



## *JPI Climate Symposium*

*“Taking Stock and inspiring the future”*

*17.+18. Nov., Palacio de Zurbano, Madrid*

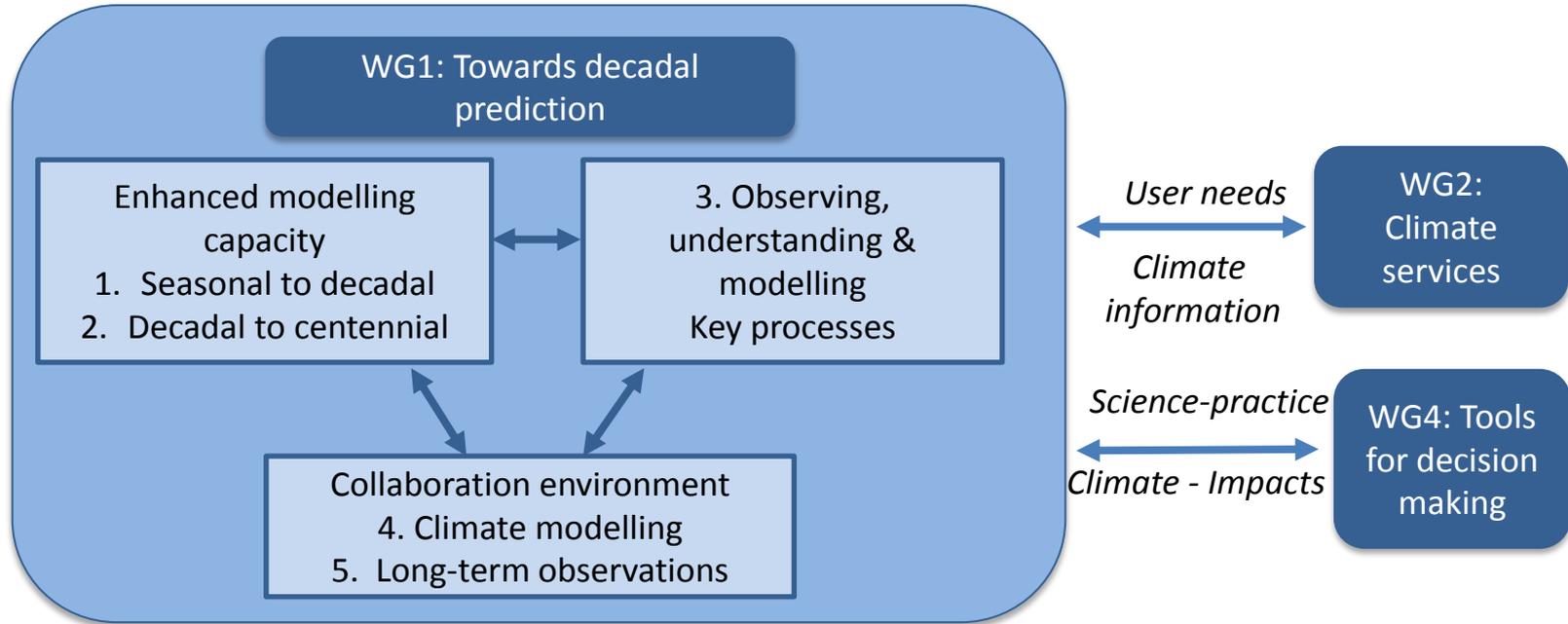
### **Module 1**

**Moving towards decadal predictions**

**Sylvie Joussaume  
& Sanna Sorvari**



- 1. Fast track activities & joint calls**
- 2. Towards a European roadmap for climate modelling and observations**
- 3. Greenhouse gas verification**



**Fast Track Activities:**

**Preparing joint calls, elaborating strategies**

FTA1.1 Decadal prediction incl. observations, processes

FTA1.2 European Strategy for climate modelling

FTA1.3 Changing cryosphere

Roadmap for climate modelling & observations



## **FTA1.1 Decadal prediction including relevant observation, understanding, processes** *Chairs A. Bellucci (IT) & R. Haarsma (NL)*

- **Review paper** : potential to improve seasonal to decadal predictions (Pub 2015)
- **WK on user needs in 2013**
- **2015 : JPI Climate/BF call “Predictability and inter-regional linkages”**

Understand variability / Investigate predictability - inter-regional linkages (poles & monsoons)  
Co-construction with users

## **FTA1.3 Changing cryosphere in the climate system, from observation to climate modelling**

*Chairs S. Sorvari (FI), F. Vial (FR), J. Sundet (NO), M/ Friberg (SE)*

- **2013 Pan-Eurasian joint call**  
Biological and physical drivers and feedbacks in Russian Arctic/Boreal systems  
Collaboration with Russia
- **Contribution to 2015 JPI/BF call on inter-regional linkages**

## 2. Towards a European roadmap for climate modelling & observations

### FTA1.2 Towards a European strategy for climate modelling: coordination and next generation of climate models

*Chairs: E. Guilyardi (UK), R. Doescher (SE), S. Jousaume (FR)*

- **Survey of the 5 modelling groups developing their coupled models**  
CNRM-CERFACS, Toulouse (FR) / EC-Earth (European) / IPSL, Paris (FR) /  
MPI-M, Hamburg (DE) / MOHC with NERC/NCAS (UK)

International CMIP coordinated experiments a key driver (timetable)

Need for a diversity of approaches/models; shared : coupler / ocean model (NEMO)

Added value of EC support – but issue of long-term support of coordination

**Emerging: strong potential for added value: model evaluation** (started but needs long-term strategy and support)



## Workshop on European long-term observing networks

*9-10 November, Paris*

*Organizers: S. Joussaume, S. Sorvari, P. Laj, M. Lainé & J. Etourneau*

- 39 participants from 10 European countries
- Long-term observations and needs for Earth system modelling & services  
**atmosphere/ocean/ecosystem/cryosphere**

**Aims of the WS: initiate the collaborative work & elaborate recommendations**

- **European added value:** Coordination, spatial coverage, visibility and leading role
- **ESFRI has already started** to build a more coherent European RI landscape, however, still gaps in observation systems (e.g. cryosphere, freshwater, sensors)
- **Organise complexity:** international/european/national – missing overall strategy of how all articulated (international landscape)
- **Changing landscape:** development of Copernicus; but cannot be the only driver !  
Closing the gap between data, science and services

## **Observational data :**

- Improve accessibility of data (metadata); quality of data is key; traceability;
- Ensure integration of scientific expertise within data management; Support co-work on RI data between users and providers; enhance analyses and favour novel use of RI data;

## **Close gap between model and observations:**

- better coverage for model evaluation, support of community tools (eg. ESM VALtool), enhance model-obs in MIPs, contribute to international initiatives (eg OBS4MIPs)
- Co-design observations in areas sensitive to change

**Build international system** of standardised and sustained observation system

Enhance collaboration with research oriented obs networks **and regulatory networks**

**JPI Climate can play important role of bringing the communities together and support collaborative actions and sustainability:**

- **Preparation of roadmap for collaborative activities/identified needs** - towards a common platform (cross-domains and obs-models) ; organise a set of obs - models workshops
- **Support targeted research actions (research projects)**
- **Promote participation of European actors in the international activities**

### Module 1-Module 4 : Greenhouse gas verification

*Chair Ned Garnett (UK), Sanna Sorvari (FI)*

Issues: moving towards GHG verification system/ collaboration with communities (inventories + obs)/ dialog with stakeholders

- **Recommendations to EC**

- **SC5-04-2017 Towards a robust and comprehensive greenhouse gas verification system**

- Development of an operationalized greenhouse gas monitoring, Reporting and independent verification system for CO<sub>2</sub>, CH<sub>4</sub> and N<sub>2</sub>O

- Knowledge gaps in carbon and nitrogen cycles

- Input to international programs and assessments

- **Workshop Dublin, 24-25 June 2015**
- **Short term activity to prepare H2020 call (Ned Garnett)**
- **JPI Climate long-term activities, after EC call (Franck Mc Govern)**



## Proposed activities to be continued

To be further discussed with WG1 during implementation preparation

- **Climate research: WCRP Grand challenges**  
Clouds / extremes / regional / cryosphere / water  
*Biogeophysical feedbacks / decadal prediction*  
**Challenge: “Provide reliable climate information at regional scale on different relevant time scales “**
- **Strengthen ERA and contribute to internationally coordinated research: observations & modelling**  
**Challenge: “European strategy for climate observations & modelling”**
- **Building a GHG verification system**  
**Challenge: “creation of GHG verification system for monitoring the effects of emission reductions and policies**
- **Develop inter & trans-disciplinary approaches on climate change with other modules**