



WORLD CLIMATE RESEARCH PROGRAMME

Future Climate Research

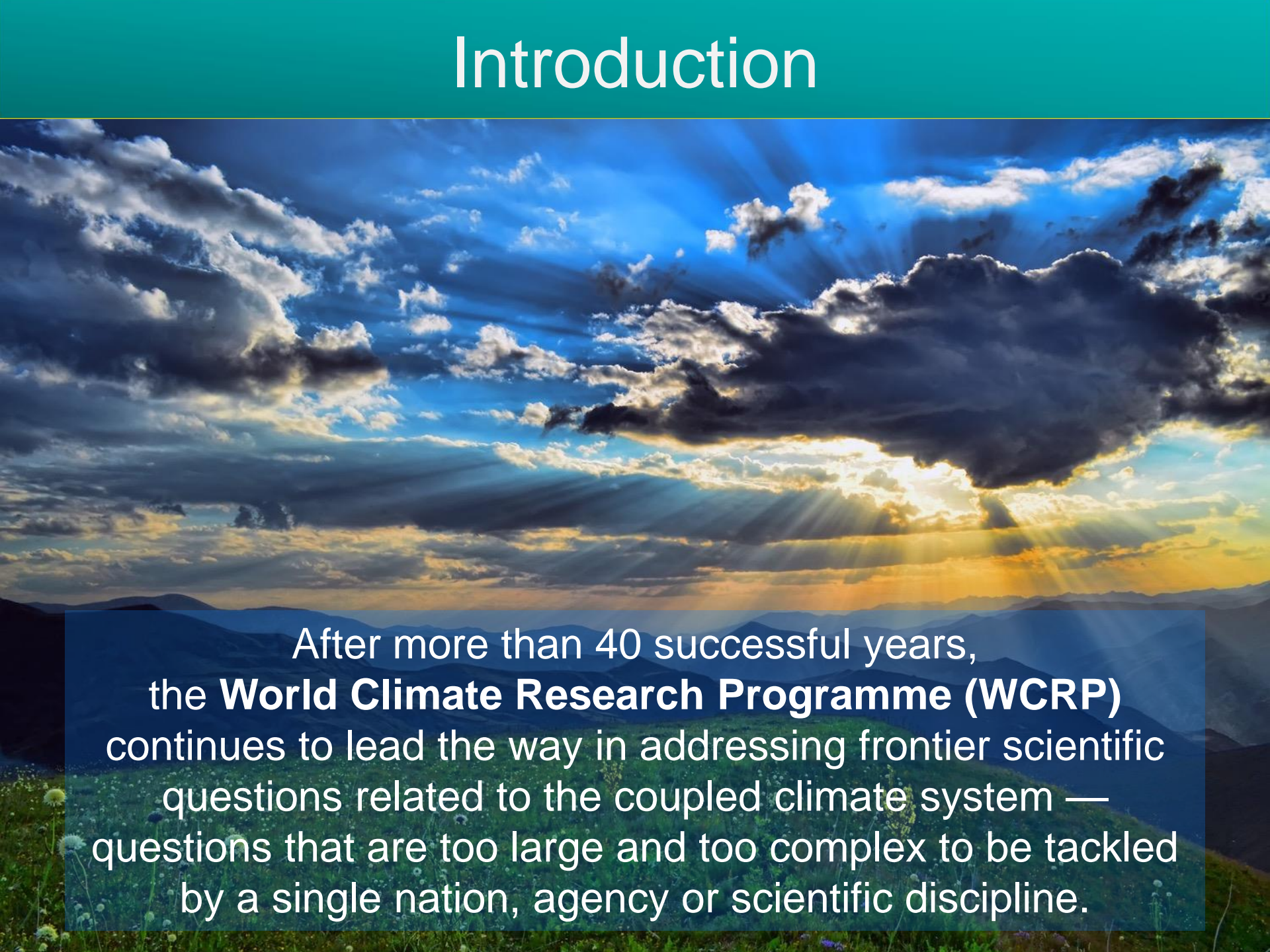
Mike Sparrow Head, WCRP Secretariat
Detlef Stammer, Helen Cleugh et al.



International
Science Council



Introduction



After more than 40 successful years,
the **World Climate Research Programme (WCRP)**
continues to lead the way in addressing frontier scientific
questions related to the coupled climate system —
questions that are too large and too complex to be tackled
by a single nation, agency or scientific discipline.

Introduction

In the past, WCRP pioneered international climate research advancing our understanding of the climate system and how it is being affected by humans.

The next decade will bring even bigger challenges that can only be addressed through a worldwide coordinated effort; involving co-design and stakeholder engagement conducted by a prepared scientific workforce.

Society requires decision-relevant, evidence-based climate information to support adaptation planning and mitigation strategies.



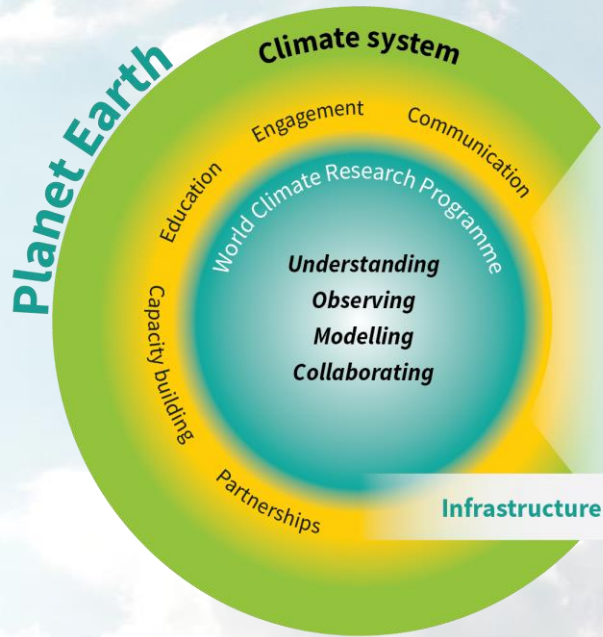
United Nations
Climate Change



Sendai Framework
for Disaster Risk Reduction
2015 - 2030



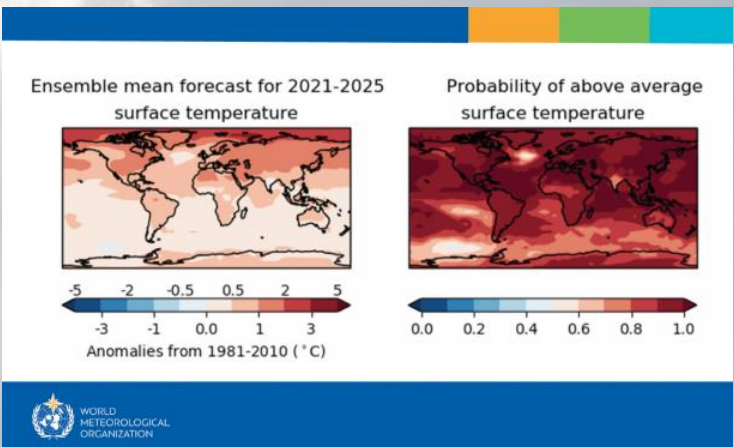
The WCRP Strategic Plan 2019-2028



- 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*



Coordinated Regional Climate Downscaling Experiment



WCRP “Lighthouse Activities”

These are new scientific approaches, technologies, and institutional frameworks required to meet society’s need for robust and actionable climate information

Explaining and
Predicting Earth
System Change

Digital Earths

Safe Landing
Climates

WCRP
Academy

My Climate
Risk

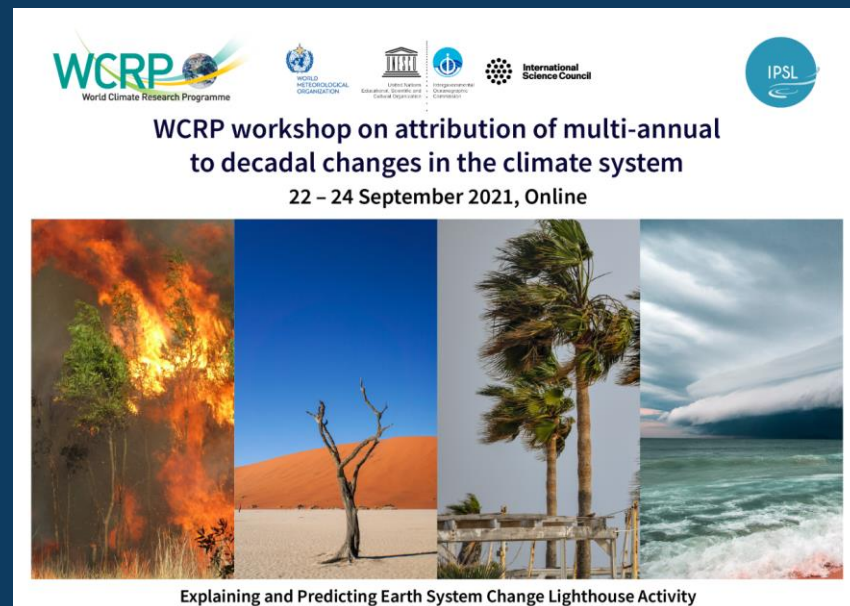
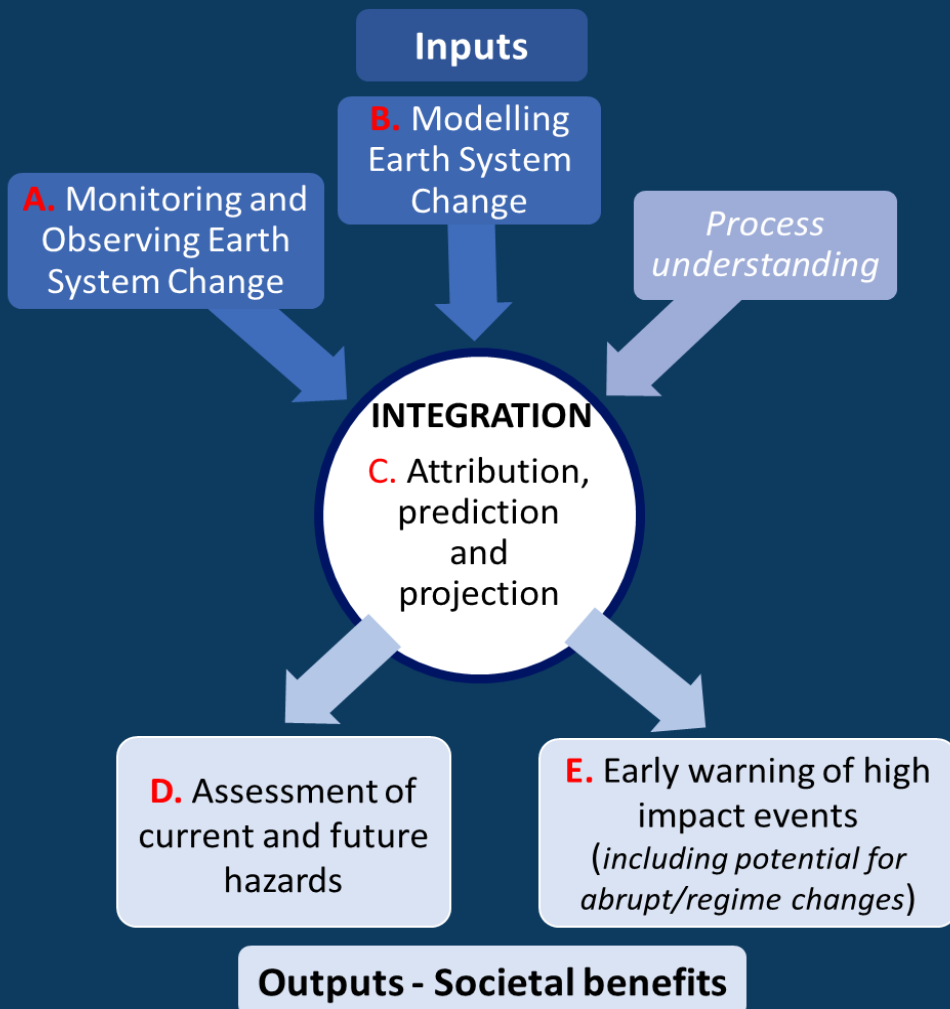
WCRP Lighthouse Activities

WCRP Lighthouse Activities

Explaining and Predicting 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.

Co-leads: Rowan Sutton and Kirsten Findell



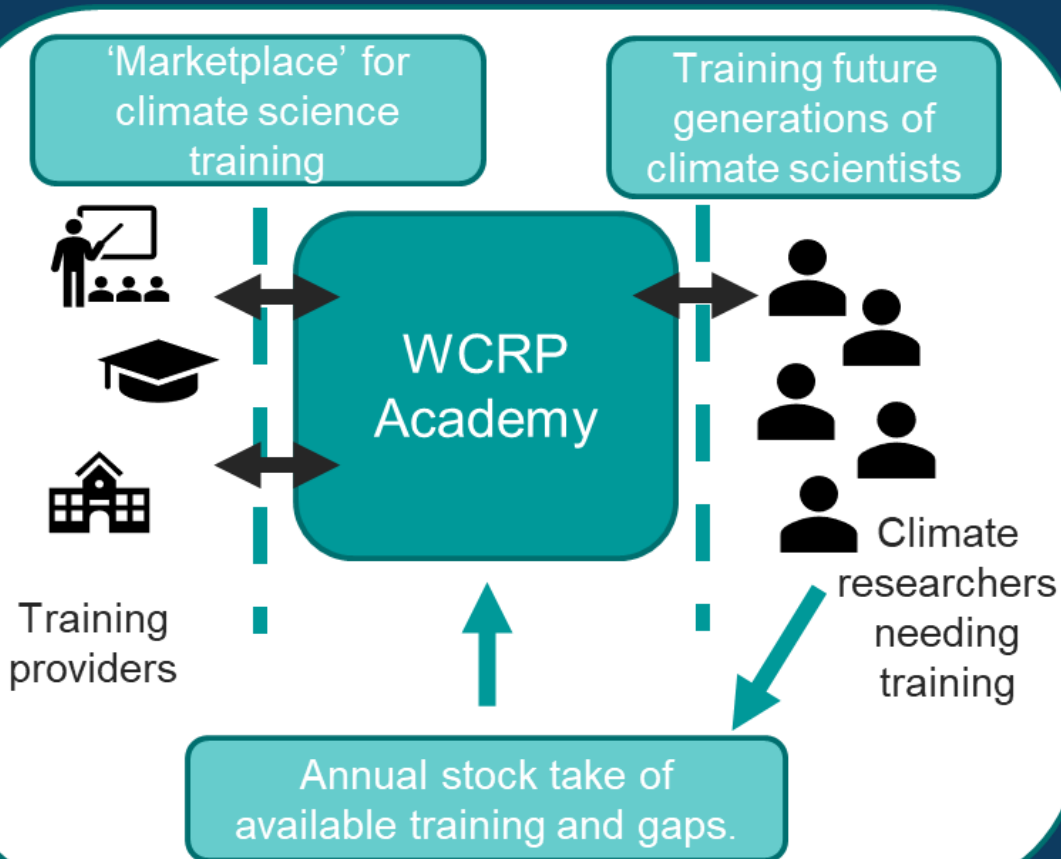
To learn more, visit the workshop website:
<https://wcrp-epesc.sciencesconf.org>

WCRP Lighthouse Activities

WCRP Academy

To determine the requirements for climate research education and to build enabling mechanisms. To achieve this, the Academy will work with WCRP core activities, including the other Lighthouse Activities and established climate education providers, including universities.

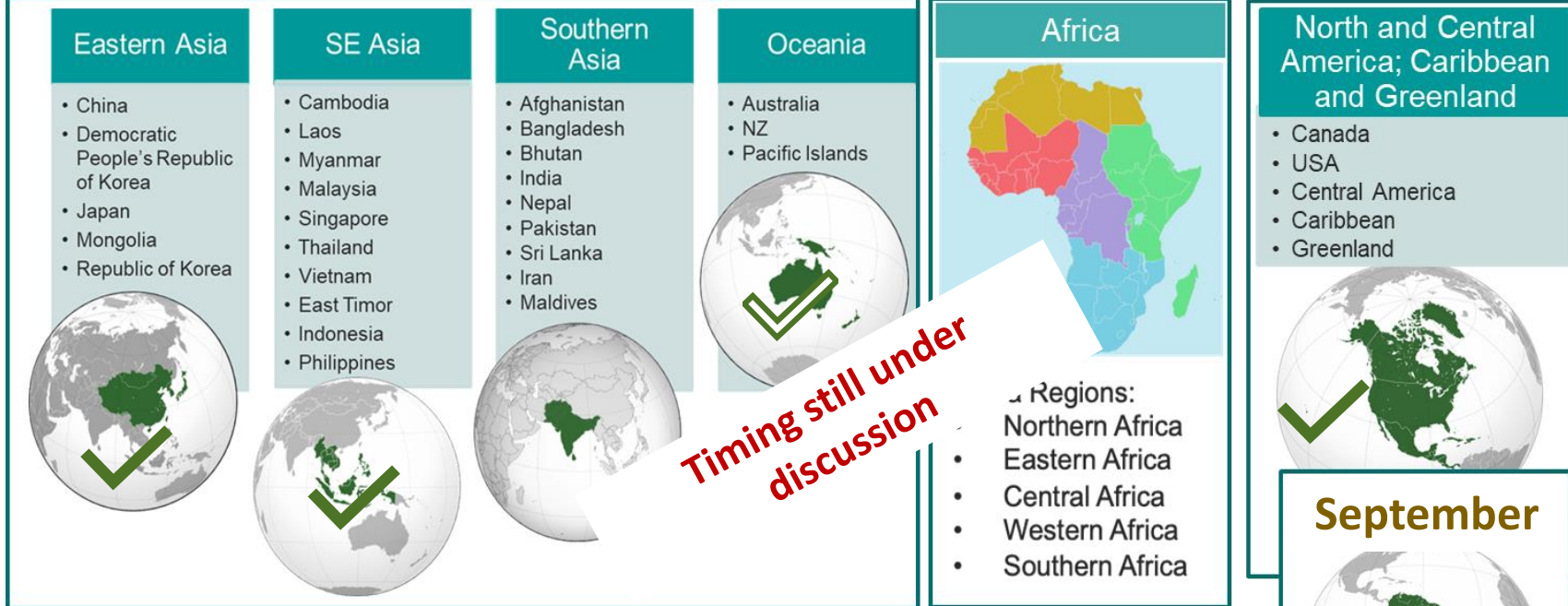
Co-leads: Angela Maharaj and Andrew Charlton-Perez



Get involved!

- *Take part in first stock take (coming soon in 2021).*
- *Could your organisation fill the training gaps? Watch for results of stock take (likely Dec 2021).*
- *We need expertise in working with philanthropic donors and in setting up non-profit organisations.*

Contact Narelle Van Der Wel:
nvanderwel@wmo.int



WCRP-hosted Forums to:

- Exchange ideas and discuss new activities and opportunities.
- Explore ways that our community of scientists, partner programs, funders and end-users of climate science can better engage.
- Contribute to building our vision of *“a world that uses sound, relevant, and timely climate science to ensure a more resilient present and sustainable future for humankind”*.

First series of regionally based Climate Research Forums are being held online, around the world, through 2021

September



Europe and Western Asia



June 9



<https://www.wcrp-climate.org/climate-research-forums>

Thank you



WORLD
METEOROLOGICAL
ORGANIZATION



United Nations
Educational, Scientific and
Cultural Organization



Intergovernmental
Oceanographic
Commission



International
Science Council

WCRP Open Science Conference 2023

Advancing climate science for a sustainable future

FIRST CIRCULAR



TENTATIVELY
MARCH 2023

Themes

- Recent advances in climate science
- Climate research challenges and opportunities
- Regional climate extremes and risks
- Useful and useable climate information



For more information and to register your
interest please visit the Conference webpage

www.wcrp-climate.org/WCRP-OSC23



ADDITIONAL SLIDES (FOR QUESTIONS ETC)

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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 millennial 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.

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