

Geospatial Information Applications for Disaster Risk Reduction in Asia and the Pacific

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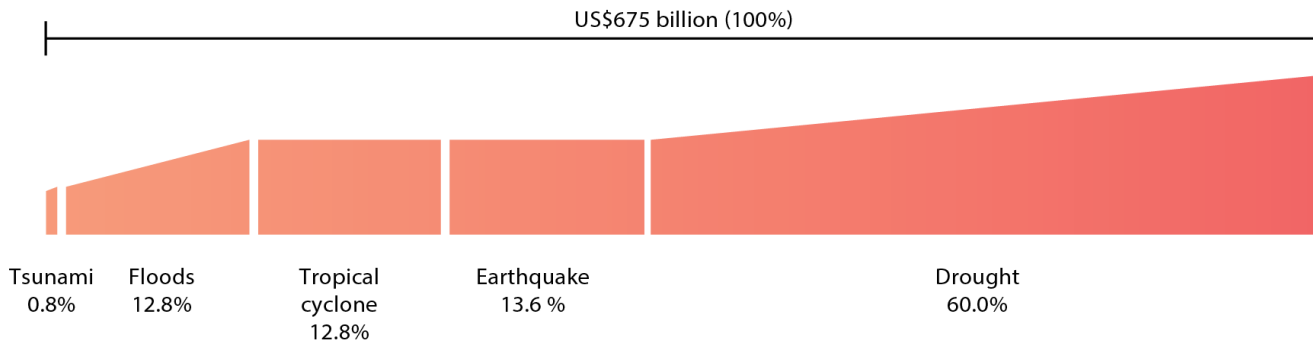
Space Applications Section
Information and Communications Technology and
Disaster Risk Reduction Division



Regional Drought Mechanism



Disasters Risks in Asia Pacific



The Drought Mechanism

Four main components

Regional Service Nodes



Thematic and scientific communities



Pilot countries



The agricultural community



ESCAP facilitates interaction between these components

Key Steps

How it all works



Experts provide feedback on the scientific and technical methodology and procedures
Technical feedback



Networks share knowledge and good practices
Knowledge transfer



Provide satellite imagery and products

Monitoring



Capacity building in space and GIS

Capacity building



Government agencies analyse and share space-based information

Space-based information



National institutions perform soil and moisture analysis
Ground-based information



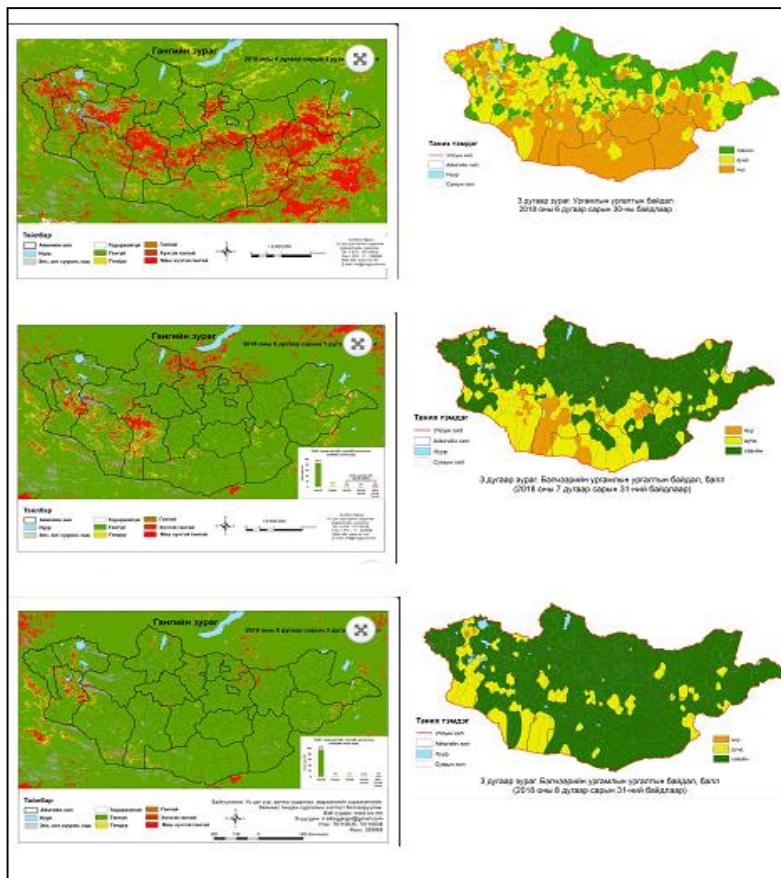
Agricultural community responds accordingly to minimise the effects of drought
Early action



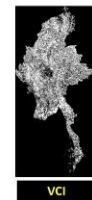
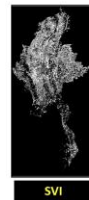
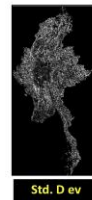
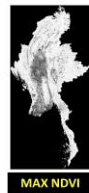
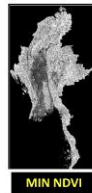
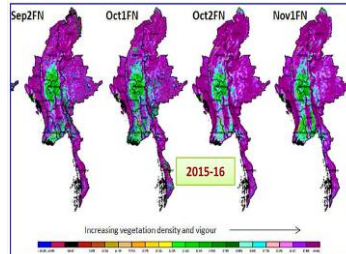
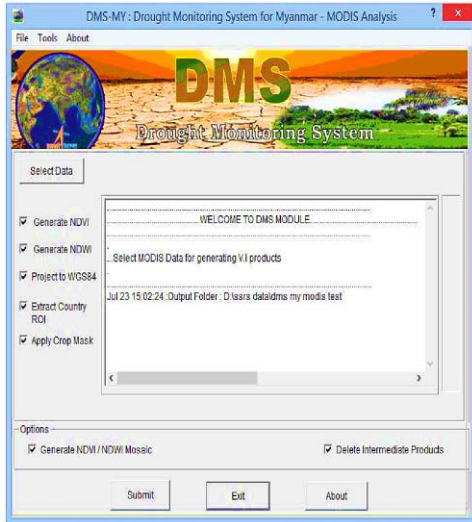
Government provides early warning notifications and initiates timely relief measures
Early warning and timely relief

Drought Monitoring System Mongolia

Drought monitoring system
DroughtWatch is operational in Mongolia



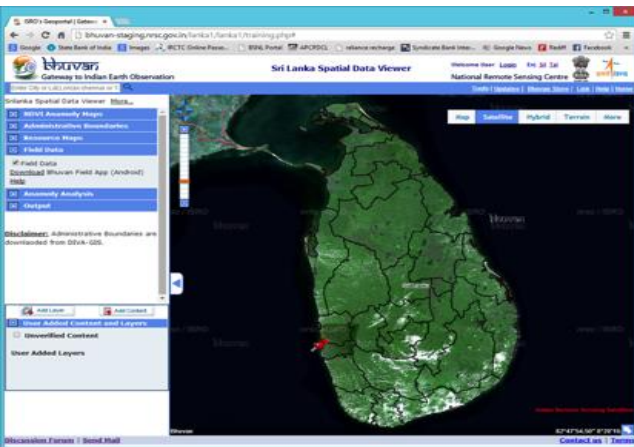
Drought Monitoring System Myanmar



Operationalization of
drought monitoring system Myanmar



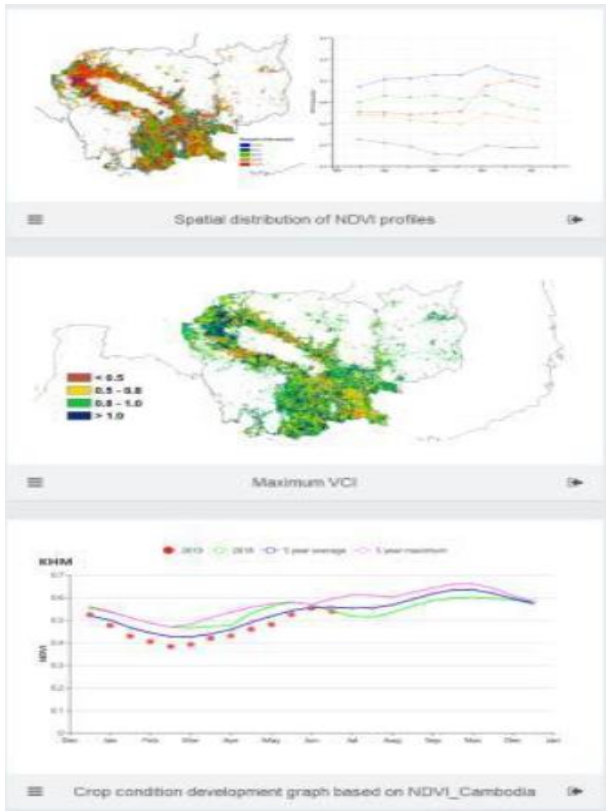
Drought Monitoring System Sri Lanka



Study tour of Sri Lanka officials to ISRO
on operationalization of drought
monitoring system,

August 2019

Drought Monitoring System Cambodia



Hands-on training for Cambodian officials
on crop and drought monitoring in RADI,
August 2019



Lessons Learnt

- Lack of well trained and consistent team including senior and junior professionals with different background and knowledge related to drought monitoring and management
- Lack of inter-agency cooperation, coordination and timely sharing the information
- Lack of continued technical support and customized system
- Lack of automatic ground data collecting stations or equipment
- Low internet bandwidth and high performance work station
- Agricultural drought is sophisticated phenomena, need to support country based on their specific climate, water management and crop situation.

Technical cooperation and capacity building



First Expert Group Meeting on the Development of Decision-Making Tools for Geo-Drought Monitoring and Early Warning in Central Asia



ASEAN Regional Training Course on Geospatial Big Data Applications for Sustainable Development



Asia-Pacific Networked Geospatial Data Hub



Asia-Pacific Networked Geospatial Data Hub

- Stage 1 (2020-2021)
 - Master Plan, Intergovernmental Agreement, Operational Principles (TOR)
 - Draft a Blueprint (concept design) for algorithm-based data networking system
 - Update UN-GGIM-AP website
- Stage 2 (2022-2026)
 - Adoption of 'Master Plan', 'Operational Principles' and 'Intergovernmental Agreement'
 - Develop and operate algorithm & test run
- Stage 3 (2027-2030)
 - Fully operational for Member States

THANK YOU

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