



# WORLD CLIMATE RESEARCH PROGRAMME

*Our Climate Future*

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International  
Science Council



# Introduction

For almost 40 years WCRP has been the leading initiative dedicated to coordinating international climate research and advancing our understanding of the climate system and how it is affected by human activities.

The next decade will bring challenges that can only be addressed through a worldwide coordinated effort; involving co-design and stakeholder engagement conducted by a prepared scientific workforce.

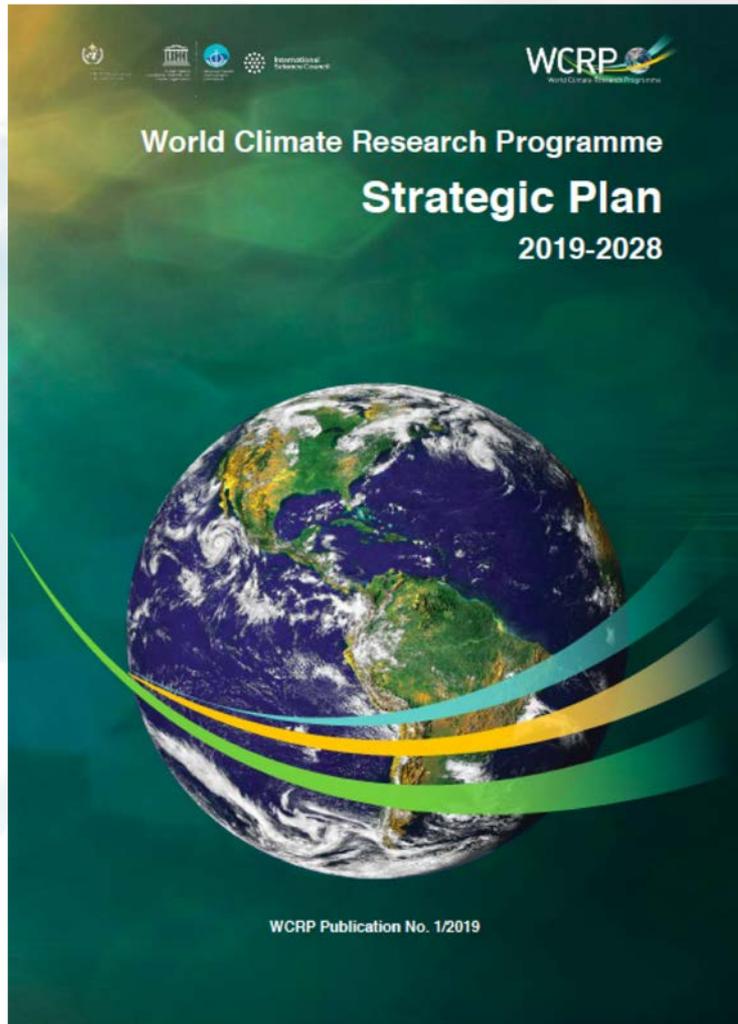
Society requires decision-relevant, evidence-based climate information to support mitigation strategies and adaptation choices.

# Introduction



The **World Climate Research Programme (WCRP)** leads the way into the future in addressing frontier scientific questions related to the coupled climate system — questions that are too large and too complex to be tackled by a single nation, agency or scientific discipline.

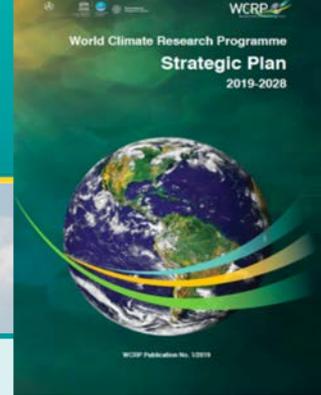
# The Future of WCRP



## WCRP Strategic Plan 2019 - 2028

[www.wcrp-climate.org/wcrp-sp-overview](http://www.wcrp-climate.org/wcrp-sp-overview)

# The New WCRP Strategy



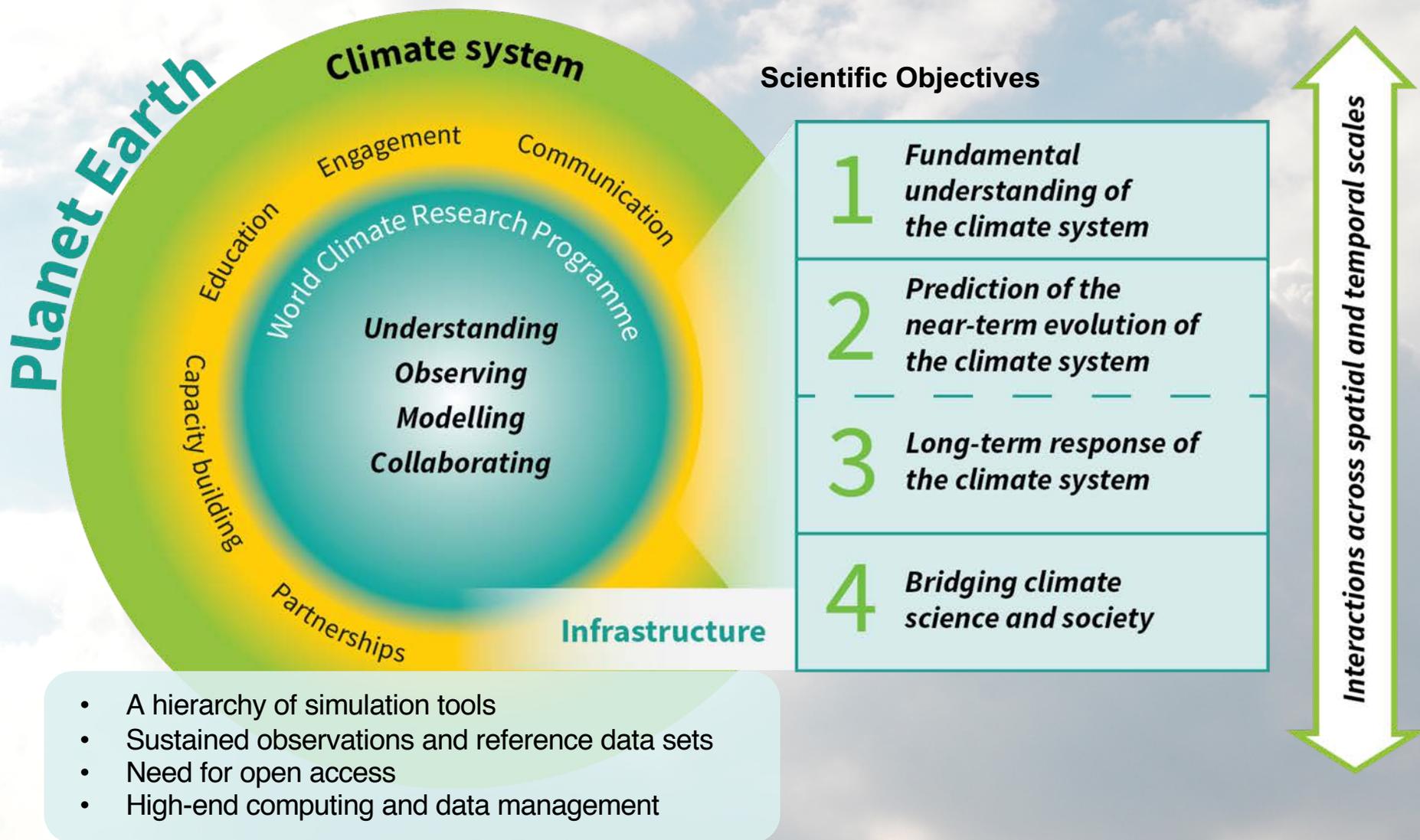
## The Vision *(our aspiration)*

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

## The Mission *(what we do, our purpose)*

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

# WCRP Strategic Plan: Overview



# Implementation Priorities

- 1. Foster and deliver the scientific advances and future technologies required to:**
  - Advance understanding of the multi-scale dynamics of Earth's climate system
  - Quantify climate risks and opportunities



# Implementation Priorities

## ***2. Develop new institutional and scientific approaches required to:***

- Co-produce cross-disciplinary regional to local climate information for decision support and adaptation*
- Inform and evaluate mitigation strategies*

# Implementing the WCRP Strategy

**WCRP will prioritize its science and implement its Strategy by pursuing a series of Lighthouse Activities, along with other core research activities, to deliver and achieve critical outcomes over the next decade**



# Proposed Lighthouse Activities

**Explaining and  
Predicting Earth  
System Change**

**My Climate Risk**

**Safe Landing  
Climates**

**WCRP Academy**

**Digital Earths**

**These draw on WCRP's fundamental science, critical  
infrastructure and strategic partnerships**

**Provisional  
Names**

# Proposed Lighthouse Activities

## Earth System Change

To design, and take major steps toward delivery of, an integrated capability for quantitative observation, explanation, early warning and prediction of Earth System Change on global and regional scales, with a focus on multi-annual to decadal timescales.

## My Climate Risk

To develop a new framework for assessing and explaining regional climate risk to deliver climate information that is meaningful at the local scale.

## Safe Landing Climates

To explore the routes to climate-safe landing 'spaces' for human and natural systems, on multi-decadal to centennial timescales; connecting climate, Earth system and socio-economic sciences. Explore present-to-future "pathways" for achievement of key SDGs.

## Digital Earths

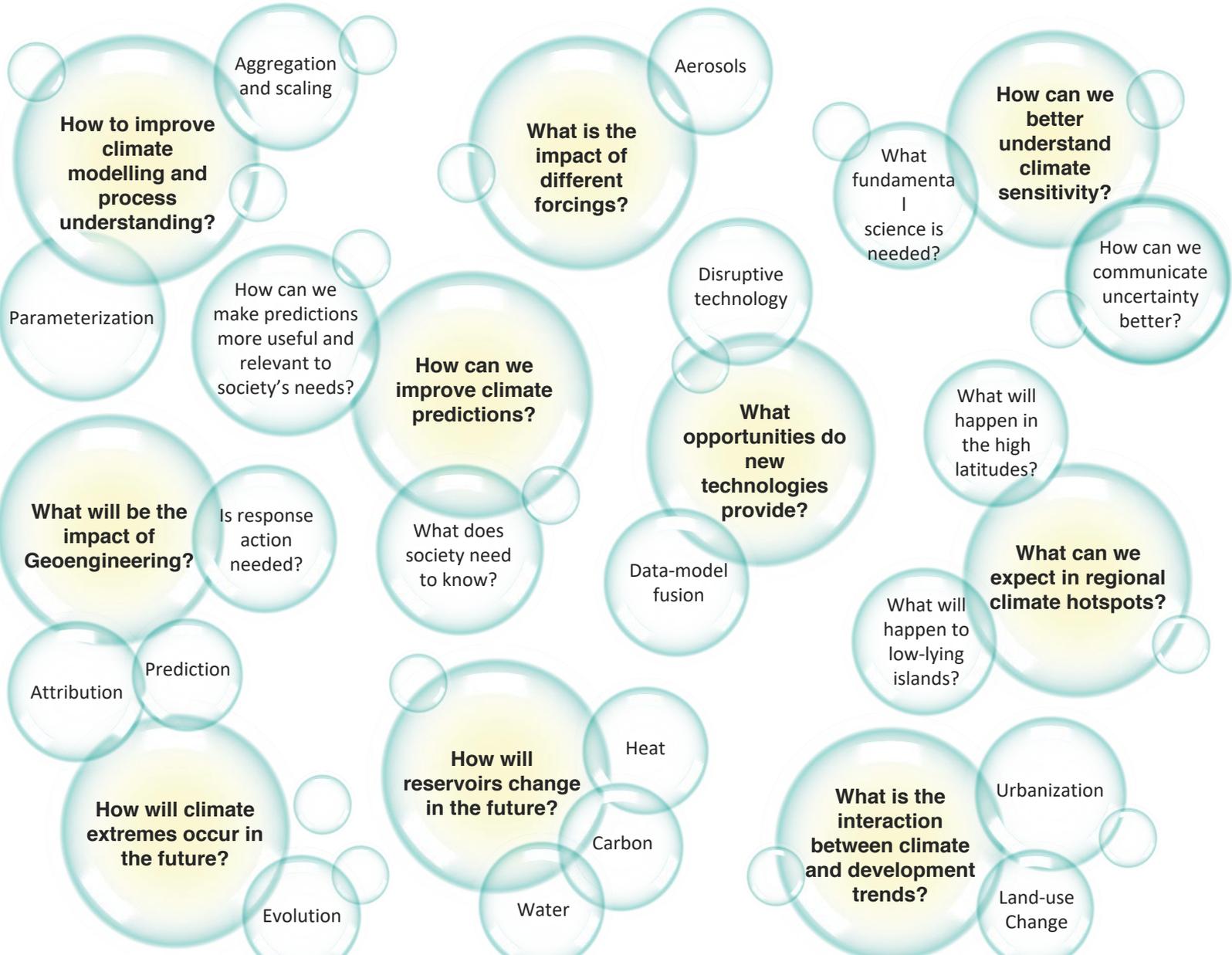
To develop a digital and dynamic representation of the Earth system, optimally blending models and observations, to enable an exploration of past, present and possible futures of the Earth system.

## WCRP Academy

To establish one or more targeted capacity exchange climate programmes, working with one or more of the other lighthouses and established climate education providers, including universities.

# High-level Science Questions

Considering all scales



# First Draft of a New WCRP Structure

## Joint Scientific Committee

### WCRP Secretariat

#### Lighthouse Activities

Major experiments, high visibility projects,  
infrastructure building blocks  
*Ambitious and exciting*

Ongoing and additional  
activities and fora

Fixed-term Projects

### International Offices

Conferences and Workshops

#### WCRP Communities Enduring Capabilities, Homes for Expertise

Reference Datasets,  
Evaluations and Benchmarking

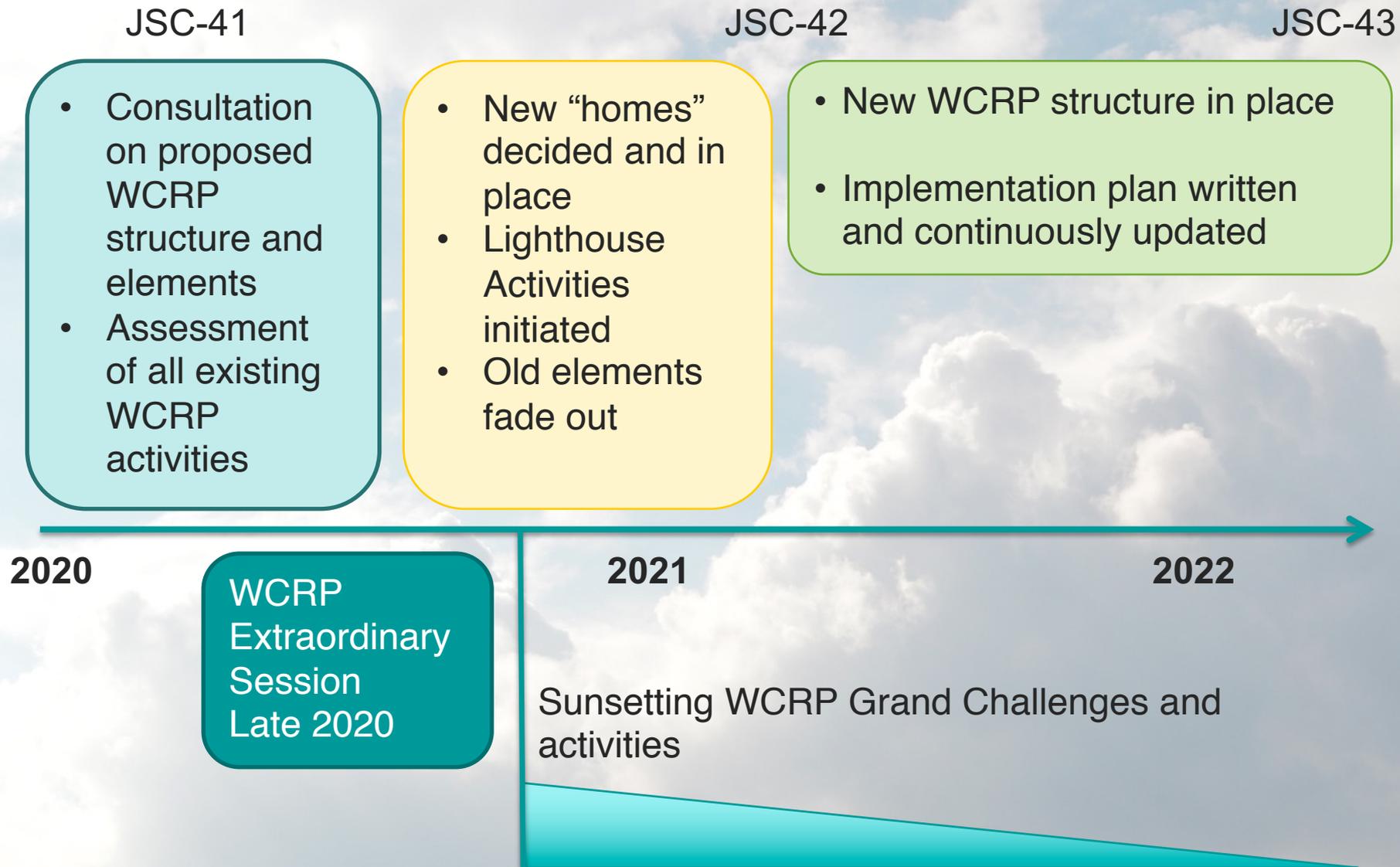
- *Climate and Cryosphere*
- *Climate and Ocean Variability, Predictability and Change*
- *Global Energy and Water Exchanges*
- *Stratosphere-troposphere Processes And their Role in Climate*
- *Earth System Modelling and Observational Capabilities (new)*
- *Regional Climate Information for Societies (new)*

Diversity- and Capacity-  
building: ECRs, Regions

Rapid Updates, Syntheses  
Assessments, Gap Analyses

Communications and Outreach

# Soft Transition Timeline



**Thank You**



WORLD  
METEOROLOGICAL  
ORGANIZATION



United Nations  
Educational, Scientific and  
Cultural Organization



Intergovernmental  
Oceanographic  
Commission



International  
Science Council