



WORLD CLIMATE RESEARCH PROGRAMME

JSC39 – Strategic Plan Overview

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ICSU
International Council for Science

General considerations

1. Strategic Plan = the 'what' and the 'why'

- Vision and mission unchanged
- Evolution of context
- Exciting new directions and aspirational research goals
- Two purposes: galvanize the community, marketing tool



Vision, Mission and Values

Vision

A world that uses relevant and authoritative climate science to ensure a resilient present and future for humankind.

Mission

The WCRP develops, shares and applies climate knowledge that contributes to societal well-being by supporting international climate research.

Values

WCRP is guided by the following core values in support of excellence in science and global relevance:

- Accountability and transparency of process and results
- Collaboration and partnerships
- Inclusive practice



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2. Implementation Plan = the 'how'

- Develops over time to reflect logic of SP
- Measures of Success
- Milestones



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Structure of Strategic Plan

- **Overarching Objectives**
 - focus on the far horizon and consider the scientific research that will be required to answer the substantial challenges with which society is presented over the next decade
- **Emphases**
 - fundamental science capacities that must be supported promoted
- **Imperatives**
 - Tools, resources, and capabilities required to underpin the international scientific enterprise

Together they provide a framework that will drive climate science forward in the coming decade.



Overarching Objectives

O-1. Understanding the climate system

Identify and constrain processes that affect the climate system, notably the reservoirs and flows of energy and water – and other essential elements including carbon, aerosols, salt and other **climate-active species/compounds** – within and between the components of the Earth system.

O-2. Advance predictive skill on sub-decadal timescales

Quantify the uncertainties and enhance the prediction skill for shorter time scales of the climate system and its components.

O-3. Constraining projections on decadal to centennial timescales

Quantify the sensitivities, uncertainties and emergent constraints inherent in the chang-

O-4. Connecting climate science with policy and services

Improve the generation of decision relevant climate information and knowledge about the evolving Earth system.

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Scientific Emphases

- Climate science in support of sustainable development
- The atmosphere in the climate system
- The ocean in the climate system
- The land in the climate system
- The cryosphere in the climate system
- The regions in the climate system

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Imperatives

- Hierarchy of Earth and Climate System Models
- Observations and data sets in support of climate science
- Timely assessments of the state of the climate system
- Open access, high-end computing and data infrastructures
- Supporting a vibrant climate research community around the world
- Communication and education
- Outreach and societal engagement
- Institutional and programmatic partnerships

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Thank You



WHO



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www.wcrp-climate.org



in



Breakout Groups

- **Overarching Objectives**
- **Emphases**
- **Imperatives**



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BOG 1 – Overarching Objectives

Points for discussion

- **Foci and wording**
- **Link to emphases and imperatives**
- **Scope: energy, water, carbon, momentum, etc**
- **List of activities under each Ox: needed? For IP?**
- **Convection, planetary boundaries, etc: under objectives or emphasis (atmosphere)?**
- **O1: are process studies specific to this objective? Or part of emphases (disciplinary areas)? Opportunity for broad objective on consistent picture of reservoirs, cycles and exchanges**
- **O2: focus on ‘improving skill’ before ‘uncertainties’**
- **O3: is wording ‘emergent constraints’ self-explanatory?**



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BOG 2 – Emphases – Points for discussion

- **Carbon: how much and where in the SP? Includes CO2 monitoring w/ GAW?**
- **Strengthen focus on processes studies in each Es (interfaces and disciplinary areas)**
- **Attribution science could be strengthen: where, how?**
- **Some details in Ox vs Ex (e.g. disciplinary prediction?)**
- **E0: Some connection to SDG probably best under O4, refocus E0 on ‘climate system and interfaces’ (+coupling) and bed-rock science, otherwise risk of dilution**
- **E1: need to address changes in circulation, climate forcers and their coupling, internal variability on top of extremes**



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BOG 2 – Emphases – Points for discussion

- **E2: include influence of ocean variability on atmosphere and related predictability?**
- **E3: include carbon here and ESM of agriculture? Extremes here or atmosphere? Land use change, water and carbon?**
- **E4: add focus on snow, integrated satellite and in-situ polar products, revisit list (amplification, feedbacks, etc)**
- **E5: increase focus on regional decadal predictions?**



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BOG 3 – Imperatives – Points for discussion

- **I1: recognize role of modeling centers (or in I8?)**
- **I2: distinguish observations and data/analysis science (elsewhere, e.g O1?), role of WCRP in observations science? Resp. role of GCOS vs WCRP in IP?**
- **I3: assessment as imperative or part of O1 (understanding part) and O4 (connection to policy)?**
- **I4: strengthen need for data infrastructures**
- **I5: quota on gender and geographical balance?**
- **I6-7: some duplication between I5-8, maybe combine or some or restructure? Societal engagement part of WCRP?**
- **I8: add regional partnerships and modeling centers, highlight requirements for resources and coordination**



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