

CRESCENDO

Coordinated **R**esearch in **E**arth **S**ystems and **C**limate:
Experiments, **kN**owledge, **D**issemination and **O**utreach

www.crescendoproject.eu

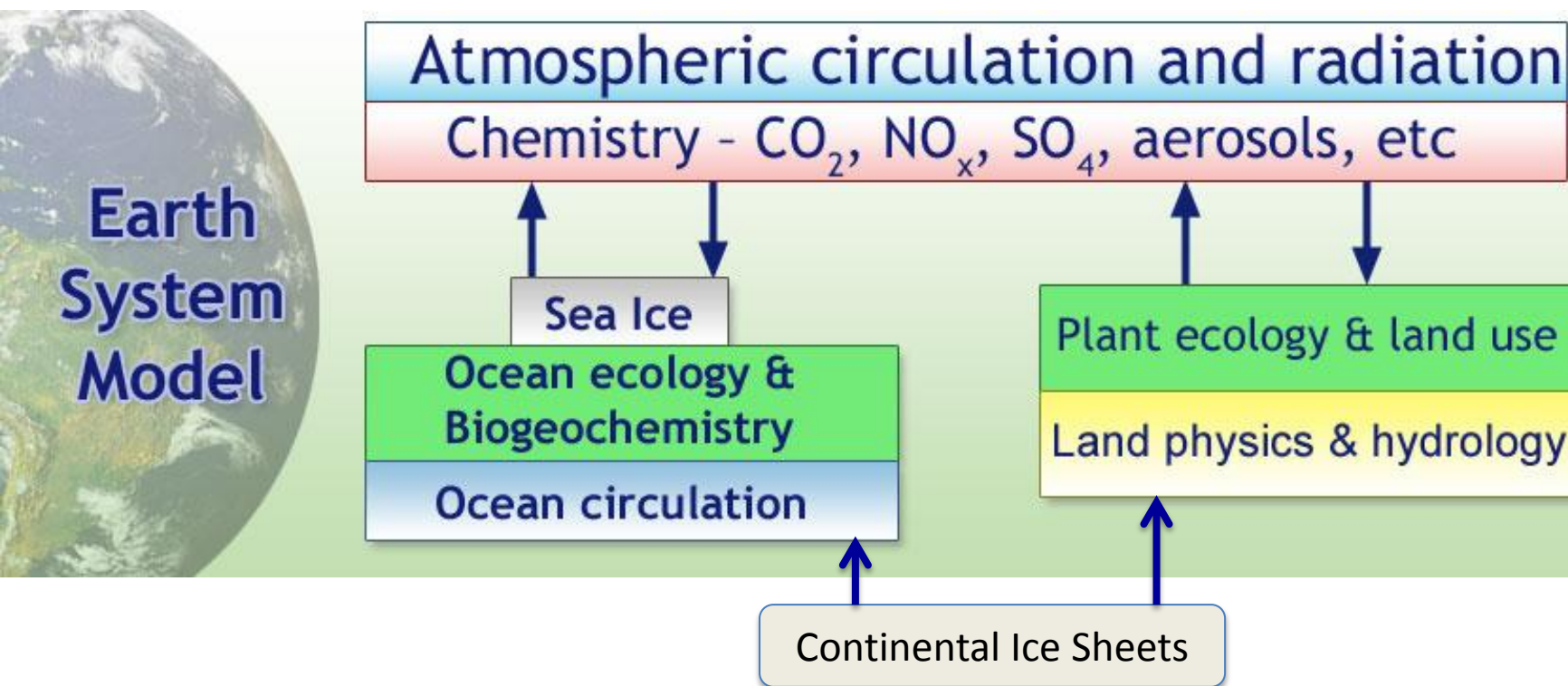
Coordinator: Colin Jones: University of Leeds/NCAS

Project start : Nov 1st 2015, Duration : 5 years

Funded under Horizon2020 Grant Agreement 641816

CRESCENDO

Developing, evaluating and using Earth system models

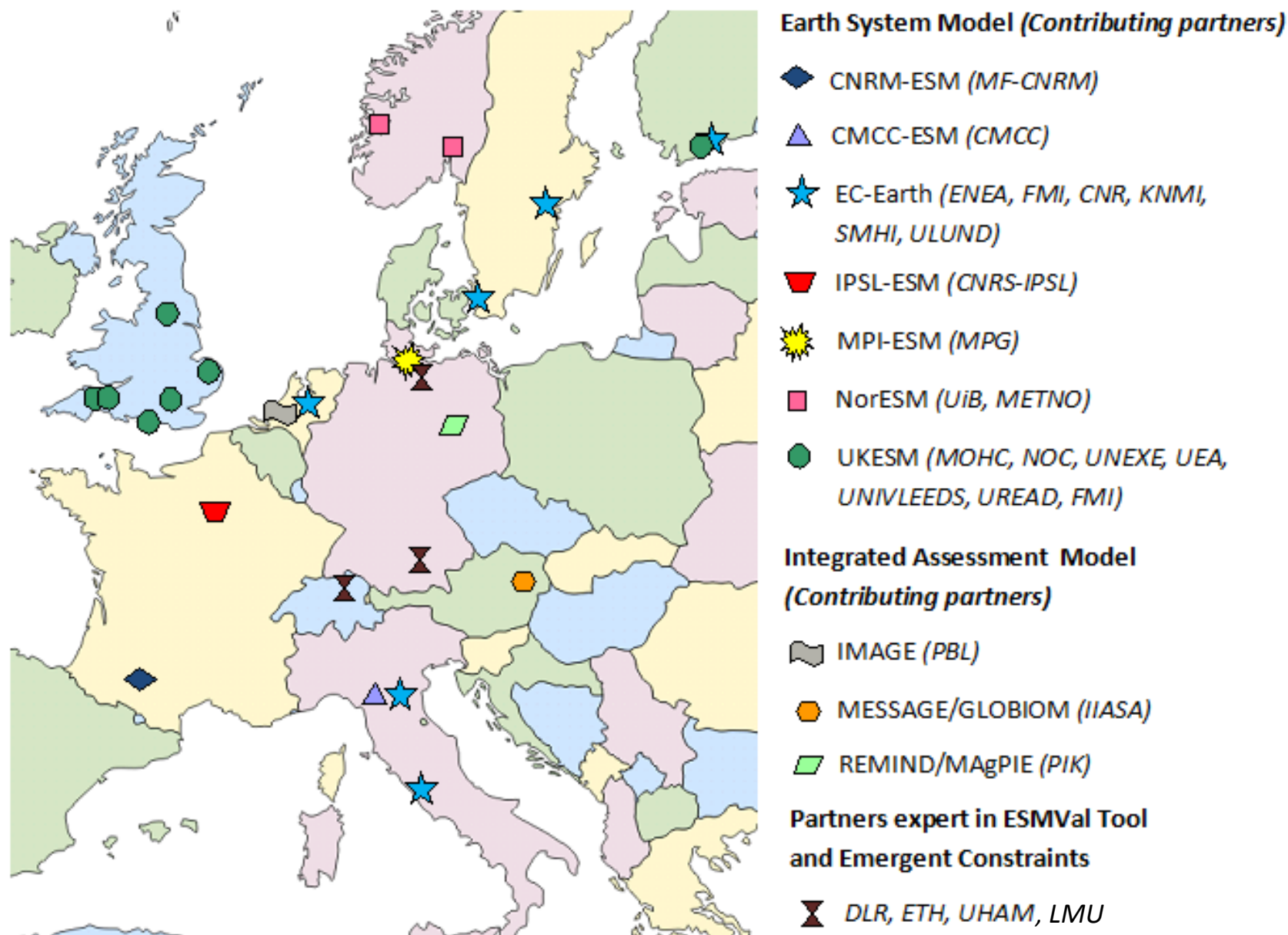


A coordinated European contribution to CMIP6

CRESCENDO primary science objectives

- To improve the representation of key biogeochemical, biophysical and aerosol processes in European Earth System Models (ESM)
- To develop and apply evaluation methods to assess the process-level performance of these ESMs
- To coordinate a European contribution to key CMIP6 MIPs:
C4MIP, AerChemMIP, OMIP, LUMIP, LS3MIP and scenarioMIP
- To develop new emission and land-use scenarios for CMIP6 scenarioMIP and use these data in producing an ensemble of ESM projections.
- To develop and apply advanced methods for analysing ESM projections and use these in constraining/weighting the ensemble of projections

25 CRESCENDO partners from 10 countries



Non-European Collaborating institutes

Earth system modelling

Geophysical Fluid Dynamics Laboratory (GFDL), USA

National Center for Atmospheric Research (NCAR), USA

Centre for Australian Weather and Climate Research (CAWCR)

New Zealand National Institute of Water and Atmospheric research (NIWA)

South African Council for Science and Commonwealth Research (CSIR)

ESM evaluation

Program for Climate Model Diagnosis and Intercomparison (PCMDI), USA

NASA Jet Propulsion Laboratory (NASA-JPL), USA

Integrated Assessment modelling

University of Melbourne, Australia.

External Advisory Board

Clare Goodess (UEA) : Links to impacts research and downscaling

Bill Large (NCAR) : Ocean modelling and evaluation

Jim Randerson (UC Irvine) : Terrestrial modelling and evaluation

Robert Watson (Tyndall C) : Links to policy/decision makers

Denise Young (ICSU) : Science communication

Earth System Models in CRESCENDO

CNRM-ESM : Meteo-France

CMCC-ESM : CMCC

EC-Earth : ENEA, FMI, CNR, KNMI, SMHI, ULUND

IPSL-ESM : CNRS-IPSL

MPI-ESM : MPI-M, MPI-BGC

NorESM : UiB, met.no

UKESM1 : Met Office, NOC, UNEXE, ULEEDS, UREAD, UEA

Ambitions for the joint kick-off sessions

To ensure our respective project plans are known by and aligned with/informed by/support the priorities of:

- The European Commission
- IPCC
- The World Climate Research Program and CMIP6
- The Global Framework for Climate Services
- Copernicus Climate Change Services
- International Earth system/Climate modelling activities

Ambitions for the joint kick-off sessions

Share model simulation, model evaluation and data/knowledge dissemination plans to:

- Avoid duplication of effort
- Increase the sum of our parts through informed collaboration
- Share findings and model improvements across modelling groups
- Coordinate HPC and storage requirements and (as appropriate) HPC requests
- Ensure both projects have access to sufficient/useable HPC and data storage
- Ensure coordinated and useful provision of data and knowledge to users

International research community (e.g. via ESGF)

Regional downscaling

Impacts research

European and National Policymakers

European and National Stakeholders

European Public

Ambitions for the joint kick-off sessions

and perhaps most important

stimulate individual scientist to scientist collaboration to
the benefit of both projects and broader Earth system
and Global Climate modelling efforts across Europe