



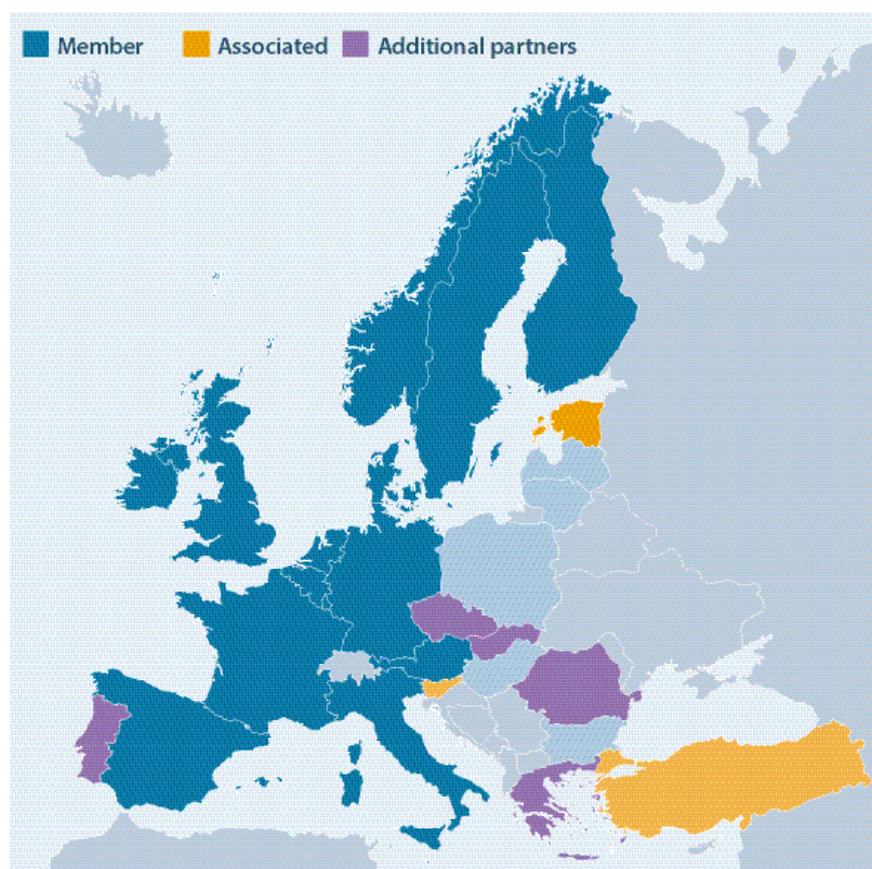
Connecting climate research and knowledge across Europe to better support and respond to the needs for societal innovation and sustainable development.

JPI Climate integrates European climate change science and connects it to policy and practice initiatives across Europe. The overall objective is to provide integrated climate knowledge and decision support services for societal innovation.

At present the JPI Climate has 16 Member countries. Partners from Czech Republic, Greece, Portugal, Romania and Slovakia participate in activities in the framework of the "European Research Area for Climate Services" (ERA4CS).

Observer institutions: NordForsk, European Environment Agency, European Space Agency, European Climate Research Alliance.

Source: www.jpi-climate.eu/programme/membercountries





Europe and its member states have set ambitious goals for both climate change mitigation and adaptation. In many countries, research is underway to generate new knowledge to assess and communicate the risks and challenges, and to evaluate the costs and benefits of action. But this research is often fragmented and not necessarily focussed on informing decision-making processes in governments, businesses and industry.

JPI Climate is working across national boundaries to coordinate and develop high quality science and to support transnational collaboration. By seeking to maximise the value of national research investments for use by policy-makers and practitioners, JPI Climate aims to provide integrated climate knowledge and decision support services to inform European responses to climate change.

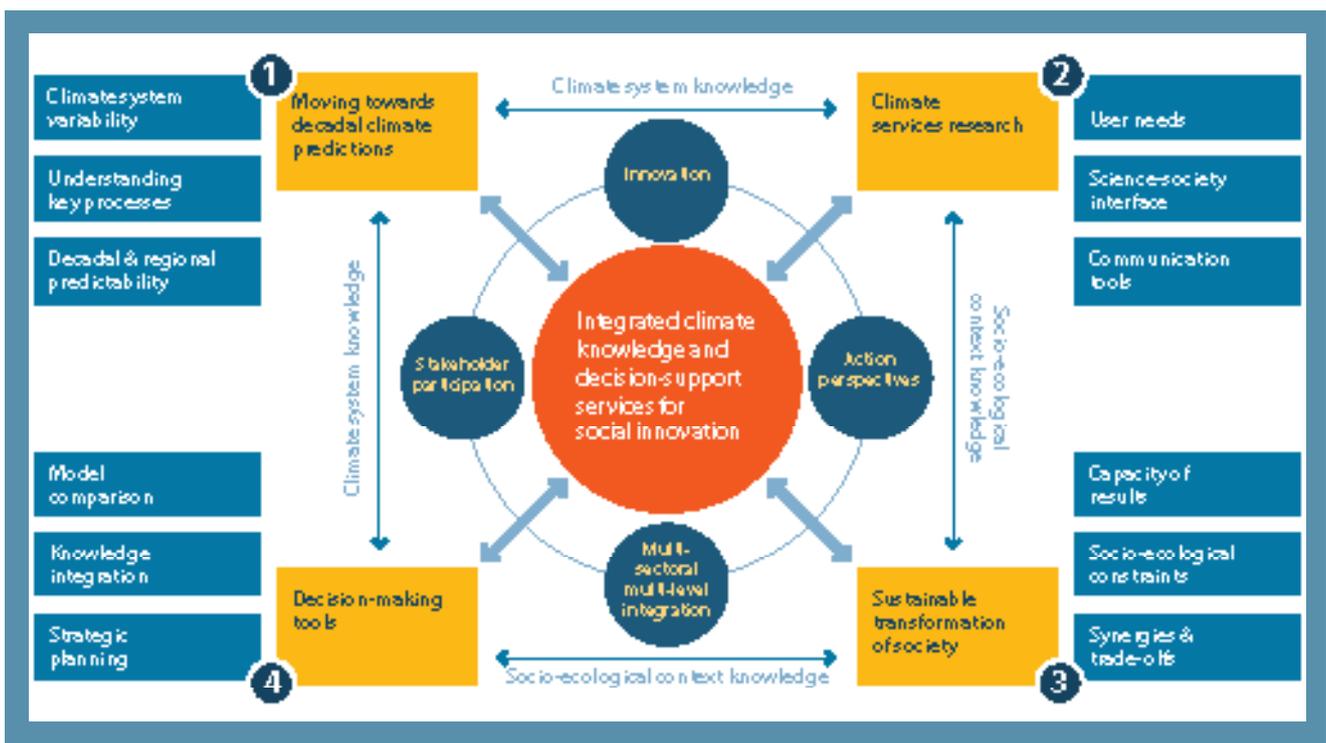
THEMATIC MODULES

JPI Climate has developed a Strategic Research Agenda and Implementation Plan based on four interconnected research modules:

Module 1 – Moving towards reliable regional decadal climate predictions

Delivering salient climate information for decision making requires improved understanding of climate variability and change, the development of regional and decadal scale climate predictions, and enhanced coordination of national activities.

- Investigate climate predictability on seasonal to decadal timescales.
- Provide reliable climate information for decades up to centennial timescales.
- Observing, understanding and modelling key processes/mechanisms.
- Enhance collaboration within the European climate modelling community.
- Enhance collaboration for long-term monitoring and analysis of the Earth systems.





Module 2 – Researching and advancing climate services development

Promoting the quality of climate services, improving the effectiveness of climate service production and delivery, and developing standards and good practice.

- Building a network of climate service providers.
- Engagement of users and other climate service stakeholders.
- Development and deployment of effective climate services.

Module 3 – Societal transformation

Responding to the challenge of climate change involves complex processes of societal change and transformation. The social sciences and humanities are crucial to our understanding of these processes.

- Agenda setting within social sciences and humanities research on climate change.
- Literature reviews in the fields of transformational research and socio-ecological research.
- Building a community within the social sciences and humanities research on climate change.
- Agenda setting and reviewing systemic perspectives on climate change.

Module 4 – Improving tools for decision making

Informing and accelerating decision-making requires practice-oriented approaches appropriate to specific policy contexts. Existing approaches will be improved and new methods developed, and uptake and use will be supported through science-practice interactions.

- Climate impact model inter-comparison for integrated scenario development.
- Methods for socio-economic assessment of climate change and responses.
- Knowledge transfer: usability and framing of scientific climate information.
- Greenhouse gas management support systems.

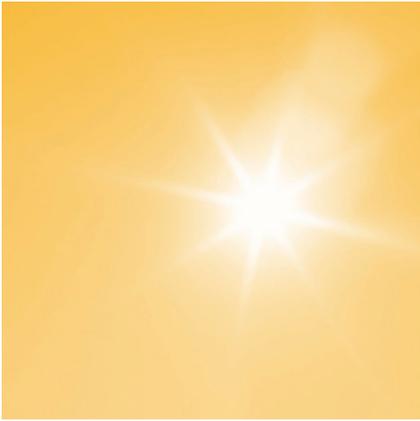
INTEGRATION

The assessment of probabilities, risks and consequences of plausible climate futures requires joint learning, synthesis and knowledge exchange across the boundaries between natural and social sciences and between modules.

- Integrated socio-economic policy and response analysis.
- Integration of observations, models and tools.

Cross-cutting integration involving all the modules recognises the need for the integration of climate and other relevant knowledge to better inform users' needs.

- Integrated climate services.
- Integrated hot-spots or sector studies.
- Science-practice laboratories.



RECENT ADVANCES

1. Joint Call for transnational collaborative research projects

Recognising that many climate challenges require multinational efforts, JPI Climate issued a first call in 2014 for joint research projects in two broad topics of high societal relevance:

- Societal Transformation in the Face of Climate Change. Building capacity in the social sciences and humanities to tackle the challenge of climate change.
- Russian Arctic & Boreal Systems. Improving the fundamental understanding of key biological and physical drivers and feedbacks in the Russian Arctic/Boreal system.

2. Joint Call for Climate Services collaborative research action

Considering the global dimension of climate change, JPI Climate issued a call in 2015, together with the international Belmont Forum, on Climate Predictability and Inter-regional Linkages, with the following topics:

- Understanding past and current variability and trends of regional extremes
- Predictability and prediction skills for near-future variability and trends of regional extremes
- Co-construction of near term forecast products with users

3. Fast Track Activities (FTAs)

Synthesis papers are being prepared on research priorities and actions to inform responses to climate change. These are a step towards the definition of joint calls and co-alignment activities. FTAs are being implemented in support of the work of all modules, for example:

Module 1:

- Decadal prediction including relevant observation, understanding, processes.
- Towards a European strategy for climate modelling: coordination and next generation of climate models.
- Changing cryosphere in the climate system, from observation to climate modelling.

Module 2:

- Mapping users' requirements: What do we know and what not?
- Mapping climate services providers in Europe.

Module 3:

- Scoping, reviewing and facilitating social science contributions to climate change research.

Module 4:

- Development of science-practice laboratories.
- Effectiveness of knowledge transfer at the occasion of the publication of the IPCC AR5.
- Impact modelling intercomparison programme.
- Greenhouse gas verification.
- Economic evaluation of impacts, adaptation and mitigation.

4. ERA-NET Cofund for Climate Services (ERA4CS)

Within the context of the European Roadmap for Climate Services, JPI Climate led the building of the ERA4CS network, designed to boost the development of efficient Climate Services in Europe. ERA4CS focuses on the development of a "climate information translation layer", bridging user communities and climate science. ERA4CS launched a joint call with two complementary topics:

- Advanced co-development with users, supported in cash by 13 national Research Funding Organisations
- Institutional integration between 30 Research Performing Organisations

MORE INFORMATION:

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