

2012 – First Strategic Research Agenda Methodology

A number of activities aim to enforce the FACCE – JPI process and to move toward a transdisciplinary, participative approach. Its research scope, first designed in the Scientific Research Agenda, is complemented thanks to the analysis of current and future national research programmes through a series of mapping and foresight meetings on research themes previously defined, and by the regular input of stakeholders (Figure 2).

FACCE – JPI aims to work together with other European initiatives such as ERA-NETs, and other JPIs plus instruments foreseen to realise the potential of the EU Knowledge Based BioEconomy KBBE, (e.g., the European Innovation Partnership 'Agricultural Productivity and Sustainability', KICs), and to ensure coherence and contribute efficiently to achieving the European Research Area (ERA). However, since the issues addressed are overarching and go beyond a simply European or continental problem, a global approach, with key international partners, is also part of the research and implementation strategy. Finally, this strategy will be further supported by activities on infrastructure and platforms, capacity building, education and training, knowledge exchange and communication and dissemination.

Although building on existing tools and know-how, as a new process, many aspects of JPIs need to be "invented" – or at least appropriated by JPI actors. In this sense, JPIs must advance and "learn by doing", but at each step gaining insight on how to improve the process. That is why we foresee a cyclical process (Figure 3). In this first iteration of the Strategic Research Agenda, the basis for the future research conducted in the context of FACCE – JPI has been laid down.

Joint actions and activities are being planned to implement this agenda and more will arise as the JPI advances. The progress of the JPI toward reaching its strategic goals will be monitored, to allow necessary adjustments to the agenda and the means of implementing it.

Figure 2. FACCE-JPI activities contributing to the Strategic Research Agenda

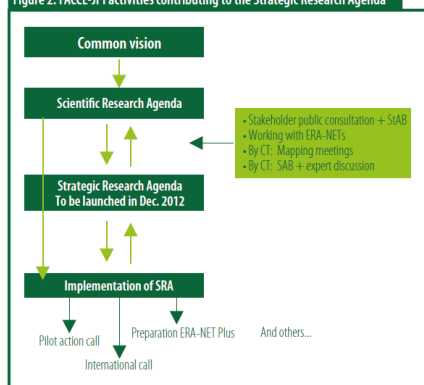
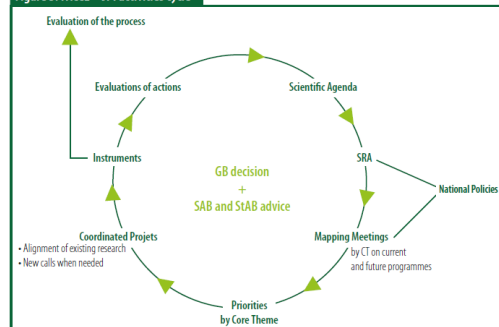


Figure 3. FACCE – JPI activities cycle



Scientific Research Agenda

A board of 12 internationally renowned scientists has been elected to constitute the SAB. Their initial task was to develop a Scientific Research Agenda for FACCE-JPI. The Scientific Research Agenda designed by the SAB has defined five core themes which have been adopted and taken forward in the FACCE – JPI mapping process and which will structure future joint actions. Additionally, short-, medium- and longterm priority actions were described. The full scope of the JPI was described. The Scientific Advisory Board has further elaborated on three of the core themes and these inputs are included herein.

Mapping Meetings

An innovative system of mapping and foresight meetings on on-going and future research projects and programmes is currently being carried out on each of the core themes defined in the Scientific Research Agenda. During these meetings (see Annex 3 for a list of all JPI meetings to date), posters are prepared by each member country presenting their current and future national programmes as well as their participation in European and international actions. Mapping meetings are complemented by desk studies and bibliometric analyses. The meetings bring together funders and research policy makers as well as scientific experts to analyse the current research and to make recommendations for future research and policy and the means to implement them.

Mapping of core themes is helping to identify:

- 1• Topics on which much research is being done in many JPI countries. These topics are of interest for future alignment, joint actions or instruments.
- 2• Topics on which research is carried out in a small number of JPI countries. These latter are topics for novel alignment activities (e.g. geographic, thematic).
- 3• Topics which are in the Strategic Research Agenda but on which there is little or no research. These topics could give rise to news topics in Horizon 2020 as collaborative projects, joint calls or ERA-NETs.
- 4• Emerging topics. FACCE – JPI will organise workshops, seminars or ideas labs to further explore these topics.

So far, four mapping meetings have been successfully conducted: on mitigation of agricultural greenhouse gases, on climate change adaptation, on trade-offs between food production, biodiversity and ecosystem services and on food security under climate change. The reports from these meetings are available for downloading from the FACCE JPI website (<http://www.facejpi.com/Document-library/Mapping-meeting-reports>).

A final “broad based” meeting will conclude the 5 thematic mapping meetings to maximise their outcomes, build synergies with alignment and implementation working groups and to

evaluate both the methodology and the process. FACCE – JPI work continues to identify instruments and methods to realise alignment of national activity.

Stakeholders

In order to gather stakeholder views on FACCE – JPI plans and activities, an online questionnaire, structured around the five core research themes of the FACCE – JPI, was used as the basis for a consultation exercise with stakeholders across Europe. The summary of responses is now available. For the creation of this Strategic Research Agenda, input from the consultation was used to validate and in some cases expand the subjects to be addressed in the core themes and to highlight supporting activities required by the JPI.

Stakeholder input will continue throughout the FACCE – JPI process through the Stakeholder Advisory Board (StAB; Annex 2.4). A group of 22 European and international stakeholders from 5 broad categories (Civil society, including NGOs and consumers, Farmers, Industry, Administration, including European Technology Platforms - ETPs), themselves representing a great number of other organisations from very various backgrounds, will meet to give advice on the main FACCE– JPI strategic orientations, and will take part in the relevant JPI activities and give relevant technical advice on a case by case basis.

European and international collaboration

FACCE – JPI works with a number of European initiatives and projects (public to public, public-private partnerships), aiming with these collaborations not only to bring further the research and alignment goals of FACCE – JPI, but also to realise the European Research Area. These other European initiatives include ERA-NETs (16 ERA-NETs were identified as relevant for the FACCE – JPI focus. Collaboration with them in the form of joint mapping, best practices and data sharing or joint calls, is well underway as well as participation in a network of bioeconomy relevant ERA-NETs and JPIs: the FP7 project PLATFORM).

FACCE – JPI also works with other JPIs (in particular, JPI Climate, JPI Water and JPI Healthy Diet for a Healthy Life) and participates in the FP7 project JPIs-TO-COWORK as well as the European Energy Research Alliance (EERA). Links will further be established with the new European Innovation Partnership on Agricultural Productivity and Sustainability. FACCE – JPI will also work with public-private partnerships such as the European Institute of Technology's Knowledge and Innovation Communities (KIC) which focus on bringing together education, technology, research, business and entrepreneurship, in particular, the Climate KIC and the future Food KIC. The FACCE – JPI will also establish links to existing and emerging European research infrastructures, for example ANAEE, MIRRI, ICOS, ELIXIR etc., seek interactions with the European Strategy Forum on Research Infrastructures (ESFRI) and propose areas where

new infrastructures or upgrades of existing ones are necessary (see also the section on “Horizontal programmes and activities”).

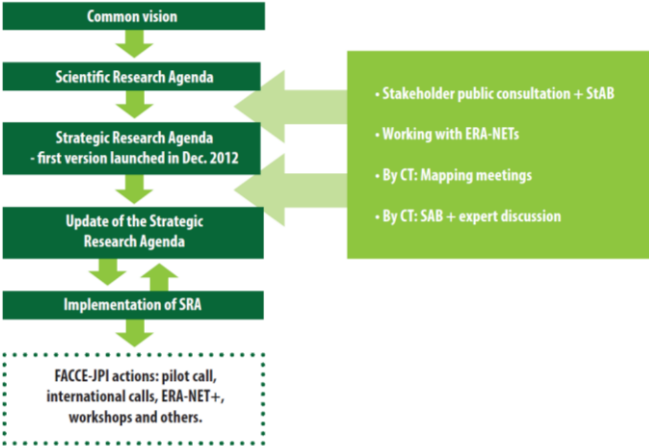
On a more global scale, FACCE – JPI recognises the necessity for a global approach to large scale issues as are Agriculture, Food Security and Climate Change. FACCE – JPI is actively developing partnerships with international initiatives going beyond the EU: an International Call on Greenhouse Gases Mitigation with non-European countries from the Global Research Alliance on Agricultural Greenhouse Gases (GRA; <http://www.globalresearchalliance.org/>) and a joint action with the Belmont Forum on Food security and land use. FACCE – JPI has initiated a collaboration process with other international initiatives, such as the FAO Committee on Food Security, the European Commission’s Joint Research Centre, CGIAR programmes and in particular that on “Climate Change, Agriculture and Food Security” (CCAFS; <http://ccafs.cgiar.org/>) and the Wheat Initiative (<http://www.wheatinitiative.org/>) and will continue to seek strategic links with others.

2016 – Update of the FACCE-JPI SRA

Methodology – inputs to the Strategic Research Agenda

A number of activities aim to progress the FACCE-JPI process and to move towards a transdisciplinary, participative approach. Its research scope, first designed in the Scientific Research Agenda²⁵, was complemented by the analysis of current and future national research programmes through a series of mapping meetings on the 5 core themes in 2011 - 2013 and by the regular input of stakeholders (Figure 3). FACCE-JPI works together with other European initiatives to ensure coherence and contribute efficiently to achieving the European Research Area (ERA). Finally, this agenda will be further supported by activities on infrastructure and platforms, capacity building, education and training, knowledge exchange and communication and dissemination.

Figure 3. FACCE-JPI activities contributing to the SRA and its update



Scientific Research Agenda

A board of internationally renowned scientists (Annex 4.3) are elected to constitute the SAB. The initial task of the SAB in 2010 was to develop a Scientific Research Agenda for FACCE-JPI. The Scientific Research Agenda designed by the SAB defined five Core Themes which were adopted and taken forward in the FACCE-JPI mapping process and which (with some modification) continue to structure future joint actions.

A set of criteria has been developed in order to select the core research themes of the FACCE-JPI. According to these criteria, core themes should:

- Be evidence based,
- Be highly effective at European level,
- Have high expected returns,
- Reflect priority needs of Europe and/or regions of Europe,
- Reinforce Europe's contribution to global public goods,
- Be interdisciplinary,
- Influence the development of the research agenda,
- Be complementary, with clear links and synergies within and across themes.

The full scope of the JPI was described. The Scientific Advisory Board has elaborated on the Core Themes and research priorities and these inputs are included herein. The Scientific Research Agenda formed the scientific basis of the subsequent Strategic Research Agenda.

Mapping Meetings

An innovative system of mapping and foresight meetings on ongoing and future research projects and programmes was carried out on each of the core themes defined in the Scientific Research Agenda between 2011 and 2013. During these meetings, posters were prepared by each member country presenting their current and future national programmes as well as their participation in European and international actions. Mapping meetings were complemented by desk studies and bibliometric analyses. The meetings brought together funders and research policymakers as well as scientific experts to analyse the current research and to make recommendations for future research and policy and the means to implement them²⁶.

Mapping of core themes helped to identify:

- 1 • Topics on which much research is being done in many JPI countries. These topics are of interest for future alignment, joint actions or instruments.
- 2 • Topics on which research is carried out in a small number of JPI countries. These latter are topics for novel alignment activities (e.g. geographic, thematic).
- 3 • Topics which are in the Strategic Research Agenda but on which there is little or no research or there is need for new investment. These topics could give rise to news topics in Horizon 2020 as collaborative projects, joint calls or ERA-NETs.
- 4 • Emerging topics. FACCE-JPI organised workshops to further explore these topics.

A "broad based" meeting concluded the 5 thematic mapping meetings to maximise their outcomes, build synergies with alignment and implementation working groups and to evaluate both the methodology and the process. FACCE-JPI's work continues to identify instruments and methods to realise alignment of national activity.

Stakeholders

In order to gather stakeholder views on FACCE-JPI plans and activities, an online questionnaire, structured around the five core research themes of the FACCE-JPI, was used as the basis for a consultation exercise with stakeholders across Europe in 2012. For the elaboration of the 2013 Strategic Research Agenda, input from the consultation was used to validate and in some cases expand the subjects to be addressed in the core themes and to highlight supporting activities required by the JPI.

Stakeholder input has continued throughout the FACCE-JPI process through the Stakeholder Advisory Board (StAB). A group of European and international stakeholders corresponding roughly to 5 broad categories (Civil society, including NGOs and consumers, Farmers, Industry,

Administration, including European Technology Platforms – ETPs and international and European research), themselves representing a great number of other organisations from very various backgrounds, meet to provide advice on the alignment of FACCE-JPI activities to stakeholder needs and to increase the impact of JPI actions for stakeholders and end-users.

Strategic Research Agenda

Using the Scientific Research Agenda as a basis, and taking into consideration outputs from the mapping meetings, the SAB analysed all core themes in more detail, bringing in scientific experts to identify gaps and decide priorities for each theme. These are presented with each Core Theme above. The priorities have been updated for this revised version of the Strategic Research Agenda to focus more on impact-driven research.