



WORLD CLIMATE RESEARCH PROGRAMME

Extraordinary Session of the WCRP Joint Scientific Committee (JSC41B)

Safe Landing Lighthouse



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Purpose

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



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Questions – to guide the discussions

1. Progress in developing Science Plan

- Initial goals and objectives
- Include any new science / technologies / models / observations being envisaged
- How to ensure geographic and gender diversity in the science planning team?

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. Early thoughts and recommendations

- Funding requirements?
- Other resource needs?
- Are there obvious funders to be approached?

4. Timeline and roadmap

- Draft timeline / roadmap for developing the science plan, and the launch of the LHA.

5. Other – anything else?



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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.

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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)

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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?
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4. Draft Timeline and Roadmap: Science Plans and LHA Launch

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.

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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!

5. Other – anything else?



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