

World Climate Research Programme

**46th Session of the WCRP
Joint Scientific Committee (JSC-46)**

Science session with French scientists

Welcome to French participants !

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*WCRP JSC-46
12-16 May 2025
UNESCO – Paris (France)*



Agenda

- Introduction session (30 mn)
 - Introduction : Pascale Braconnot (JSC member)
 - Overview of WCRP science directions: Tim Naish (WCRP chair)
 - WCRP science in France from a CNRS-INSU point of view: Nicolas Arnaud, CNRS-INSU director)
- Scientific highlights (1 hour)
 - Earth System Modelling and Observations in WCRP: Susann Tegtmeier
 - Transformative Advance in Climate Modeling for Climate Services: Masa Kageyama
 - WCRP strategic action and collaboration with IPCC on tipping points and high impact events: Gabi Hegerl
 - Towards a better understanding of high latitudes in the climate system: Camille Lique
 - Why do clouds organise on the mesoscale? Does it matter for climate? Insights from recent field campaigns and satellite observations: Sandrine Bony
- - Panel discussion: Global South research and society (30 mn)

19:15 - 20h45 Cocktail

The World Climate Research Programme

WCRP-supported research builds the climate science that underpins the United Nations Framework Convention on Climate Change, including national commitments under the Paris Agreement of 2015, and contributes to the knowledge that supports the [2030 Agenda for Sustainable Development](#), the [Sendai Framework for Disaster Risk Reduction](#), and multilateral environmental conventions

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WORLD
METEOROLOGICAL
ORGANIZATION

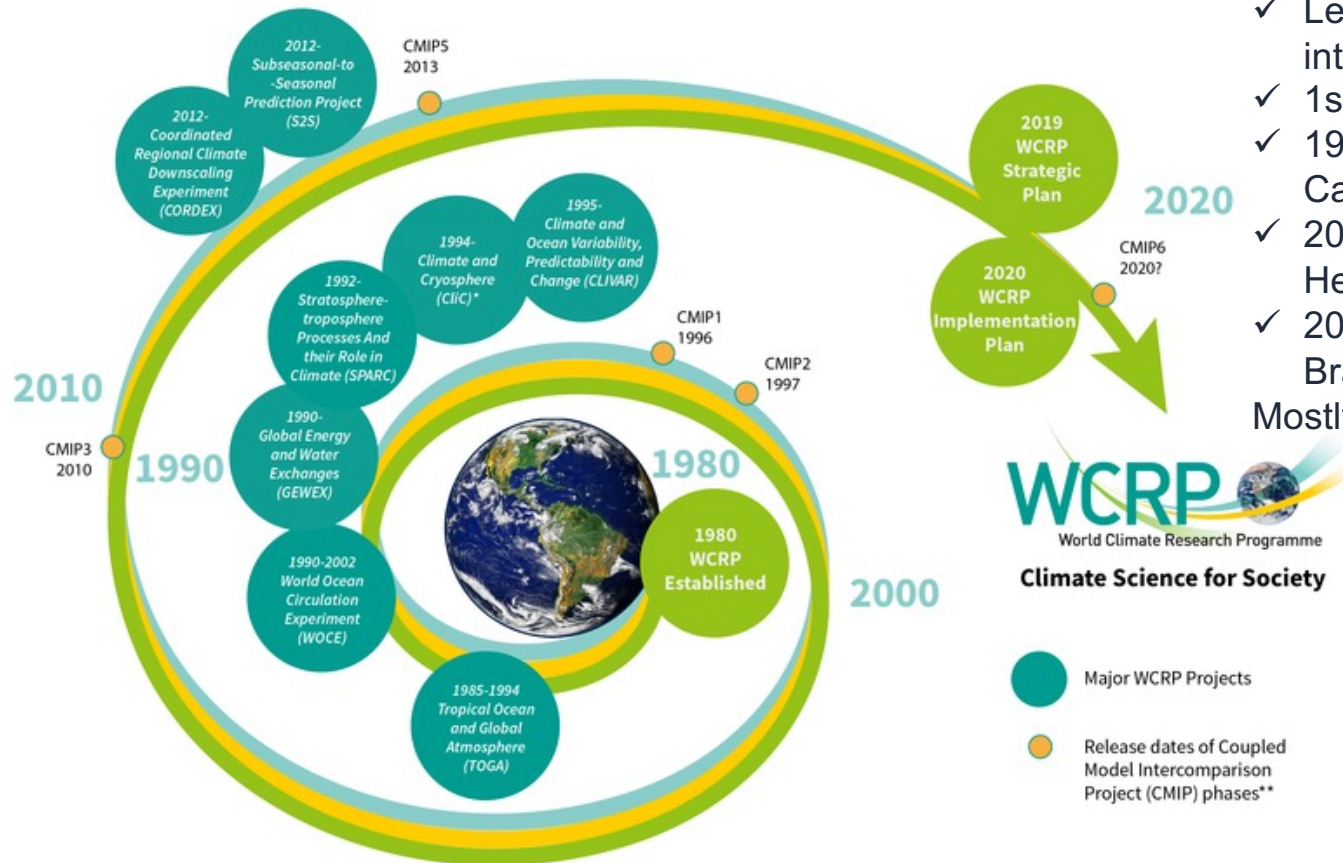


Intergovernmental
Oceanographic
Commission



International
Science Council

WCRP in France : a long history



- ✓ Leading rôle of key scientists in pre-WCRP international field campaigns
 - ✓ 1st WCRP director : **Pierre Morel**
 - ✓ 1993-2004 : SPARC IPO (Marie-Lise Chanin, Catherine Michaut)
 - ✓ 2005-2018 : IPSL and international bureau (lead by Hervé LeTreut)
 - ✓ 2019- : IPSL-ISU and MOU with WCRP (Pascale Braconnot, Catherine Michaut)
- Mostly in-kind funding + financial support to key events



Bert Bolin . Smagorinsky **Pierre Morel**
(1st WCRP director)

Cf film 40 th anniversary (AGU 2019)

* CliC was formerly the Arctic Climate System Study (ACSYS)

** There was no CMIP4



Meet the Joint Scientific Committee of the WCRP



Tim NAISH
New Zealand, CHAIR



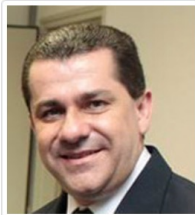
Cristiana STAN
USA, VICE CHAIR



Krishna ACHUTARAO
India



Lisa ALEXANDER
Australia



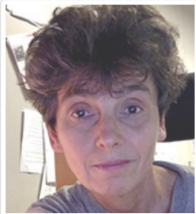
Tercio AMBRIZZI
Brazil



Eleanor BLYTH
United Kingdom



Pascale BRACONNOT
France



Susanna CORTI
Italy



Pierre FRIEDLINGSTEIN
United Kingdom /France



Amadou T. GAYE
Senegal



Kendra Gotangco GONZALES
Philippines



Pang-chi HSU
China



Josephine KHAOMA NGAIRA
Kenya



Roberto SANCHEZ-RODRIGUEZ
Mexico



Anna SORENSSON
Argentina



Ken TAKAHASHI
Peru



Masahiro WATANABE
Japan

Sponsors

- World Meteorological Organisation
- International Ocean Commission UNESCO
- International Science Council



Meet the WCRP Secretariat



Michael SPARROW
Head, World Climate
Research Division, WMO
& Head of the WCRP
Secretariat



**Hindumathi
PALANISAMY**
Scientific Officer



Narelle VAN DER WEL
Science and
Communications
Officer



Maureen WANZALA
Scientific Officer



**Carlos Andres
MONTOYA ACOSTA**
Science and
Communications
Assistant Scientific
Officer



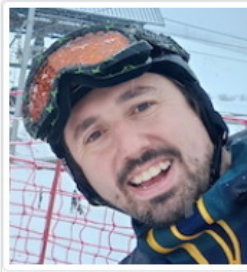
Catherine MICHAUT
WCRP Support Unit at
Institut Pierre-Simon
Laplace (IPSL-ISU)



Lian XUE
Junior Professional
Officer



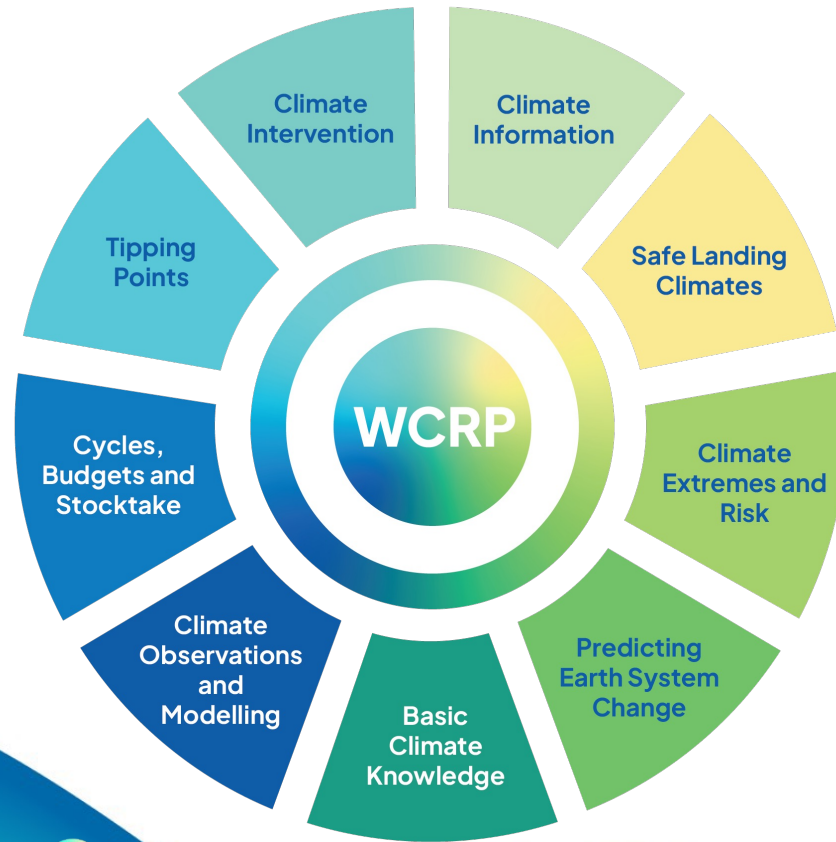
Lora BATINO
Science Intern



Peter ABBOTT
Visiting Scholar

Plus of course our many
colleagues and friends in the
International Project Offices !

WCRP major ongoing Science Foci



WCRP's objectives on these foci areas is achieved through its six Core Projects, six Lighthouse Activities, and the WCRP Academy.

Current high-level assessments

- **Tipping Points – AR7 focused (expert meeting in Paris, November 2025)**
- **TCRE and ZEC**
- **Climate Intervention**

On the horizon

- **Impacts and adaptation – actionable knowledge**
- **E.g. sea-level and coastal impacts**
- **Artificial intelligence**

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Curent research emphasize

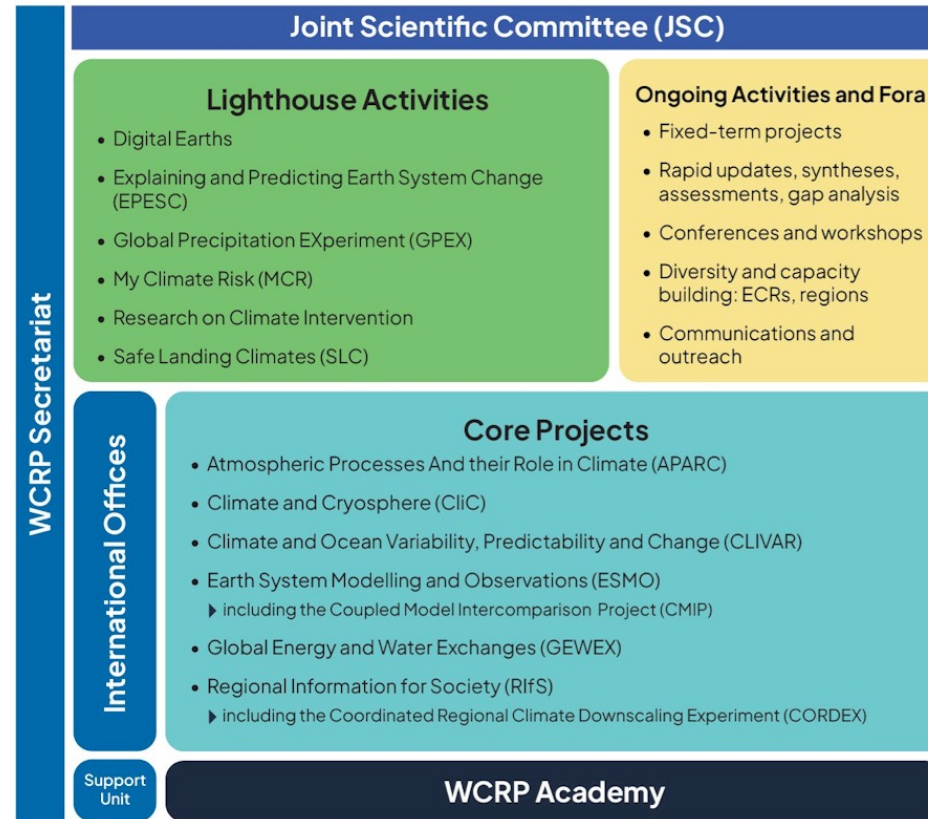
- Mesoscales and regional climate
- Systemic approaches
- Extremes, compounding cascading events
- Human interactions with climate
- Legacy of past changes
- Climate predictability
- Harnessing new technologies: observations, modeling, use of AI
- Fit for purpose climate information co-produced and driven through stakeholder/use engagement

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WCRP Organizational Structure



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Core Projects

- Long-term activities that are dedicated to specific aspects of climate science within WCRP
- Are the home to various scientific communities – across oceans, cryosphere, land, and atmospheric science domains; process studies, modelling, and observations; and regional climate information
- Supported by International Project Offices with oversight by the WCRP Secretariat
- **Atmospheric Processes and their Role in Climate (APARC)**
- **Climate and Cryosphere (CliC)**
- **Climate and Ocean Variability, Predictability and Change (CLIVAR)**
- **Earth System Modelling and Observations (ESMO)**
- **Global Energy and Water Exchanges (GEWEX)**
- **Regional Information for Society (RIfS)**

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Lighthouse Activities

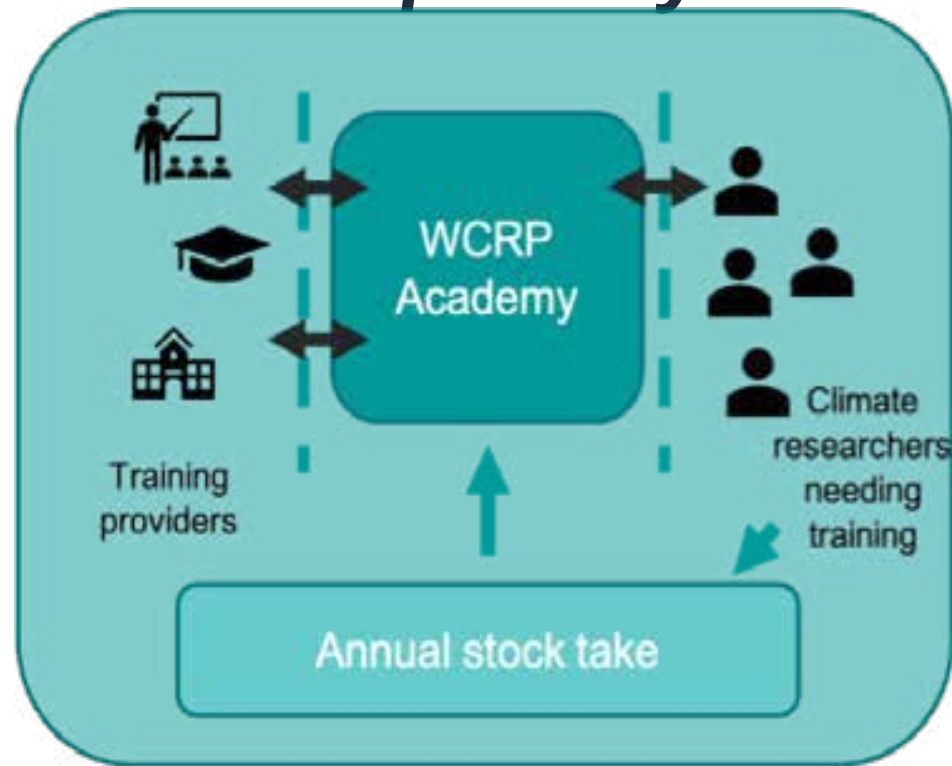
- Designed to be ambitious and interdisciplinary, and work across core projects.
- Goal is to rapidly advance the major and new scientific approaches, technologies, and institutional frameworks required to meet society's need for robust and actionable climate information.
- **Digital Earths (DE)**
- **Explaining and Predicting Earth System Change (EPESC)**
- **Global Precipitation Experiment (GPEX)**
- **My Climate Risk (MCR)**
- **Research on Climate Intervention (CI)**
- **Safe Landing Climates (SLC)**

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WCRP Academy is a hub for raising capacity and capability



45 French scientists involved in WCRP

APARC

- SSG
 - S. Szopa (LSCE-IPSL)
- CCMi
 - B. Josse (Météo France)
- OCTAV-UTLS
 - V. Thouret (Obs. Midi-Pyrénées)
- FISAPS
 - A. Podglajen (LMD-IPSL)
- Gravity Waves
 - R. Plougonven (LMD-IPSL)
- LOTUS
 - S. Godin-Beekmann
- SSiRC
 - C. Kloss (CNRS)
- ATC
 - P. Keckhut (LATMOS-IPSL)

CLiC

- SSG
 - C. Lique (IFREMER)

CLIVAR

- SSG
 - Masa Kageyama (LSCE-IPSL)
- CDP
 - J. Mignot (LOCEAN-IPSL)
- DCVP
 - R. Msadek (Cerfacs)
 - K. Von Schuckmann(Mercator Océan)
- GSOP
 - M. Belbeoch (Ocean Ops)
 - S. Bielli (Univ. de la Réunion)

WCRP JSC - P. Braconnot (LSCE-IPSL)

- OMDP
 - J. Le Sommer (IGE)
 - F. Lemarié (INRIA)
 - A. Melet (Mercator Ocean International)
- Pacific panel
 - S. Cravatte (Legos)
 - T. Izumo (Univ. Polynésie française)
- Atlantic panel
 - S. Illig (Legos)
- CLIVAR/CLiC/SCAR Southern Ocean Region
 - C. Dufour (IFREMER)
- CLIVAR/CLiC Northern Oceans Region
 - C. Lique (IFREMER)
- CLIVAR/IOC-GOOS Indian Ocean Regional
 - M.A. Sicre (LOCEAN-IPSL)

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ESMO

- SSG
 - R. Sférian (Météo France)
- WGSIP
 - C. Ardilouze (Météo France)
- WIP
 - G. Levavasseur (IPSL)
- WGNE
 - R. Roehrig (Météo France)
- CMIP
 - A. Ben Nassar (IPSL)
 - O. Boucher (IPSL)
 - T. Lurton (IPSL)
 - M.P. Moine (Cerfacs)
 - R. Sférian (Météo France)
 - G. Rigoudy (Météo France)
- DCPD
 - D. Swingedouw (Univ. Bordeaux)

GEWEX

- SSG
 - J. Polcher (LMD-IPSL)
- GASS
 - S. Bony (LMD-IPSL)
- GDAP
 - H. Brogniez (LATMOS-IPSL)
 - B. Meyssignac (Univ. Toulouse)
- Gewex Ambassador
 - C. Stubenrauch (LMD-IPSL)

Rifs

- Euro CORDEX
 - A. Colette (INERIS)
- Med CORDEX
 - F. Solmon (Lab. Aérologie)
 - S. Somot (Météo France)

EPESC Lighthouse Activity

- EPESC
 - H.W. Jacobi (Univ. Grenoble Alpes)
 - B. Meyssignac (Univ. Toulouse)

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Thank You

