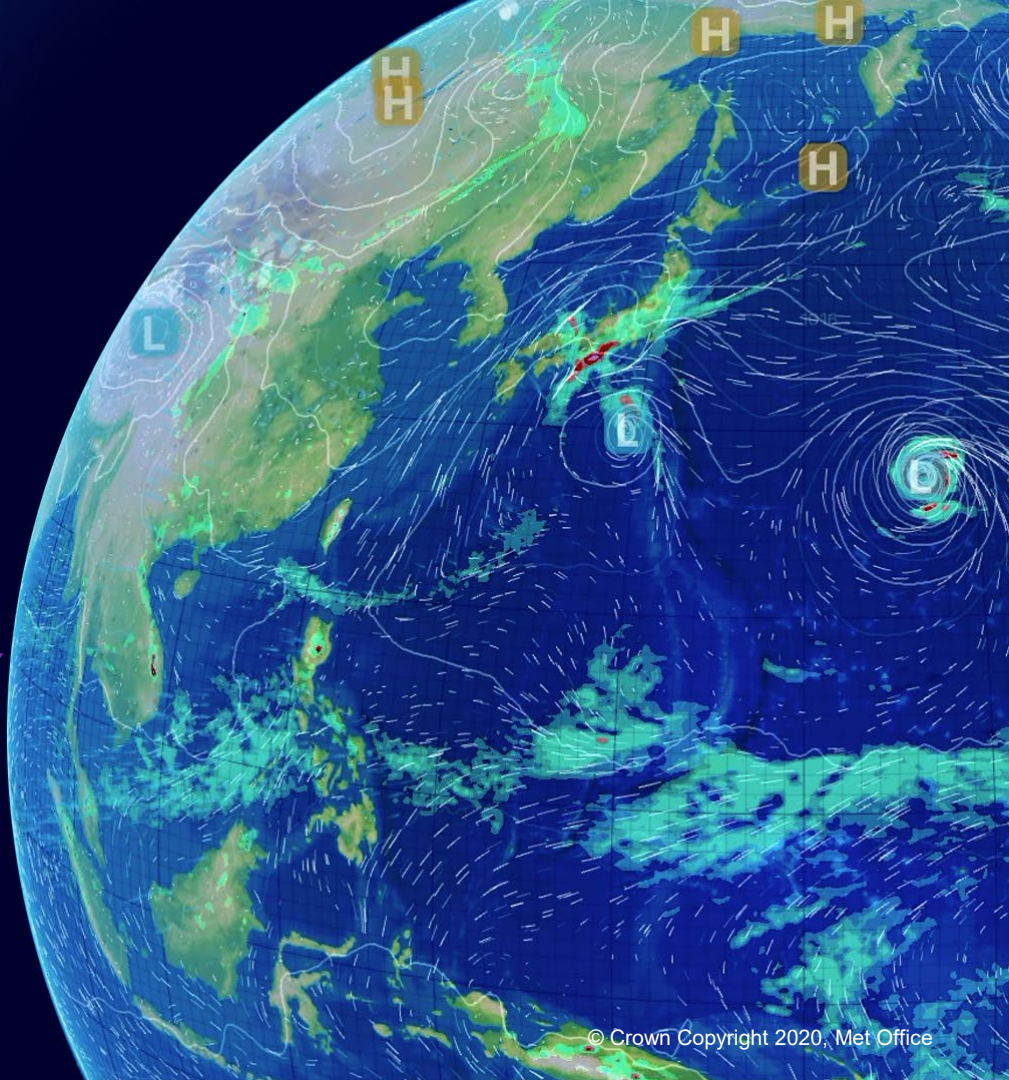


ARRCC CDS CASE STUDY

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ARRCC – BACKGROUND

- 2018-2022
- Asia Regional Resilience to a Changing Climate (ARRCC) Met Office Partnership Programme
- Funded by WB and FCDO (UK AID)
- Pan-regional capacity development, supporting partners in the South Asia Region: Afghanistan, Bangladesh, Bhutan, India, Maldives, Myanmar, Nepal, Pakistan, and Sri Lanka.
- Four focus countries (where bilateral support provided national level capacity and service development): Afghanistan, Bangladesh, Nepal, Pakistan
- Successfully delivered support to over 2 million people to adapt to the effects of climate change.
- CD Dimension Focus: Institutional; Information and Services



ARRCC - BACKGROUND



The programme aimed to strengthen weather and climate forecasting systems across South Asia.

This included innovative approaches to help vulnerable communities use weather warnings and forecasts to better prepare for climate-related shocks.

ARRCC was delivered as four complimentary work packages, which targeted vulnerable countries in South Asia:

1. Impact Based Forecasting (IBF)
2. Strengthening Climate Information Partnerships South Asia (SCIPSA)
3. Climate Analysis for Risk Information and Services in South Asia (CARISSA)
4. Valuing the Socio-economic Benefits of Weather and Climate Information Services (VALUE)

CDS Step 1. ASSESS capacity assets and needs, establish baseline



- ✓ Scoping phase (2017) which included **consultation with stakeholders** across the South Asia Region on needs and opportunities for weather and climate services development.
- ✓ The **assessment was then used to inform recommendations for the programme around three core outputs:**
 - i. Regional coordination: Enhanced coordination and communication of weather and climate information across the region, including the cascade of information from global to regional and regional to national.
 - ii. Institutional strengthening: Stronger regional and national hydro-meteorological and climate organisations, with enhanced capacity, responsiveness, connectivity, and institutional sustainability.
 - iii. End user innovation: Development of user-led weather and climate information products and services that allow for improved planning and decision-making over different timescales and across sectors.

CDS Step 2. ENGAGE stakeholders



- ✓ Stakeholder engagement was informed initially by a **desk-based review** to identify recent developments in the region, collate information on donor activities and priorities, and identify current and planned regional and sub-regional programmes related to weather and climate services.
- ✓ The review was **followed by a consultation exercise** undertaken through interviews, bilateral discussions, and workshops with selected stakeholders.
- ✓ **Consultation with NMHSs was informed through semi-structured interviews** during which they were encouraged to reflect on, amongst other areas, the extent to which they were effectively interacting with their users, and the key gaps and barriers which were potentially hindering this.

CDS Step 3. DESIGN capacity development response intervention



- ✓ ARRCC facilitated the co-production of weather and climate services, and products and tools, that build knowledge and awareness of specific climate impacts at national and regional levels. For example:
 - ❖ The development of climate and food security analysis with the World Food Programme in Nepal.
 - ❖ The piloting of impact-based forecasting systems and services in Nepal, Bangladesh, and Pakistan.
 - ❖ The development of seasonal decision support systems for the agriculture sector in Bangladesh and Nepal.
 - ❖ Enhancing the cooperation, forecasting approach and user engagement at the South Asia Climate Outlook Forum.
- ✓ The collaborative design, development, and delivery of these tools built co-production capacity and forged working relationships across organisational and national boundaries and throughout the weather and climate information services (WCIS) value chain.

CDS Step 4. IMPLEMENT a capacity development, monitor and take corrective actions as necessary



- ✓ The overarching monitoring of progress was informed by the **ARRCC** ‘theory of change’ and ‘log frame’ which set the programme’s key milestones and targets.
- ✓ Further to this, **regular review points** were conducted **through annual, mid-term and programme completion reviews** which allowed for detailed qualitative and quantitative assessment of achievements.
- ✓ **Regular and ad-hoc communications** were also maintained with **NMHSs** and other project partners.
- ✓ This frequent correspondence meant that the **programme was able to respond quickly** to e.g. the impacts of the **COVID-19** pandemic.

CDS Step 5. EVALUATE results of CD actions, communicate and recommend improvements



- ✓ Developed a ‘Theory of change’ for how the project would address the key barriers to realising the full potential benefits of climate services in the South Asia region.
- ✓ These activities have strengthened working relationships between NMHSs, service users and intermediary agencies, along with providing opportunities for applied learning and development in the production and use of weather and climate information to enhance resilience.
- ✓ The outputs for ‘Step 4 and 5’ also feed into ‘Principle 6: Result-based CD actions – establish/improve feedback mechanisms, evaluate and ensure continuous improvement

Application of WCD principles and CD cycle:

Principle 1:

Integrated and holistic approach to capacity along the weather, climate, hydrological and related environmental knowledge and services value-chain

- ✓ ARRCC worked across a broad 'ecosystem' of weather and climate services, encompassing activities including: short range impact-based forecasts, seasonal agricultural advisory products, and sea level rise projections.
- ✓ This entailed designing interventions which would incorporate the whole value chain and involve collaboration with a large range of users and producers.

Application of WCD principles and CD cycle:

Principle 2: Sustainability of CD actions – enabling factors

- ✓ The programme included a dedicated work package focused on evaluating the socio-economic benefits of the services developed, using case studies to undertake this.
- ✓ For example, The University of Leeds and the International Centre for Integrated Mountain Development (ICIMOD) led a study, in partnership with the Pakistan Meteorological Department, focused on agricultural meteorological advisories aimed at cotton and wheat farmers in the Punjab and Sindh provinces of the country where rising temperatures, more frequent flooding, and prolonged droughts threaten productivity.

Application of WCD principles and CD cycle:

Principle 3:

Prioritization of CD actions to address critical capacity gaps and societal needs

- ✓ The interventions were aligned with the priorities expressed through the initial consultation exercise, which were subsequently grouped into 5 broad categories:
 - a. Activities that are linked to and to, and complement, other programmes and have clear buy-in from key stakeholders.
 - b. Regional coordination of the programme informed by development of links with existing fora
 - c. That the programme had a strong and sustained focus on building capabilities within NMHSs as well as regional providers.
 - d. A focus on translating existing information in a meaningful manner to select sectors; and rather than attempting to cover all users, to focus on selected sectors to demonstrate “end to end” delivery of weather and climate services.
 - e. Use of selected pilots to build on examples of what worked well from previous and existing studies.

Application of WCD principles and CD cycle:

Principle 4:
CD actions based on
efficiency and
innovation

- ✓ The programme led to 13 new systems and tools for climate services being implemented, with a further 35 expected to start implementation shortly.
- ✓ These include early warning systems, as well as the piloting and uptake of innovative new technologies.
- ✓ In Nepal and Bangladesh, the programme established a new early warning system for wheat diseases, combining weather information with field surveillance data from mobile phones and disease spread modelling, to submit near real-time wheat disease advisories directly to farmers' phones and through radio and other mediums.

Application of WCD principles and CD cycle:

Principle 5:

CD actions that build trust and enhance cooperation, equity and inclusion

- ✓ It was essential to collaborate closely with our in-region partners to clearly identify gaps in knowledge and how best to bridge these gaps with a variety of different types of knowledge products and outputs.
- ✓ A flexible approach was also required to adapt to new opportunities throughout.



Lessons learnt:

- 1) **Remote delivery:** Some opportunities e.g. more people, cost, less travel emissions; BUT challenges e.g. more prep time; for more complex training hard to identify those who need support...
- 2) **Importance of engaging and involving stakeholders across the 'value chain':** The ability to do this effectively was impacted by current working models of information producers, and also COVID. And both made it more challenging for GESI considerations in design.
- 3) **Time and resourcing:** Implementing IBF can take some time and needs engagement across stakeholders including NMHS. Needs should be driven by local demand and embedded in local planning.
- 4) **Collaboration and co-production:** Close collaboration with partners, through developing an open and trusting relationship from the outset, is key to ensuring that knowledge products are fit for purpose, have clear objectives, and intended audience, and maximise the reach of the work on weather and climate information services.