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Asia Water Forum 2022
8–11 August 2022 • Online

Focus Area: Climate change and water-related risks

Session Title: Understanding, managing and communicating risks

Schedule: [09 August, 2022 | 03:30-04:30]

Water and climate risk preparedness tools for anticipatory actions and response planning in South Asia

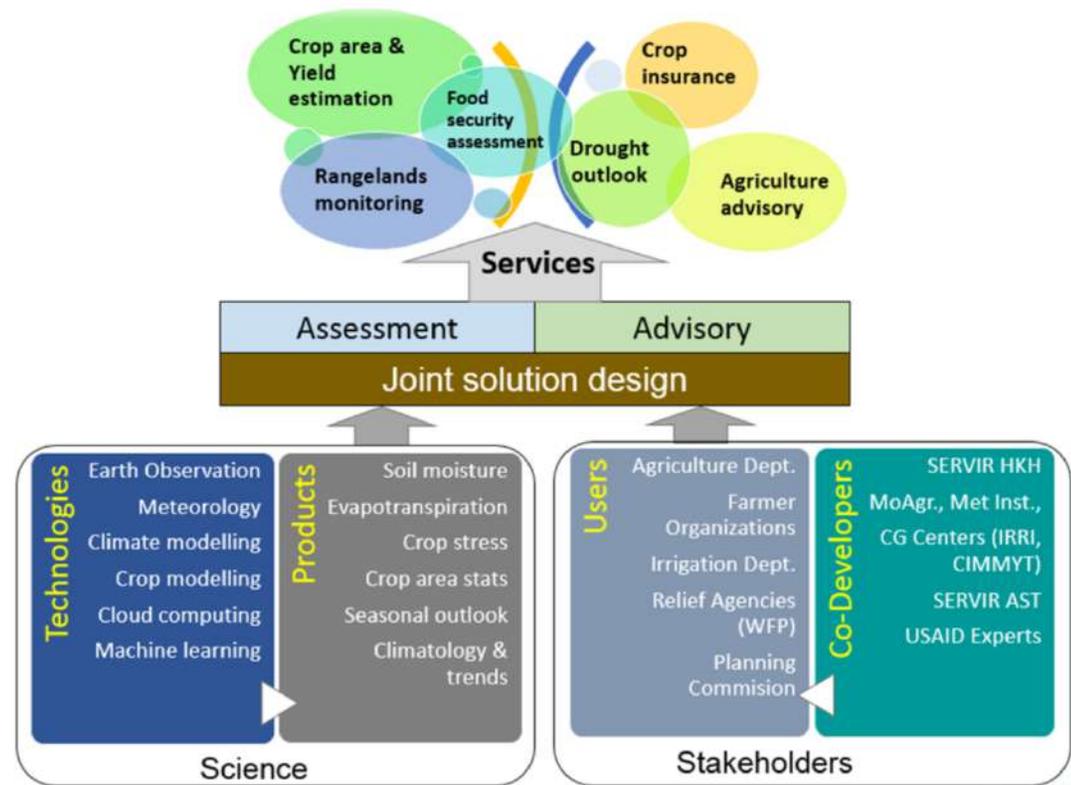
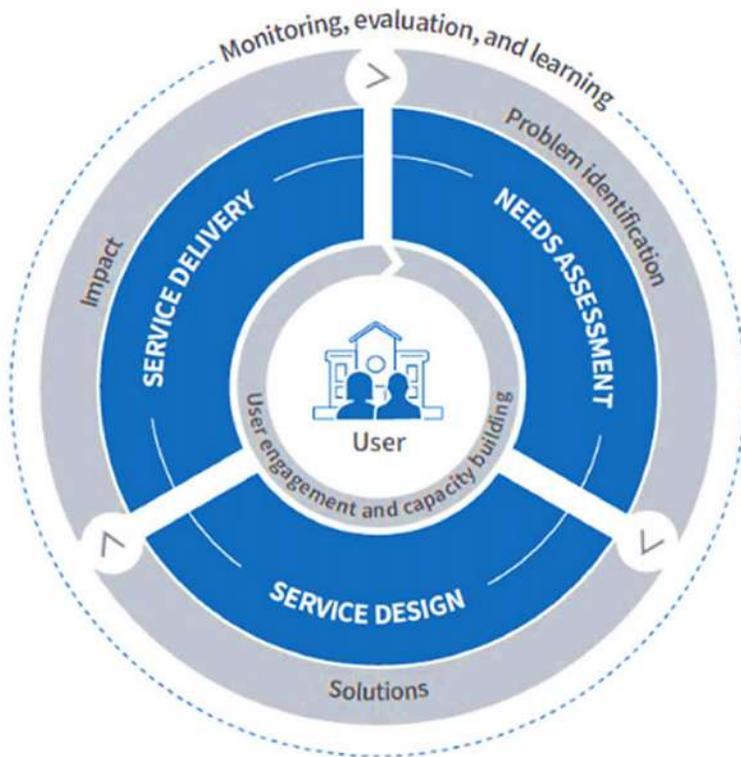
ICIMOD

ADB



NASA SERVIR – Connecting Space to village

<https://servir.icimod.org/>



Priory countries: Afghanistan, Bangladesh, Nepal, Pakistan



Timescale of actions for climate resilient agriculture

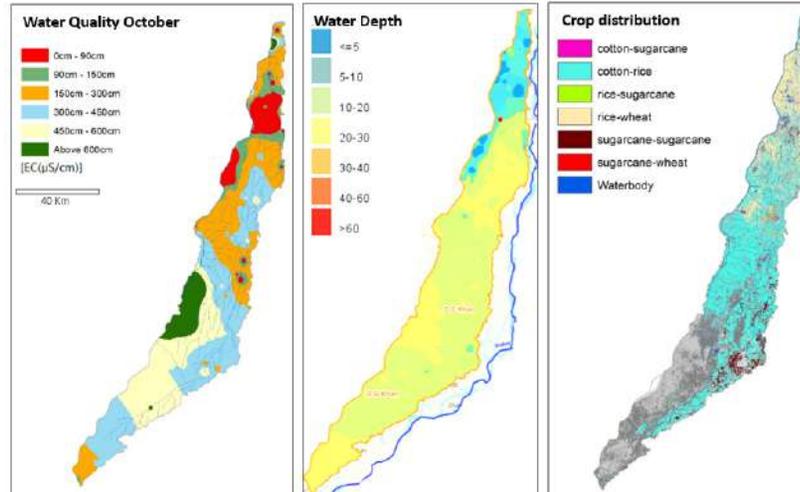
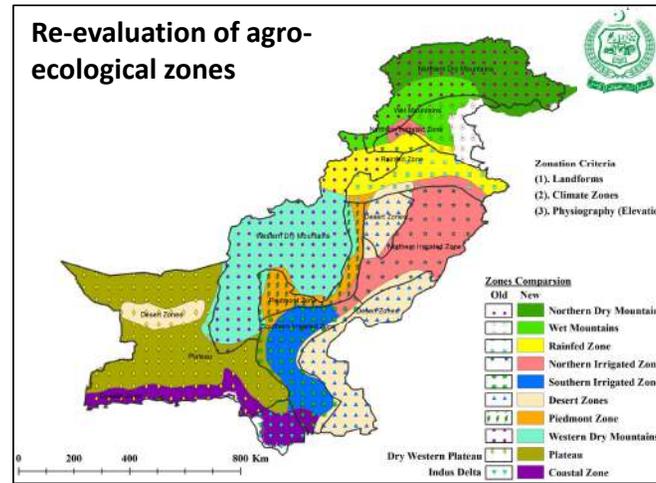
Sustainability assessments for policy formulation (National planning commission)	Seasonal scale planning decision (Nationally mandated institutions)	Advisory services (Farmers/Local government)	Risk transfer & sharing losses (Multilateral development banks)
Agricultural landuse policies support in context of climate and water availability scenarios	In-season crop condition monitoring to support national food security planning process	ICT and advance climate information supported agricultural advisories	Forecast based action/financing (FbF) & Insurance
Agro-ecological zonation Niche crop zonation	Harnessing data-science for climate-risk preparedness of pastoral communities	(high value) Crop specific advisories	Loss and damage assessment





Strengthening sustainable agricultural practices and policy support through Earth observation data in Pakistan

- EO derived agro-climatic data for re-evaluation of agro-ecological zones of Pakistan
- Sustainability assessment of current cropping practices in Pakistan, in context of climate patterns and water availability, to support crop-zoning recommendations



National partner agency:
Pakistan Agriculture Research Council (PARC)

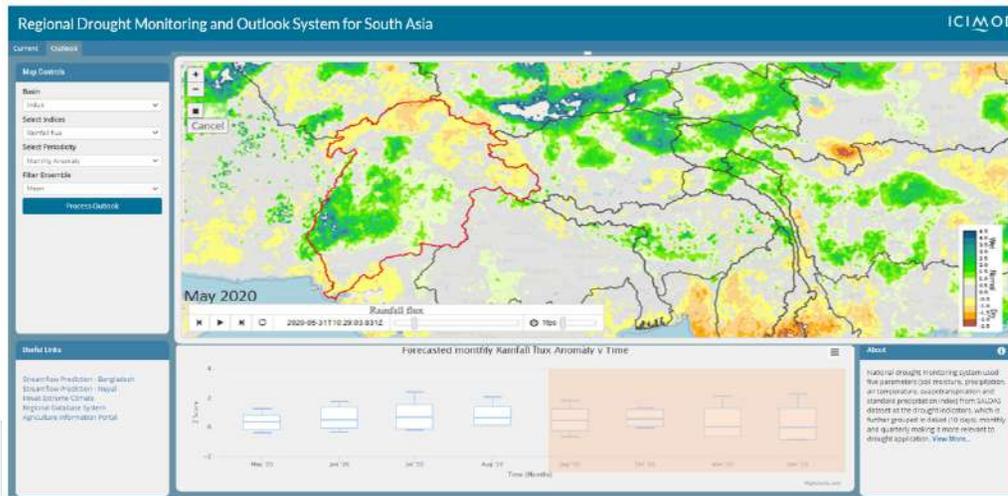


Earth Observation data supported drought early warning and impact evaluation

- Downscaling and calibration of global system at regional scale in collaboration with national institutions
- Information service for decadal near real time assessment and 4-months seasonal outlook
- Promoting use (integration) of data products in the risk preparedness and aid assistance at national and local level



Drought response plan for the livestock sector – 2021
 General Directorate of Livestock and Animal Health
 Ministry of Agriculture, Irrigation and Livestock, Afghanistan



<http://tethys.icimod.org/apps/regionaldrought/outlook/>

LIVESTOCK & CLIMATE RESILIENCE

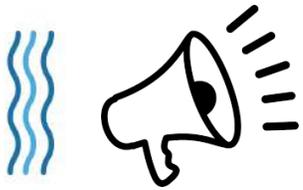
20 innovations that demonstrate opportunities for climate adaptation through livestock

Livestock contribute to about 25% of total agricultural GDP in low and middle-income countries (LMICs), also support the livelihoods of tens of millions of poor people, providing with an important pathway out of poverty and insecurity. Meanwhile, livestock production is also threatened by climate change. Rising temperatures and

Transhumance pastoral migration in the Hindu Kush Region. The Regional Drought Monitoring and Outlook System can help pastoralists and governments better prepare for droughts. Photo credit: Faisal Mueen Qamar (ICIMOD).

Drought data gives farmers security against climate change





2nd Regional Knowledge Forum on
**Drought and Climate Services for Food Security and
Agricultural Decision Making in South and Southeast Asia**
16–17 August 2022 via Online | 0900-1200 hrs (Thailand Time, UTC+7)

Registrations open



<https://servir.icimod.org/events/2nd-regional-knowledge-forum-on-drought-and-climate-services-for-food-security-and-agricultural-decision-making-in-south-and-southeast-asia/>

Book of Abstracts

**Regional Knowledge Forum
on Drought**

Earth Observation and Climate Services for Food Security and
Agricultural Decision Making in South Asia and Southeast Asia
8–10 October 2018 | ICIMOD, Kathmandu, Nepal

SERVIR MEKONG SERVIR HKH CSRD

USAID NASA adpc CIMMYT ICIMOD

The 2018 Regional Knowledge Forum on Drought spotlighted the impacts of climate-induced hazards, particularly droughts in South and Southeast Asia, on agriculture and food security. It has laid the foundation for collaborative research and action towards drought monitoring and improving food security in the region.

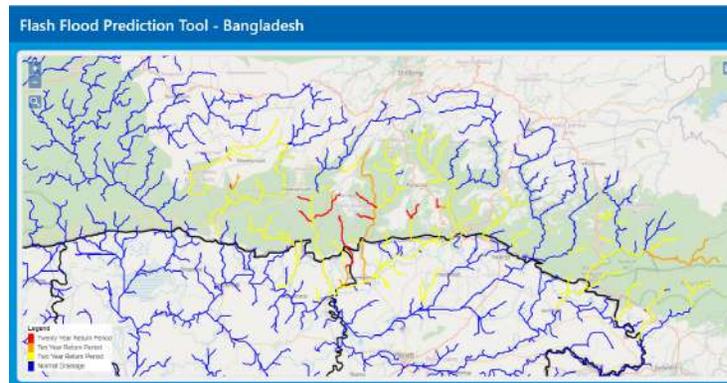
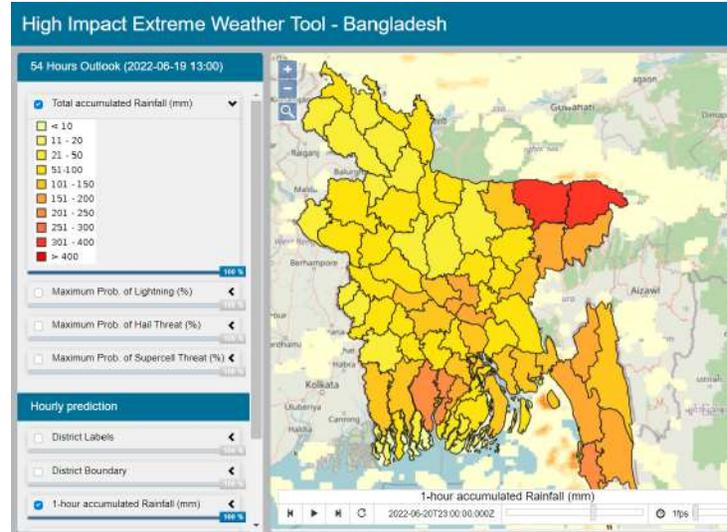
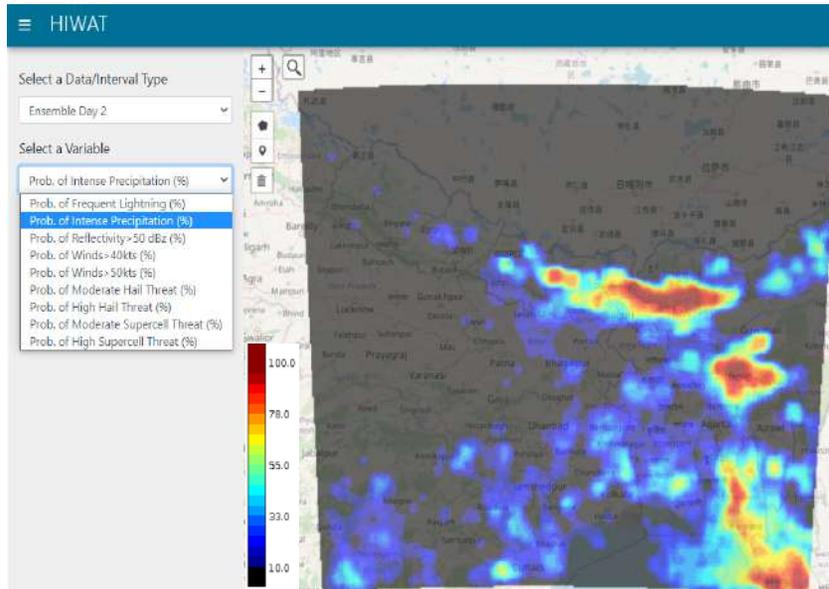


1st Regional Knowledge Forum on Drought, 2018, Kathmandu, Nepal

<https://servir.icimod.org/servir-hkh/wp-content/uploads/2021/07/book-of-abstract-knowledge-forum-on-drought.pdf>

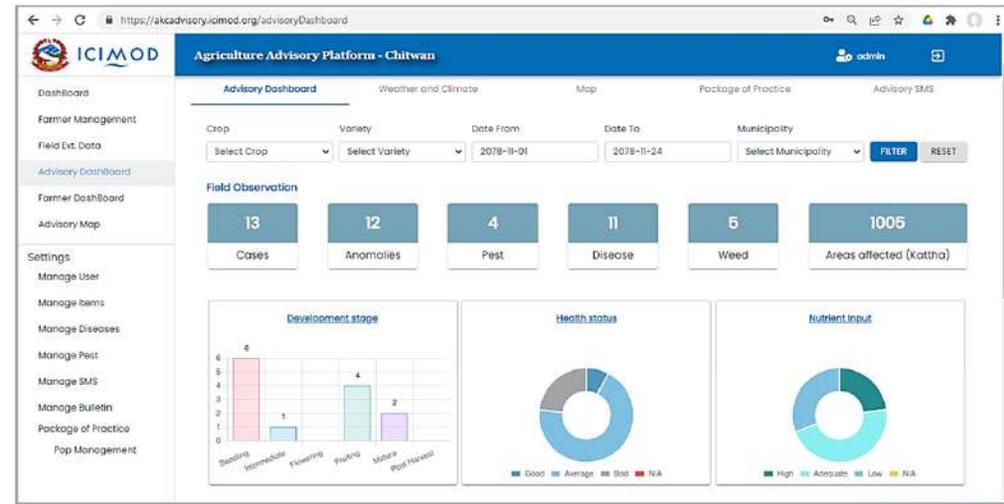
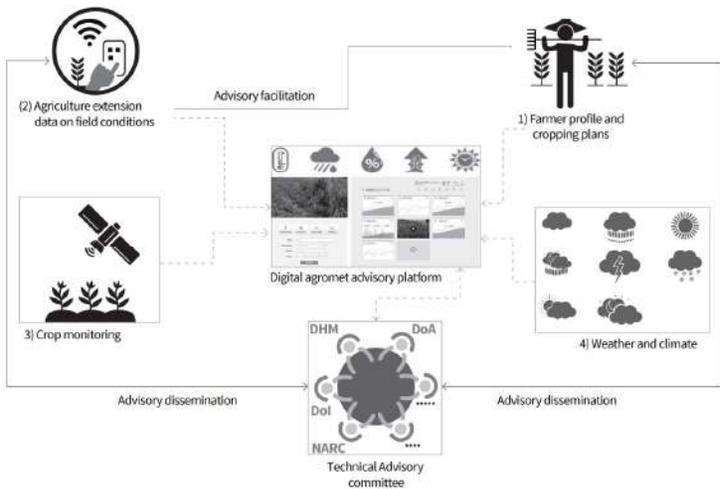
HIWAT – 54 hours extreme weather outlook

- Precipitation
- Lightning
- Wind Speed
- Hail Threats



Localizing public sector agromet advisories for resilient agriculture

Setting-up institutional and technological mechanism at district level – Chitwan, Nepal

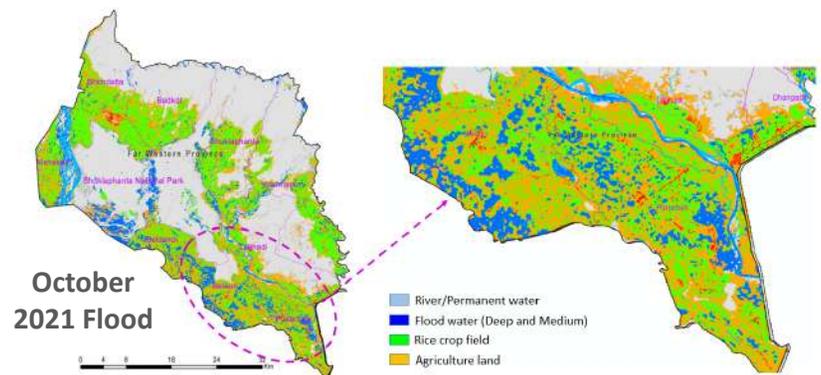
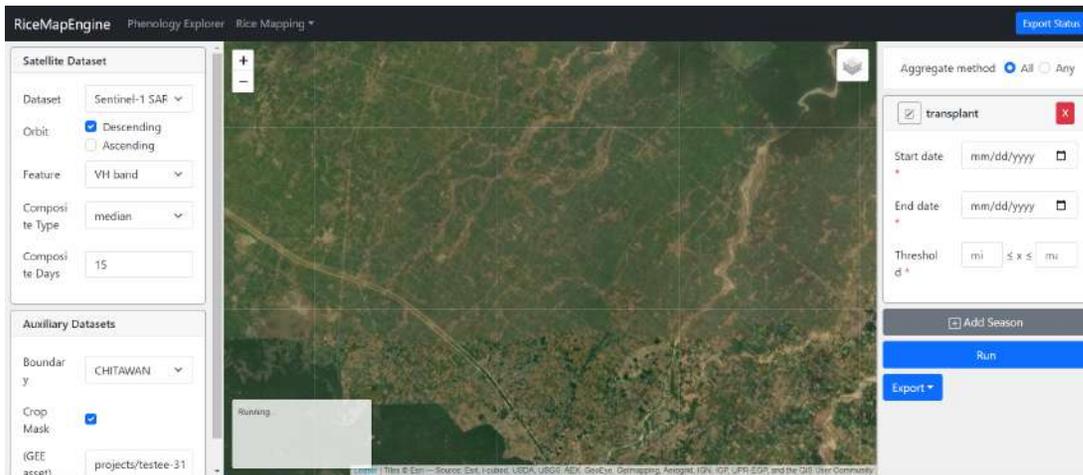




Strengthening in-season crop assessment to support agriculture planning and climate risk management in Nepal

- Co-development and customization of algorithms in local context
- Easy-to-use service (RicemapEngine) design aligned with existing institutional function
- Institutional capacity building at all levels

Satellite remote sensing based crop area maps provided critical information on finalizing 2020 rice crop production estimates when conventional assessment was constrained due to COVID-19 restrictions.





Building on capacities for resilient future

- **Continuing working with key national institutions on expanding users, enhancing service functions as per emerging needs to support the service adoption process.**
- **Working with multilateral development banks for designing earth observation data supported risk financing services**
- **Promoting use of data products and service for processes like Loss and Damage assessment**
- **Integration of climate risks and adaptive capacity assessments in the formulation agriculture landuse policies**



Thank you

Seasonal water outlook and implications for farmers in the Indus basin

FAISAL MUEEN QAMAR AND SHER MUHAMMAD 8 MINS READ

Feed the Future .. 04 May
 #FeedtheFuture is partnering with @NASA's @SERVIRGlobal and @icimod to use satellite technology to help communities better prepare and respond to #ClimateChange and other external shocks. Read the full story: ow.ly/ykvi50IW0ik
 #ClimateAction
 #InvestInOurPlanet

"The training on using satellite remote sensing and digital technology for crop monitoring enabled us to perform our task of reporting on crop conditions more efficiently... it enables us to plan our activities and service provisioning for local farmers better."
 — RAW SIRAN ACHAKAL, Agriculture Extension Officer at the Hindustan District's Office
 SOUTH ASIA

thethirdpole.net
 UNDERSTANDING ASIA'S WATER CRISIS

Home About Topics River Basins Countries Explore Maps & Data Share a map

Toolkits to deal with Asian droughts

As severe multi-year droughts blight Asia, organisations are coming together to create toolkits and response mechanisms to deal with the crisis

FEEDTHEFUTURE The program is part of the U.S. Government's global hunger and food security assistance.

AGRILINKS

Operationalizing an Agricultural Drought Monitoring and Early Warning System in the Hindu Kush Himalaya Region

Ag Agrilinks Team
 USAID May 20, 2019

Resource book
Earth observation and climate data analysis for agricultural drought monitoring in South Asia

ICIMOD CIMMYT

BBC URDU
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ارسا کے مطابق اس وقت پانی کی قلت 40 سے 50 فیصد ہے اور خدشہ ہے کہ خریف کی فصل پر بھی اس کے منفی اثرات ہوں گے جس کے نتیجے میں خوراک کی کمی کا سامنا کرنا پڑ سکتا ہے۔

See translation

BBC NEWS | اردو

BBC.COM
 موسمیاتی تبدیلی: پاکستان کے آبی ذخائر میں کمی کی وجوہات و اثرات - BBC News اردو

Regional Drought Monitoring and Outlook System

Seasonal outlook May–August 2022

The following brief presents seasonal anomaly maps from May–August 2022 in major river basins of the HKH region based on data generated by the RDMOS. Long-term average conditions (climate normal) are also given for an overall understanding of precipitation and temperature patterns in the region. Read more about the Regional Drought Monitoring and Outlook System (RDMOS) here.

PRECIPITATION ANOMALY (Z SCORE)

PRECIPITATION (mm)



The cryosphere – snow, ice, and permafrost – is an important source of water in the Hindu Kush Himalaya region. Observed and projected estimates...