

Coordination of European transnational research in organic food and farming

Acronym:

CORE Organic

Project No:

11716

EU contribution:

EUR 1.2 million

Duration:

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ERA-Net

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<http://www.coreorganic.org/> (active)

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Summary

(http://www.coreorganic.org/library/pub/core_i_final_scientific_report.pdf)

Research in organic food and farming is a fairly new, but rapidly expanding, discipline on the European research scene. One of the problems faced by the authorities seeking to initiate research programmes in organic food and farming is that the present research effort in Europe is characterised by small research communities, which are often scattered and fragmented both geographically and institutionally. Therefore, a gathering of the dispersed expertise to a critical mass in order to increase the competitive quality and relevance of the research as well as the dissemination and use of the research is needed.

CORE Organic was a three-year FP6 coordination action with the aim of improving the coordination of transnational research in organic food and farming. The project was carried out by 13 public funding bodies representing 11 European countries: Austria, Denmark, Finland, France, Germany, Italy, the Netherlands, Norway, Sweden, Switzerland and the United Kingdom. The overall objective of CORE Organic was to gather a critical mass and enhance the quality, relevance and utilisation of resources in research in organic food and farming in the partner countries, and to establish a joint pool of at least EUR 3 million per year by the end of the project for funding selected transnational research projects. This was accomplished by the implementation of the following four objectives.

1. Increased exchange of information and establishment of a common open web based archive
2. Coordination of existing research and integration of knowledge
3. Sharing and developing best practice for evaluating organic research
4. Identification and coordination of future research

Objectives 1 and 2 were reached by means of various tools.

- ▶ The establishment of an internet and intranet site for coordination and communication externally and internally (<http://www.coreorganic.org>).
- ▶ The publication of eight electronic newsletters.

- ▶ The building and running of a common Internet portal on research in organic food and farming (<http://www.coreportal.org>) with information on history, organisation, research programmes, financing, research facilities, initiation of research, selection and evaluation, utilisation of research and scientific education plus research schools in the 11 partner countries linking to further information.
- ▶ Extending the open access electronic archive for research publications related to organic production (<http://www.orgprints.org>), which was established by DARCOF in 2002, to include research publications etc. from all the partner countries. The archive is maintained by the three partners — BLE (DE), DARCOF (DK) and FiBL (CH) — and each partner has a nominated national editor responsible for depositing publications and other relevant information from their country. In 2007, Organic Eprints contained more than 200 descriptions of research organisations, programmes and facilities, 500 descriptions of research projects and more than 10 000 research papers: there were 200 000–300 000 visits per month (autumn 2007).
- ▶ A workshop was held in May 2006 at the Joint Organic Congress in Odense, Denmark, to identify and discuss the most important research topics of common interest for the joint transnational CORE Organic call to be launched later in the project.

Thereby, topics for increased future cooperation as well as new research areas suitable for transnational cooperation and development of training schemes for research personnel and experts were identified.

The 11 partner countries organised organic research funding in different ways. Some countries mainly fund organic research through universities or public/private research centres (Germany, France and Switzerland) while others fund organic research through general research funding schemes or specific organic funding schemes with regular or irregular calls every one to five years or up to several times a year (Norway). All of the partner countries had organic research farms (76 in total), except Italy and Norway, which carried out a large number of experimental fields. Long-term experiments were established in all countries except the Netherlands. Fields for nutrient leaching experiments were only established in the Nordic countries (Denmark, Finland, Norway and Sweden). Eight countries (AT, CH, DE, DK, FI, NO, SE and UK) had organic animal research facilities, of which three for beef production, 14 for dairy production, seven for pig production, seven for poultry production and five for sheep production.

The most important research topics identified among the partners for a five-year period within 2000–07 were within the categories crop husbandry, animal husbandry, farming systems and food systems, while

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less important research topics were environmental aspects, values, standards and certification, knowledge management and soil science.

Objective 3 focused on the joint development of best practices for evaluation and quality assurance at project and programme level to ensure high-quality research in organic food and farming. To reach this objective, a questionnaire investigation involving various stakeholders in the 11 partner countries was used: this revealed that the evaluation criteria for organic research are quite similar in the partner countries and close to those used for the evaluation of general research programmes. In eight countries, the research proposal evaluation is carried out anonymously (i.e. the evaluation experts are not known to the applicants), while the evaluation experts are known to the applicants in three countries (Italy, Sweden and Switzerland). Reporting and monitoring of projects is very similar in most countries and annual reporting and a final report are requested, but Finland and Norway request semi-annual reporting. Based on these findings, a concept for the evaluation of the proposals for the first CORE Organic call was developed and a list of excellent European experts to peer review transnational CORE Organic pilot project proposals was drawn up.

Objective 4 concerned the identification and coordination of future research. This objective was reached by identifying research topics of common high priority and developing plans for future coordination and agreement on a range of procedures for transnational funding. Of seven high priority research topics, the following three topics were selected for the joint transnational pilot call.

- ▶ Animal disease and parasite management, including preventive and health improvement therapies to reduce reliance on antibiotics
- ▶ Quality of organic food — health and safety
- ▶ Innovative marketing strategies — identification of successful marketing methods, local markets

In 2007, the CORE Organic partners launched a pilot call for joint transnational research projects within these three common research topics. Of 37 project proposals, eight were selected for transnational funding by means of a virtual common pot approach (i.e. each national funding body funds researchers from its own country), and all partner countries participated in the transnational funding. The overall funding budget for the eight three-year projects was about EUR 8.3 million — close to the aim of EUR 3 million per year. The following were the eight CORE pilot projects for the period 2007–10.

- ▶ **AGTEC-Org** — Methods to improve quality in organic wheat
- ▶ **ANIPLAN** — Planning for better animal health and welfare

- ▶ **COREPIG** — A tool to prevent diseases and parasites in organic pig herds
- ▶ **FCP** — How to communicate ethical values
- ▶ **iPOPY** — Innovative public organic food procurement for youth
- ▶ **PathORGANIC** — Assessing and reducing risks of pathogen contamination in organic vegetables
- ▶ **PHYTOMILK** — What makes organic milk healthy?
- ▶ **QACCP** — How to assure safety, health and sensory qualities of organic products

(also see <http://www.coreorganic.org/research/index.html>)

After the selection procedure, an evaluation of the evaluation criteria and the procedure used for the CORE Organic pilot call was made by means of a questionnaire investigation involving, among others, the applicants and evaluation experts. Furthermore, a literature review was carried out. This study showed that the 19 evaluation criteria clustered within six main categories fulfilled the expectations of most target groups, but interdisciplinarity and innovative aspects should be addressed in a more appropriate way. Moreover, the gap between the initial scientific evaluation and the final selection of CORE Pilot projects should be reduced; the evaluation should be made more transparent and the way national priorities were integrated in the decision-making process should also be considered in more detail.

At a kick-off meeting for the eight CORE Organic projects in September 2007, the partners decided to continue the cooperation in a CORE Organic Funding Body Network after the end of the project in order to monitor and evaluate the eight research pilot projects and to broaden and deepen the cooperation between European organic research funding bodies in the future.

Problem

Research in organic food and farming is a fairly new, but rapidly expanding discipline on the European research scene. One of the problems faced by the authorities seeking to initiate research programmes in organic food and farming is that the present research effort in Europe is characterised by small research communities, which are often scattered and fragmented both geographically and institutionally. Therefore, a gathering of the dispersed expertise to a critical mass in order to increase the competitive quality and relevance of the research as well as the dissemination and use of the research is needed. Many organic research topics are of common European interest and they will be better addressed by a transnational approach, at the same time increasing the outcome of the resources put into organic research in each country.

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Background and objectives

(http://www.coreorganic.org/library/pub/core_i_final_scientific_report.pdf)

BACKGROUND

Organic farming represents a possible alternative with a more holistic view of agriculture and food production, and directly addresses the problems faced in many areas of conventional agricultural practice. Concerns for the environment, biodiversity, rural development and social aspects, animal welfare, product quality and safety are thus essential ingredients of the philosophy behind organic farming. A sustainable development of agriculture, environment and the rural districts are key policy objectives of the common agricultural policy (CAP). At its full potential, organic farming may constitute a solution to a number of current difficulties in the CAP. This is most obvious in terms of reducing environmental pressure, supporting ecosystem functions, and in terms of improving food safety and quality, animal welfare, etc. Moreover, as organic production often is smaller, but more valuable and labour intensive, organic farming also provides potential in terms of supporting rural development, improving farm income, market internalisation of the public goods produced by agriculture and supporting decreased resource use in primary production (multifunctional agriculture), and — obviously — in terms of reducing surpluses of agricultural commodities.

On several occasions, the European Council has recognised that organic agriculture improves the sustainability of farming activities and thus contributes to the general aims of the common agricultural policy. According to the Commission staff working paper (SEC(2002) 1368) 'Analysis of the possibility of a European Action plan for organic food and farming', the main documents on Community policy on agriculture have highlighted the importance of organic farming as an environmentally friendly farming system and have called for actions to further support the development.

In 1999, a conference — organised by the European Union — was held in Baden (Vienna), 'Organic farming in the European Union — Perspectives for the 21st Century'. As a follow-up, a new conference, 'Organic Food and Farming — Towards Partnership and Action in Europe', was held in 2001 in Copenhagen. This conference highlighted that:

- ▶ organic farming is a highly relevant tool in simultaneously solving a range of problems related to food production, environment, animal welfare, and rural development;
- ▶ organic food and farming is becoming a major opportunity for food producers in Europe, due to a growing consumer interest for certified organic products: this should lead to a developing market for organic food and create income for farmers;
- ▶ organic food and farming should be developed further.

Furthermore, the conference recognised research as a tool for developing organic food and farming, and a number of research issues were suggested, namely research to support the development of:

- ▶ organic foods of high quality;
- ▶ a stable production of organic food and feed for livestock;
- ▶ long-term and sustainable progress of organic farming;
- ▶ coherence between practice and principles.

It should also be said that in order to become a tool for a sustainable development, future research initiatives must consider market demands, while preserving the values associated with organic principles. These highlights and recommendations were meant to inspire the elaboration of the *European Action plan for organic food and farming*. At the latest hearing concerning this in Brussels on 22 January 2004, Dr Franz Fischler, Commissioner for Agriculture, Rural Development and Fisheries, said in his opening speech that improving the funding for research in organic farming, was identified as a very important issue in the coming action plan.

Essential to the achievement of such comprehensive goals is the development of appropriate research methodology, but also a close liaison between sponsors of research, researchers and the users of the research. Because of these objectives and the complexity of organic farming, it is necessary to focus on a development of research that is holistic, relevant and of high quality. Organic farming research methods include:

- ▶ research which generates general and communicable knowledge;
- ▶ whole systems, multidisciplinary and interdisciplinary approaches should be used (rescaling continually the focus of research, e.g. cell, plant, field, farm, region);
- ▶ both short and long-term impact on agro-ecosystems should be considered — this includes models that allow amplification of environmental cost or benefits of a technology;
- ▶ views of stakeholders (e.g. farmer, processors, consumers, environmentalists) should be integrated (participatory/action research);
- ▶ a specific analysis of stakeholders' expectations, since, according to organic farming objectives and principles, any situation is specific; therefore, paradigms and technical solutions cannot be implemented in the same way everywhere.

However, there are barriers to conducting relevant and high-quality research in organic farming. Organic farming is a fairly new research field with small national research communities, especially in specific areas, and there is a need to gather a critical mass in research in organic farming. Although research of relevance to organic farming can be undertaken by many different research groups and in different disciplines,

organising organic farming research within the currently completely segregated agricultural research structures is not appropriate. The prerequisite to strengthening research in the field of organic food and farming is thus to have strong and efficient core structures or schemes (national or regional hubs), which support specialists in research programmes of complex systems. For a European research programme on organic farming, it would be necessary to have the complete information about existing programmes.

Collaboration and coordination is essential in strengthening the overall performance of European research in organic farming. Among other things, it is important to establish networks in organic research and it is important to utilise possibilities for cooperation between national research programmes. Collaboration in education and extension as well as participatory or farmer-driven research should also be possible. Finally, identification of common evaluation procedures relevant to organic farming is seen as crucial for safeguarding and enhancement of research quality.

It is, therefore, desirable to establish a coordination network at the European level, which can secure collaboration, quality and relevance of research. The network, should compile the research projects in progress, project results and scientific publications throughout Europe, making them accessible via common databases and Internet portals to the interested public and to policymakers. With this background, the present ERA-NET proposal was prepared as a result of the seminar 'How to facilitate the development of Transnational cooperation in research in Organic Farming by member and associated states' on organic farming research in Europe. The seminar was held in Brussels, 24 and 25 September 2002, and was arranged by the European Commission.

OBJECTIVES

Because public research and development in organic food and farming is scattered and fragmented both geographically and institutionally in Europe, with small research communities, there is a need to gather the dispersed expertise to a critical mass to keep and increase the competitive quality of European organic research and development.

The overall objective of CORE Organic was to gather this critical mass and enhance the quality, relevance and utilisation of resources in European research in organic food and farming. The ultimate goal was to establish a joint pool of at least EUR 3 million per year by the end of the project to fund selected transnational research projects. This should be accomplished by implementation of the following four objectives.

1. Increased exchange of information and establishment of a common open web-based archive

2. Coordination of existing research and integration of knowledge
3. Sharing and developing best practice for evaluating organic research
4. Identification and coordination of future research.

Methodology

To reach the objectives, the project was structured in seven work packages (WPs).

Objective 1: Increased exchange of information and establishment of a common open web-based archive:

- WP 1: Coordination
- WP 2: Mediation and communication
- WP 3: Mapping of existing research programmes and facilities

Objective 2: Coordination of existing research and integration of knowledge

- WP 4: Coordination of existing research and integration of knowledge

Objective 3: Sharing and developing best practice for evaluating organic research

- WP 5: Sharing and developing best practice for evaluating organic research

Objective 4: Identification and coordination of future research

- WP 6: Identification and prioritising of future research topics
- WP 7: Coordination and implementation of future research topics with joint funding

The project also held three workshops, the first two were for stakeholder consultations:

- ▶ a public workshop on how to increase transnational cooperation in organic food and farming research at the Joint European Organic Congress in Odense, Denmark in May 2006;
- ▶ an open workshop on the third QLIF Congress in Hohenheim, Germany, in March 2007, where the open access web-based archive, Organic Eprints (<http://www.orgprints.org>) was presented and discussed.

The third workshop, the kick-off meeting for the eight transnationally funded CORE Organic pilot projects, was held in Vienna, Austria, in Sep-

tember 2007, and was for an invited audience consisting of the CORE Organic pilot project coordinators, the Core Organic partners, invited staff from the European Commission's Directorate-General for Research and Innovation (Jean Francois Maljean and Wolf Wittke) and the Directorate-General for Agriculture and Rural Development, Organic Unit, represented by Marta Fladl, plus representatives from public funding bodies in Estonia, Spain, Latvia and Slovakia.

Main findings and outcomes (results) or expected results

Objective 1, Increased exchange of information and establishment of a common open web-based archive and Objective 2, Coordination of existing research and integration of knowledge, were reached by means of the following tools.

- ▶ The establishment of an internet and intranet site for coordination and communication externally and internally (<http://www.coreorganic.org>).
- ▶ The publication of eight electronic Newsletters.
- ▶ The building and running of a common Internet portal on research in organic food and farming (<http://www.coreportal.org>) with information on history, organisation, research programmes, financing, research facilities, initiation of research, selection and evaluation, utilisation of research and scientific education plus research schools in the 11 partner countries lining to further information.
- ▶ Extending the open access electronic archive for research publications related to organic production (<http://www.orgprints.org>), which was established by DARCOF in 2002, to include research publications etc. from all the partner countries. The archive is maintained by the three partners — BLE (DE), DARCOF (DK) and FiBL (CH) — and each partner has a nominated national editor responsible for depositing publications and other relevant information from their country. In 2007, Organic Eprints contained more than 200 descriptions of research organisations, programmes and facilities, 500 descriptions of research projects and more than 10 000 research papers: there were 200 000–300 000 visits per month (autumn 2007).
- ▶ A workshop was held in May 2006 at the Joint Organic Congress in Odense, Denmark, to identify and discuss the most important research topics of common interest for the joint transnational CORE Organic call.

Objective 3 was reached by means of a questionnaire investigation involving various stakeholders in the 11 partner countries: this revealed that the evaluation criteria used for organic research are quite similar in the partner countries and close to those used for the evaluation of general research programmes. In eight countries, the research proposal

evaluation is carried out anonymously (i.e. the evaluation experts are not known to the applicants), while the evaluation experts are known to the applicants in three countries (Italy, Sweden and Switzerland). Reporting and monitoring of projects is very similar in most countries and annual reporting and a final report are requested, but Finland and Norway request semi-annual reporting.

Based on these findings, a concept for the evaluation of the proposals for the first CORE Organic call was developed and a list of excellent European experts to peer review transnational CORE Organic pilot project proposals was drawn up.

Objective 4 was reached by identifying research topics of common high priority, developing plans for future coordination and agreeing on a range of procedures for transnational funding. Of seven high priority research topics, the following three topics were selected for a joint transnational pilot call.

- ▶ Animal disease and parasite management, including preventive and health improvement therapies to reduce reliance on antibiotics
- ▶ Quality of organic food — health and safety
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In 2007, the CORE Organic partners launched a pilot call for joint transnational research projects within these three common research topics. Of 37 project proposals, eight were selected for transnational funding by means of a virtual common pot approach (i.e. each national funding body funds researchers from its own country), and all partner countries participated in the transnational funding. The overall funding budget for the eight three-year projects was about EUR 8.3 million — close to the aim of EUR 3 million per year. The following were the eight CORE pilot projects for the period 2007–10.

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(also see <http://www.coreorganic.org/research/index.html>)

After the selection procedure, an evaluation of the evaluation criteria and the procedure used for the CORE Organic pilot call was made by means of a questionnaire investigation involving, among others, the applicants and evaluation experts, and through a literature review. This study showed that the 19 evaluation criteria clustered within six main categories fulfilled the expectations of most target groups, but interdisciplinarity and innovative aspects should be addressed in a more appropriate way. Moreover, the gap between the initial scientific evaluation and the final selection of the CORE pilot projects should be reduced; the evaluation should be made more transparent and the way national priorities are integrated in the decision-making process should also be considered in more detail.

The project was represented and had presentations at various Commission meetings and conferences:

- ▶ at an exhibition which took place in parallel with the second 'Communicating European Research' conference, arranged by the Directorate-General for Research and Innovation in November 2005, in Brussels, Belgium;
- ▶ at the workshop 'The life cycle of ERA-NET projects: from proposal submission to project-contract implementation', arranged by the Directorate-General for Research and Innovation in May 2006, in Brussels, Belgium;
- ▶ at a SCAR committee workshop held by the Directorate-General for Agriculture and Rural Development in June 2006, in Brussels, Belgium;
- ▶ at a workshop for ERA-Nets and technology platforms in the field of biotechnologies, agriculture, fisheries and food research arranged by the Directorate-General for Research and Innovation February 2007, in Brussels, Belgium.

Potential applications

At a kick-off meeting for the eight CORE Organic projects in September 2007, the partners decided to continue the cooperation in a CORE Organic Funding Body Network after the end of the project in order to monitor and evaluate the eight research pilot projects and to broaden and deepen the cooperation between organic research funding bodies in the 11 partner countries in the future.

This cooperation resulted in a broadening of the cooperation and the launch of a new call in the 'follow-up' coordination project under FP7: CORE Organic II (2010–13), which involves 21 European partner countries' (<http://www.coreorganic2.org>). The CORE Organic Funding Body Network is open to all countries which have a funding programme for organic research or are interested in the implementation of such a programme, so the network may later also involve countries outside Europe,

which may lead to even more efficient use of the limited research funding resources, better transnational cooperation at the funding body level as well as the research level and improved usability of the research results.

The CORE Organic Funding Body Network has also made contact with other ERA-networks to establish further cooperation on calls, evaluation methods, transnational funding models, etc., in order to improve and harmonise such procedures.

Innovation contribution

The project produced an overview of organic farming research in the 11 European CORE Organic partner countries (i.e. the history, organisation, research programmes, financing, research facilities, initiation of research, selection and evaluation, utilisation of research and scientific education and research schools) — presented in the CORE Organic Research Portal (<http://www.coreportal.org>) (possibly no longer active).

An open access web-based archive, Organic Eprints (<http://www.orgprints.org>) was also produced by the project. It contains more than 200 descriptions of research organisations, programmes and facilities, 500 descriptions of organic research projects and more than 10 000 research papers: in 2007, there were 200 000–300 000 visits per month (September 2007). To increase and improve the submission and use of Organic Eprints, national editors in each partner country were appointed.

CORE Organic was one of the first ERA-NETS to launch a transnational call based on a virtual common pot with participation of all partner countries. Furthermore, the project contributed to the harmonisation and improvement of call and evaluation procedures for organic research projects in the 11 partner countries.

The formation of a lasting CORE Organic Funding Body Network for continued collaboration and improvement of future transnational calls and funding procedures plus the widening of the network to other European countries after the end of the CORE Organic project was also an important contribution to innovative international collaboration on funding of research with important aspects as regards future improved quality and usability of organic research and funding efficiency in Europe.

Conclusions

The ERA-NET CORE Organic was successful in bringing 13 partners from 11 countries together to carry out common activities in transnational organic research. CORE Organic successfully launched a transnational pilot call and subsequently selected eight research projects to be funded by a means of a virtual common pot. These projects ran until 2010. The

ERA-NET allowed partners to obtain a map of various aspects of organic research in the partner countries, and to prioritise topics and develop common approaches for the pilot call. The CORE Organic evaluation of the pilot call and the recommendations made throughout the project regarding priorities, best practices and evaluation methods, etc., was important for the continued and improved transnational collaboration between the partners after the end of the project.

After the final selection of project CORE pilot project proposal, a self-evaluation was carried out by the members at the management board (MB). It revealed that MB members had perceived the coordination and implementation of the call as generally good. However, they also saw room for improvement concerning details of the evaluation procedures, the transparency of the funding selection process and asked for more flexibility concerning the applied funding model.

The following suggestions on how to improve the call procedure were given for the different call phases.

PREPARATORY PHASE

The use of a two-step application procedure.

- ▶ A formalised procedure to define call topics including common issues at European level and complex interdisciplinary problems, additional to the pooling of national programmes
- ▶ Full agreement on call topics (i.e. no particular national restrictions) among funding partners
- ▶ Assignment of funds to each individual call topic and/or allow for restricted calls with a smaller number of funding institutions
- ▶ Aim towards a more even funding between participating partners in the call
- ▶ More detailed information in call documents (e.g. national funding rules)
- ▶ The use of milestones and deliverables in application documents
- ▶ Larger application document, with more space for project description (e.g. four to six pages only for the first step application draft and a larger more detailed, final project description in the second step)
- ▶ Involvement of all the CORE Organic partners already early in the preparatory phase
- ▶ The early setup of a FAQ forum

APPLICATION PHASE

- ▶ The setup of a central contact point (e.g. call secretariat) or at least improved communication and information exchange between individual NCCPs on FAQ.
- ▶ The use of a fully adapted web-based application system.

EVALUATION PHASE

- ▶ If funding is assigned to each specific topic of the call, it is suggested that evaluation by experts be restricted to the applications in their field of expertise.

SELECTION PHASE

- ▶ A formalised procedure including discussion on selection of criteria and written selection feedback to applicants.

Comparison of the CORE Organic call with a survey on joint activities in individual ERA-NETs showed that problems encountered during the different call phases were comparable to those in other ERA-NETs. This was due to the evident learning-by-doing aspects in ERA-NETs, as participants of ERA-NET projects usually have no previous experience with the scheme.

Strategic issues and future cooperation

Strategic aims for the future were established by the CORE Organic Funding Body Network. The following subjects should be considered:

- ▶ increasing the research community in organic farming;
- ▶ exchange of information and experiences on funding mechanisms;
- ▶ coordination of knowledge production;
- ▶ strategic topic formulation.

Subjects that need further cooperation and research

- ▶ Topic formulation: openly formulated v restricted calls
- ▶ Number of participating organisations: all v few funding institutions participating in a call
- ▶ Funding model: virtual pot v true common pot

Future aims for the CORE Organic funding body network collaboration

Based on the different evaluations and taking into account experiences from other ERA-NETs four strategic aims were identified. They are now presented in no particular order of priority.

INCREASE OF RESEARCH COMMUNITY IN ORGANIC FARMING

Several partners expressed a wish to increase the organic farming research community. One aim with the CORE Organic joint call was to create a critical mass of researchers (from different partner countries) of the somewhat scattered and small organic food and farming research community. In this way, funding organisations can expect more efficient knowledge production/generation which gives more value for spent money/funding.

An additional aim mentioned by some partners was to not only increase the organic farming research community by involving national researchers in organic farming, but also to complement or integrate it with researchers from adjacent research areas such as health, food quality, environment or climate. The goal of such an enrichment of complementary scientific competence would be an improved scientific quality of research but it could also improve the management in research of more complex interdisciplinary problems of organic food and farming systems in relation to sustainable development issues. Special activities in order to create forums for researchers from different fields to meet and interact would be needed to obtain such future integrated research applications.

EXCHANGE OF INFORMATION AND EXPERIENCES ON FUNDING MECHANISMS

The prerequisite of ERA-NET projects, that partners are restricted to programme owners and managers, was appreciated by several CORE Organic partners. In the formed network, funding institutions were able to learn from different funding mechanisms and procedures in partner countries and exchange experiences.

Although most partners judged that virtual common pot funding was the most realistic in a short and medium-term perspective, they were also positive concerning a development towards true common pot funding or rather interpreted as mixed funding. One approach in this direction is restricted calls with only few partners.

COORDINATION OF KNOWLEDGE PRODUCTION

Coordination of knowledge production and avoidance of duplication was identified as an important outcome by the CORE Organic Governing

Board (GB). The thorough work in CORE Organic on screening research mechanisms, funding, programmes and ongoing research on organic food and farming systems in the partner countries was an important source of information to minimise duplication of knowledge production. To maintain the possibility to coordinate future knowledge production, the database Organic Eprints needs to be maintained and actively updated by CORE Organic partners. A maintained network with at least annual meetings will probably also be necessary in order to coordinate future national activities in food and organic farming research.

STRATEGIC TOPIC FORMULATION — NATIONAL AND COMMON TOPICS

Some problems of the call application and selection phases were related to the earlier topic formulation. Partners prioritised the involvement of all partners in the CORE Organic pilot call and all national research needs of partners were pooled and negotiated. A somewhat differing commitment between participating partners of the CORE Organic joint call could, however, be noted. Partners also chose to devote substantially different amounts of funding to the joint call and selected projects.

The problem of topic formulation has also been reported in other ERA-NETs as 37 % of partners who chose not to participate in ERA-Net calls referred to difficulties in reaching a common agreement on a common call theme. In future calls, CORE Organic partners should not be able to apply national restrictions to the topics. Apart from this, actions need to be taken to attract enough funding institutions. The joint calls should offer a solution to problems of generating research in prioritised areas at the national level.

Procedures for the formulation of additional strategic research need to be further developed and this could possibly create a more even commitment for future joint calls. One aim of the CORE Organic ERA-NET was to increase the interdisciplinarity of research. To obtain interdisciplinary research applications and consortia, a more complex problem formulation is needed in the topics from the beginning. Common research needs on a European level must be developed and the involvement of national and European stakeholders in the formulation of such research needs is important. The challenge is to formulate topics that are interesting enough for a sufficient number of funding institutions to allocate funds.

Conflicts

OPENLY FORMULATED OR RESTRICTED CALLS

There were different views between partners on topic formulation. Some partners preferred restricted, narrowly formulated calls by funding institutions with or without the involvement of food chain stakehold-

ers (i.e. top-down formulated topics). Other partners argued for more openly formulated calls to let researchers formulate the most relevant research questions (i.e. bottom-up formulated topics). This probably reflects a true difference in research traditions between the CORE Organic partners. One possibility to handle this difference is to open several joint calls with fewer participating funding bodies.

ALL OR FEW FUNDING INSTITUTIONS PARTICIPATING IN CALLS

Partners judged it important that all CORE Organic partners took part in the CORE Organic pilot call, and enough partners were prepared to moderate their demands on chosen topics to obtain this. For future calls, funding institutions can be expected to be more demanding on the choice of topic. With a smaller number of funding institutions, fewer funds will be assigned to the chosen topics. On the other hand, with fewer partners, agreement on the funding model and more even funding or other means (i.e. mixed models) to facilitate the application selection phase will be easier.

VIRTUAL COMMON POT VERSUS TRUE COMMON POT

The drawbacks of virtual common pot funding were evident in the CORE Organic pilot call. Due to virtual common pot effects and the selection of topics, there was no optimum relation between the outcome of the scientific evaluation and the final selection of projects to be funded; there is, therefore, a need to investigate the pro and cons plus national legal restrictions on the use of a true common pot funding model. As long as topic selection is only based on pooling of national programmes it could, however, be expected that true common pot funding could imply some negative effects on contextualisation and specific national relevance of individual research projects.

Lessons learned — recommendations bridging to future cooperation

TIMING OF CALL PROCEDURES

The CORE Organic ERA-NET budget was less than first planned for and there was a shortage of time during the whole call process, especially during the evaluation and selection phases, but the important preparatory phase with topic selection also suffered from time pressure. Other ERA-NET experiences show that the implementation of the call was considered much more complex than national calls by 41 % of ERA-NETs and the preparation of the call was regarded by some as the most difficult and time-consuming element of organising a joint call. A time frame for future calls has been suggested to meet the need for sufficient time for planning of the call and to make space for continuous follow-up, analysis and adjustments (Table 1).

Table 1: Suggested time frame for future calls

CALL PHASE	TIME PERIOD
Preparatory phase	8 months
Application phase	3 months
Evaluation phase	4 months
Selection phase	1 month
Contract and funding phase	4 months
Total call procedure	20 months

The setting-up of a call secretariat (avoiding increased bureaucracy) for future calls would also simplify planning of the call phases.

PROCEDURE FOR TOPIC FORMULATION

A crucial aspect for future topic formulation is to reach a shared view among partners on strategic research issues. This could be obtained by applying methods and tools used for rational decision-making, and by opening up common research needs both within and outside existing national research programmes.

TWO-STEP PROCEDURE

Experiences from other ERA-NETs are that a two-step procedure was used for larger calls with project durations of several years. The reason for choosing a one-step procedure in the CORE organic pilot call was entirely due to time constraints.

COMMUNICATION AND INFORMATION TO APPLICANTS

The applicants' evaluation of the pilot call showed the importance of fast and clear information throughout the call process. Communication channels and information including the early set-up of a home page, FAQ and information on the call concerning national restrictions and assigned funding to high-quality science and selection feedback need further planning and coordination in future calls.

PROCEDURE FOR FINAL SELECTION

The final selection procedure needs to be clearly defined in advance and fully understood by all partners as well as all applicants when the call is launched. The use of mixed models for funding could tighten the relation between scientific evaluation and final selection.