

ARRCC Impact Story

Enhancing the Seasonal Monsoon Outlook



Motivation

The climate of South Asia is dominated by the monsoon system. National Meteorological and Hydrological Services (NMHSs) collaborate with other stakeholders, such as the Regional Climate Centre Pune, to produce a seasonal climate outlook in real time at the South Asian Seasonal Climate Outlook Forum (SASCOF). This outlook provides a joint assessment of the upcoming season over South Asia to offer guidance to the region's NMHSs for their preparations of national-level seasonal outlooks and to support climate-sensitive sectors (e.g. Agriculture). Using a co-productive approach and driven by user demand, an enhanced 'Seasonal Climate Outlook Statement (SCOS)' has been developed to ensure that the NMHS requirements are met and that the key messages from the SASCOF are clearly communicated. This ultimately supports informed planning, decision-making, communication, adaptation, and impact mitigation, thereby reducing climate-related risks.

Our approach

We have co-produced an enhanced SCOS product¹ in three key phases:

Phase 1: Co-exploration with NMHSs and other SASCOF attendees via workshops and surveys to identify requirements and priorities.

Phase 2: Co-develop and design a series of prototype SCOS outputs, incorporating feedback from associated surveys.

Phase 3: Co-deliver the enhanced SCOS and ensure its ongoing future refinement.

Impact

Figure 1 (overleaf) shows the co-produced SCOS product, designed to enhance the usability of the seasonal information for NMHSs and other users.

More than 90% of NMHS survey respondents moderately or strongly agree that the enhanced SCOS meets its aims.

"[The enhanced SCOS] provides a good example of how Regional Climate Outlook Forum (RCOF) products can be communicated."

"It shows our forecast is based on science and global conditions."

"It gives more details of the climate drivers & how it was changed from previous year, which makes easy to apply the information."

"The overall design & content is good & well arranged."

"It's become more informative for decision-making."

"[It's] very helpful for preparing our National Seasonal Forecast."

"It provides useful information to users, [which is] easy to understand with graphics."

What's next?

Implement and Facilitate: Incorporate the latest prototype feedback and facilitate its real-time production.

Transition to the Enhanced SCOS: Work with the SASCOF community to support the transition to and the promotion of the enhanced SCOS.

Sustain Delivery and Measure Effect: Sustain delivery and ensure ongoing feedback from the NMHSs and other SCOS users, to enable continuous refinement of the SCOS product and its adaptation to advances in science and changing user requirements.

Lessons Learned: Write a joint peer-reviewed publication about the SCOS enhancement and co-production process, so the benefits can be considered by other RCOFs and seasonal information providers.

Examples of new features within the enhanced SCOS

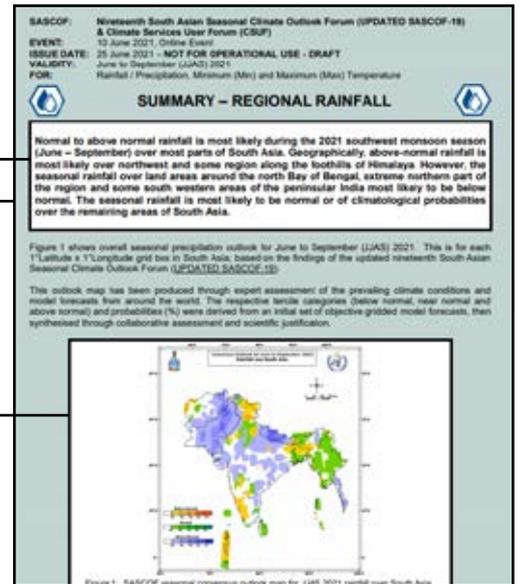
Format

Key messages highlighted in boxes or tables

Clear summary with key plots at the start, with the more technical details later in document

Visual representations of outlooks, supported by written descriptions

New document structure and layout, with the key summary guidance in part 1, the dynamic seasonal outlook content in part 2, and the supporting background information in part 3.



Function

CONTENTS	
SUMMARY - REGIONAL RAINFALL	1
SUMMARY - REGIONAL MIN & MAX TEMPERATURE	2
OUTLOOK CONSIDERATIONS SUMMARY	3
SUMMARY - NATIONAL	4
Disclaimer	5
Points of Contact	5
The National Climate Outlook Forum (NCOF) / Monsoon Forum (NMF) (Dates (at time of writing))	5
SASCOF Update Schedule (at time of writing)	5
Regional Climate Centre, Pune	5
PART 3 - SASCOF FORECAST FOR JJAS 2021	6
SASCOF-19	6
Current Conditions	7
Status of the Climate Drivers	7
Comparison - Last Years Observed Versus This Seasons Outlook	7
Confidence, Skill & Uncertainty	8
Verification of Last Years Forecast - RAINFALL	10
PART 3 - SUPPORTING DOCUMENT	11
Climate Drivers - Background	11
The SASCOF Process	13
SASCOF & CSUF Background	13
Frequently Asked Questions	14
Find Out More / Useful Links	16
Acronyms	17

To incorporate user recommendations, new content includes...

Avenues for further information

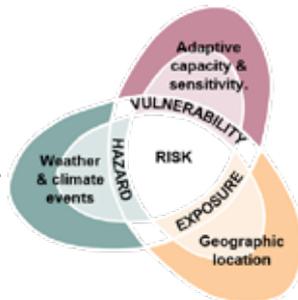
Comparisons with previous years and graphical communication of the skill & uncertainties in the outlook

Supporting information

Feel

A graphical summary of the purpose and production of the outlook

Other new infographics and figures



OUTLOOK CONSIDERATIONS SUMMARY

Factors that have been assessed to produce this outlook include:

This SCOS aims to ...

- Communicate the regional outlook for the upcoming seasons rainfall pattern in South Asia.
- Offer guidance to facilitate NMHSs preparations of national level seasonal forecasts.

This is because weather, seasonal & climate predictions can be used to ...

- Inform decision making & risk management.
- Enable adaptation to future conditions
- Mitigate impacts.

CLIMATE DRIVERS

Emerging large-scale climate drivers have been reviewed, e.g.

- The El Niño Southern Oscillation (ENSO)
- The Indian Ocean Dipole (IOD).

AIMS

Model simulations from around the world have been assessed to ...

- Establish the prevailing conditions.
- Produce this outlook.

COMPUTER MODELS

RELEVANCE

AUDIENCE

The target audience is...

- The regions NMHSs.
- The NMHSs are available to guide climate service users.

¹ <http://rcc.imdpune.gov.in/Products.html>

For further information, please contact: internationaldevelopment@metoffice.gov.uk

This work was conducted in the 'Strengthening Climate Information Partnerships - South Asia (SCIPSA) project as part of the ARRCC programme.

