WORLD CLIMATE RESEARCH PROGRAMME

Extraordinary Session of the WCRP Joint Scientific Committee (JSC41B)

Safe Landing Lighthouse
This Lighthouse Activity is an exploration of the routes to climate-safe landing 'spaces' for human and natural systems. It will explore present-to-future “pathways” for achievement of key, if not all, Sustainable Development Goals (SDGs). The time scale is multi-decadal to millennial.

Global climate risk management
## Questions – to guide the discussions

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<tr>
<th>1. Progress in developing Science Plan</th>
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<tr>
<td>• Initial goals and objectives</td>
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<td>• Include any new science / technologies / models / observations being envisaged</td>
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<td>• How to ensure geographic and gender diversity in the science planning team?</td>
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<th>2. Who are the critical partners?</th>
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<td>• Have they been contacted, and are they being engaged in the co-design?</td>
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<th>3. Early thoughts and recommendations</th>
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<td>• Funding requirements?</td>
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<td>• Other resource needs?</td>
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<td>• Are there obvious funders to be approached?</td>
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<th>4. Timeline and roadmap</th>
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<td>• Draft timeline / roadmap for developing the science plan, and the launch of the LHA.</td>
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<th>5. Other – anything else?</th>
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1. Progress towards developing Science Plan

• Science Planning team: Steve Sherwood/Gabi Hegerl/Neil Harris/Bette Otto-Bleisner/Beth Holland/Jim Renwick/Kevin Reed/Hyungjun Kim/Pascale Braconnot/Paulo Nobre/Pierre Friedlingstein

• Concerns/questions about the Hamburg Outline:
  • Role of IAMs and socio-economic coupling
  • Role for geoengineering
  • “User oriented” tools and stakeholder/client engagement
  • Model development

• Key areas of focus/concern
  • “Tipping points” and unknown unknowns
  • Defining “safe”
  • Risk communication

• Need to focus on a few things where we can make a difference.
2. Partners – external and internal to WCRP

- Other lighthouses—Explaining and Predicting…, My Climate Risk
- All four existing Core Projects and two new ‘Homes'
- Future Earth (SOLAS, AIMES, PAGES, ILEAPS)
- Integrated Assessment Modelling Consortium
- Belmont Forum
- Earth Commission
- UNFCCC
- SCAR (ISC Scientific Committee on Antarctic Research)
- CMIP (ISIMIP, LS3MIP)

2. Who are the critical Partners?

- Have they been contacted, and are they being engaged in the co-design?
- NB this includes those external (e.g. Future Earth) and internal to WCRP (esp. the Core Projects).
3. Resource requirements – early thoughts

• Huge challenge: achieving meaningful links across disciplines
• Fundamental uncertainties may require better models or new observations (permafrost/clathrates/ice sheets/biome responses to climate change and CO2)
• Meetings
• Outreach (e.g. web design)

3. Early thoughts and recommendations

• Funding requirements?
• Other resource needs?
• Are there obvious funders to be approached?
Develop science plan by June 2021

Possible plan: “Phase I” (first few years) on key biophysical problems, while at the same time building social-sciences partnerships outside WCRP. Aim toward “Phase II” on non-stationary interactions between humans and natural systems.
5. Other

• Probably need to increase our development team, but first want to try to narrow scope and identify key targets.
• Team gender balance is OK, but we could use more people from outside Europe/US/Australia, and a few more early career people!