

# WORLD CLIMATE RESEARCH PROGRAMME

JSC39 – Strategic Plan

Guidance and questions for Breakout Group Discussions

*Guy Brasseur*  
*JSC39, 2018*  
*Nanjing, China*



ICSU  
International Council for Science

# General considerations

- **Strategic Plan = the ‘what’**
  - Follows the vision, mission and context evolution
  - Positioning, niche, relevance, new directions, focus on big picture
  - Two purpose: galvanize the community, marketing tool
- **Implementation Plan = the ‘how’, setting the Strategic Plan in motion, the devil is in the detail, should follow somewhat naturally the logic of the Strategic Plan**
  - Resources
  - Structures
  - Milestones
  - Deliverables
  - Measures of Success
  - Risk assessment
  - etc



# Evolving context and challenges

Last WCRP Strategic Plan: 2005-2015

Last WCRP Review: 2009

Last WCRP Implementation Plan: 2010-2015

Research is pulled into a new and broader  
“operational/service/policy” landscape

- IPCC Assessment Reports
- UNFCCC Paris Agreement and Global Stocktake
- Global Framework for Climate Services
- Sendai Framework for Disaster Risk Reduction
- ...



INTERNATIONAL  
COUNCIL  
FOR SCIENCE



# Key recommendations of the Review

1. Science Strategy and Implementation: key societal needs, international coordination, bedrock science but relevance
2. Governance and the MoU, sponsors board
3. JSC Science Strategy leadership
4. JPS and Operations
5. WCRP structure to support implementation
6. Sponsors' financial support
7. Science for Services
8. Partnerships: WWRP, GAW, GCOS, Future Earth, etc



INTERNATIONAL  
COUNCIL  
FOR SCIENCE



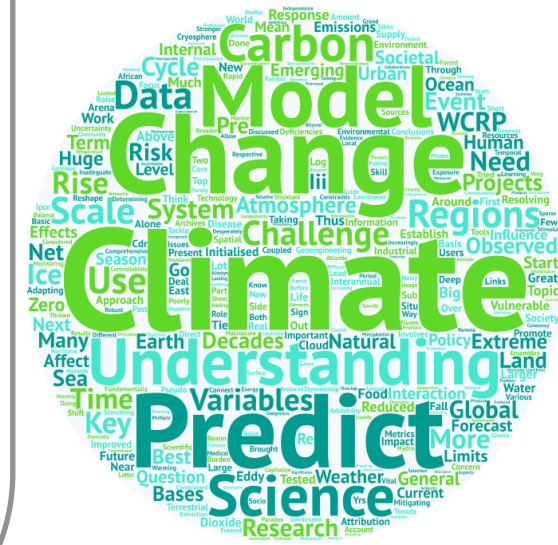


# WCRP New Strategy: draft content

1. **The World Climate Research Programme**
2. **Forty years of successful international climate science**
3. **The next decade of the World Climate Research Programme**
4. **Overarching Scientific Objectives of the Programme**
  - O1. Understanding the climate system
  - O2. Determining predictability on weekly to decadal timescales
  - O3. Understanding projectability on decadal to centennial timescales
  - O4. Connecting climate science with policy and decisions
5. **Emphases of the Programme**
  - E0. Climate science in support of sustainable development
  - E1. The ocean in the Earth system
  - E2. The atmosphere in the Earth system
  - E3. The land in the Earth system
  - E4. The cryosphere in the Earth system
  - E5. The regions in the Earth system
6. **Imperatives for the Programme**
  11. Hierarchy of Earth and Climate System Models
  12. Observations and data sets in support of climate science
  13. Timely assessments of the state of the climate system
  14. Open access, high-end computing and data infrastructures
  15. Supporting a vibrant climate community around the world
  16. Communication and education
  17. Outreach and societal engagement
  18. Institutional and programmatic partnerships
7. **Closure Statement**



Strategic Plan 2019-2029



WMO



INTERNATIONAL  
COUNCIL  
FOR SCIENCE





# Strategic Plan and Sponsors' Review

- **Add maybe here a few salient points of review (cf what Elena will have presented in the morning)?**



INTERNATIONAL  
COUNCIL  
FOR SCIENCE





# Structure of Strategic Plan

- **Overarching Objectives (O1-O4)**
  - focus the science community on the far horizon and consider the scientific research that will be required to answer the substantial challenges with which society is presented
- **Emphases (E0-E5)**
  - fundamental science that must be supported and nurtured as new communities form and re-form around the evolving scientific goals
- **Imperatives (I1-I8)**
  - tools and capacities required to underpin our international scientific enterprise

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



INTERNATIONAL  
COUNCIL  
FOR SCIENCE



World Climate Research Programme

# Strategic Plan: broad questions

- **Remit of WCRP:**
  - core business
  - high level WCRP involvement, but in partnership
  - principally done by partners, but with WCRP involvement
  - no WCRP involvement
  - Ex 1: CMIP research vs transition of «operational elements»
  - Ex 2: how close a connection to societal agenda and services
- **Attractive to sponsors, stakeholders?**
- **Innovation? Ambition?**
- **Relevant given the new context?**
- **Are key messages clear?**
- **Need all details? Or move some elements to IP?**
- **Any key elements missing?**



INTERNATIONAL  
COUNCIL  
FOR SCIENCE



# 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?**



INTERNATIONAL  
COUNCIL  
FOR SCIENCE



# 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**



INTERNATIONAL  
COUNCIL  
FOR SCIENCE



# 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?**



INTERNATIONAL  
COUNCIL  
FOR SCIENCE



# 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**



INTERNATIONAL  
COUNCIL  
FOR SCIENCE



World Climate Research Programme

# Thank You



WHO



IOC



ICSU

International Council for Science



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



in

