

Agriculture Food Security and Climate Change

Newsletter

[Bi-annual Newsletter]

Issue 1, May 2012



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Welcome to the first issue of the FACCE – JPI newsletter! This first issue will introduce you to the Joint Programming concept and in particular the Joint Programming Initiative on Agriculture, Food Security and Climate Change (FACCE – JPI)*. This newsletter complements the website: www.faccejpi.com.

This issue features updates on FACCE – JPI activities and an interview with the coordinators of the FACCE – JPI pilot action: the project FACCE MACSUR, which was officially approved for funding on April 11, 2012.

We look forward to keeping you up to date on FACCE – JPI activities and welcome your feedback on what you would like to see in this newsletter.

Heather McKhann

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What is Joint Programming?

Joint Programming is an intergovernmental process that was defined by the European Commission in 2008 as part of the building of a European Research Area (ERA). The overall aim of Joint Programming is to pool national research efforts in order to make better use of Europe's precious public R&D resources and to tackle common European challenges more effectively in a few key areas. It will follow a structured strategic process whereby Member States agree on a common vision and a strategic research agenda to address given societal challenges.

In Joint Programming, Member States are expected to coordinate national research activities, group resources, benefit from complementarities to provide the long-term, stable research base that is needed to address major societal challenges.

Why Agriculture, Food Security and Climate Change?

Agriculture, food security and climate change pose key challenges for the world. The 2007-2008 world food crisis was a stark reminder that all countries need to build more resilient food systems in the light of expected (and unexpected) changes ahead. Research must play a leading role in bringing solutions. Europe has, and continues to develop, knowledge and technologies to underpin sustainable and competitive food production systems. Agriculture (including forestry and aquaculture) are highly exposed to climate change – the variability of crop yields has already increased as a consequence of extreme climate events, such as the summer heat of 2003 and the spring drought of 2007 in Europe. However the agriculture and forestry sectors also offer the potential of mitigation of N₂O and CH₄ emissions, while reducing greenhouse gas (GHG) emissions associated with indirect land use change and the development of verifiable GHG mitigation and carbon sequestration measures. Agriculture has to meet a demand for food which is estimated to rise globally by 50% by 2030 and to double by 2050, due to population growth, urbanisation and increased affluence in many societies. A European Research Area needs to play its role in sustainable growth in the agriculture sector (crops, livestock, fisheries, forests, biomass and commodities) to:

- Meet growing world food demand
- Enhance rural livelihoods
- Address competing demands on land use for biomass production
- Stimulate sustainable economic growth
- Maintain and restore ecosystem function / services
- Make the transition to a bio-based economy.



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History of the FACCE – JPI

The FACCE – JPI evolved from the outputs of the Standing Committee on Agriculture Research (SCAR) foresight exercises through which Member States and Associated Countries identified food security and climate change as two of the major issues impacting on the future of European agriculture. The JPI combines suggested activities on agriculture and food security, and agriculture and climate change, following discussions at the European Agricultural Research Initiative (EURAGRI) in Madrid in September 2009. At this time, France and the United Kingdom started preparing a proposal, supported by a number of other Member States, on the topic of “Agriculture, food security and climate change”. The Council of the EU confirmed this JPI theme in its Conclusions of 3 December 2009. The FACCE – JPI was officially launched in January, 2010 when the Governing Board met for the first time.

The strategic objective of the FACCE – JPI is to bring together European countries to identify, prioritise and deliver the research needed for agriculture to meet the challenge of responding to the demands of growing population in terms of both food sufficiency and safety within the context of climate change. In October 2010, the Council adopted the launching of the new JPI on “Agriculture, food security and climate change”.

At the initiative of France and the UK, the first meeting was held in Paris in January, 2010, attended by representatives of 25 Member States and Associated Countries. At this meeting, the Joint Programming process was described and States wishing to participate in this JPI were asked to pay a fee of 5000 Euros to finance the first meetings of a Scientific Advisory Board.

Twenty one countries are currently participating in the JPI . From April, 2010 until the end of 2011, interim governance was in place, consisting of the Governing Board (GB), a high level Scientific Advisory Board (SAB) elected by the GB, and a Secretariat (based at INRA and BBSRC). Permanent governance was adopted in February 2012 and adds a Stakeholder Advisory Board, which will be described in the next issue.



Scientific Research Agenda

The FACCE – JPI ¹ has developed a Scientific Research Agenda on the challenges of agriculture, food security and climate change, to serve as a base for the Strategic Research Agenda (SRA), which will be implemented by the participating Member States/Associated Countries.

The Scientific Research Agenda is centered on 5 core research themes:

1. Sustainable food security under climate change, based on an integrated food systems perspective: modeling, benchmarking and policy research perspective;
2. Environmentally sustainable growth and intensification of agricultural systems under current and future climate and resource availability;
3. Assessing and reducing trade-offs between food production, biodiversity and ecosystem services;
4. Adaptation to climate change throughout the whole food chain, including market repercussions;
5. Greenhouse gas mitigation: N₂O and CH₄ mitigation in the agriculture and forestry sector, carbon sequestration, fossil fuel substitution and mitigating GHG emissions induced by indirect land use change.

Based on this agenda, a set of 15 priority research actions have been defined that include short-term, medium-term and long-term actions. For more information, please go to the [FACCE – JPI website](#).

¹ Supported by FACCE CSA WP1 (Refining and updating the Strategic Research Agenda)



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FACCE – JPI Activities to Date

In order to support the development and launch of FACCE - JPI, the initiative benefits from a Coordination and Support Action (CSA) from the European Commission, which covers the period from 2011-2014 ². In this context, FACCE – JPI has undertaken a number of activities that include funding/mapping workshops, a workshop with ERA-NETs and the launch of a pilot action.

Funders / Mapping meetings: a novel approach that brings together funders and scientists to identify opportunities ³

Aligning programmes requires knowing which programmes exist in which countries and what is being planned in the future. The goal of the funders / mapping meetings is to bring together all the relevant actors in a dialogue on current and future research programmes to map areas for alignment in existing programmes and to explore areas for future joint programming. Each meeting is organised around a core theme identified by the SAB, and brings together scientists, funders and policymakers to analyse the state-of-the-art and to identify opportunities for joint actions. Prior to mapping meetings posters are prepared from research institutes and research policy makers to identify gaps and complementarities. The meetings are complemented by desk studies and bibliometric analyses.

The first mapping meeting on Core theme 5 - Mitigation of agricultural greenhouse-gas-induced climate change, was held on 20-21 June 2011 in The Hague, the Netherlands. A second meeting on Core theme 4: Adaptation to climate change, was held in Madrid on February 22- 23, 2012. The third meeting, to be held in conjunction with the EuroScience Open Forum in Dublin in July, will be on core theme 3 – Optimising trade-off: food systems, biodiversity and ecosystem services.

The report from the first mapping meeting is available on the [FACCE – JPI website](#).

Working with ERA-NETs

The FACCE – JPI is unique among joint programming initiatives in that a large number of on-going ERA-NETs have thematic complementarities with the JPI. In order to avoid duplications and provide synergy between the ERA-NETs and the FACCE – JPI, a brainstorming workshop was organised with the coordinators (or their representative) of 14 of these ERA-NETs on October 5, 2011 in Paris ⁴. In addition to the ERA-NETs, two representatives of the European Commission were present: François Constantin and Zsuzsanna Koenig.

A first mapping of the thematic overlaps was done during the meeting as illustrated below.

To continue this dynamic, ERA-NET representatives are invited to relevant mapping meetings.

The PLATFORM project (see box) will also have an important role to play in bringing together the different ERA-NETs to discuss practical and strategic questions.

² The CSA is divided into 7 work packages (WP) which are mentioned in the notes as relevant.

³ FACCE CSA WP2 (Mapping and foresight for strategic collaboration)

⁴ FACCE CSA WP4 (Communication and Outreach)



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The PLATFORM project

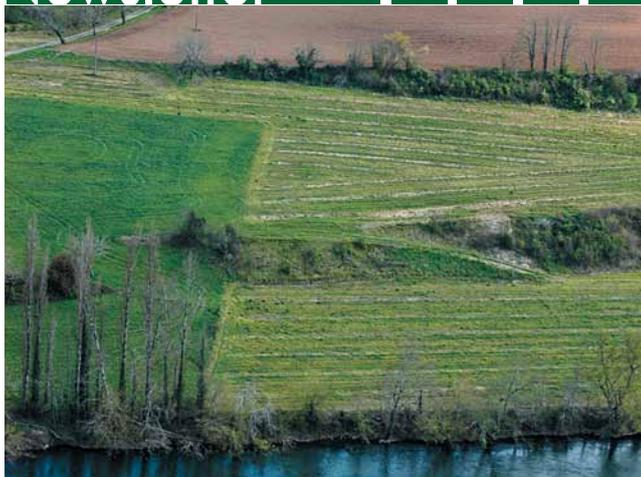
Funded under the topic "KBBE.2011.4-01: Networking of KBBE relevant ERA-NETS", PLATFORM will bring together the European Research Area Networks (ERA-NETS) from FP6 and FP7 in the area of the Knowledge Based Bio-Economy (KBBE) with the aim to improve exchange and cooperation between ERA-NETS and strengthen their contribution to, and impact on, the European Research Area in the Knowledge Based Bio-Economy. The project will establish a networking platform with a mutual learning dimension and a strategic dimension. PLATFORM will deliver a vision paper and roadmap for long-term cooperation and synergy among ERA-NETS, and between ERA-Nets and other research policy actors such as JPIs, SCAR, and KBBE Technology Platforms, thus contributing to a common strategic framework for EU research and innovation policy.

Contact: Christine Bunthof, WUR



Thematic complementarity between FACCE – JPI and 15 ERA-NETS as identified at the first FACCE- JPI /ERA-NET brainstorming workshop

- | | |
|--|--|
| <p>1</p> <p>Sustainable food security under climate change</p> | <ul style="list-style-type: none"> ● — RURAGRI ● — ERA ARD2, ARIMNET ● — SUSFOOD |
| <p>2</p> <p>Environmentally sustainable growth and intensification of agriculture</p> | <ul style="list-style-type: none"> ● — ICT-AGRI, Core Organic II, ERA-CAPS ● — ERA-IB, EUROTransbio ● — ERASysBio, ERA SynBio |
| <p>3</p> <p>Assessing and reducing tradeoffs: food production, biodiversity & ecosystems services</p> | <ul style="list-style-type: none"> ● — BIODIVERSA2 |
| <p>4</p> <p>Climate change adaptation</p> | <ul style="list-style-type: none"> ● — EUPHRESKO II ● — CIRCLE2 ● — ANIHWA |
| <p>5</p> <p>Greenhouse gas mitigation</p> | <ul style="list-style-type: none"> ● — Same domain as FACCE-JPI ● — Includes other sectors than ag. & food ● — Includes other regions than Europe ● — Links with A Healthy Diet for a Healthy Life JPI |



First FACCE – JPI Knowledge Hub launched

To rapidly initiate the process of coordinating national activities, the FACCE-JPI launched a pilot call in 2011 bringing together scientific groups from across Europe under a common theme: “A detailed climate change risk assessment for European agriculture and food security, in collaboration with international projects”. This action will address the modeling of impacts of climate change and the reduction in uncertainties in climate change scenarios. Seventeen of the twenty one participants in FACCE – JPI are taking part in the pilot action.

• An original instrument

The “FACCE Knowledge Hub” is a novel instrument developed by the FACCE – JPI to foster the transnational cooperation, collaboration and communication between the research communities in the field of FACCE. It will also contribute to optimising research outcomes by facilitating better networking and information exchange among all actors. A Knowledge Hub is a network consisting of selected research groups from JPI member countries within a defined area of research.

• Organisation

The call ⁵ was organised in a two-step process, beginning with a letter of intention. Eligibility to enter the second stage was determined nationally by members of the Steering Committee, which includes one representative of each participating country. 96 letters of intention were received by the call office with 74 selected to participate in the Knowledge Hub. Subsequently a number of research groups fused, resulting in 65 research groups in the final project. A first networking meeting was held in Berlin on October 18, 2011 with around 130 participants including researchers and Steering Committee members present. One full proposal, uniting all the groups, was submitted on December 19, 2011 and was favorably reviewed by an Expert Evaluation Committee, subject to responding to the reviewers comments. Final approval was received on April 11, 2012 and the Knowledge Hub will start officially in June, 2012.

• FACCE MACSUR

The project, “FACCE MACSUR: Modeling European Agriculture with Climate Change for Food Security”, brings together 65 research groups in 17 countries, with an estimated total budget of 15 million Euros. The project is divided into 3 sub-themes: crops, livestock and grasslands, and trade. Below, the FACCE MACSUR coordinator and his deputy describe the project and its ambitions.

⁵ FACCE CSA WP3 (Design and delivery of implementation modalities)



Interview with MACSUR main Coordinator Martin Banse and deputy main Coordinator Richard Tiffin

What is innovative in the approach of a Knowledge Hub compared to other existing instruments?

From our point of view MACSUR has a very challenging approach to identify and to address models currently used in crop, livestock and economic sciences separately and to combine these models for an integrative assessment of climate risks for European agriculture and food security.

The knowledge hub is a partnership which adds value to existing national funding by building linkages across borders. It is funded by collaboration between national funders and is specifically focussed on sharing knowledge between modelling teams.

What do you expect from this Knowledge Hub? What added value will MACSUR bring to the field of research, both on a short- and longer term basis? Added value to AgMIP ⁶

In MACSUR we will train a new generation of scientists to work across models which will in turn contribute to greater integration of models. In the longer term we would describe this challenge as the integration of modellers as opposed to integrated models. MACSUR plans to contribute to AgMIP in a coordinated action. MACSUR, however, as a whole has the ambition to go further in terms of developing climate change risk assessment methodology focussing on European agriculture in a range of pilot studies.

MACSUR is designed to break down some of the barriers that exist between modellers. Thus we expect best modelling practice to be shared between crop, livestock and trade modellers. Beyond this we aim to improve the understanding of the capabilities of different models so that we can move towards integrated modelling of climate risks to European agriculture.

What is your feeling concerning the involvement of Member States in the field of MACSUR?

MACSUR will determine options and ways to reduce uncertainty on the impacts of climate change on European food security. This requires an active involvement of stakeholders and policy makers at national and regional levels. Therefore, the involvement of people from different regions in Europe is the key for the success of MACSUR.

⁶ AgMip: The international project "The Agriculture Model Intercomparison and Improvement Project"



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Site specific knowledge is an important element of model building and evaluation. We have a comprehensive coverage of the regions in our consortium which will contribute in this regard. We also expect to build modelling capability in Member States where this is limited at present. As a result of MACSUR and AgMip, pan-European modelling of climate risks to agriculture will become possible.

Can you describe your consortium and partners? What is the added value of such a wide network?

The partnership is led by individuals from Germany, the Netherlands and the UK. This is a tiny proportion of the number of Member States represented by the 60+ research groups in the consortium. With this diversity there is a tremendous range of expertise in the consortium and we are very excited about the possibilities that this creates.

Upcoming Event: Euroscience Open Forum, Dublin City of Science: The Great Debate

The FACCE – JPI⁷ is organizing a session at the Euroscience Open Forum entitled: “The Great Debate on the battle to feed a changing planet”. Confirmed speakers are Prof. Rajendra K. Pachauri (Nobel Laureate), Chairman, Intergovernmental Panel on Climate Change; Prof. Sir John Beddington, Chief Scientific Advisor to the UK Government; Prof. Louise Fresco, University of Amsterdam; Prof. Lynn Frewer, Newcastle University; Prof. Pamela Ronald, University of California, Davis.

The central auditorium (2000 seats) of the Convention Centre Dublin (CCD) has been secured to facilitate the planned format of the discussions and the anticipated wide interest of the general public and media on this topic. The Debate will take place on 13 July 2012, from 13:30 until 15:00, as part of the “Policy Day” of the Euroscience Open Forum 2012.

The format for this session will be organised to maximise audience participation and will include debate, live feed-ins from the field and direct as well as indirect (texting or tweeting) audience participation. For further information, please see the ESOF web site: <http://www.esof.eu/>

⁷ FACCE CSA WP5 (Coordination with International Initiatives)



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FACCE – JPI governance

At this time, the FACCE – JPI consists of a decision-making body, the Governing Board (GB), with a maximum of 2 representatives per participating country; an advisory body, the high-level Scientific Advisory Board (SAB), with 12 scientists elected by the GB; and an executive body, the Secretariat. A second advisory board, the Stakeholder Advisory Board, is currently being established and will be described in the next issue.

FACCE – JPI Governing Board

Austria: Sebastian Helgenberger: University of Natural resources and Applied Life Sciences;

Elfriede Fuhrmann: Federal Ministry of Agriculture, Forestry, Environment and Water Management;

Belgium: Anne Vuylsteke: Flemish Government, Department of Agriculture and Fisheries; Thierry van Cauwenberg: Direction des Programmes de Recherche Direction des programmes fédéraux et internationaux

Czech Republic: Ladislav Jerabek: Ministry of Agriculture of the Czech Republic

Cyprus: Leonidas Antoniou, Rebecca Chrysafi: Research Promotion Foundation

Denmark: Niels Gøtke, Floor ten Hoopen: Ministry of Science Technology and Innovation

Estonia: Külli Kaare: Estonian Ministry of Agriculture - Research and Development Department

Finland: Mikko Peltonen: Ministry of Agriculture and Forestry, Department of Agriculture; Arja Kallio: AKA - Academy of Finland

France: Marion Guillou : Institut National de la Recherche Agronomique (INRA);

Maurice Héral: Agence National de la Recherche (ANR)

Germany: Claudia Herok: Federal Ministry of Education and Research (BMBF);

Wiebke Rudt von Collenberg: Bundesministerium für Ernährung, Landwirtschaft und Verbraucherschutz (BMELV)

Ireland: Richard Howell: Ministry of Agriculture; Frank O'Mara: TEAGASC

Israel: Yuval Eshdat: Ministry of Agriculture and Rural Development;

Yoram Kapulnik: Agricultural Research Organization from the Volcani Center

Italy: Marina Montedoro: Ministero delle Politiche Agricole e Forestali;

Federico Cinquepalmi: Ministry of Education, University and Research – Miur

The Netherlands: Annette Wijering: Ministry of Economic affairs, Agriculture and Innovation;

Aalt Dijkhuizen: Wageningen University Research

Norway: Kristin Danielsen: The Research Council of Norway, Dept. Agriculture and Marine Issues;

Harald Ribe: Norwegian Ministry of Agriculture and Food

Poland: Monika Rzepecka: Ministry of Science and Higher Education

Romania: Nastasia Belc, Antoaneta Popescu: National Authority for Scientific Research

Spain: Paloma Melgarejo : Instituto Nacional de Investigación y Tecnología Agraria y Alimentaria (INIA);

Nuria Duran: Instituto Valenciano de Investigaciones Agrarias (IVIA)

Sweden: Stefan Källman: Ministry for Rural affairs; Jan Svensson: Formas

Switzerland: Pascal Walther: Swiss National Science Foundation; Andreas Aeschlimann: Forschungsanstalt Agroscope, Switzerland;

Turkey: Cinar Adali, Disem Celikkanat Ozan: Scientific and Technological Research Council of Turkey

United Kingdom: Tim Willis: Biotechnology and Biological Sciences Research Council (BBSRC);

Mike Roper: Department for Environment, Food and Rural Affairs (DEFRA)

Observers: Timothy Hall, François Constantin: European Commission;

Mike Collins: Standing Committee on Agricultural Research (SCAR)

Scientific Advisory Board

Prof. Elias Fereres, School of Agricultural and Forestry Engineering, University of Córdoba, Spain, Institute of Sustainable Agriculture, Scientific Research Council of Spain (IAS-CSIC)

Prof. Stephen P. Long, University of Illinois, Urbana-Champaign, USA

Prof. Frits Mohren, Wageningen University, Netherlands

Prof. Bernd Müller-Röber, Potsdam University's Institute of Biochemistry and Biology, Max Planck Institute of Molecular Plant Physiology (Germany)

Dr. Rajul Pandya-Lorch, International Food Policy Research Institute (IFPRI)

Prof. Pirjo Peltonen-Sainio, MTT Agrifood Research, Finland

Prof. John R. Porter, University of Copenhagen, Denmark

Prof. Johan Rockström, Stockholm University, Sweden

Prof. Thomas Rosswall, CGIAR Challenge Program "Climate Change, Agriculture and Food Security"

Dr. Henning Steinfeld, Food and Agricultural Organisation

Dr. Jean-François Soussana, Institut National de la Recherche Agronomique (INRA), France

Prof. Joachim von Braun, Center for Development Research (ZEF), University of Bonn, Germany

Stakeholder Advisory Board

The Stakeholder Advisory Board is currently being established. It will consist of representatives of 20 stakeholder organisations. Its composition will be presented in the next newsletter.

Secretariat

The FACCE – JPI Secretariat is led by the INRA in France and BBSRC in the UK.

The Secretariat has the overall responsibility for day-to day management of the FACCE – JPI.

The Secretariat is composed of the following members: Isabelle Albouy, Heather McKhann, Claire Treignier, Ophélie Hémonin (INRA) and Tim Willis, Gabriela Pastori, Josephine McSherry (BBSRC).

A special thanks to Szabolcs Tasnády, Intern in the Hungarian Public Administration Scholarship Program, who, during his internship at INRA (September – December, 2011) contributed to the FACCE – JPI.

We wish him the very best for his future endeavors.

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