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INFRASTRUCTURE FOR THE EUROPEAN NETWORK FOR EARTH SYSTEM MODELLING

IS-ENES2 – Final General Assembly
16-18 January 2017
Paris, France

InfraStructure for the European Network for Earth System modelling Phase 2

Overview

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http://is.enes.org/

IS-ENES : Infrastructure for ENES

FP7 project « Integrating Activities »

1rst phase: March 2009- Feb 2013 (7.6 M€), 18 partners
2nd phase: Apr 2013- March 2017 (8 M€), 23 partners

Better understand and predict climate variability & changes

Foster:

- The integration of the European ESM community
- The development of ESMs and their environment
- High-end simulations
- The application of ESM simulations for climate change impacts

Support to international coordinated experiments for IPCC
CMIP & CORDEX

WCRP World Climate Research Programme

What are our main achievements ? Our main impacts ?
What are the following steps ?

Foster the integration of the European ESM community

Foster interactions, synergies and common strategies

NA1
With all WP

ENES Infrastructure Strategy :

- Infrastructure for model evaluation
- Mid-term update 2016
- Planning for a long-term sustained European research infrastructure

Community building:

- Training school on ESM (2nd and 3rd schools)
- ENES portal

- **Strengthen governance:**
  - ENES Scientific Officer
  - Organisation of ENES (ENES Board, HPC and data task forces)
  - Governance on common software
  - International governance ESGF, WIP

IS-ENES2 activities

Enhance the development of ESMs

Accelerate progress/ Foster common developments/ Share expertise

Service on models and model environment: SA1

- Model documentation (CIM CMIP5)
- Service on tools and components: OASIS, CDO & NEMO
- Service on models : Level 1 (infos) & Level 2 (codes)

Towards next generation models: NA2

- Common radiation, COSP simulators
- Code/software convergence
- NEMO & ICON dycore Kernels

Sharing best practices for model environments NA3

- Configuration management, workflow ….

Support high-end simulations

Ensure efficient access and execution of ESMs on HPC

Networking on high-performance computing (HPC):

- HPC Task Force, Common strategy, interface with PRACE RI
- Preparation of the Centre of Excellence ESiWACE
- Technology tracking for exascale

NA1

NA2

Improve model performance on HPC:

- I/O, coupler, post-processing, running ensembles
- Performance analyses

JRA1

Prepare future high-end experiments

- Ensemble High-Resolution

JRA1

Develop coupled benchmarks

JRA2

Innovation: **Interactions with ICT & vendors**

NA5

IS-ENES2 activities

Facilitate the dissemination of ESM simulation results

Ease use of model results for climate research & for climate impact research

Service around model results
- CMIP5 & CORDEX
- Service to providers (data nodes) & users

SA2

Develop more efficient tools for ESGF
- ESGF security issues
- preparation of CMIP6

JRA3

Metadata
- Upgrades & interoperability
- Preparation of CMIP6

NA4

Services for climate impacts

JRA3
- Tools, downscaling, indices

Societal innovation:

NA5
- to corporates (coll Climate KIC)
- to climate services centres (coll CSC) – link with CLIPC & C3S

3rd and last General Assembly

- **Prepare reporting :**

  RP3 report (April 2016-March 2017) and Final report (4 years)

  Main achievements / Perspectives - Monday pm

  Discussion on some project issues - Tuesday am

  General matters for reporting - Wednesday am

  Use GA meeting of partners to finalise some deliverables !

- **Prepare the future:**

  Further elaborate our strategy – Tuesday pm

  IS-ENES3 / ESIWACE2 / Copernicus / EPECC …

  After IS-ENES2 ? – Wednesday am

Enjoy the meeting and Paris roofs !

Photo Sylvie Joussaume

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