

The Role of Co-production in RCOFS: Toward Usable Climate Services

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What makes knowledge 'usable'?

“...information is likely to be effective in influencing the evolution of social responses to public issues to the extent that the information is perceived by stakeholders to be not only *credible*, but also *salient* (relevant) and *legitimate*.”

(Cash et al. 2003)

Criteria for usable knowledge

Criterion	Definition
Credibility	perceived validity, reliability, and trust-worthiness of knowledge; adequacy of evidence
Salience	perceived relevance of knowledge, as well as relative importance of new knowledge compared to existing knowledge sources
Legitimacy	openness, transparency, and unbiased nature of knowledge; respectful of stakeholders' divergent values and beliefs

(Adapted from Cash et al. 2003)

Co-production & usable knowledge

- However, scientists and stakeholders often have **different norms & expectations**
- Climate information should **'fit' a defined problem**
- Many studies highlight the **importance of iterative interaction** between 'producers' and 'users' to increase usability
- **Boundary-spanning** at interface of users / producers – through co-production – can help to enhance credibility, salience, legitimacy

(Cash et al., 2003; Dilling & Lemos, 2011; Lemos & Morehouse, 2005; McNie, 2007)

What is 'co-production'?

No single definition, but some common features:

1. Ongoing interaction and collaboration between actors possessing different knowledge, experience, or perspectives
2. Builds relationships, trust, respect, and communication among participants
3. Includes different types of knowledge – scientific and non-scientific
4. Places scientific knowledge in social, cultural, and political contexts
5. Goal of producing usable, or actionable, science for society

Co-production – both the solution and the problem?



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“Success of climate forecasts since the 1990s brought great promise for societal benefit in their use and applications. This promise is not yet fully realized partly because the interactions with users have not been sufficient and adequate.”

(WMO, 2008 – RCOF Review⁶)

Examining Co-production of Climate Services in Tanzania



Key Lessons:

- Co-production thus far has focused primarily on salience (relevance) of climate services (e.g., through down-scaling, packaging of information)
- Credibility is often the most important aspect for users – but users have different ways of establishing credibility than scientists
- Issues around the legitimacy of climate services have not received enough attention (e.g., what actors are included / excluded, differences in power / prestige between scientists and stakeholders)

Understanding User Satisfaction



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CICERO Report 2016:02

Establishing a baseline for
monitoring and evaluating user
satisfaction with climate services in
Tanzania

Meaghan E. Daly, Jennifer J. West, Pius Z. Yanda
March 2016



Key Lessons:

1. Need for stronger institutional coordination across all scales;
2. Awareness of and access to climate services highly variable across institutional scales;
3. Credibility of climate information and services is paramount to increasing user satisfaction;
4. Need to balance credibility and relevance;
5. Incorporating local knowledge is necessary to enhance the legitimacy of processes;
6. Improving user satisfaction with climate services will be a **long-term process**

Co-production & RCOFs



- RCOFs are some of the earliest efforts to disseminate seasonal forecasts
- Sites of interaction between scientists and users
- Part of the CSIS and UIP under the GFCS

20 years later...what can we learn from these processes?

Overview of Research: Examining Co-production of Knowledge in RCOFs

Phase 1: Scoping of RCOFs Globally – near complete

- Interviews with individuals involved in implementation or coordination of the RCOFs either at global or regional scales
- Document analysis & review of literature
- To identify: goals, institutions, actors, processes, role of users / co-production

Phase 2: Comparative Study of RCOFs – ongoing

- Study of 3 RCOFs: SASCOF, SARCOF, & MEDCOF
- Observation, interviews, online survey
- To identify: lessons / learning about efforts to co-produce climate information across multiple RCOFs

Influence of Regional Context on RCOFs

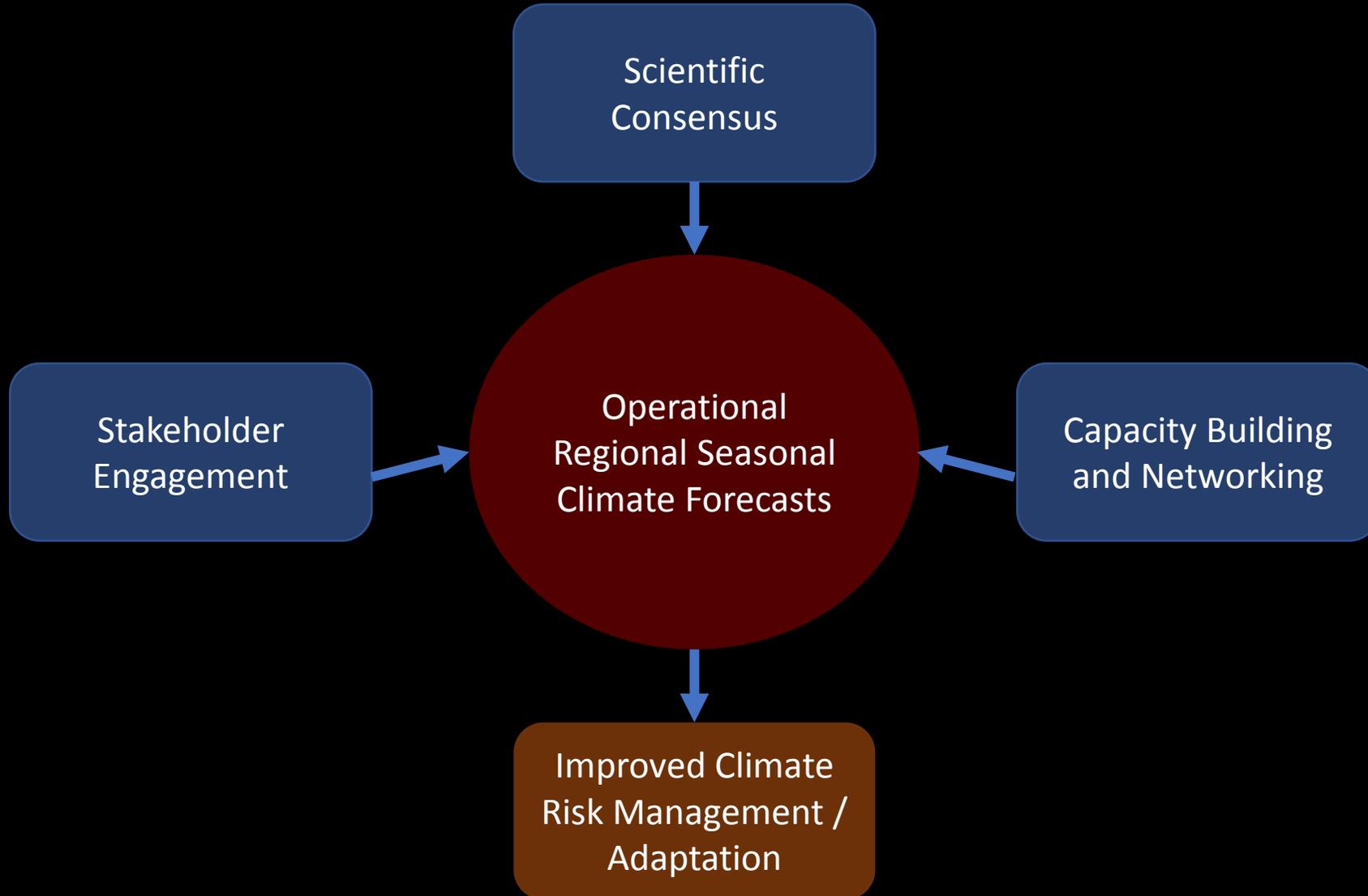
RCOFs have many similar elements but have evolved independently and quite differently in response to the regional context:

- Institutions and cultures
- Capacities – human & technical
- Processes – forecast & forum
- Participant engagement
- Format and duration





Multiple Goals of RCOFs



Who participates in RCOFs?

Producers:

- National met agencies within the region
- WMO Regional Climate Centers
- WMO Global Prediction Centers
- Met agencies and climate institutes outside the region

Stakeholders / Potential Users:

- National government – e.g. ministries and agencies
- NGOs / IGOs
- Development banks / multi-lateral & inter-governmental agencies
- Research / academic institutions
- Private sector – e.g. insurance, energy, tourism
- Media



How do 'users' currently participate?

Varies greatly across RCOFs, many different forms:

- No participation
- 'Transfer' of knowledge
- Sectoral interpretation of forecasts
- Application within sectoral modeling
- Review previous forecasts & evaluate applications
- Boundary organizations & intermediaries
- Sectoral user forums – e.g., health, food security, water, agriculture
- Inputs / feedback toward tailored products
- Support & investment – financial, human-resource, in-kind
- Follow on activities – e.g. contingency planning, agricultural planning workshops
- Produce new products using the forecast input – e.g. food security outlook

How do you 'do' co-production?

- **No 'silver bullet' approach**
 - Co-production & user engagement is specific to context – no single 'method'
 - What might be appropriate in some locations will not work in others
- **The process is as important as the product**
 - Just getting people 'in the same room' is often not sufficient
 - Need for relationships, authentic dialogue, & mutual understanding
- **Co-production may not be necessary in all cases**
 - Co-production is time & resource intensive
 - Some users are better able to assimilate climate information
 - Necessary to understand when and where co-production is truly needed

Consideration 1: Landscape of 'Producers' & 'Users'

- **'Users' is an ambiguous term**
 - Cannot be assumed
 - Interest must be gauged and needs understood
 - Will vary across contexts
- **Multiple roles of producers & users**
 - Many users are also producers of climate info products
 - Producers also play multiple roles in the cycle of climate service delivery
 - Need for joint ownership
- **Moving beyond 'producers' & 'users'**
 - Need for other partners – intermediaries, communications experts, etc.
 - All participants are partners in the process of developing climate services



Consideration 2: Transparency in Processes & Products

- **Products**

- Are key information / messages clearly communicated?
- Are the strengths & limitations of the information / product well communicated? – (e.g. resolution, uncertainty, skill)
- Are methods well-documented and available?

- **Processes**

- Is participation in processes open and accessible to a wide range of interested stakeholders?
- Is there a clear way for stakeholders to communicate feedback?
- Is there a standard procedure for identifying, documenting, and responding to needs?

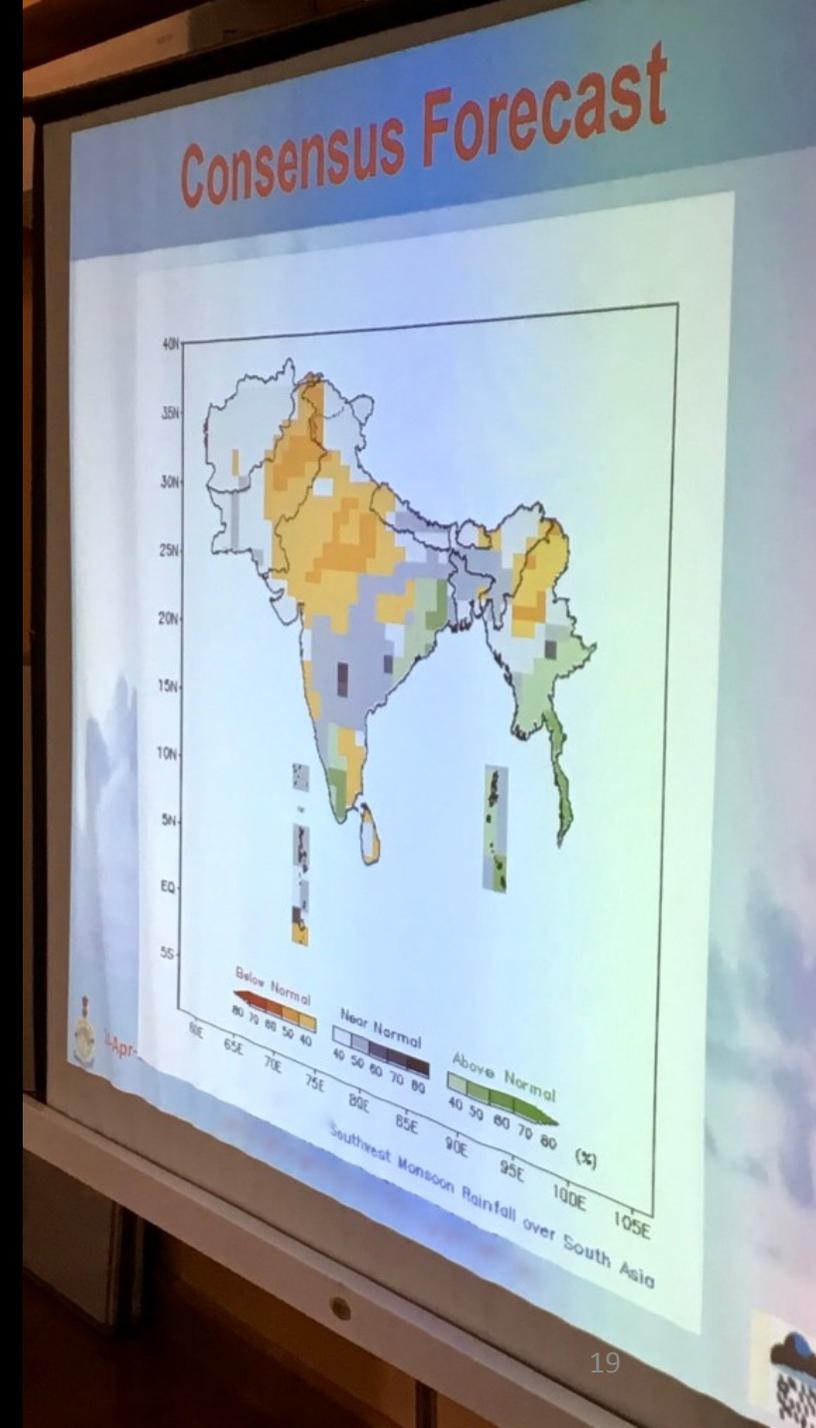
Consideration 3: Setting Clear & Realistic Expectations

- **Roles & responsibilities of all stakeholders is clear**
 - What action is required and by who?
 - Who is responsible?
 - What resources are needed?
- **Clear communication of limitations**
 - Human, technical, & financial resources?
 - What are the limitations of the science ?
 - Issues of sustainability
- **Iteration**
 - Co-production takes time
 - Often a back-and-forth process



Consideration 4: Intended Goals & Outcomes

- **What are the goals?**
 - What is the problem to be addressed?
 - Are goals clearly defined and stated in sufficient detail?
 - Are these agreed upon among stakeholders?
- **Are activities aligned with goals?**
 - Part of a multi-level / integrated system
 - What goals are appropriate at which stages of the cycle?
 - e.g. what is best addressed at regional level? What is best addressed at national level?
- **How do we assess progress toward goals?**
 - Is there a means of evaluating goals & outcomes?



Thank you. Merci. Gracias.

Questions?

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