



WORLD CLIMATE RESEARCH PROGRAMME

Update on strategy and implementation

Bill Merryfield, Doug Smith, Michel Rixen

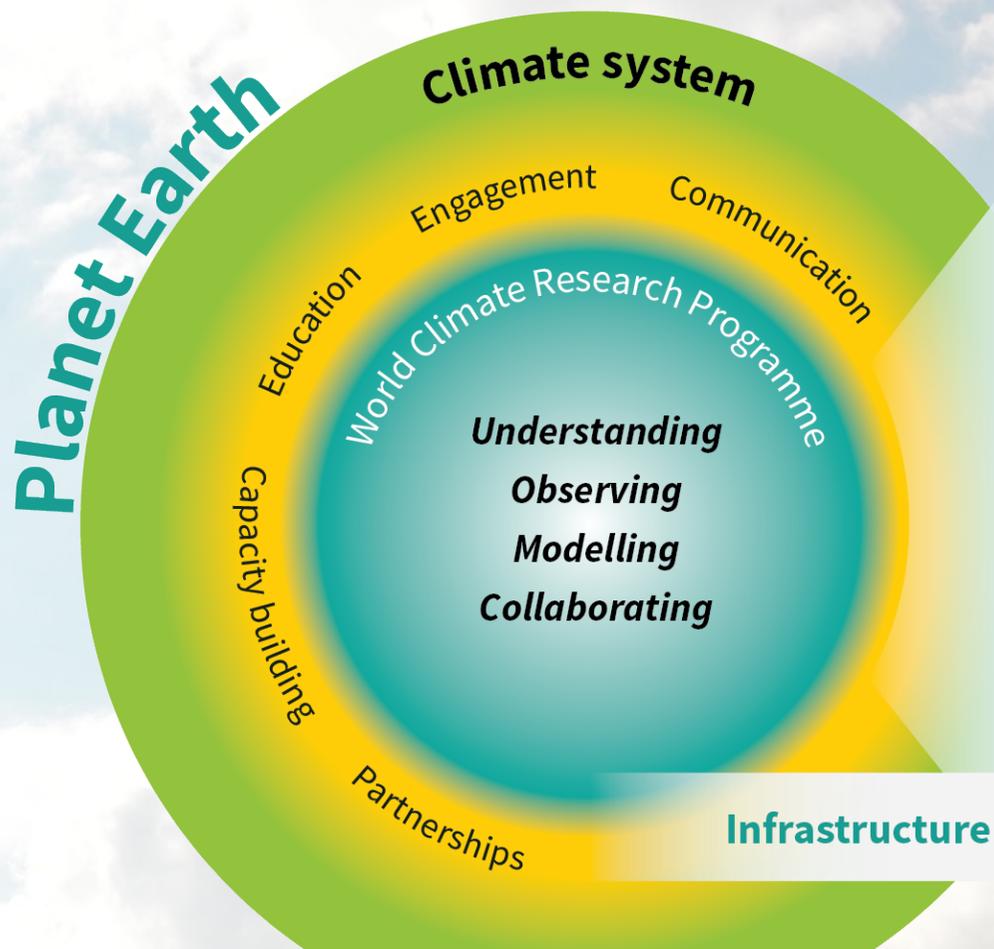
WGSIP22, 28-30 Oct 2020



International
Science Council



WCRP Strategic Plan: Overview



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*

Interactions across spatial and temporal scales

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

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



Conferences and Workshops



Reference Datasets,
Evaluations and Benchmarking



Diversity- and Capacity-
building: ECRs, Regions



Rapid Updates, Syntheses
Assessments, Gap Analyses



Communications and Outreach

International Offices

WCRP Communities

Enduring Capabilities, Homes for Expertise

- *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)*

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.

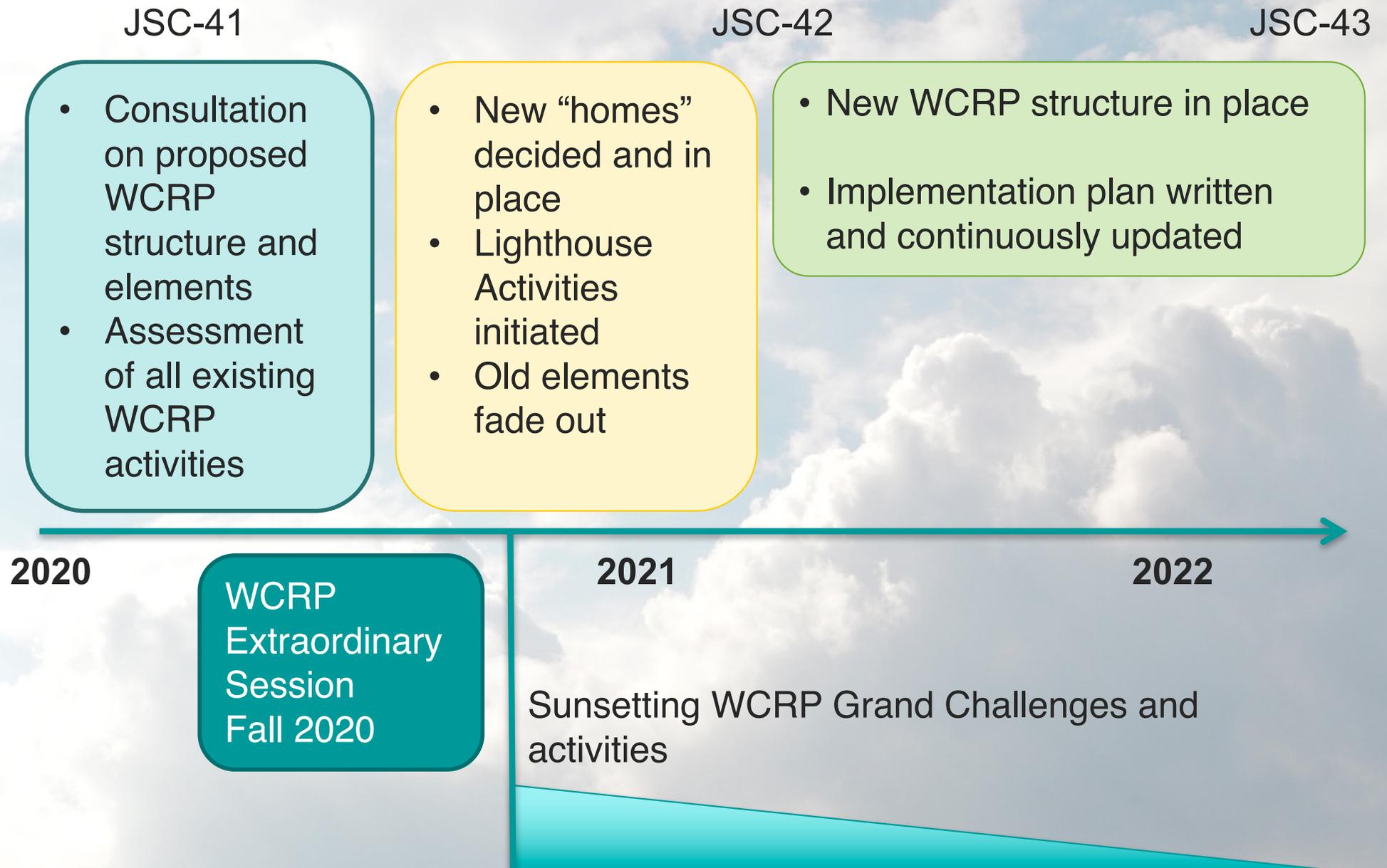
Digital Earths

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.

Soft Transition Timeline



JSC-*n* = WCRP Joint Scientific Committee Sessions (meetings)

Model-data home: current options

1. Model-data home includes CMIP with a dedicated Project Office TBD
2. CMIP broader (including S2S) framework serving as model-data home, building on CMIP Office call – so far only viable secretariat option - preferred by most people so far
3. Model-data home with dedicated office separate from CMIP structure and office
4. Model-data home as a joint WMAC+WDAC governance without an office

Feedback and alternatives welcome!

Thank You