The Future of the World Climate Research Program

The Vision
A world that uses sound, relevant, and timely climate science to ensure a more resilient present and sustainable future for humankind.

The Mission
Coordinate and facilitate international climate research to develop, share, and apply the climate knowledge that contributes to societal well-being.

www.wcrp-climate.org/wcrp-sp
WCRP Strategic Plan: Overview

- A hierarchy of simulation tools
- Sustained observations and reference data sets
- Need for open access
- High-end computing and data management

Scientific Objectives

1. Fundamental understanding of the climate system
2. Prediction of the near-term evolution of the climate system
3. Long-term response of the climate system
4. Bridging climate science and society

www.wcrp-climate.org/wcrp-sp
The transition from our current functioning WCRP into a new WCRP requires:

• A transparent «bottom-up» approach involving the entire community

• Identifying high-level Science goals; and the key actions required to reach them and to ensure strong “buy-in” from the community

• Identifying those Elements of a new WCRP that are required to put the WCRP Strategic Plan into action, including:
  – structures, milestones, deliverables, resources, measures of success, risk assessment
Implementation and Transition Meeting, 4-5 May 2019

- Representatives of the WCRP community discussed how to implement the WCRP Strategic Plan
- Identified a Conceptual Framework for a new WCRP that is fit-for-purpose, has an effective governance, sufficient resources, budgets and finance management

WCRP Joint Scientific Committee (JSC-40), 6-10 May 2019

- Further discussion and refinement; with main outcomes of:
  - Engagement, dialogue and discussion with partners, agencies and sponsors
  - Agreement on implementation and transition road map
Geneva, 2019:
Development of a Conceptual Framework by WCRP Family
WCRP Mission: to coordinate and facilitate international climate research to develop, share, and apply the climate knowledge that contributes to societal well-being.
Implementation Plan:

Roadmap

May 2019

Agreement on Implementation Plan Phase 1:
- Science questions and conceptual framework
- Key elements for delivery and engagement
- Science, funding and infrastructure needs.
JSC-41

April 2020

Consolidation:
- Questions and framework
- Partner & stakeholder consultation
- Funder and sponsor consolidation

Drafting Implementation: Phase 1.

Science Questions Workshop: February 2020

“Elements” Workshop:
Finalize Phase 1 Brainstorming for Phase 2
March 2020

AGU: Community consultation of WCRP Framework
December 2019

Consultation regarding new structure and governance

Decision on Phase 2 and beginning of transition
(JSC-42)
April 2021

Synthesis of core activities

Transition

April 2022
Community Consultation

• Task Teams on Regional Activities, Modelling and Data
• Consultation with funding agencies.
• Interaction with WWRP/GAW and other partners
• Integration into new WMO, ISC, IOC
• Interaction with Future Earth and Belmont Forum: Landscape discussion
Next Steps

• February 2020: WCRP High-level Science Questions and Flagship Workshop

• March/April 2020: WCRP Elements and Structure Workshop
1. Regular Syntheses, Assessments and Gap Analyses

- Defined lifetime [start and end] milestones and deliverables
- Joint, and co-designed, with Partners in/outside WCRP
- Deliver to WCRP Strategic Goals, Science Questions
  - Relevant, integrative, credible
  - Global collaboration

2. Rapid Assessments and Reports

- Implementation Plan Elements
  - Defined lifetime [start and end] milestones and deliverables
  - Joint, and co-designed, with Partners in/outside WCRP
  - Deliver to WCRP Strategic Goals, Science Questions
    - Relevant, integrative, credible
    - Global collaboration

- Research Projects

- Conferences, Workshops, WCRP Fora

- Fora to engage and empower ECRs and Regional Partners

- Evaluations Intercomp’s Benchmarking Standards

- Enduring capability, People and Science

- Reference data sets (observed, modelled)
High-level Science Questions are central

How to improve climate modelling and process understanding?

What is the impact of different forcings?

How can we better understand climate sensitivity?

How can we improve climate predictions?

What opportunities do new technologies provide?

What can we expect in regional climate hotspots?

What is the interaction between climate and development trends?

How will reservoirs change in the future?

How will climate extremes occur in the future?

What will be the impact of Geoengineering?

Is response action needed?

What does society need to know?

How can we make predictions more useful and relevant to society’s needs?

What will happen in the high latitudes?

What will happen to low-lying islands?

What will be the impact of Geoengineering?

How will climate extremes occur in the future?

How will reservoirs change in the future?

How can we improve climate predictions?

What is the impact of different forcings?

How can we better understand climate sensitivity?

What opportunities do new technologies provide?

What can we expect in regional climate hotspots?

What is the interaction between climate and development trends?
Refining Science Question areas

We will refine science question areas via consultation with:

- The WCRP Community
- Science Plans of the WCRP family
- Partners (including by co-design)
- Horizon scanning done by Partners
- Gap and needs assessments
Implementation Plan: Roadmap

Mid to end 2020:
JSC-41: Approval of WCRP Implementation Plan:
• High-level science questions and flagship product
• Elements of the new WCRP
• Collaboration landscape and interfaces to partners
• Governance
• Financial plan

After JSC-41:
• Request from Sponsors for approval of plan
• Writing of WCRP Implementation Plan
• Community and agency outreach, including fundraising
Detlef - Did you want to add a final visionary slide/statement?
Thank You
### Implementation Plan Elements

#### Research Projects
- Lifecycle (start and end) with a clear timeline and deliverables
- Joint and co-designed with Partners outside WCRP
- Deliver to Strategic Plan Objectives
- WCRP attributes: Integration; Scale; Relevance; Climate Change; Discovery and Innovation

#### Conferences, Workshops, WCRP Forum
Projects and fora to engage and empower ECRs; and regional partners: part of the WCRP family

#### Regular Syntheses, Assessments, Gap Analyses
Rapid Assessments and Reports

- Reference data sets (observed, modelled)
- Evaluations, Inter-comparisons, Benchmarking, Standards

#### Coordination
- Educational services and activities
- Stakeholder engagement and outreach
- Capacity building and communication

#### Enduring capability - people:
- Climate System Elements
- Infrastructure and Integration