalities of DSS, and the data and analytics that the systems generate. The webinar series *Decision Support System (DSS) for Understanding and Reducing Climate Risks* is divided into six different episodes of 90 minutes each and delivered online by Zoom.

The tentative dates for 2021 and topics for the webinar's episodes are:

- ***March 3, 2021: An Overview of DSS***
- May 4, 2021: DSS for the Agriculture Sector
- July 7, 2021: DSS for the Water Sector
- September 1, 2021: DSS for the Transport Sector
- November 3, 2021: DSS for Disaster Management
- December 1, 2021: DSS for the Planning and Finance Sectors

Episode 1: An Overview of DSS

March 3, 2021 | 15:00-16:30 (Bangkok time)

The first episode of the webinar series *An Overview of DSS* provides an introduction to the components and functionalities of DSS, and on the use of information generated from DSS in development plans and investment decisions.

Objectives

- Provide a general overview of DSS
- Introduce users on the components and functionalities of DSS
- Orient users on how the information generated from DSS is integrated into development plans or investment decisions

Participants

- Policy-level users of DSS from the planning, finance and sectoral line agencies
- Operational users of DSS, including operational staff of sectoral agencies and provincial- and local-level governments
- Selected RIMES, ADPC and World Bank staffs

Technical Specifications

Zoom is used as the webinar platform. Participants will have the opportunity to ask questions and make comments using the chat function.

Agenda

Time	Session
15:00 - 15:10	Opening Session
15:10 - 15:20	Decision Support System: An Overview *Speaker: Amir Rajak, RIMES*
15:20 - 15:30	DSS Application for Agriculture *Speaker: Itesh Dash, RIMES*
15:30 - 15:40	DSS Application for Disaster Risk Management *Speaker: Jothiganesh Shanmugasundaram, RIMES*
15:40 - 15:45	Q&A teaser
15:45 - 16:05	Breakout Session *(Sector-based session: Agriculture, Planning and Finance, Water Resource and Transport)*
16:05 - 16:17	Highlights from the Breakout Session
16:17 - 16:27	Q&A and Discussions
16:27 - 16:30	Closing Session

Speakers

Itesh Dash

RDAS/DSS Development Lead, RIMES

Itesh supervises the development of platforms for the Resilience Data and Analytics Services (RDAS) and the DSS. He also leads the collection, management, and analysis of datasets. At RIMES, Itesh serves as the Team Leader for Systems Research and Development. He leads systems research, development, and management for RIMES' earthquake, tsunami, weather, flood, climate and capacity building services.

Amir Rajak

IT Expert, RIMES

Amir holds experience of working with data analysis using both conventional SQL based systems and state-of-the-art machine learning and deep learning algorithms. He brings his expertise of recent AI technologies to build machine learning models for climate DSS applications.

Jothiganesh Shanmugasundaram

Climate Applications Specialist, RIMES

Jothiganesh leads the assessment of weather and climate information needs and requirements of DSS users. He also supervises the integration of technical inputs in the design and development of DSS, and the capacity building activities for the users. At RIMES, he serves as the Team Leader for Climate Applications. He focuses on risk assessments, evaluates, and facilitates the development of climate application products and services, and builds the capacity of RIMES member states for improved planning and decision-making to manage resources and disaster risks.

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