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Regional information for Society (RifS) Preliminary Science Plan

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1 Strategic goals and outcomes

1.1 Overview

The name of the new core project; Regional information for Society (RifS) captures the essence of our philosophy; “for society”, [climate] “information”, and “regional”. RifS represents an exciting new dimension to WCRP activities that leverages existing core projects and lighthouses, expands their scope of influence and coordinates new research required to provide actionable climate information at the regional scale. The focus of RifS will inevitably evolve through time but the core research principles of provision of actionable information, integrating the best available science, developed for scales of relevance to society’s decision contexts within a co-creation/co-production framework will endure.

1.2 Overarching questions

- 1) What are the key processes driving regional climate variability and change and the related impacts on society?
- 2) How can we best integrate across a variety of approaches used in producing climate information at relevant scales - including evidence from observations, global climate models, regional climate models, statistical models, and local knowledge - to enable the effective co-development and delivery of societally relevant climate information and knowledge?
- 3) What and how can we learn from society’s diversity of decision makers, policy communities, and related stakeholders to better inform and evolve physical climate science research agendas and activities?

1.3 Research Foci

- 1) Understand the stakeholder and climate services landscape, and characterize typologies of users based on climate information needs and effective modes of engagement.
- 2) Evolve the dialogue with stakeholders towards context-relevant co-design and co-development of climate information, including storylines (narratives), and their effective communication.
- 3) Assess, enhance and better articulate climate prediction and projection skill and associated uncertainties for the decision maker’s contexts.

- 4) Reconcile and integrate multiple lines of climate information to produce context-relevant knowledge for decision makers.
- 5) Advance understanding of primary climate drivers of risk for selected (pilot) societal systems/sectors/geographical regions on multiple temporal and spatial scales and their relation to regional climate change and variability.

1.4 Desired outcomes

- 1) Enhanced reduction of systemic risk to climate change and variability.
- 2) Clear and sustained context relevant dialogue with major users of climate information to improve effectiveness of climate products by system, region and sector.
- 3) Improved articulation of how best to develop and deliver context-dependent, region or sector specific climate science.
- 4) WCRP becomes fully engaged with knowledge co-production.
- 5) Catalyzed regional and global collaboration on RifS themes.
- 6) In partnership with CORA¹ and other core projects develop and extend the catalogue of regional activities and enhance visibility of those activities and elucidate key areas requiring further research.

There are many points of collaboration potential across WCRP core projects and lighthouse activities (particularly with CORDEX², CLIVAR³ and GEWEX⁴) and mutual dependencies. RifS has a unique commitment to viewing and synthesizing the outcomes of these research activities through a societal lens.

2 Relationships

Our primary partner is CORDEX because it fundamentally contributes to the RifS agenda in several research questions and via cooperation on production of regional information. Example other key partnerships within WCRP include; CliC⁵, GEWEX, CLIVAR, Earth System Modelling and Observational Capabilities and VIACS Advisory Board⁶, plus lighthouse activities⁷ such as: My Climate Risk and LHA WCRP Academy. During year 1 we will conduct dialogues with each of these partners.

Prospective external partners include but are not limited to: Future Earth, AIMES project⁸, Knowledge Action Network on Emergent Risks and Extreme Events (Risk KAN)⁹, Climate Services developers/entities at the regional scale and beyond (incl. GFCS), Global Climate Observing System (GCOS)¹⁰, UN Office for Disaster Risk Reduction and the World Bank.

3 Structure

We anticipate a three-tier governance structure supported by an International Project Office (IPO), as shown schematically on the following preliminary mind-map and detailed in the following sub-sections. Key

¹ <https://www.wcrp-climate.org/cora-overview>

² <https://cordex.org/>

³ <https://www.clivar.org/>

⁴ <https://www.gewex.org/>

⁵ <https://www.climate-cryosphere.org/>

⁶ <https://viacsab.gerics.de/>

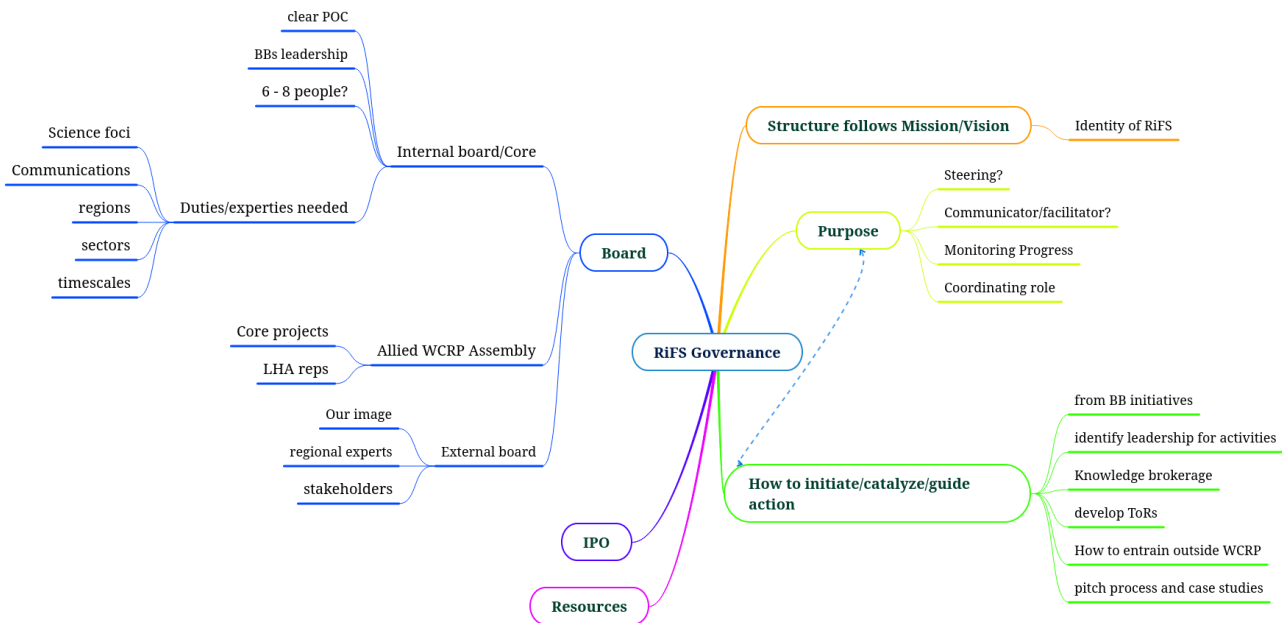
⁷ <https://www.wcrp-climate.org/lha-overview>

⁸ <https://aimesproject.org/>

⁹ <https://www.risk-kan.org/>

¹⁰ <https://gcoss.wmo.int/en/home>

consideration will be given to ensure inclusion of social scientists and communication experts in all levels of RifS governance (specifically (3.1) and (3.3)).



3.1 RifS internal board

This internal board will serve as the scientific steering committee (SSC) and is the principal governing body for RifS¹¹. There will be 3 co-chairs who will span the full RifS agenda as in the current Interim Coordination Group (ICG) structure, with at least one co-chair from CORDEX. These co-chairs will be nominated by the RifS internal board for approval by the JSC. RifS internal board members will represent the core themes of RifS (see section 1) and will be selected to ensure all time scales and interfaces are covered and include representatives from related WCRP activities. Points of Contact with a mandate to ensure engagement with appropriate stakeholders/external partners will be clearly identified. The internal board will also serve to identify and select for JSC approval members of the assembly and external board.

We propose the internal board will comprise 15 RifS members with ex-officio attendance from WCRP partners. The RifS internal board members will serve for the duration of term consistent with WCRP policy. The internal board will be the reporting body to the JSC, in parallel with CORDEX.

3.2 Assembly of allied WCRP Core and Lighthouse representatives

The assembly's purpose is to foster and enable cross-cutting communication and collaboration on the development of regional climate information. This assembly will comprise 2 nominated members from each activity (core project or lighthouse) with each member being approved by the RifS internal board. We tentatively propose the assembly have a membership of approximately 25.

3.3 External board

The role of the external board is to provide a platform to foster dialogue with external stakeholders and organizations. We envisage the profile of the external board will be inclusive of regional representatives

¹¹ Note: We use internal board rather than Scientific Steering Committee to highlight the role of this entity in integrating activities rather than steering research.

and key stakeholders. Applications to join the external board will be solicited using the widest possible network of external organizations (e.g. START¹², Future Earth).

The internal RifS board will establish the policies and procedures governing the external board within six months of the establishment of the internal board.

3.4 International Project Office (IPO)

A new IPO will need to be established to continue the work of the current Coordination Office for Regional Activities (CORA) who's contract is concluded at the end of 2021. The IPO for RifS is high priority and essential to the success of RifS.

4 Process of Forming the Internal Board

Members of the internal board will be identified, selected and appointed following WCRP policies and procedures. Special attention will be paid to ensuring regional, sectoral and gender representation. Participation from Early Career scientists will also be given high priority.

Nominations will be sought via a wide range of channels (including established networks, social media and email) and will leverage the active RifS community (see section 8).

The internal board will be established in parallel with the International Project Office (IPO), and efforts will be taken to ensure there is continuity between the ICG and the new internal board.

5 Requested support from WCRP

The success of RifS critically depends on establishment of a new International Project Office to assist in the realization of RifS goals and objectives, and thus we request WCRP assistance with establishment of an IPO. Development of this proposal and initial RifS activities have greatly benefited from support from CORA, but we are cognizant that the contract expires at the end of the year. Thus, issuance of a call by the JSC to host this new IPO is a matter of urgency and it may be necessary to finance a short-term continuance of CORA support.

RifS requests 80,000 CHF to support:

- A 2-day workshop on building and expanding the RifS community. We envisage 30+ participants to ensure representation from RifS and allied WCRP core projects and the lighthouse activities.
- A second 2-day workshop to commence engagement with the first tier of stakeholders. We envisage 40-50 participants to ensure a broad engagement and build upon the existing momentum that RifS has established in 2021.
- A workshop with a specific focus on dialogue with climate service communities in our pilot regions.

RifS will seek to maximize the impact from this investment by partnering with activities (e.g. workshops) of other WCRP core projects.

To facilitate broad participation we will actively seek to enable and utilize remote participation options in these workshops and other meetings and to use a hub and regional spokes arrangement to minimize travel distances and costs.

Additionally, RifS requests 60,000 CHF to support the following planned CORDEX activities:

- 6-8 Regional Workshops over the CORDEX domains
- CORDEX-SAT face to face meeting (1 per year)
- ICRC CORDEX Conference
- 3-day Workshop focused on integrating statistical and dynamical Downscaling approaches for providing useful climate information for decision making.

¹² <https://start.org/>

CORDEX specific activities will also use hybrid options (remote and presential) to maximize participation and minimize costs.

6 Resources

Establishment of RifS provides a new and exciting opportunity to open dialogue with potential external funders (e.g. the Bezos Earth Fund, Belmont Forum). Such possibilities will be vigorously pursued by the RifS internal board.

7 New Communities

To ensure we meet our overarching goals, RifS will expand participation in WCRP to include social scientists and communication specialists. We will actively engage with both the climate service and VIA communities. In the initial phases we envisage targeting specific pilot regions to build these joint activities and community interfaces. An initial activity of the RifS ICG and internal board will be to open discussion with appropriate regional activities and organizations.

8 Specific issues for JSC consideration

The success of RifS will be dependent on the co-establishment of a RifS internal board and an IPO as soon as possible. We seek urgent assistance from the JSC on these matters.

We will seek to ensure strong gender, age and geographic equity on the internal board and would welcome the opportunity to work collaboratively with WCRP JSC to achieve this desired balance.

The RifS Internal Board currently envisage parallel reporting with CORDEX to the JSC.

RifS has broad support within the community as demonstrated by the participation in the lead-up to this submission. Overview statistics are as follows:

- A large meeting in March 2021 had over 50 participants from all over the world.
- 68 individuals have attended at least one of RifS meeting during 2021.
- There have been 11 RifS meetings since the end of April during which RifS overarching objectives, governance structures and relationships within and external to WCRP have been developed.
- The four sub-committees of RifS have each had at least two meetings to articulate the research goals and approaches briefly precised in section 1 of this document.

Each of these meetings have significantly contributed to refining and articulating the research goals described herein, and their participants are gratefully acknowledged and appreciated.