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CORE Organic Cofund

Project title

**Coordination of European Transnational Research
in Organic Food and Farming Systems**

Task 4.4, Deliverable 4.1

Impact Assessment

**Assessing the potential impact of 11 CORE Organic Plus research projects using a
quantitative and qualitative approach**

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Executive Summary

Active engagement and participation of stakeholders in research and successful dissemination are seen as key pathways to achieve impact and close the gap between science and end users. Impact assessments help projects to meet their objectives and relevant impacts better. This deliverable assesses the impact of the CORE Organic Plus projects (2015-2018). It provides additional information and recommendations to the CORE Organic funding bodies to consider in future calls, selection, monitoring and evaluation procedures.

Impact is challenging to measure; therefore, prerequisites and indicators related to a potential impact are utilised in the methodology. A five-stage impact model is used: 1) call process, 2) inputs, 3) outputs, 4) outcomes, and 5) impacts. This report presents findings on stage three, four and five of the assessment. A quantitative analysis, based on the methodology by Pederson et al. (2011), was used to analyse stage three (output). Stages four and five (outcomes and impacts) of the impact assessment use three methods: First, a selection of projects participants and end users from France and Finland were either interviewed by phone or asked to fill out a questionnaire. The responses were coded to identify the meanings. Second, inspired by BiodivERsa ERA-NET indicators, stakeholder engagement was explored. Lastly, the ERA LEARN survey obtains input from project partners about the overall output and impact of the CORE Organic programme. The same survey was conducted in 2017 and in 2019, to allow for comparison.

The quantitative assessment looks at three categories of outputs: scientific effect, embedment of knowledge, and impact on industry and society. The analysis showed considerable differences between projects, but no correlation was found between the size of the budget and the number of points achieved. The same was true for the person months used and the number of points achieved. It also showed that the CORE Organic Plus projects achieved better results in terms of impact on industry and society than CORE Organic II projects. This may be due to the increased focus on this category by the CORE Organic secretariat and monitoring persons. Finally, the results showed that building on projects from previous calls can be very effective.

The qualitative assessment showed that the projects produced some very valuable information for end users, but more practical demonstrations are desired. Results are not always easy to adapt in practice because they can be very location-specific. Moreover, language was identified as an issue in some cases, suggesting that more dissemination materials can be translated into project languages. The trans-national nature of the project was identified as very important for the success of the projects.

The stakeholder assessment addressed the type of stakeholders involved, the differences in the level of engagement of stakeholders in the research and the stage of engagement of stakeholders from the industry and society and the scientific community in the projects life cycle. Most projects focused primarily on local producers and other local businesses, but not as much on policy makers and government. Furthermore, most projects were very active in informing stakeholders but less active in actively engaging stakeholders. However, a few projects involved stakeholders as partners in the consortium. Although considerable differences exist in stakeholder engagement between projects, there was no trade-off identified between scientific excellence and stakeholder engagement, suggesting both can be achieved by

a single project. Finally, it showed that projects were more active in engaging stakeholders in the beginning and middle of the project. At the end, focus often shifted more to scientific output.

Finally, the ERA LEARN survey highlighted the importance of the international nature of the projects. Respondents felt they were able to deal with several challenges better at the international level than the national level. It also emphasized the need for adequate policy development and support at the national level. Importantly, CORE Organic is seen as more solutions-oriented and as having fewer administrative burdens than other EU Framework programmes.

Overall, the projects can be seen as having a positive impact on various target groups. However, simply increasing the number of outputs does not necessarily improve the impact. Instead, end users and other stakeholders need to be actively engaged in the process. The timing of project outputs is also very important. If results are only communicated at the end of the project, there is less opportunity to exploit the results. Furthermore, there is no evidence for a trade-off between scientific excellence and society/policy-relevant outputs. One single project can contribute to both objectives.

It is clear that participation in transnational research projects adds value to national research communities. By participating in CORE Organic, new opportunities were created and problems were investigated that would not have been tackled within national research projects. This was also seen in the impact assessment of the CORE Organic II programme. European research programs promote knowledge exchange between countries and transfers valuable knowledge about organic farming from more experienced areas to less experienced areas. International cooperation also motivates researchers in their work. They also recognized challenges in international project in terms of data collection and harmonization and coordination tasks. These challenges cannot be avoided but can be addressed by careful planning and efficient coordination of the projects.

In order to further improve impact, future projects and programmes can consider ensuring sufficient dissemination budget or appointing someone responsible for dissemination in each country. Co-designing projects together with stakeholders, disseminating results as soon as possible and evenly over the course of the project period and putting a greater focus on practice demonstrations, which show the potential of results in different practical contexts, could help improve impact. Furthermore, the development of a realistic project dissemination plan, at both the project and the national level, as part of the research proposals or in the very early stage of the project, can help researchers identify key stakeholders, which can be informed and involved early in the project, and focus the project.

1. Background and Aims

Successful dissemination of research results is crucial to achieve relevant impacts. The funding partners of CORE Organic and the European Commission need to know whether the spending of national funds for transnational research met the **objectives of the CORE Organic ERA-NET, which were: 1) contribute to the building of research capacity for organic food and farming in Europe and 2) have European added value and transnational impact, and tackle transnational problems in European organic agriculture.** In order to improve future calls, selection and monitoring procedures, they need to know how funded projects performed. What kind of outputs did the funded projects generate? What effects did the projects produce? How were these perceived by end users? Are projects with bigger or smaller budgets more cost effective? What about person months? These questions should be answered by this impact analysis.

However, impacts are one of the most challenging aspects of a project to measure and some inherent hurdles need to be considered. First, there is a time lag between when the research is conducted and the outcomes and impact of the research. Another hurdle is the so-called 'attribution-gap'. Most research takes place within a community of researchers across institutions working on similar topics. Projects seldom achieve a clearly defined 'product', 'technique' or 'process' that is implemented in practice within the budgeted timeframe of the project. Further research and/or commercialization efforts are often needed before the results are implementable and a real impact is achieved. It is therefore difficult to determine the extent to which a particular research project contributed to a particular impact. **As impact is difficult to measure, we have looked for prerequisites and indicators, which are related to a potential impact** (Müller and Wolf, 2017).

Pedersen et al. (2011) distinguish three main categories related to impact of research projects: scientific effect, embedment of knowledge and impact on industries and society. Exchanges between researchers and stakeholders where the acquired knowledge is continually communicated and discussed are important prerequisites to create impact. Thus, successful dissemination to target groups outside of academia is key. True participation and involvement of stakeholders along the research process creates trust, ownership of solutions and facilitates sustainable impact of knowledge (Wolf et al., 2015; Andreasen et al., 2015).

Willener et al. (2017) developed an impact model to assess the ERA-NET ICT-AGRI. They structured the model according to the following **five main stages: 1) call process, 2) inputs, 3) outputs, 4) outcomes, and 5) impacts.** In CORE Organic, stage 1) and parts of 2) were previously evaluated in a separate deliverable (Capolino, 2015).

The aim of this deliverable is to assess the impact of the CORE organic Plus projects (2015-2018) and provide additional information to the CORE Organic funding bodies to be considered in future calls, as well as for future selection and evaluation procedures. Following Willener et al.'s (2017) model, we first assess the outputs (stage 3) of all 11 funded CORE Organic Plus projects using a **quantitative analysis**. The aim is to provide a systematic overview of outputs, which are differentiated by category (scientific effect, embedment of knowledge and impact on industry and society). The assessment provides insights into the effectiveness of different budgets and person months as well as the focus on different output categories.

By using the same approach used in the CORE Organic II impact assessment, we are also able to compare results to determine whether programme changes successfully impacted outputs.

With the **qualitative case studies** in France and Finland we assess outcomes and impacts (stage 4 and 5). The qualitative impact assessment aims to further evaluate to what extent CORE Organic Plus projects created benefits to 1) end-users in the organic sector as well as to 2) the organic research communities. As such, the results complement or further qualify the results in the quantitative impact assessment. In addition, the qualitative assessment aims to provide recommendations to improve positive impact as well as the effectiveness/efficiency of best practices and tools.

Further, we evaluate whether a trade-off exists between the scientific excellence of the research projects and the excellence of society/policy relevant outputs. Active involvement and participation of stakeholders are seen as crucial to create impact in research. Good cooperation between scientist and stakeholder is seen as a key in the transfer and uptake of knowledge and tools resulting from research. It is seen as a challenge for researchers to reach high scientific impact and to be able to involve stakeholders fruitfully in research. Inspired by the **indicators** developed by the **BiodivERSa ERA-NET** (Lemaitre and LeRoux, 2015), the **level of engagement of stakeholders** in CORE Organic Plus project is explored.

Finally, we also use the **ERA LEARN survey** to address outcomes and impacts (stage 4 and 5). The purpose of the survey was to obtain input from project partners about the overall output and impact of the CORE Organic programme and compare these results to a pilot survey, which was conducted in 2017 using the same questions. This not only complements the results from the quantitative and qualitative assessment, but also provides insights to improve future programmes in view of Horizon Europe.

The [11 CORE Organic Plus projects](#) (2015-2018) that are included in the impact assessment are:

- **2-Org-Cows:** Improving health in native dual-purpose cattle
- **EcoBerries:** Innovative and eco-sustainable processing and packaging for safe and high quality organic berry products with enhanced nutritional value
- **EcoOrchard:** Innovative design and management to boost functional biodiversity of organic orchards
- **FaVOR-DeNonDe:** Drying, Juices and Jams of Organic Fruit and Vegetables: what happens to Desired and Non-Desired compounds?
- **FertilCrop:** Managing fertility building in organic cropping systems
- **OrganicDairyHealth:** Improving animal health and welfare in organic cattle milk production through breeding and management
- **PRODIVA:** Diversify your cropping system for better weed management
- **PrOPara:** Evaluation of practices for parasite control in organic ruminant systems
- **ReSolVe:** Restoring optimal Soil functionality in degraded areas within organic Vineyards
- **SoilVeg:** Improving soil conservation and resource use in organic cropping systems for vegetable production through introduction and management of Agro-ecological Service Crops
- **SusOrganic:** Increasing sustainability and quality of organic produce

The impact assessment team is also working together with other initiatives in CORE Organic to ensure synergies with other efforts to assess the impact and outcomes of the programme. As such, these results may be extrapolated upon in further reports.

2. Methodology

2.1 Quantitative analysis

For the previous assessment, Alföldi et al. (2018) examined several quantitative assessments and the methodology by Pedersen et al. (2011) was selected as appropriate to assess the output of the CORE Organic II projects. To facilitate comparison across CORE Organic programmes, the same methodology was used to conduct the quantitative assessment of the 11 CORE Organic Plus projects. According to this methodology, the **different types of research outputs (e.g., peer reviewed papers, conference contributions, articles in farmers magazines, field demonstrations) are used as proxy indicators for a potential impact** and allocated to a specific type of output to which different scores are assigned. We used the types of output and the score points proposed by Pedersen et al. (2011) (Annex 4 shows the scoring system).¹ All outputs are grouped into the following three categories:

1. **Scientific effect:** outputs and outcomes from the research project that are directly related to scientific dissemination, including scientific peer reviewed journals, conference papers, etc.
2. **Embedment of knowledge:** outcomes from the research project that are related to the education of current and future researchers and professionals (e.g., supervision of Ph.D. and master students)
3. **Impact on industry and society:** outcomes such as popular articles, articles in farmer magazines, homepages, newsletters, press interviews, videos, stakeholder workshops etc.

All CORE Organic research consortia had to upload the outputs of their projects to open access archive Organic Eprints (www.orgprints.org). They also had to include a list of their dissemination activities in the final report of their projects. Most projects ended in the first half of 2018 and many peer-reviewed articles and other products had not yet been published at that time. Therefore, in May and June 2019, the project coordinators were asked to add any dissemination activities that were missing from Organic Eprints and the final project reports. We are aware that beyond this time frame additional outputs might still be published or delivered.

While the methodology is helpful in many ways, it is also important to take note of some of its limitations. Industry and society is a relatively broad category. Using this methodology and the information available from the different projects, it was not possible to distinguish further between actors within this category. Furthermore, **caution should be taken when directly comparing the results of the different projects, especially concerning the cost effectiveness. There are many factors that can affect the overall output for different projects.** For future analyses, it may also be useful to add a category about social media as this is becoming more prominent in CORE Organic projects. Furthermore, it may be valuable to re-assess the points assigned to each category to check if the distribution still reflects the importance of the various

¹ As YouTube videos produced within a project were not considered by Pedersen et al. 2011, we allocated them to the category “publication in a subject specific Journal” with 50 score points

outputs, given the changes in communication tools and strategies since 2011 when the methodology was developed.

2.2 Qualitative analysis

The French and Finnish project partners of EcoOrchard (France), EcoBerries (Finland), FertilCrop (France), 2-Org-Cows (France), PRODIVA (Finland), PrOPara (France), ReSolVe (France), and SoilVeg (France) were informed that they would be asked to contribute to the impact assessment work. In addition, the project partners were asked to provide the names (and contact details) of Finnish and French end users of the results of the project.

The project partners and end-users were either interviewed by phone or asked to reply in writing to a questionnaire. The same questionnaire was used for both methods. The questionnaire focused on:

- 1) successes of the projects in **dissemination of research results** to end-users,
- 2) key **factors leading to successful dissemination** of the results from the perspectives of the researchers and end-users,
- 3) **utilisation of the new know-how in practice**, and
- 4) **value creation** of transnational research projects on national research communities and on the national organic sector.

Each theme included more detailed questions which were created through several rounds of discussion and revision by the research team in order to make questions plain and unequivocal. See Annex 1 for a full list of questions.

The identified end users were either interviewed or asked to fill out the questionnaire. In order to facilitate this process, the questionnaire was translated into French and Finnish. For this assessment, “end user” includes farmers, advisors and food processors, as well as anyone from the Agriculture and Knowledge Information Systems (AKIS) who was impacted by or involved in the project.

Seven project partners and eight end-users (four farmers and four advisors) responded to the interview request. Ten interviews were done in France and five in Finland. Interviews were conducted in French or Finnish and afterwards translated to English by native French and Finnish speaking evaluators.

Once the responses were collected from the partners and end-users, a first analysis of the responses was done. Based on this, complementary phone or face-to-face interviews were conducted in order to dig further into selected aspects relating to outputs and outcomes. These results were then integrated and assessed in order to improve the first assessment. **A content analysis was conducted to organise data and elicit meaning of the collected data (Bengtsson 2016).** In order to identify similarities and differences in partners’ and end-user’s opinions, the meaning units were first formed by reading the written data carefully on the basis of the questions used when the data were collected. **Meaning units were then labelled with a colour code, and similarly coded meanings created coded categories, which were generated to represent the homogenous meanings of the data.**

2.3 Stakeholder engagement assessment

The BiodivERsA ERA-NET evaluated the **active involvement and participation of stakeholders in research projects** by taking into account: 1) the **type** of stakeholders involved, 2) the differences in the **level** of engagement of stakeholders in the research and 3) the **stage** of engagement of stakeholders in the projects life cycle (Lemaitre F. and Le Roux X., 2015). For the assessment, ‘stakeholders’ are seen as a broad spectrum of representatives from the industry and society that can be involved in a project and/or contribute to or have an interest in its success.

Many different **types** of stakeholders can be engaged, such as national and local policy makers, international policy makers or advisers, NGOs, natural resource managers, users, other businesses, local communities, and the public. Depending on the research topic, different stakeholders should be targeted as the main end-users.

Projects also differ in the **level that stakeholders are engaged** in the research. Different levels of engagement correspond to different levels of investment for researchers and stakeholders and often depend on the ultimate aims of engagement activities. The different categories of engagements defined in BiodivERsA are **1) inform, 2) consult 3) involve and 4) collaborate**, representing increasing levels of engagement. While ‘inform’ is the most basic level of engagement and corresponds to one-direction communication to stakeholders without specific activities or involvement in the actual research, ‘consult’, ‘involve’ and ‘collaborate’ means that stakeholders are involved to some extent in research activities and/or project decision-making. The different categories of engagement are scored according to the level of engagement: Inform=1, Consult=4, Involve=6, Collaborate=8. A stakeholder engagement index per project was calculated as the sum of scores for each stakeholder group and activity. This detailed information was not available for the CORE Organic projects. Therefore, only a general index for all stakeholder groups was calculated. More information about the applied methodology for the 11 CORE Organic Plus projects is provided in Annex 2.

Another indicator of active stakeholder involvement is the **stage at which stakeholders are engaged in the research projects**. In the BiodivERsA project, a difference is made between stakeholders engaged before, during or after the project’s life: *“Stakeholders involved before the start of research project often either helped in framing the research questions, or were consulted as part of preliminary work when building the project. Stakeholders engaged after the research projects most often worked with researchers on preparing new projects, promoting outputs beyond the projects’ lives, and even implementing training and monitoring schemes. Activities involving stakeholders during the life span of funded projects were much more diverse”*. For the CORE Organic Plus projects, only information about **engagement of the stakeholders during the project period and shortly after the project** is available and differences in stakeholder engagement between the beginning, the middle and the end of the project is explored.

The assessment of the CORE Organic Plus projects was **based on information gathered in the quantitative impact analyses and extra information provided in the final project reports** about stakeholder involvement.

2.4 ERA LEARN Survey

The survey was carried out in conjunction with ERA-LEARN to assess the impacts of 11 funded projects. The **online questionnaire** was launched on October 7, 2019. The questionnaire was composed of 12 closed questions and one open question (see Annex 3) and was designed to be applicable to all types of project beneficiaries. It includes questions on the following aspects:

- Motivation to participate in the project;
- Comparison with a similar project involving only national partners;
- Comparison with their experience in EU Framework programmes;
- Exploitable outcomes for their organisation;
- Actions taken to enable exploitation of the research results;
- Expected impacts on their organisation from exploitation;
- Level of impacts compared with original expectations;
- Key factors that may have affected the success of the project;
- Anticipated wider impacts beyond their organization.

All participants in the CORE Organic Plus project consortiums were invited to participate. In total, 128 people were asked to participate, and a total of 50 responses were collected, corresponding to a response rate of 36%. All responses were treated anonymously and the analysis was carried out at an aggregated level.

3. Quantitative analysis of potential impact

3.1 Overview of the results of all projects

The results of the quantitative evaluation of the 11 CORE Organic Plus projects and the average of all projects are summarized in Figure 1. The detailed results are shown in Annex 4. Four projects achieved a total score (i.e. across all three categories according to the Pedersen et al. 2011 methodology) that was above average: FertilCrop, SusOrganic, EcoOrchard and 2-Org-Cows. The project with the highest total score (FertilCrop, 9510) achieved a score more than five times that of the project with the lowest score (FaVOR-DeNonDe, 1770).

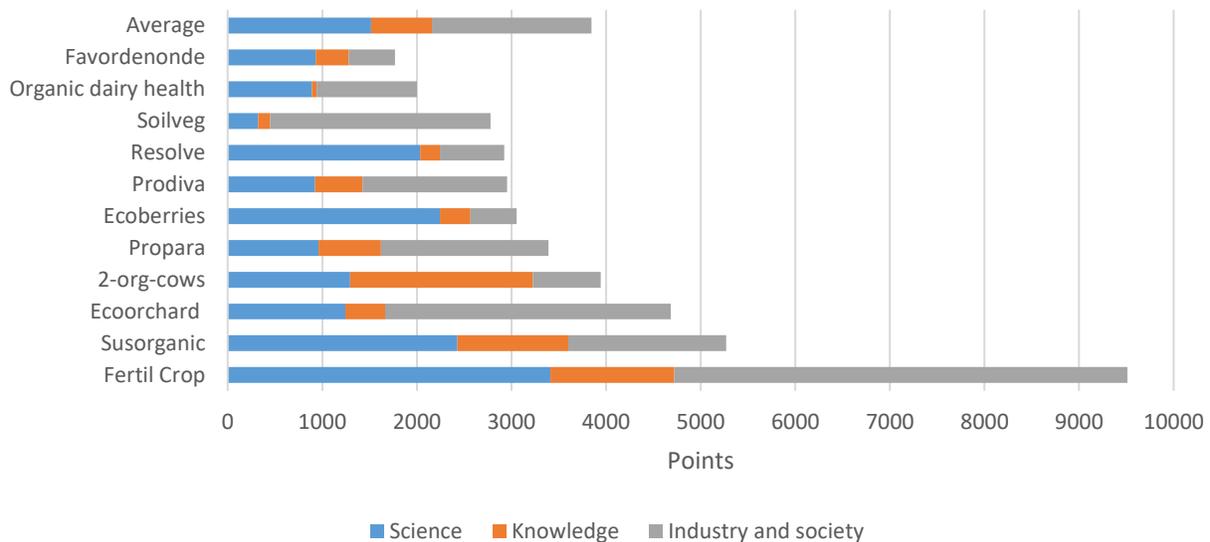


Figure 1: Absolute points of all CORE Organic Plus projects

Looking at the average of all projects, 44 % of outputs address the industry and society, 39 % of the outputs belong to the category “scientific effect”, and 17 % belong to the category “embedding of knowledge” (Figure 2). The output of six projects (OrganicDairyHealth, SoilVeg, PRODIVA, PrOPara, EcoOrchard and FertilCrop) are targeted primarily toward industry and society with a share of more than 50 %. By contrast, scientific outputs account for more than 50 % in only three projects: FaVOR-DeNonDe, ReSolVe and EcoBerries. 2-Org-Cows has the highest share of outputs in the embedding of knowledge category (49%).

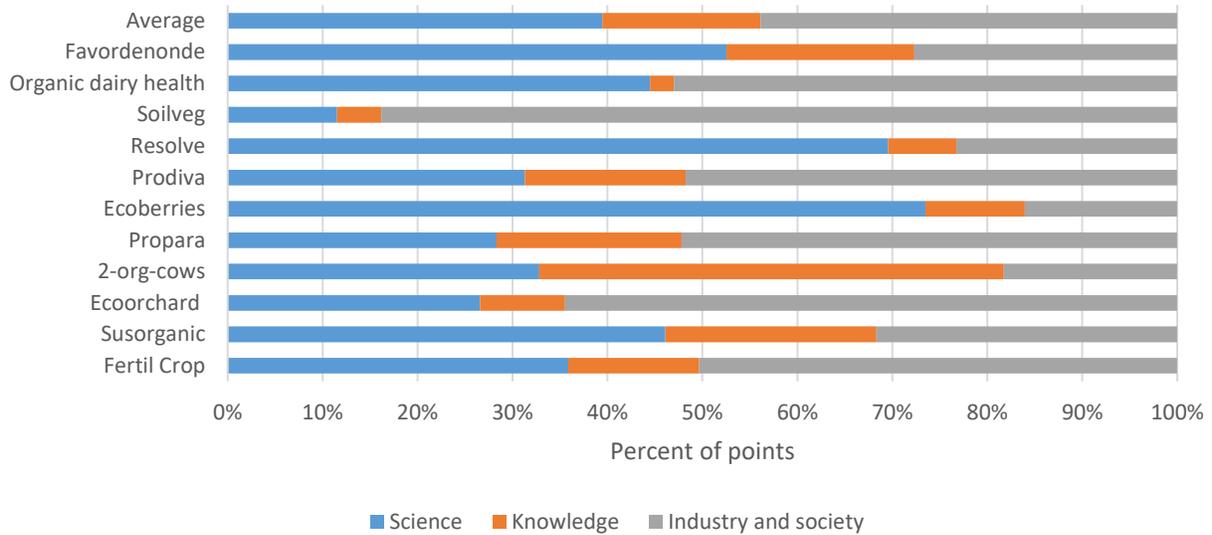


Figure 2: Distribution across different impact categories of 11 CORE Organic Plus projects

The project budget varies between 0.70 Million Euros (FaVOR-DeNonDe) and 1.5 Million Euros (FertilCrop). The cost effectiveness is expressed by the number of points achieved per million Euros (Figure 3). The FertilCrop project shows the best cost effectiveness of all projects. The 11 projects had an average of 3446 points per million euros and five projects scored higher than this: 2-Org-Cows, PRODIVA, ReSolVe, SusOrganic and FertilCrop. The remaining six projects (OrganicDairyHealth, SoilVeg, EcoBerries, PrOPara, FaVOR-DeNonDe and EcoOrchard) scored lower than average in terms of cost effectiveness. **The size of the available budget does not influence the cost effectiveness**, as shown in Figure 4.

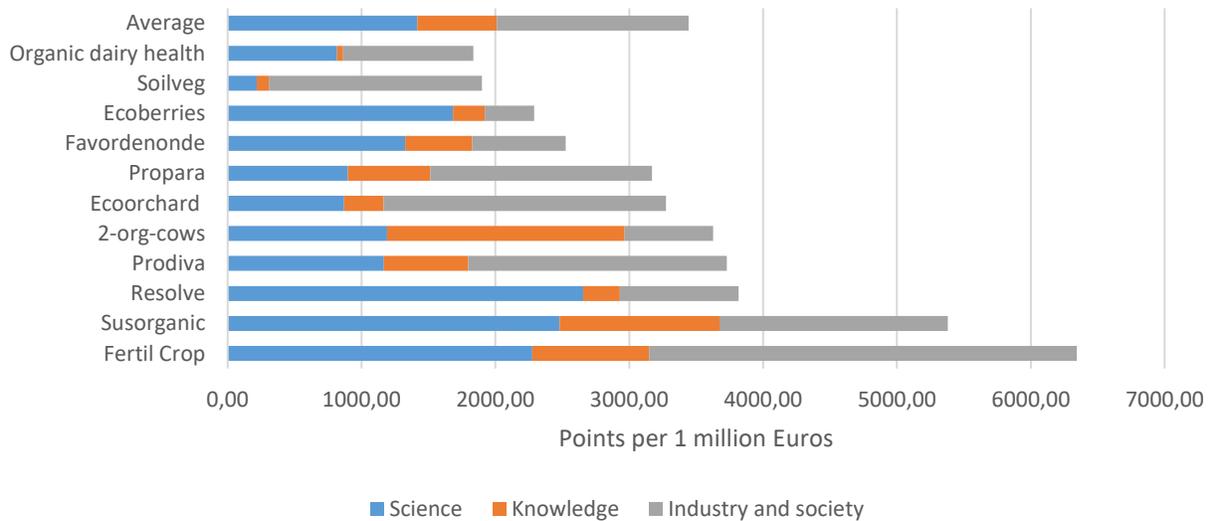


Figure 3: Points per million euros of 11 CORE Organic Plus projects

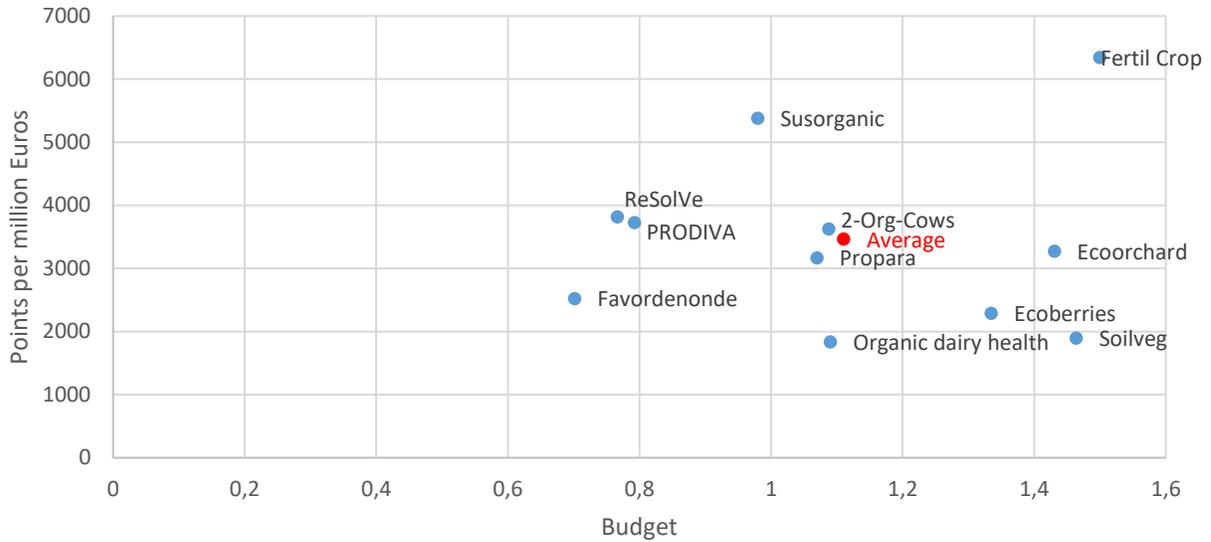


Figure 4: Cost effectiveness – points per million euros relative to the budget of 11 CORE Organic Plus projects

The number of person months varies between 109.1 (OrganicDairyHealth) to 340.1 (FertilCrop). The number of points per person month varies between 9.06 (SoilVeg) and 35.5 (SusOrganic). The average number of points per person month was 19.67. In addition to SusOrganic, two projects scored well above average: 2-Org-Cows and FertilCrop. Four projects scored close to average (PrOPara, EcoOrchard, PRODIVA and OrganicDairyHealth) whereas four projects scored below average (EcoBerries, FaVOR-DeNonDe, ReSolVe and SoilVeg) (Figure 5). Like with cost effectiveness, **there was no noticeable correlation between the amount of person months available and the points per person month** (Figure 6).

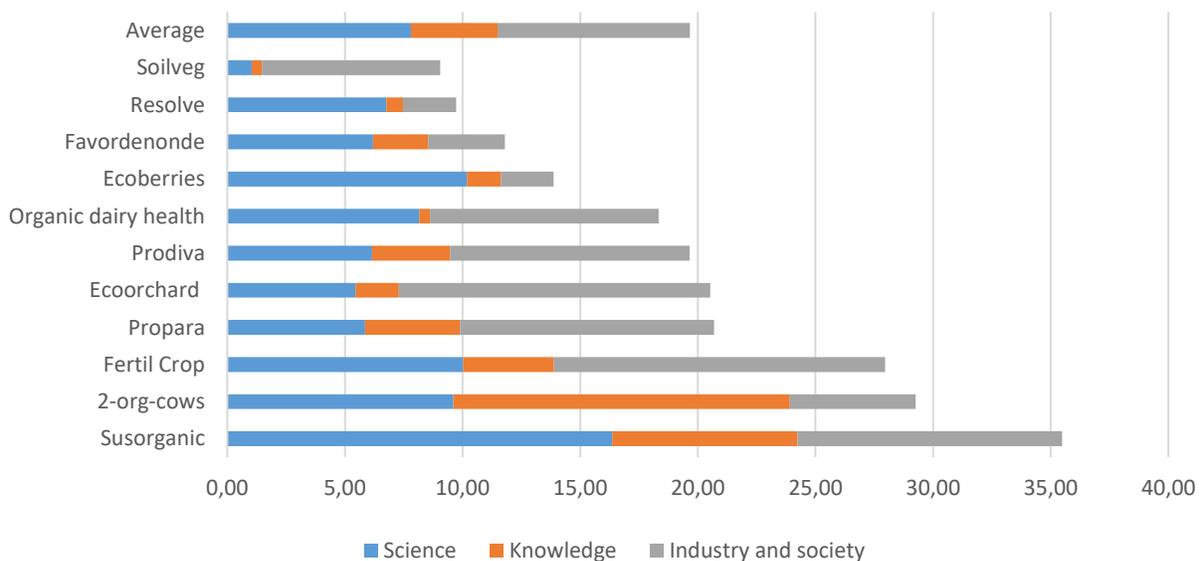


Figure 5: Points per person month of 11 CORE Organic Plus projects

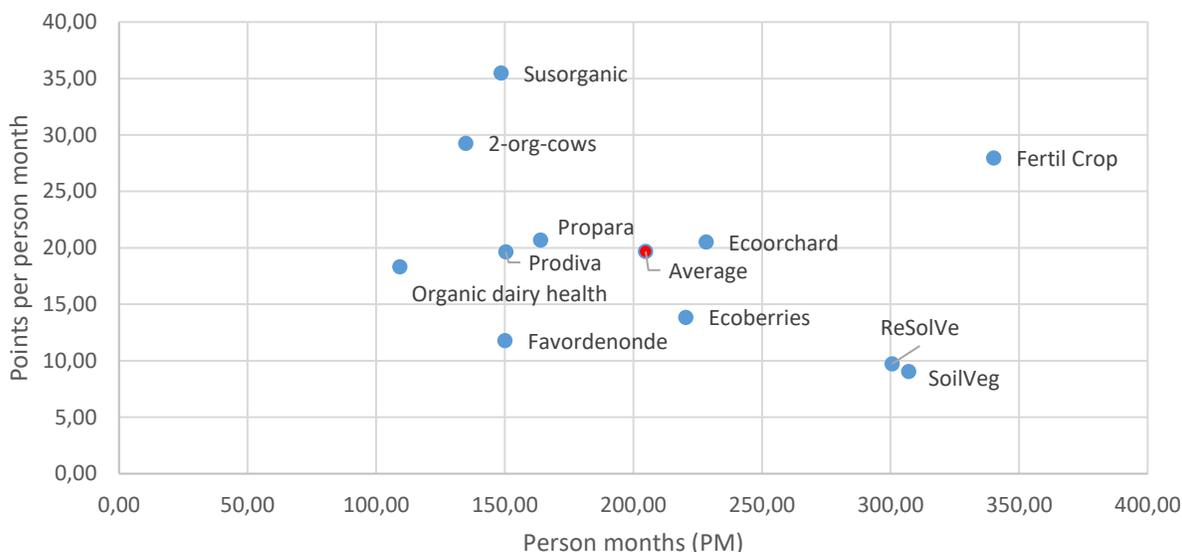


Figure 6: Person month effectiveness – points per person month relative to the budget of 11 CORE Organic Plus projects

3.2 Detailed results by category

In total, six projects focused primarily on industry and society, whereas four focused on scientific effect and one on embedment of knowledge. However, all projects scored points in all three categories.

INDUSTRY AND SOCIETY

In six projects, the majority of the points were achieved in the category industry and society: SoilVeg (84% of all points), EcoOrchard (64%), OrganicDairyHealth (53%), PrOPara (52%), PRODIVA (52%) and FertileCrop (50%). Across all projects, the majority of the points scored in this category come from publications in subject-specific journal/newspaper (5700 points), followed by subject meetings/workshops (4900 points) and procedures for practitioners/farmers (4700). None of the projects produced any procedures for authorities (policy brief). All of the other outputs combined achieved a total of 3250 points.

FOCUS ON SCIENTIFIC IMPACT

Scientific impact has the highest number of points in four projects: EcoBerries (73.5% of all points), ReSolVe (70%), FaVOR-DeNonDe (53%) and SusOrganic (46%). Across all projects, the vast majority of the points in this category (and among all categories) came from scientific papers (10,500 points), followed by conference proceedings and work papers (1840 points) and conference presentations (with peer review) (1560 points). All other outputs in the scientific impact category scored 2785 points collectively.

FOCUS ON EMBEDMENT OF KNOWLEDGE

The only project that focused on embedment of knowledge was 2-Org-Cows (49% of all points). Considering all projects, the highest number of points achieved in this category come from researchers

(PhD and post-doc) (3300), followed by Masters Theses (2550) and supplementary training (education) (1000). All other outputs in this category achieved 200 points collectively.

3.3 Comparison to CORE Organic II

In CORE Organic II projects, 50% of the 14 projects had a total of less than 2000 points while all but one CORE Organic Plus project achieved a score of more than 2000 points. The total points across the CORE Organic Plus projects were higher in every category than CORE Organic II projects. **This was most notable in the industry and society category, in which CORE Organic Plus projects achieved more than 1.5 times as many points as CORE Organic II projects.** The other categories were more similar: CORE Organic Plus scored 1.1 time as many points in scientific effect and 1.4 times as many in embedment of knowledge (Figure 7).

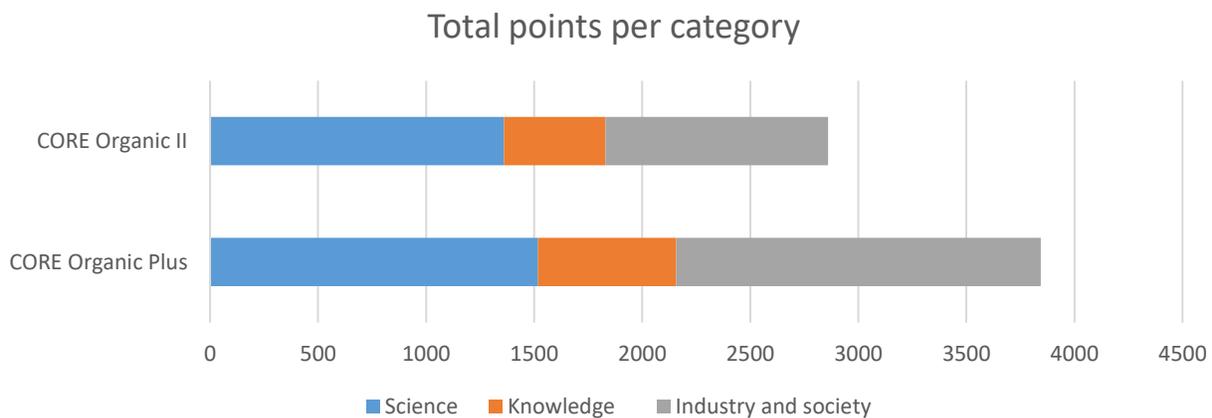


Figure 7: Average points per category for CORE Organic II and CORE Organic Plus projects

Whereas CORE Organic II projects had an overall focus on outputs that targeted science (47 %), this category only accounted for 39 % of outputs in the CORE Organic Plus projects (Figure 8). By contrast, the category with the most points among in the CORE Organic Plus projects is industry and society (44 %), compared to 36 % in CORE Organic II. **This is likely because the CORE Organic secretariat and monitoring persons put a stronger focus on communication with stakeholders as well as dissemination of results to stakeholders through different tools/channels.** For example projects were obligated to write three stakeholder-oriented articles for the CORE Organic ERA-NET newsletters, which may have oriented the focus more toward industry and society.

Both programmes had roughly the same focus on embedment of knowledge (16% in CORE Organic II and 17% in CORE Organic Plus). It should also be noted that **CORE Organic Plus project had a wider range of outputs across the categories** (i.e. all projects had outputs in all three identified categories).

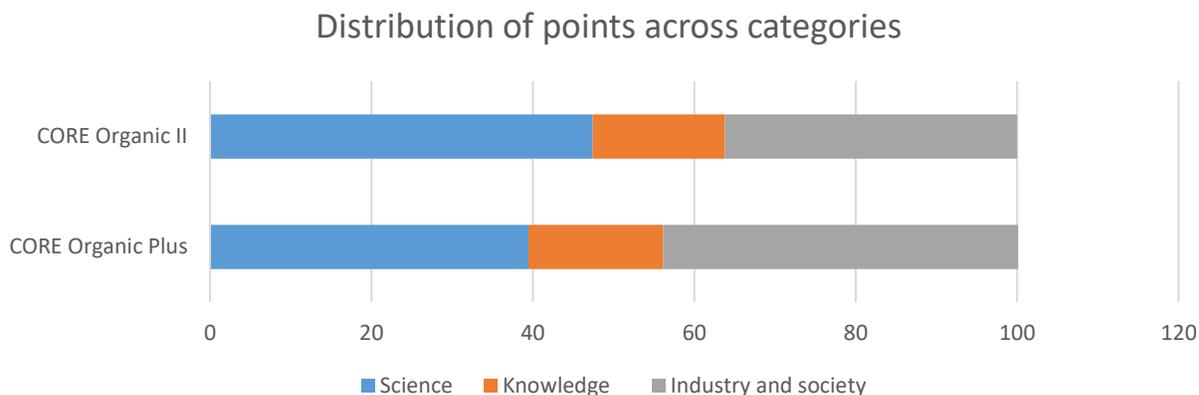


Figure 8: Distribution of points across the three categories for CORE Organic II and CORE Organic Plus projects

Similarly, **CORE Organic Plus projects achieved a higher number of points per million Euros (3462) than CORE Organic II projects (2901).**

3.4 Discussion of the quantitative analysis

Pedersen et al. (2011) found an average cost effectiveness of 193 points per Million Danish Kroner (DKK) for 41 Danish projects. This corresponds to 1436 points per million Euros². With an average of 2901 points per Million Euros, the 14 CORE Organic II projects achieved nearly twice as many points compared to the national research projects in Denmark. The 11 CORE Organic Plus projects further surpassed the previous programme with an average of 3444 points per million Euros.

In the Danish projects, the share of points in the category “impact on industry and society” varied strongly: For two of the Danish programs the share was only 10 %. In CORE Organic II, the average share for this category is 36 % and for CORE Organic Plus, it is 44 %. This increase is likely due to the increased focus put on this target group by the CORE Organic secretariat, suggesting that dissemination of results targeted to the end-user is strong in CORE Organic projects.

The following aspects may have also contributed to the high score of CORE Organic projects compared to the Danish projects: CORE Organic projects had to produce at least three stakeholder-oriented articles for the CORE Organic newsletters, as this was a binding requirement from CORE Organic. Moreover, sector-specific dissemination material produced in CORE Organic projects were often adapted and translated to several national languages. The necessity to translate dissemination material into national languages in transnational programmes to increase impact was also one of the recommendations from the previous impact analyses of the CO II projects. **The improvement shown in this category between CORE Organic II and CORE Organic Plus also shows that further improvements are possible if it is considered as a higher priority by the CORE Organic Secretariat and the monitoring persons.**

² Currency conversion factor 7.44

However, **caution should be taken when directly comparing the results of the different projects**, especially concerning the cost effectiveness. There are many factors that can affect the overall output for different projects. For example, many outputs are attributed to various funding sources (i.e. they are not solely products of CORE Organic projects). Furthermore, some projects face unique obstacles. For example, the SoilVeg project starting to test the roller crimpers in agricultural service crops, which was a new method and thus required significant investment. This therefore likely has an impact on the cost effectiveness of the project in terms of outputs. On the other hand, some projects have distinct advantages. For example, FertilCrop was a continuation of the CORE Organic II project Tillman-Org, and was therefore able to leverage the work done and the network built in the previous project. The same caveat applies to some extent when comparing the points per person month.

3.5 Conclusions for the quantitative analysis

- The quantitative analysis is a suitable method to compare the outputs between different projects or programs with a reasonable amount of effort. If other ERA-NETs were to adopt a similar approach, it could be a suitable means of comparison. A prerequisite is, however, that all project outputs are collected and accessible.
- Like in CORE Organic II, the differences in cost effectiveness between the different projects are considerable and the size of the project budget has no apparent influence on the cost-effectiveness.
- Assessing the points per person month provides slightly different results than cost effectiveness, but the total number of person months also has no apparent influence on the points per person month.
- There is a strong focus on certain categories (i.e. subject meetings/workshops, procedure for practitioners/farmers and publication in subject-specific journal/newspaper) in the impact of industry and society.
- Compared to CORE Organic II projects, a higher focus was put on output targeted toward industry and society compared to science. This increase is likely due to the increased focus put on this target group by the CORE Organic secretariat and monitoring persons.
- Building on previous projects (e.g., in the case of FertilCrop and Tillman-org) would likely provide projects with more opportunities to exploit results and produce outputs.
- The quantitative analysis only provides an estimate of the potential impact on industry by collecting data on the project outputs. To assess the real impact in practice, the quantitative analysis needs to be complemented with a qualitative assessment.

4. Qualitative analysis

4.1 Results of the content analysis

The content analysis of the transcripts identified **common opinions and feedback from the researchers and end-users in France and Finland**, helping us to identify the factors affecting the implementation of the research results in practice and their potential impact creation. The content analysis of the feedback identified several categories. Responses from researchers were coded into five subject matters:

1. Factors contributing to the success of the different project outcomes
2. Obstacles for dissemination and implementation of research results by end-users
3. Supportive actions facilitating successful dissemination and implementation of the research results
4. Benefits of participation particularly in this transnational project
5. Challenges encountered when participating particularly in this transnational project

Responses from end users were coded into three subject matters:

6. Did this project produce research knowledge valuable for you?
7. What would be the easiest way to adopt scientific information according to your experience, so that it would be easy to apply in practice?
8. To what extent has the knowledge produced in the project supported the development of the organic sector in your country?

The coded categories cover general meanings of the common opinions expressed in the interviews. Table 1 and Table 2 provide examples of responses for each category and the results are discussed below.

Interviews showed **that farmers, advisors and other end users are actively searching for knowledge via multiple channels**. They read professional magazines, technical bulletins, follow webpages of research organizations and participate in seminars and other educational activities. They were asked whether these particular projects produced research knowledge valuable for them (See subject matter 6) and whether it was transmitted in a way that facilitated the adoption of the information (See subject matter 7.). Many of them felt that the **project had produced valuable knowledge, but not all of them**.

Example from the category 'Yes, indeed':

"The project has produced useful results because there are many requests from producers for this technique and the references are often rather in field crops, or are not really scientifically validated" (End-user, France).

Some of them felt that the results had remained unclear (Category 'No, results remained unclear') for them or the project did not really produce new knowledge, only supported earlier practical findings. This answer from an end user representing organic agricultural extension services also indicates that the end users participating in projects are sometimes experts in organic agriculture, and therefore one single project may not provide extra value.

Example from the category ‘No, results remained unclear’:

“Yes and no. It strengthened what was already known in practice. While working actively with farmers, research knowledge seems to come a little behind. Of course, this study was necessary but in my opinion the results remained superficial” (End-user, Finland).

If results remained unclear, it may also indicate that the dissemination activities did not succeed in reaching interest groups. Quite often, researchers have limited resources for dissemination activities after the project has finished. We were interested in finding out **key factors leading to the successful dissemination of the results** from the perspectives of **researchers and end users**. Project partners were asked to select the most relevant factors attributed to the successes of the different project outcomes (See subject matter 1). The content analysis highlighted two categories which were: ‘*European research co-operation*’ and ‘*Collaboration between different stakeholder groups*’. Researchers appreciated research co-operation between European countries, which enlarged the experimental areas and possibilities to test tools in larger areas. ‘*Collaboration between different stakeholder groups*’ was considered as a success factor by three projects.

Example from the category ‘Collaboration between different stakeholder groups’:

“The first success factor is the involvement of stakeholders (farmers, researchers) in the design of the cropping system” (Project partner, France).

Researchers also indicated that creation of the **international learning networks** as well as the possibility to **add value to the results in the larger geographical contexts** were important benefits of participation in transnational projects.

When evaluating the **obstacles for dissemination and implementation of research results by end users** (See subject matter 2), we could group answers into two different categories: ‘**Results were not easy to adopt in practice on farms or at the small and medium enterprise (SME) level**’ and ‘**If all materials are produced only in English, the language barrier prevents the implementation of results**’. Several researchers indicated that the adoption of the research results in practice on farms or by SMEs is a difficult task. Difficulties can occur when generic or sometimes overly technical knowledge has to be applied to farm-level operations. Sometimes the cost of new equipment that would enable the adoption of new processing technology was considered to be too high by end users, which may hinder application of results in practice. One project partner raised the question of language: if a big part of the results is presented solely in English, it may slow down the dissemination of results.

Examples from the category ‘Results were not easy to adopt in practice on farms or at the SME level’:

“Scientific experiments which are carried out under specific “controlled” conditions lead to results which are not easily transposed to real farm condition due to the real-life heterogeneity of farming conditions” (Project partner, France).

“Selected indicators were relevant for a detailed analysis of land-use processes but very difficult to implement by managers / farmers. Proposed measures were technical and sometimes remote from farmers’ field issues” (Project partner, France).

There was also one project that had no end-user contacts or dissemination activities for end users at the national level. Project partners were concentrated only on scientific work and all the dissemination activities were conducted at the international level by this partner. Utilisation of scientific knowledge in the national organic sector is not promoted by this kind of project.

When asking the **researchers** for recommendations to **make dissemination and implementation of their research results more efficient and successful** (See subject matter 3), project partners raised the following three points: 1) **'be active at early stages of the project'**, 2) **'produce simple material in native languages'**, and 3) **'establish contacts with experienced stakeholders'**. It was concluded that the dissemination activities and collection of feedback have to be started early enough, which would also enable the improvement of protocols throughout the project.

Examples from the category *'Be active at early stages of the project'*:

"It is necessary to produce notes and tools during the project (and not just at the end) to test them with professionals. So we can come back to it during the project to improve them" (Project partner, France).

"Dissemination activities have to start as soon as there are results. The final seminar is not enough. Researchers must dare to say something during the second project year" (Project partner, Finland).

End users raised two points when they were asked for the easiest way to adopt scientific information in practice (See subject matter 7):

1) They recommended **practical demonstrations**, which might show the potential of results in different practical contexts. It not only helps to adopt new information but also tests the results in a real-life context.

Examples from the category *'Practical demonstrations'*:

"When we are shown organic farming practices, the doctrines stay well in the mind and a very realistic picture is formed. If the results are only read from the paper, a black and white picture will be easily created. For example, the significance of weeds in practical cultivation is a matter which can be understood only on an organic field" (Farmer, Finland).

Concerning the dissemination to a broader audience, a farmer said that he expected that the results would be presented more as contextualised scenarios, by taking into account the soil, climate conditions and local constrains rather than the purely experimental results.

2) End users also expressed the wish that the **research results** were **summarized and presented in a way that offers possibilities for end users to participate somehow**.

Example from the category *'Summaries of the results'*:

"The best way to learn is to participate somehow. For example, so that the core matters and pearls of the results are presented in an education session" (End user, Finland).

"Dissemination of syntheses of the results (e.g., articles, oral communications) promotes a better understanding of the work" (End user, France).

We also asked end users for their opinions about the **extent to which the knowledge produced in the project has supported the development of the organic sector in their country** (See subject matter 8). In their opinions, projects helped promote important developmental goals of organic farming and inspired both organic and conventional farmers.

Example from the category ‘*Projects encouraged discussion about the important developmental aspects of the organic sector*’

“The knowledge produced in the project has supported the development of the organic sector because it has allowed producers to have precise and scientifically validated technical information on technical guidelines adapted to market gardening in organic farming. Moreover, these techniques are very much part of the agroecological approach, and this meaning can inspire other modes of production, including conventional” (End user, France).

Table 1: The coded categories on different subject matters based on interviews with researchers. Examples of the expressions are presented for each category.

Subject matter	Coded categories based on researchers’ opinions and examples from the categories
<p>1. Factors contributing to the success of the different project outcomes</p>	<p>European research co-operation</p> <p><i>“The new information about the appearance of weeds and about the control methods on the organic premises not only in Finland but also in the other five countries in the Baltic Sea area. From the point of view of the operation of the project, it was important that the cultivation systems and cultivation conditions were similar in all countries. This eased mutual understanding and information exchange, which was motivating.”</i> (Project partner, Finland)</p> <p><i>“The involvement of many countries in the development of soil observation tools, which has made it possible to disseminate tools of researchers to professionals in different European countries.”</i> (Project partner, France)</p> <p>Collaboration between different stakeholder groups</p> <p><i>“The first success factor is the involvement of stakeholders (farmers, researchers) in the design of the cropping system”</i> (Project partner, France).</p>
<p>2. Obstacles for dissemination and implementation of research results by end-users</p>	<p>Results were not easy to adopt in practise on farms or at the SME level</p> <p><i>“Selected indicators were relevant for a detailed analysis of land-use processes but very difficult to implement by managers/farmers. Proposed measures were technical and sometimes remote from farmers’ field issues”</i> (Project partner, France).</p> <p>If materials are produced only in English, the language barrier prevents the implementation of results</p>

	<p><i>"Yes, the main barrier is the language, a big part of the results are in English" (Project partner, France).</i></p>
<p>3. Supportive actions facilitating successful dissemination and implementation of the research results</p>	<p>Be active at early stages of the project</p> <p><i>"It is necessary to produce notes and tools during the project (and not just at the end) to test them with professionals. So we can come back to it during the project to improve them" (Project partner, France).</i></p> <p><i>"Dissemination activities have to start as soon as there are results. The final seminar is not enough. Researchers must dare to say something during the second project year" (Project partner, Finland).</i></p> <p>Produce simple material in native languages</p> <p><i>"Thinking of dissemination tools, in video ideally, in the language of the country" (Project partner, France).</i></p> <p>Collaboration with stakeholders is key</p> <p><i>"I would disseminate the results further via specific farmer organisations" (Project partner, Finland).</i></p>
<p>4. Benefits of participation in this particular transnational project</p>	<p>Creation of international learning networks</p> <p><i>"Exchange knowledge and methods of analysis with other research teams" (Project partner, France).</i></p> <p><i>"The main benefit was establishing good collaboration between the EU countries. Learning more about the organic production in different parts of the EU" (Project partner, Finland).</i></p> <p>Adding value to the results in the larger geographical context</p> <p><i>"Evaluating techniques in a wide range of soil-climatic conditions is a definite advantage to better understand the strengths and constraints of these conditions" (Project partner, France).</i></p> <p><i>"Transfer of information about organic production and weed management in partner countries with (relatively) similar cropping conditions" (Project partner, Finland).</i></p>
<p>5. Challenges encountered when participating in this particular transnational project</p>	<p>Challenges harmonising protocols and data collected</p> <p><i>"Difficulties coordinating protocols and harmonizing data collected" (Project partner, France).</i></p> <p>International work has to be well coordinated</p> <p><i>"It is not always easy to manage the linguistic constraints of the different participants: all of the exchanges and reports are done in English at the project level, whereas the same reports must be presented in national language to the financiers" (Project partner, France).</i></p>

Table 2: The coded categories on different subject matters based on interviews with end users. Examples of the expressions are presented for each category.

Subject matter	Coded categories based on end users' opinions and examples from the categories
<p>6. Did this particular project produce research knowledge valuable for you?</p>	<p>Yes, indeed</p> <p><i>“The project has produced useful results because there are many requests from producers for this technique and the existing references are often rather in field crops, or are not really scientifically validated”</i> (End-user, France).</p> <p>No, results remained unclear</p> <p><i>“Yes and no. It strengthened what was already known in practice. While working actively with farmers, research knowledge seems to come a little behind. Of course, this study was necessary but in my opinion the results remained superficial”</i> (End-user, Finland).</p> <p><i>“I missed the results. Perhaps the dissemination stage of the project was not carried out successfully.”</i> (End-user, Finland).</p>
<p>7. What would be the easiest way to adopt scientific information according to your experience, so that it would be easy to apply in practice?</p>	<p>Practical demonstrations</p> <p><i>“When we are shown organic farming practices, the doctrines stay well in the mind and a very realistic picture is formed. If the results are only read from the paper, a black and white picture will be easily created. For example the significance of weeds in practical cultivation is a matter which can be understood only on an organic field”</i> (End-user, Finland).</p> <p>Summaries of the results</p> <p><i>“The best way to learn is to participate somehow. For example, so that the core matters and pearls of the results are presented in an education session”</i> (End-user, Finland).</p> <p><i>“Dissemination of syntheses of the results (e.g., articles, oral communications) promotes a better understanding of the work”</i> (End-user, France).</p>
<p>8. To what extent has the knowledge produced in the project supported the development of the organic sector in your country?</p>	<p>Projects encouraged discussion about the important developmental aspects of the organic sector</p> <p><i>“The control of weeds is important in organic farming. It is possible to achieve high yields in organic fields despite the existence of weeds. Farmers must understand what amount of weeds in the field is too much. The weeds also have good properties, such as promoting natural biodiversity. I liked that the project did not attempt to destroy weeds but control weeds”</i> (End-user, Finland).</p>

4.2 Discussion and conclusions

The qualitative analysis was only conducted in two countries involved in the CORE Organic Plus programme. The opinions and experiences of the interviewed project partners and end users are therefore dependent in the context, that is to say, project activities as well as agricultural innovation systems in France and Finland. Therefore, results do not necessarily describe the overall situation of the CORE Organic Plus programme. Despite this, it gives us a good understanding of the challenges and successes in dissemination of research results to farmers, entrepreneurs and advisers (end users), and of key factors leading to successful dissemination of the results from the perspectives of the researchers and end users. It should be kept in mind that the earlier experiences of the interviewed people might have affected their answers and therefore their views are at least partly based on the experiences collected over a longer period of time.

What were the key factors leading to successful dissemination of the results from the perspectives of the researchers and end-users? Results shows that whilst constructing the project, much care should be taken to **assess the needs of end users**. Therefore, **co-designing the scientific questions** could be extremely relevant. It was concluded that the dissemination activities and collection of feedback have to be started early in the project, which would also enable the protocols to be improved throughout the project. These conclusions are very much in line with the SCAR AKIS 4th mandate report³ and the previous CORE Organic II impact analysis (Alföldi et al. 2018).

How can collaboration with stakeholders be promoted? One option is to assess **the structure of the consortium and their links to the organic sector** at the stage of funding decisions. This idea is supported by the findings of the impact assessment of CORE Organic II, which states: *“The dissemination of results and the attention the projects received within the organic sector strongly depend on the researcher’s network with end users.”* Another option is to **make it mandatory to write practice abstracts**, which have already been included in the dissemination activities of CORE Organic Cofund. This kind of activities may put researchers’ focus more on collaboration with end-users.

Researchers experienced that their results were not always easy to adopt in practice on farms or at the SME level for several reasons. It is obvious that local circumstances affect the adoption of the results in organic farming practices, which are often based on special knowledge of local conditions. This problem could be partly solved by **practical demonstrations and collaboration with farmers and entrepreneurs**. The impact assessment of CORE Organic II concluded that *‘Research seems to have much more potential impact when research is demonstrated on (farmers’) fields, and when end users are actively involved in the research project’*. The properties of the communication materials should also be considered. End users and researchers highlighted the importance of **producing summaries or synthesis reports** in order to facilitate the adoption of the new knowledge. The language issue was also mentioned. **Production of visual**

³ The full report can be accessed here: https://scar-europe.org/images/AKIS/Documents/report-preparing-for-future-akis-in-europe_en.pdf

communication material in several European languages might help promote dissemination of new knowledge.

Assessing the impact on industry and society is a difficult task. It is obvious that the evaluated projects contributed somewhat to the development of the organic sector. **However, it has to be kept in mind that the benefits of the projects are dependent on communication and dissemination activities.** If researchers do not have enough time to carry out these activities or if the given message remains unclear, it is obvious that project will not benefit the national organic sector. Therefore, resources should be allocated to communication and dissemination activities from the beginning to the end of the project. A realistic **dissemination plan, at both the project and the national level**, should be part of the research proposal.

It is obvious, that participation in transnational research projects adds value to national **research communities**. By participating in CORE Organic, **new opportunities were created and problems were investigated that would not have been tackled within national research projects.** This was also seen in the impact assessment of the CORE Organic II programme. European research programs promote knowledge exchange between countries and transfers valuable knowledge about organic farming from more experienced areas to less experienced areas. International cooperation also motivates researchers in their work. They also recognized challenges in international project in terms of data collection and harmonization and coordination tasks. These challenges cannot be avoided but can be addressed by careful planning and efficient coordination of the projects. In terms of impact creation, it is important that the knowledge is applied by practitioners and advisers at an international level more than before.

5. Stakeholder engagement assessment

5.1 Types of stakeholders involved and tools used

In most of the CORE Organic Plus projects, the project partners mention **local organic** (as well as conventional) **farmers and/or other businesses** such as veterinarians, breeders, processors, technical advisors and extension services as their main targeted stakeholders groups in industry and society and end-users of the project results. Besides dissemination of information about the project and project results in **technical journals, leaflets and technical notes, field days/walks and demonstrations** were organised to show the results of experiments and inform the stakeholders during different stages of the project. In several projects, **questionnaires, interviews and on-farm experiments** are used to collect data and/or **stakeholder networks** were involved to provide interaction with the target groups. Researchers organise or participate in workshops and/or discussion groups with targeted stakeholders and experts to facilitate direct knowledge exchange.

Press releases in various national languages, picked up by different media, were used to promote the project in partner countries and to increase the interest of a **broader target group** in the project results, including the general public and local and national decision makers. In addition, **videos** were produced to target this broader group with the aim of informing and of raising awareness. Other videos are more focussed on specific stakeholder groups to demonstrate certain techniques. Newsletters such as the **CORE Organic newsletter** were seen as tools to inform **European stakeholders**. In addition, the use of **social media** (Facebook and twitter) is increasingly used to reach a broad range of stakeholders.

A variety of stakeholders like extension services and advisors also participated in conferences where the project results were presented in a more scientific way. The available data, however, did not allow us to document for each stakeholder group how many stakeholders were represented or reached in each activity.

5.2 The level of engagement of stakeholders in the research

Active engagement of stakeholders in research is seen as an important pathway to achieve impact and close the gap between research production and research use. It is stated that the higher the interaction and active exchange of information and feedback between the stakeholders, the more impact the researchers can achieve. The involvement of stakeholders was also mentioned as a key factor in the successful dissemination and implementation of research result by different interviewees in the qualitative analysis. In the CORE Organic call for proposals, it was one of the main recommendations. Therefore, an explorative evaluation was made to learn more about the active engagement of stakeholders in the 11 CORE Organic Plus projects

Figure 9 shows that on average, **most activities in the CORE Organic projects** (expressed as average number of activities) are **informative** and correspond to one-directional communications. If we consider that some activities can more actively engage stakeholders in research than other activities, a stakeholder engagement score was calculated, taking into account the expected level of engagement of researchers

and stakeholder in each of the activities (Figure 10). Figure 10 shows that the activities categorized as 'inform', 'consult' or 'involve' represents a similar level of engagement of the targeted stakeholders. Although the average number of activities to inform stakeholder is high, the other activities engage stakeholders more actively and are therefore expected to have a higher potential to create impact.

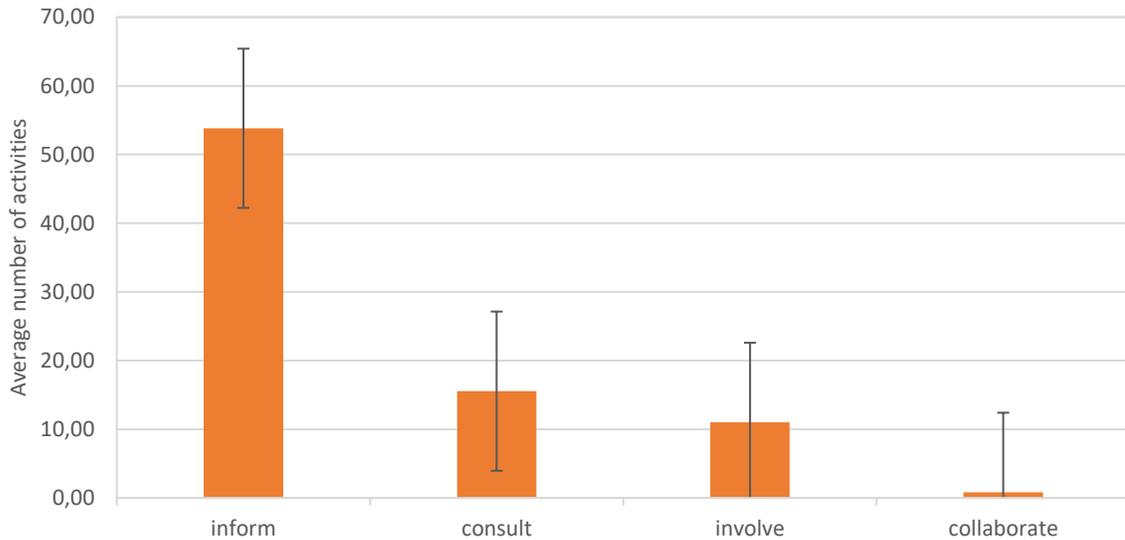


Figure 9: Average number of activities in CORE Organic Plus projects involving stakeholders from industry and society per level of engagement. Bars represent standard errors (n=11).

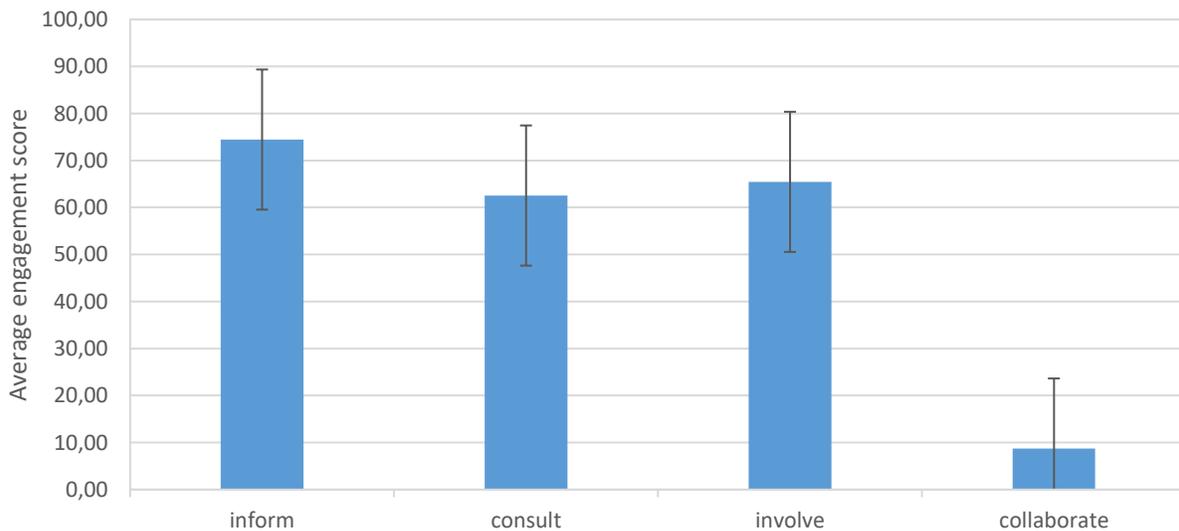


Figure 10: Average stakeholders engagement score for CORE Organic Plus projects for industry and society per level of engagement category. Bars represent standard error (n=11).

On average, the CORE Organic projects closely interact with their stakeholders by collecting data from stakeholders ('consult') or by discussing project approaches or results in a more active way ('involve').

However, **only a few projects involved stakeholder representatives as partners in the project** and in the preparation of the research proposals (**'collaborate'**). These partner organisations are important stakeholders who represent a broader community that allows them to create direct impact resulting from the project.

Nevertheless, the engagement scores between the projects differ (Figure 11). Project like FertilCrop and ECOORCHARD have above average engagement scores while in projects like FaVOR-DeNonDe, EcoBerries and OrganicDairyHealth the total engagement of stakeholders is much lower than average.

The activities by the SoilVeg and FaVOR-DeNonDe were mainly meant to be informative. This means that most interactions correspond to activities where stakeholders were informed about the project and outcomes without involvement of the stakeholders in the actual research.

The activities in the other projects were much more designed with more active involvement of their stakeholders in mind. Except for SoilVeg and FaVOR-DeNonDe, all projects intensively consulted their stakeholders through interviews, surveys and/or on-farm experiments to collect information and data in a real life context (**'consult'**). Furthermore, projects like FertilCrop, ECOORCHARD and PRODIVA were following a strong participatory approach. **Interactive events (focus groups, discussions group, workshops, etc.) were organised to discuss research approaches or research design or to get feedback on preliminary results of the project ('involve')**. This allowed researchers to conduct the research in close cooperation with their stakeholders. But, to allow more profound interaction and discussions, these events are often organised with a limited number of stakeholders. The number of stakeholders that are participating in the activities is not taken into account in the current calculation of the stakeholder engagement score, which therefore does not necessarily reflect the real impact achieved.

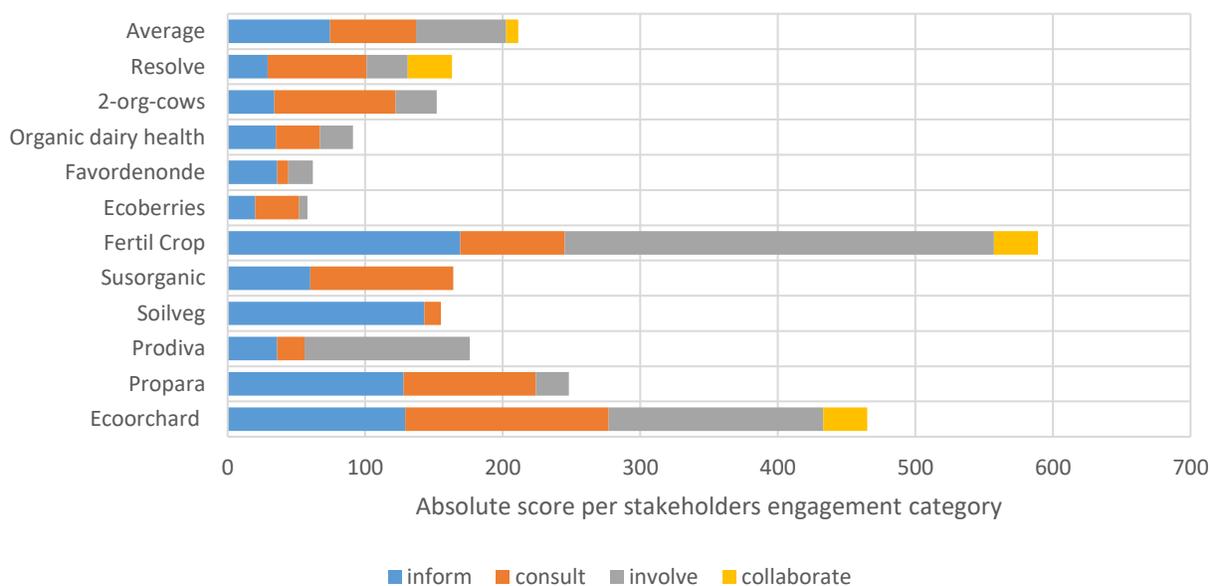


Figure 11: Total stakeholder engagement score and stakeholder engagement score per engagement level in 11 CORE Organic Plus project

We could assume that projects with more partner countries involved have a higher total stakeholder engagement score because activities are organised per countries to reach local stakeholders. Figure 12 shows that although there is some correlation between the total stakeholder engagement score and the number of involved countries, the correlation is not very strong.

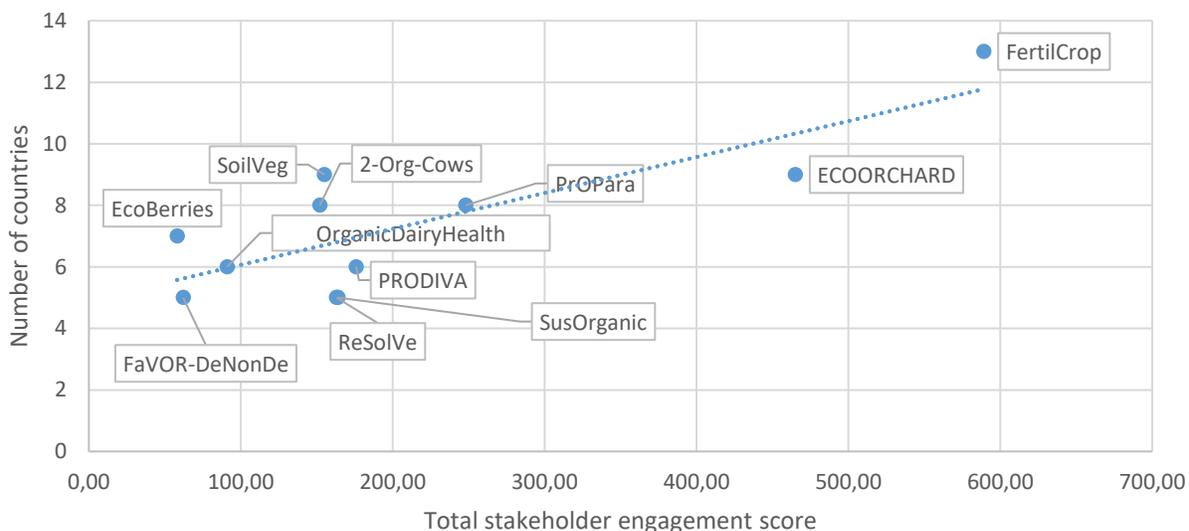


Figure 12: Correlation between total stakeholder engagement score and number of countries involved in the 11 CORE Organic Plus projects

This means that also **smaller consortia can be strong in stakeholder involvement**. This was confirmed by small project consortia as PRODIVA, ReSolVe and SusOrganic, which were relatively strong in the involvement of target groups, as shown in Figure 13. Although the total engagement score of the FertilCrop project was larger than the EcoOrchard project, the EcoOrchard project tended to engage its stakeholders per country more intensively. While **larger consortia have the potential to engage a broader group of stakeholders in a wider range of geographical areas**, they were not always doing so as seen for projects like 2-Org-Cows and EcoBerries.

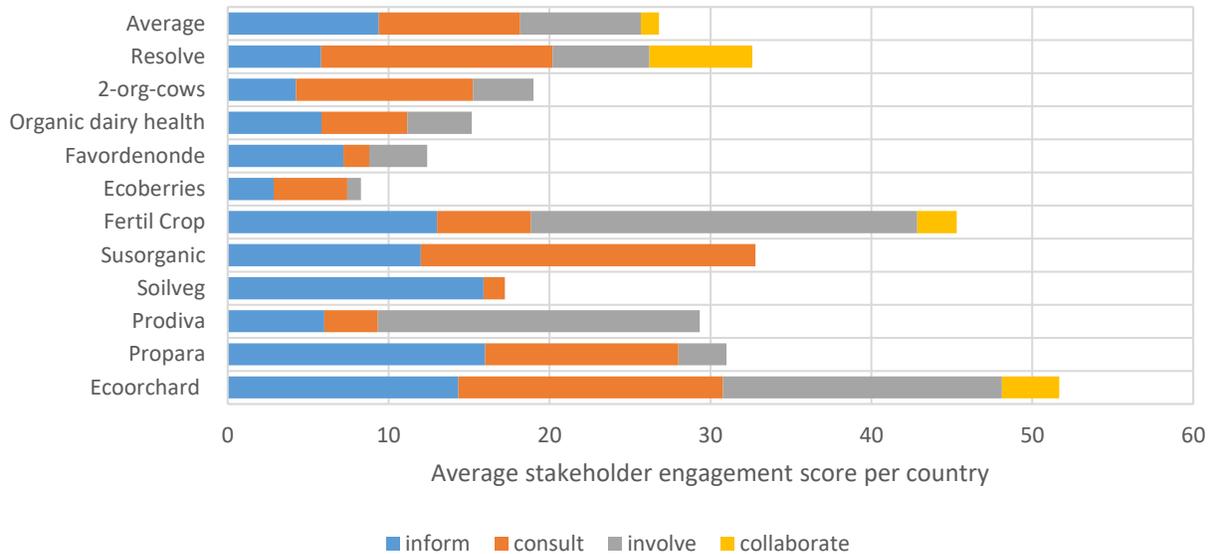


Figure 13: Average stakeholder engagement score and stakeholder engagement score per engagement level per country involved in the project consortium in 11 CORE Organic Plus projects

5.3 Stages at which stakeholders are engaged in the project

In addition to who and how the stakeholders are involved in research projects, it is interesting to know when researchers involve their stakeholders. Figure 14 shows that stakeholders were engaged during the whole project period with a peak in the middle of the CORE Organic project periods. **During the whole project period, dissemination activities pay attention to raising awareness for the project and informing the stakeholders about the research.** In the **middle of the project period, stakeholders are increasingly involved** in data collection and in the discussion of research design or preliminary results. In the **final project year**, the average stakeholder engagement score dropped mainly due to a **decrease in ‘consult’ and ‘involve’ activities.** Although we could expect that in the final project year the engagement score would increase in order to disseminate the project results to industry and society and create impact, we did not observe this. After the projects ended, few further activities were organised to disseminate the project results. This, however, does not mean that project results are not further disseminated after the project ends, only not in a context related to the project.

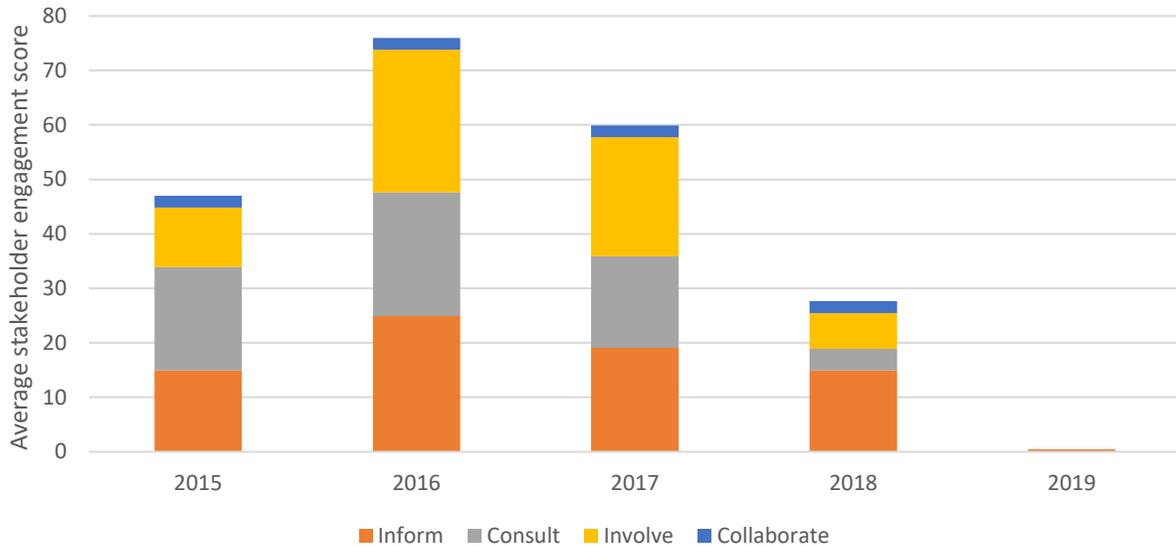


Figure 14: Average total stakeholder engagements score and average stakeholder engagement score per engagement level per year for CORE Organic Plus projects

Of course, there are individual differences between the projects (Annex 5). Projects like 2-Org-Cow, EcoBerries, PRODIVA and ProPara show a slightly different pattern with a more balanced spread of stakeholder engagement during the project. In the other projects, the stakeholder engagement score dropped drastically towards the end of the project. In almost all projects, the focus of the activities organised in the final year is mainly informative. Furthermore, we see that projects like FertilCrop, EcoOrchard and PRODIVA started to involve stakeholders from the beginning of the project indicating their strong participatory approach.

5.4 Trade-off between the scientific excellence and stakeholder engagement

It is sometimes assumed that researchers that are excellent in producing scientific output are less active in stakeholder engagement. In Figure 15, the total stakeholder engagement score is compared with the scientific excellence impact score that was calculated in the quantitative impact analysis (scientific effect). The figure shows that **there is no evidence that a focus on scientific output has a negative or positive effect on the engagement of stakeholders** in the 11 CORE Organic projects. This suggests that there does not need to be a trade-off between the scientific excellence of the research projects and the excellence of engaging stakeholders from industry and society. As CORE Organic aims to support projects that reach both scientific excellence and relevance for industry and society, both indicators are important. Projects like FertilCrop and SusOrganic are examples of projects that are doing well on both levels, while project as SoilVeg, FaVOR-DeNonDe and OrganicDairyHealth are lagging behind for one or both indicators.

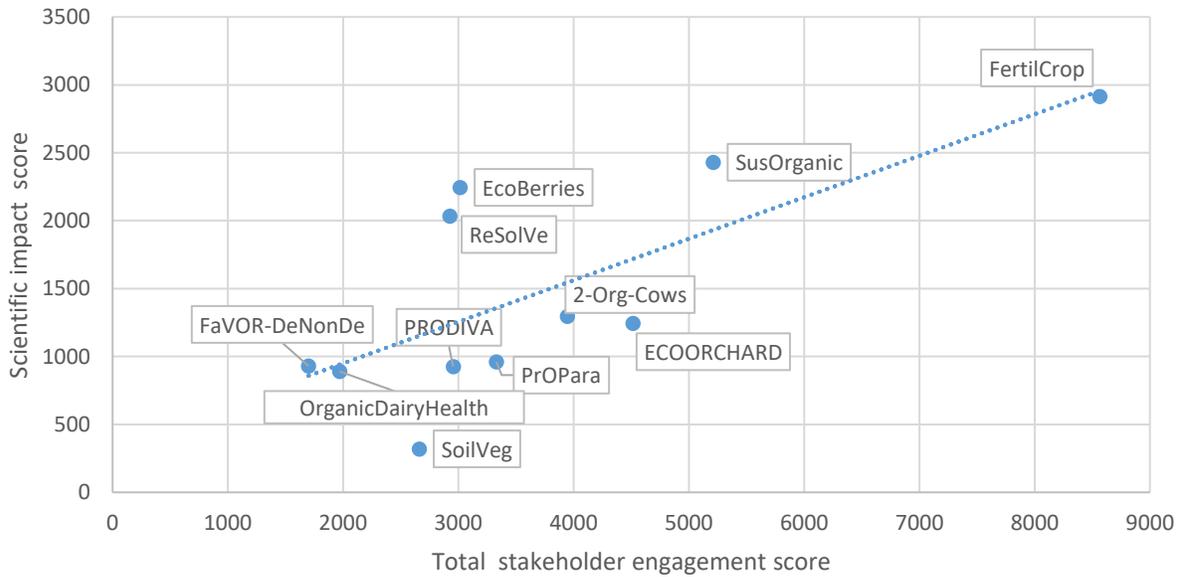


Figure 15: Correlation between the scientific impact score in the quantitative analysis and the total stakeholder engagement score for CORE Organic Plus projects

Because the projects differ in size of the consortium, both indicators were further investigated, **taking into account the number of person months spent in the projects**. Figure 16 shows that the CORE Organic Plus projects mainly differ in their stakeholder engagement score per person month. As seen in previous analysis, FertilCrop, EcoOrchard and PrOPara were more active in engaging stakeholders, while EcoBerries, ReSolVe and FaVOR-DeNonDe were much less successful.

SusOrganic and SoilVeg also largely differ in their scientific impact score per person month. SusOrganic, as a small consortium with a low number of person months to spend and few countries involved, performed relatively well while reaching an average level of stakeholder involvement. On the other hand, SoilVeg, as a consortium with many person months and a large geographical coverage did not perform as well on either indicator. The low scientific impact score and low stakeholder engagement score can probably be explained by the innovativeness of the systems studied in the SoilVeg project. The roller crimper machinery tested and further developed in the project was mainly tested and demonstrated on experimental fields and did not consult and involve stakeholder in the process.

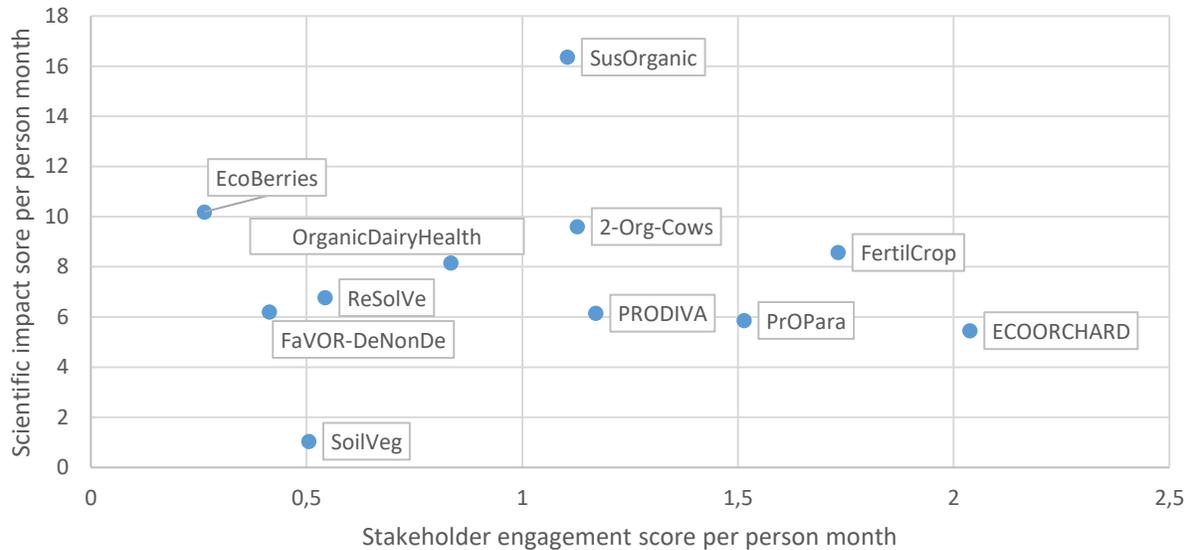


Figure 16: Correlation between the scientific impact score per person month and the stakeholder engagement score per person month in the project for CORE Organic Plus projects

5.5 Stages at which researchers interact with the scientific community in the projects

To learn more about how and when the researchers interact with the scientific community, the scientific impact score of the quantitative analysis was revisited. For each project, we looked at the timeframe in which the scientific output was produced. We see that most projects start to **present the project and preliminary results to fellow researchers at workshops and conferences relatively early in the project** (see Annex 5). When project results become available in the second half of the project period, researchers start to **write scientific papers, mostly in the last project year**. Because the review process to publish papers in scientific journals takes time, the papers were sometimes published after the projects ended. As the FertilCrop project was a continuation of the CORE Organic II project Tillman-Org, the project could start immediately to publish first results in scientific papers while other projects like SoilVeg and PRODIVA that experiment with innovative systems and management systems were less successful in publishing in scientific journals.

5.6 Conclusions:

- Projects mainly focused on the local organic (as well as conventional) farmers and/or other businesses such as veterinarians, breeders, processors, technical advisors and extension services, depending on the research objectives, as their main targeted stakeholders groups in industry and society. Local government and policy makers are less actively involved in the research.
- The dissemination of project results to industry and society is focussed on the national level. The dissemination on European-level of research results is restricted and research results produced in one country are not always disseminated to industry or society in other countries.

- Although in most CORE Organic Plus projects, activities only inform stakeholders, part of the activities engage stakeholders more actively and contributed to a higher engagement score than the informative activities. These projects are therefore expected to have a higher potential to create impact.
- In most CORE Organic Plus projects, interaction between researchers and stakeholders was organised through data collection, demonstration activities and/or on-farm experiments. In a few projects, a real participatory approach was followed that gave full opportunity for discussion and interaction from the beginning of the project.
- Only a few CORE Organic Plus projects involved stakeholders' organisations as partner in the project consortium. As partners in the project, however, stakeholders can interact with researchers about the problem definition, the research objectives and design and research results throughout the whole project period. This is seen as the most effective way to implement research results in practice and to create impact. Stakeholder partner participation should be recommended and supported by CORE Organic or future research programmes.
- Some small consortia are very effective in engaging stakeholders at the local level but large consortia with more participating countries have a higher potential to engage stakeholders in a broader geographical area.
- Projects can be successful in terms of both academic excellence and stakeholder engagement /societal relevance. There is no evidence for a trade-off between academic excellence and society/policy-relevant outputs, or the investment of research teams in engaging stakeholders. Both can be achieved in one single project.
- More attention could be given to produce industry and society-relevant output and to engage stakeholders until the end of the project when all research results are available. Once the project ends, no (or few) activities are organised to inform relevant stakeholders about the projects outcomes. We do not conclude, however, that project results are not further disseminated after the project ends. Most likely, the results are further communicated through follow-up projects and in relevant discussions.
- In the last project year, researchers seem to focus more on scientific output than on the dissemination of research results to industry and society.
- Caution should be taken when comparing the engagement scores of individual projects as various factors (e.g., consortium size, research topic, innovativeness of the project) can influence the possibility and the relevance to engage stakeholders.

6. ERA LEARN Survey

A total of 50 organisations across 15 countries took part in the survey. Due to the relatively high response rate and the balanced distribution of responses across countries, we can claim that the results are representative of the total CORE Organic Plus community. The results of the project-level impact assessment have been analysed and the outputs are presented in the following figures.

6.1 Participation in CORE Organic projects

Figure 17 shows the main motivation to participate in CORE Organic Plus projects. In relation to the motivation for beneficiaries to participate in the transnational funded projects, all listed motivations scored above 50%. There are some clear areas of particular interest, such as the **opportunity to develop new knowledge, to build and strengthen new and existing relationships with organisations in other countries and access to knowledge/facilities in other countries.**

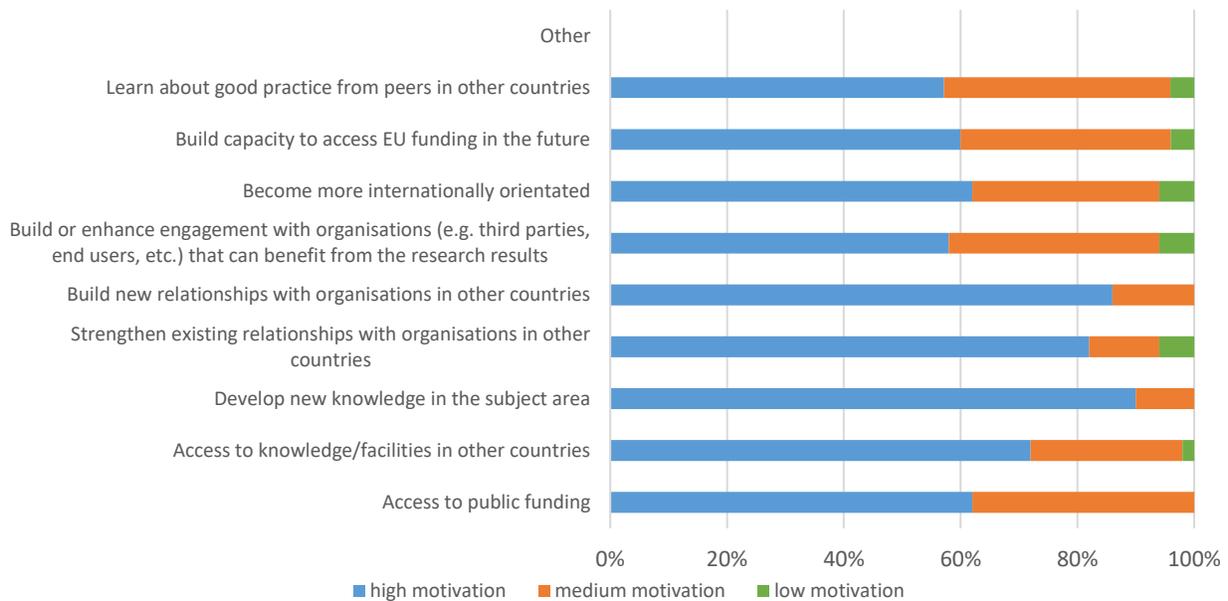


Figure 17: Motivation to participate in the project

Figure 18 and Figure 19 show the main benefits of CORE Organic Plus compared to national and EU framework programmes. Regarding the advantages compared to national projects, the survey results demonstrated that CORE Organic Plus projects provide access to higher-quality additional expertise and/or facilities, and research results, and also pursue more ambitious objectives (Figure 18). It is interesting to note that beneficiaries that have had prior experience in the EU framework programmes represented more than 92% of the total sample. As the main benefits of transnational CORE Organic Plus projects, participants indicated a higher probability of success, higher flexibility (e.g. project design, number of partners, changes) and producing results that are more solution-orientated than EU Framework Programme projects (Figure 19).

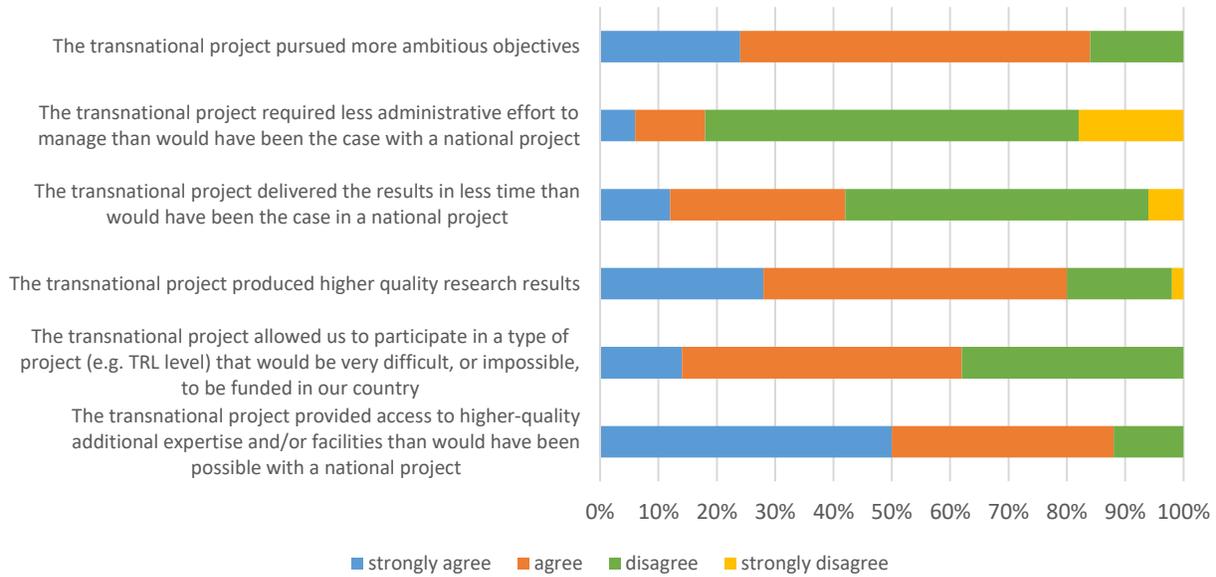


Figure 18: CORE Organic versus national projects

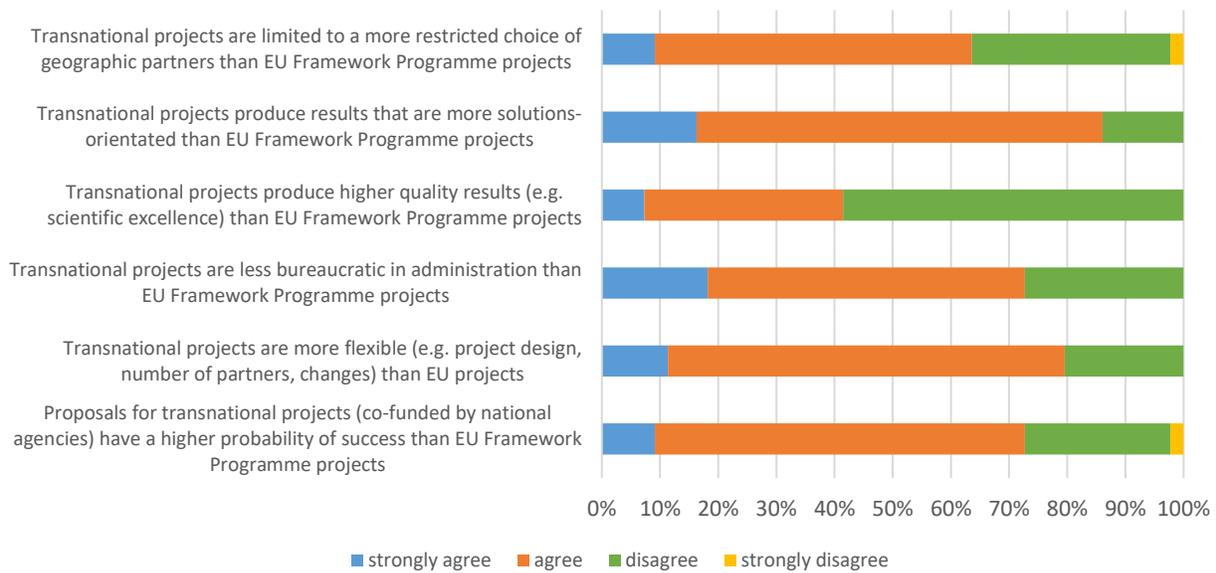


Figure 19: CORE Organic versus EU Framework Programme projects

6.2 Project outcomes and exploitation of results

Figure 20 shows the main exploitable outcomes of CORE Organic Plus projects. The most important impacts were the **opportunity to enhance research networking and competitiveness in EU framework programmes; implementation of new methods and technologies and provision of improved scientific evidence**, followed by increased research capacities and opportunity to better understand other European cultures and issues in general. In relation to minor outcomes, new organizational processes and new and

improved processes and services obtained the highest percentage. However, these aspects were not applicable for the impact assessment for some of the projects.

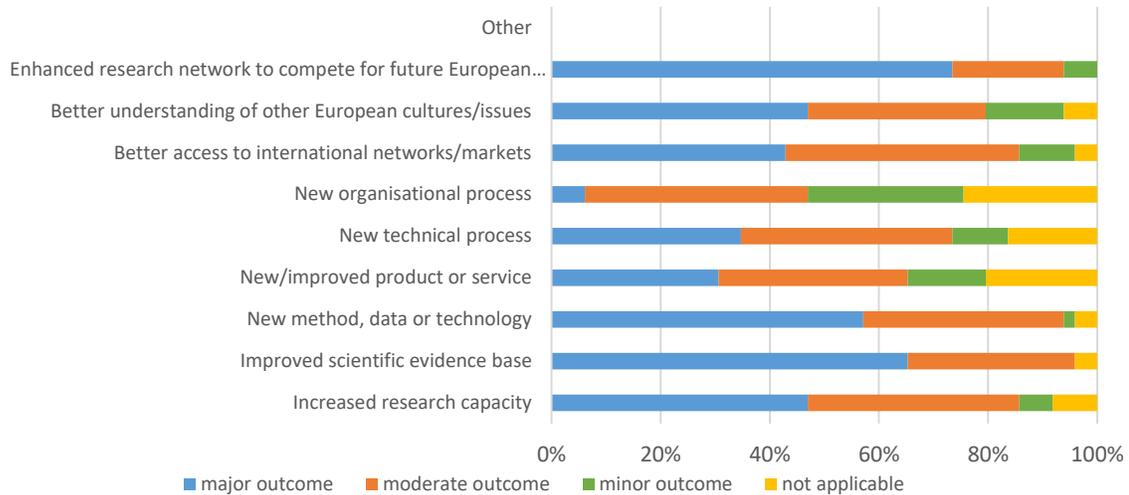


Figure 20: The main exploitable outcomes of the project

The **main actions** that were taken to enable exploitation of research results were **presentations at conferences and events** (i.e. for potential users of the research results and for important policy stakeholders), **specific publications targeting non-scientific community** (potential users) and **peer-review publications for the scientific communities** (Figure 21). It is interesting to note that there are fewer actions undertaken in relation to formal protection of intellectual property, such as patterns and trademarks, and for participation in standardization activities that would support wider exploitation of the results.

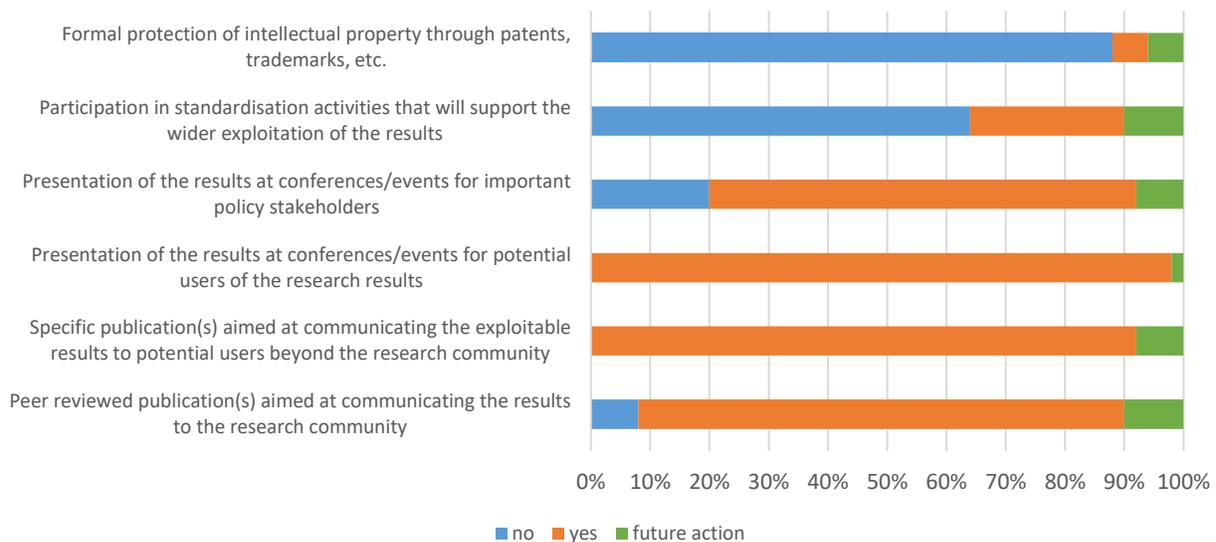


Figure 21: Undertaken actions to enable exploitation of research results

As the **main expected impacts on beneficiary organizations**, the following were identified: **improved profiles in the European/international research communities; improved access to networks and consortia; and improved competencies and skills** (Figure 22). Other important impacts were additional research income and increased interest in becoming part of other research and innovation partnerships at the European level.

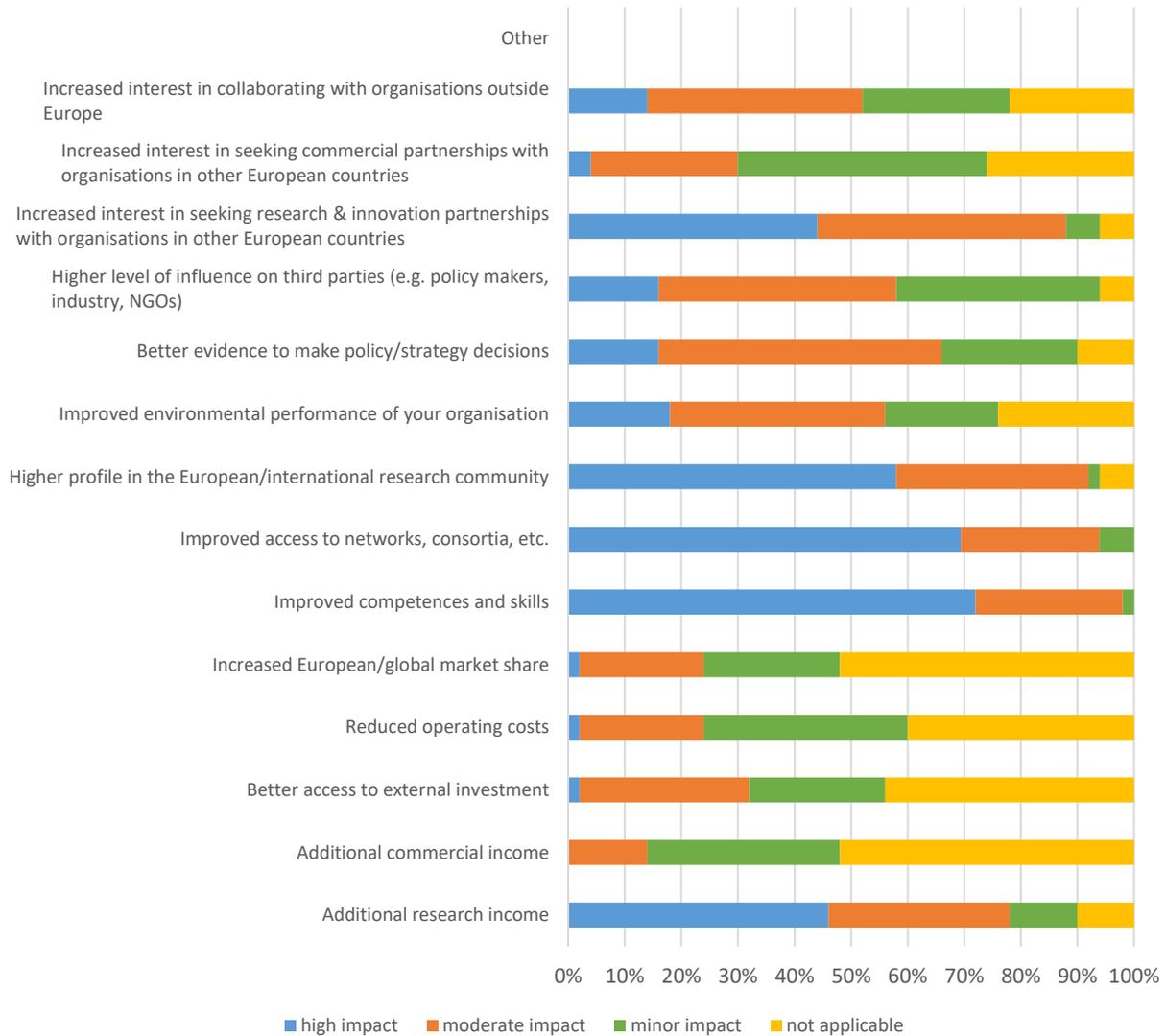


Figure 22: The expected impacts on participants' organisation

6.3 Impact

Moderate to minor impact was attributed mostly to improvements related to environmental performance, increase in commercial incomes and interest in seeking commercial partnerships, followed by reduction of operational costs and better access to external investments, etc. Again, here we must take into consideration that some of the expected impacts were not applicable to all projects.

Compared to the initial expectations, **the majority of CORE Organic Plus projects met expectations or even surpassed expectations in case of the scientific, innovation and environmental impacts.** Expectations were met to a lesser extent in the case of behavioural, policy and economic impacts (Figure 23). It is interesting to observe that all projects that took part in the survey at least met their initial expectations in the case of science-related impacts.

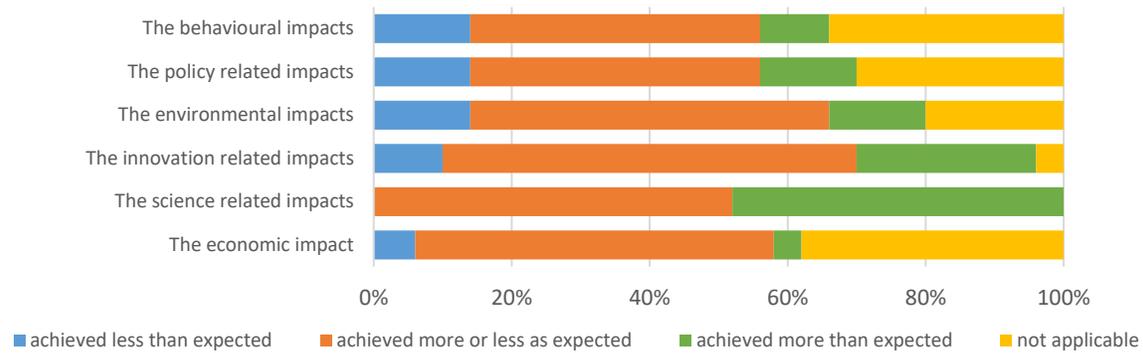


Figure 23: The level of impacts achievement compared with initial expectations

Figure 24 shows the main factors affecting project implementation. **Effective leadership and management of the consortium, coupled with good partner interaction and high-quality support coming from national funding agencies** were seen as the main factors that benefited project implementation, whereas resource availability and administrative burden were considered as inadequate and overwhelming for project implementation. Further, for most of the projects, interaction with end users and level of knowledge/expertise among consortium members were also seen as supportive factors for project implementation.

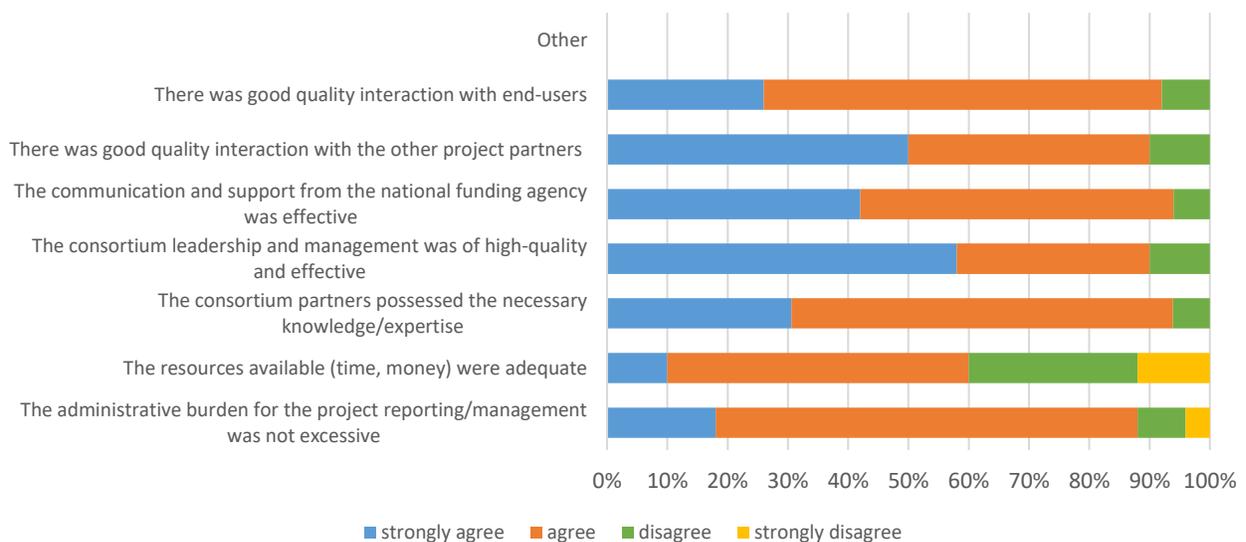


Figure 24: The main factors affecting the project implementation

Figure 25 shows the anticipated (wider) impacts of the exploitable outcomes, **beyond the respondents' organisation**. As can be seen, the results demonstrated mixed performance across the different variables put forward. However, the aspects that yielded the high to moderate impacts were related to **ability to improve environmental performance of the users; to provide new information and/or tools for use in education; to contribute to advances in complementary scientific and/or technology areas; to provide benefits for public health, safety and quality of life; and to improve the overall quality of their products and services**. The results showed that minor impacts were achieved in the creation of job opportunities both in academia and in other sectors.

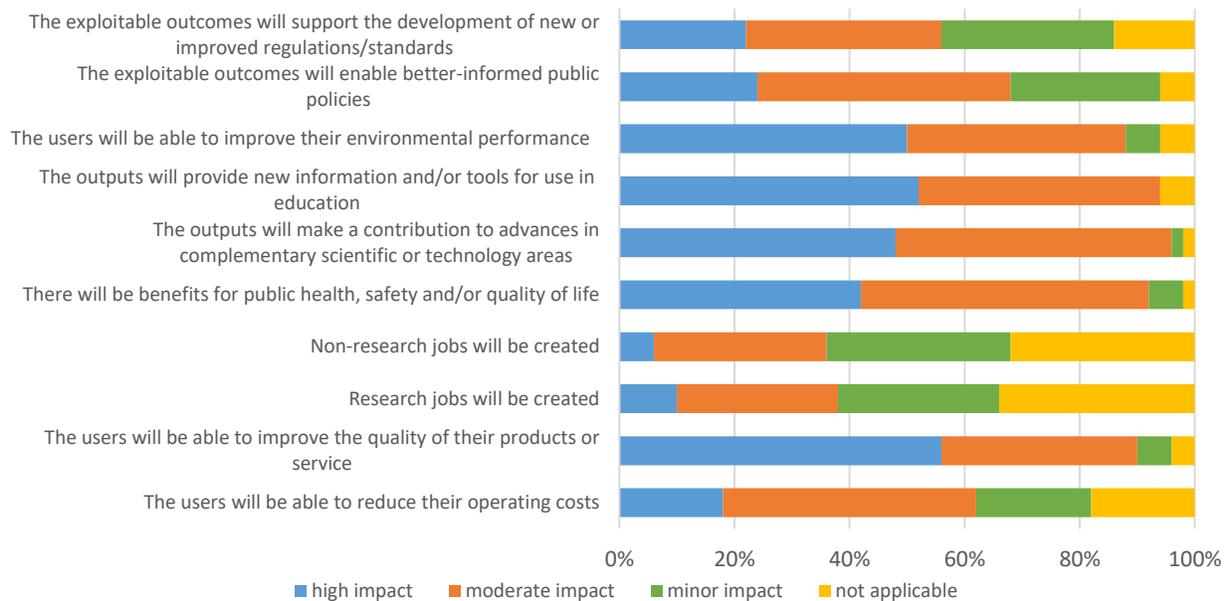


Figure 25: Anticipated wider impacts from exploitable outcomes

6.4 Other experiences

At the end of the survey, participants were free to provide any additional comment related to their experiences in relation to transnational projects and their impacts. Figure 26 shows the keywords most frequently used in this feedback. Among the comments, beneficiaries mentioned that, *“The global overview of all the complementary funding and activities that have been performed during and after the project are missing in order to really estimate the outcomes and impacts”*. Furthermore, some of them highlighted that *“It was a very nice experience to work in this consortium, in this ERA-NET CORE ORGANIC project. The outcomes were more than we expected, with high scientific and societal impact”*, or *“Good support from ICROFs in Denmark. They facilitated the disseminative work”* and *“The CORE Organic liaison to our project was a great help”*.

profile in the European/international research community, access to networks and consortia, and competences and skills were the main benefits at the organisational levels.

However, some minor differences were also identified. For example, while both groups identified impacts related to science, innovation and policy as meeting or exceeding their expectations, the CORE Organic II beneficiaries also identified behavioural impacts (e.g., increased interest in seeking research and innovation and commercial partnerships with organisations in other European countries and outside Europe) and the CORE Organic Plus beneficiaries identified environmental impacts.

The similarity of the results between the two surveys suggests that the experiences of the beneficiaries has not changed substantially. **Interestingly, the majority of the two survey respondents state that the benefits of their participation are either equal to or outweigh the costs.**

6.6 Discussion and conclusions

Overall, the CORE Organic Plus community expressed a range of motivations for participating in the call. These often recognize that certain challenges are better dealt with in international projects rather than national projects. Associated with this is the opportunity to access complementary research expertise. Perceived benefits span in three main types:

- a) Attitudinal/cultural through strengthening international collaboration among research communities across countries;
- b) capacity building, both in relation to science and technology capacities and skills, and international project management, as well as in terms of increased quality of research projects at national and regional levels; and
- c) conceptual, in terms of promoting collaboration between academics and non-academics, as well as in terms of increasing visibility of specific research issues at both the national and cross-national level. Anticipated impacts mostly related to the ability to improve the quality of products and services, advances in scientific knowledge and technology and to the ability to provide new information and/or tools.

Interestingly, the way that respondents replied in the survey questions regarding the types of benefits they experienced reveals a specific logic, connecting the various types of impacts together. Specifically, increasing research and technical skills cannot be a matter of international collaboration alone, but also requires some local conditions, such as adequate policy development and support at the national level. Quality of research is a reflection of skills and resources, coupled with international collaboration. However, collaboration at the national level among different institutions also plays a significant role. **CORE Organic should focus on scientific excellence and dissemination to practitioners, but at the same time, there is a need to pursue objectives beyond that, by increasing efforts to attract policy attention and support, primarily at the national level, thus becoming influential at all levels.**

7. General conclusions and recommendations

The impacts assessment approach highlights the importance of evaluating the impacts of CORE Organic projects based on a variety of methods. All four analyses show that **CORE Organic Plus has had a clear and positive impact for a wide range of target groups and is improving their impact in the consecutive programmes.** However, there is still room for further improvement.

7.1 Findings across the analyses

- The **greater focus placed on dissemination to industry and society by the CORE Organic secretariat seems to have been effective.** There was an increased focus on outputs targeted toward industry and society compared to CORE Organic II. However, this tends to taper off toward the end of the projects when a greater focus is put on scientific outputs.
- Despite improvements, challenges still exist with effective communication of practical results to end users outside the scientific/research community. The quantitative and stakeholders' engagement assessment showed that **there was a concerted effort to directly engage with industry and society** (e.g. through subject meetings/workshops and procedure for practitioners/farmers). While most survey participants engaged in publications which aimed to communicate exploitable results to end users beyond the research community, the survey also showed that **only a few engaged in standardized activities to support the wider exploitation of results.**
- The qualitative analysis showed that **end users expressed an interest in more practical demonstrations and the opportunity to participate more.** This was confirmed by the stakeholder engagement analysis, which showed that most outputs were focused on informing stakeholders rather than consulting or involving them.
- **Simply increasing the number of outputs (quantitative analysis) does not necessarily improve the impact (qualitative analysis)** (e.g., concerns that outputs did not produce new knowledge; only supported earlier findings). This was also reflected in the stakeholder engagement analysis, which highlights that consulting, involving and collaborating with stakeholders can have more impact than simply informing them.
- **The international nature of the projects made it possible to address topics that could not be tackled at the national level, to test tools and techniques and to disseminate results more broadly. The nature of the CORE Organic programme was also seen to be beneficial in terms of probability of success, flexibility, and solution-oriented results compared to EU Framework Programme projects.**
- Larger consortia with more partner countries have a higher potential to engage stakeholders in a broader geographical area but small consortia can also be very effective in engaging stakeholders at the local level. Interviews with end-users stressed the importance of dissemination for end users at each national level to create impact.
- **Expanding/building on previous projects can result in higher impact.** This could also serve to foster relationships with experienced stakeholders, which was identified as a strategy to improve

impact. However, it is important to make sure new projects are not just reproducing/validating previous results and that they step up the interdisciplinary nature of the projects.

- Many results, especially those related to agronomic experiments are produced toward the end of the project or after the project is over. **This substantially limits the projects' ability to disseminate this information and for the end users to ask questions or give feedback about the results.**
- There is no evidence for a trade-off between scientific excellence and society/policy-relevant outputs, or the investment of research teams in engaging stakeholders. **One single project can contribute to both objectives of the CORE Organic programme: contributing to the building research capacity and creating European, transnational and national impact.**

7.2 Recommendations for ERA-NETs and/or future research programmes

- Greater focus on **translating materials into local languages**. Sufficient budget for dissemination activities is required in order to do this. It could also help to appoint a responsible person for dissemination and communication in each country.
- Establish contacts with experienced stakeholders and **co-designing projects** with them to consider their needs and to produce new results rather than confirm old ones. Stimulate the participation of stakeholders as partners in the projects.
- Actively **disseminate results as early as possible** in the project. It could also be effective to add additional time at the end of the project that is reserved for dissemination activities rather than conducting experiments.
- Greater focus on **practical demonstrations and on-farm research/experiments**, which could show the potential of results in different practical contexts. It not only help to adopt new information but also tests the results in a real life context. **Foster engagement of various stakeholders and end users in co-design and co-development of all project phases**, starting from the identification and selection of issues, innovation activities, monitoring, and evaluation to co-authorship of scientific outputs.
- The development of a realistic **project dissemination plan**, at both the project and the national level, as part of the research proposals or in the very early stage of the project helps researchers focus the project and identify key stakeholders which can be informed and involved early in the project. In the plan, activities and the best tools to support the activities are described for each key stakeholder and each participating country. Sufficient attention should also be given to disseminate project results outside the partner countries by stimulating the communication through European dissemination channels. Good timing, budget and assigning responsibilities to each of the project partners are crucial in the plan.

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Annex 1: Questions used in the qualitative assessment

A. Open questions for the national partners in France and Finland

Questions related to national level:

1. To which activities/factors do you attribute the success of the different project outcomes? Select for example the 2 most relevant ones for you.
2. Do you see any obstacles for dissemination to and implementation of research results by end-users?
3. Were practitioners or stakeholders with direct link to the topic of the project closely involved to the project (as official partners or as stakeholder members)? How do you see their role in the dissemination of the results? How did you commit stakeholders through the project?
4. Are there cases known where the new knowledge produced in your project has been applied in the practice by organic farmer or entrepreneur? Give an example.
5. Do you have any advises to the researchers concerning an efficient and successful dissemination and implementation of their research results?
6. Has the knowledge produced in the project supported the development of organic sector in your country?
7. What sort of follow-up activities should take place/are you involved in to ensure that the results of this project are applied to the fullest extent possible? How will you contribute to these activities? Are stakeholders or end-users will be involved in these (e.g. preparation of new research projects, of stakeholder-led projects resulting from this research, etc.) and to what extent?

Questions related to transnational level

1. Did you promote the transnational dissemination of results? Any successes or obstacles.
2. Are all the deliverables meant to serve end-users in different countries still available on certain websites? If so, list website.
3. What do you consider to be the benefits for your participation in this particular transnational project?
4. Would this project have been possible in a purely national context? If no, please explain why and place emphasis on the added-value of the European dimension.
5. Which challenges did you encounter in participating in this particular transnational project?

B. Open questions for the end-users (farmers/processors 2-4, advisers 2-4) in France and Finland

1. Do you regularly search for research results on organic farming issues and if so, which sources and tools you prefer to use?
2. Did this particular project produce research knowledge valuable for you? Was it transmitted in a way which facilitated the adopting of the information?

3. What expectations did you have on this project and did it fulfil your expectations?
4. What would be the easiest way to adopt scientific information according to your experience, so that it would be easy to apply in practice? Good examples?
5. To which extent the knowledge produced in the project has supported the development of organic sector in your country?
6. Do you have any advices to be given to the researchers planning new projects to fill identified knowledge gaps of organic sector?

Annex 2: Stakeholder engagement analysis methodology: level of stakeholder engagement

For each CORE Organic Plus project, the level of stakeholder engagement was estimated by scoring the different outputs and activities from the project based on the methodology developed by the BiodivERSA ERA-NET.

The different categories of engagements defined in BiodivERSA are: 1) Inform, 2) Consult, 3) Involve and 4) Collaborate.

1. **Inform** most basic level of engagement. It corresponds to one-directional communication to stakeholders without real specific activities and without involvement in the actual research. *(Examples: information about the project or results through newsletters or websites, presentation in workshops or seminars, practical demonstrations)*
2. **Consult**: a certain interaction of researchers with stakeholders is organised and specific questions are asked by scientists to stakeholders but without a full two-way discussion or interaction. *(Examples: physical or e-consultation of stakeholder on research subject or outcomes, basic consultation to obtain access to study sites or to data without specific interactions, training sessions, performing surveys and interviews, small size meetings, on farm experiments)*
3. **Involve**: middle level of engagement; more opportunity for discussion and interactions is allowed compared to consult. Stakeholders are more fully engaged in the research and may also provide resources or data. *(Examples: organisation of a workshop to review projects questions or findings, two way exchange is allowed, discussion and provision of feedback to site owners or data providers, involvement in experimentation/monitoring beyond simple access to study site or existing data).*
4. **Collaborate**: stakeholders involved to some extent in research activities and/or project decision-making. Fully active engagement is undertaken where stakeholders are partners in the research team, possibly contributing to the suggestion of research directions and perspectives. *(Examples: involvement of stakeholders in the project's advisory or steering committee, co-production of a paper or another product co-authorised by scientists and engaged stakeholder).*

The level of engagement is scored for each stakeholder using the following scores: Inform=1, Consult=4, Involve=6, Collaborate= 8. The index is the sum of the scores for each activity⁵ computed per stakeholder and per project.

Based on information in the quantitative impact analyses and extra information in the final reports of the projects, all activities and outputs were categorized in one of these stakeholder engagement levels.

The categorisation of the different activities and outputs used for the CORE Organic Plus projects are:

- **Inform**: publication in subject specific journal/newspaper, procedures for authorities (policy brief), procedure for practitioners /farmers, lectures, feature article, newspaper article, subject publications in relation to the project, newsletter, homepage/website. -> score 1

⁵.

- **Inform/consult:** workshops to inform different stakeholders often not organised by the project consortium or workshops/seminars organised at the end or after the end of the project-> score 2
- **Consult** surveys/questionnaires, interviews, on farm experiments used to collect data, workshops directed to specific stakeholder groups organised by project consortium -> score 4
- **Involve:** repeated discussion groups, expert meetings, farmers networks established to discuss project results and research questions, training events -> score 6
- **Collaborate** stakeholders (farmers/producer/advisory service/processor) is partner in the project -> score 8

The number of stakeholders involved in the activities is not available for each activity and each CORE Organic Plus project. Therefore, only a simplified index could be calculated compared with the BiodivERSA analyses. The number of stakeholders reached with each activity is not taken into account.

As detailed information was not always provided and the information reported differs from report to report, the results for the CORE Organic Plus projects are partly qualitative and less detailed than the BiodivERSA ERA-NET.

Annex 3: Survey questions

1. To what extent did the following opportunities motivate your organisation to participate in the project? (for possible answers, see Figure 17)
2. To what extent was the transnational project opportunity superior to participating in a similar project with only national partners in your country? (for possible answers, see Figure 18)
3. Does your organisation have prior experience of international research and innovation funding schemes?

yes no

Transnational research & innovation projects that were co-funded by a national or regional funding agency in your country (e.g. ERA-NET) (Required)

EU Framework Programmes for research and/or innovation (e.g. FP7, CIP, Horizon 2020) (Required)

International schemes that extend beyond Europe (e.g. Belmont Forum, Intelligent Manufacturing Systems) (Required)

Other (please provide details below) (Required)

4. If you have some experience of EU Framework Programmes (optional question depending on answer to Q4), to what extent do you agree with the following? (for possible answers, see Figure 19).
5. What have been the main exploitable outcomes of the project for your organisation? (for possible answers, see Figure 20).
6. Which of the following actions have you undertaken (or are planning) to enable exploitation of your research results? (for possible answers, see Figure 21)
7. What are the expected impacts on your organisation from participating in the specific transnational project (i.e. how will your organisation benefit from the exploitable outcomes)? (for possible answers, see Figure 22)
8. How do you judge the level of achievement of the impacts on your organisation until now compared with your original expectations? (for possible answers, see Figure 23)
9. To what extent would you agree with the following statements about key factors that may have affected the course of your project? (for possible answers, see Figure 24)
10. To what extent do you anticipate any of the following beneficial impacts beyond your organisation (i.e. for third parties, society and/or the environment) from your exploitable outcomes? (for possible answers, see Figure 25)
11. Is there any other feedback you would like to provide about your experience of such transnational projects and their impacts? (for possible answers, see Figure 26).

Annex 4: Overview of quantitative analysis results

Indicator	Score	Ecoorchard		Propara		Prodiva		Soilveg		Susorganic		Fertilcrop		Ecoberries		Favordenonde		ODH		2-org.cows		Resolve	
		Count	Pts	Count	Pts	Count	Pts	Count	Pts	Count	Pts	Count	Pts	Count	Pts	Count	Pts	Count	Pts	Count	Pts	Count	Pts
Scientific effect			1245		960		925		320		2430		3410		2245		930		890		1295		2035
Scientific paper with JIF > 4	120	0	0	0	0	0	0	0	0	1	120	9	1080	6	720	2	240	0	0	0	0	1	120
Scientific paper with 4 > JIF < 2	100	4	400	5	500	1	100	1	100	13	1300	4	400	3	300	3	300	4	400	4	400	14	1400
Scientific paper with JIF < 2	80	2	160	0	0	0	0	0	0	0	0	8	640	10	800	3	240	2	160	4	320	0	0
Scientific paper without JIF	30	0	0	0	0	1	30	0	0	5	150	3	90	0	0	0	0	0	0	0	0	1	30
National language paper without JIF	20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	20
Books (chapters)	40	0	0	0	0	0	0	0	0	1	40	2	80	0	0	0	0	0	0	0	0	0	0
Conference Proceedings and work papers	20	5	100	4	80	12	240	3	60	12	240	23	460	0	0	0	0	3	60	23	460	7	140
Research report	20	2	40	6	120	7	140	1	20	3	60	4	80	1	20	1	20	6	120	3	60	9	180
Conference presentation (with peer review)	20	6	120	5	100	6	120	1	20	16	320	21	420	8	160	1	20	7	140	2	40	5	100
Conference presentation (without peer review)	15	13	195	6	90	11	165	6	90	10	150	4	60	3	45	4	60	0	0	1	15	1	15
Poster presentation	10	23	230	7	70	13	130	3	30	5	50	10	100	20	200	5	50	1	10	0	0	3	30
Embedment of knowledge			420		660		500		130		1170		1310		320		350		50		1930		210
Bachelor thesis	10	0	0	0	0	1	10	1	10	1	10	2	20	2	20	0	0	0	0	3	30	0	0
Supplementary training (education) per course	20	6	120	8	160	2	40	1	20	13	260	7	140	0	0	0	0	0	0	5	100	8	160
Researchers (PhD and post-doc)	300	1	300	1	300	1	300	0	0	1	300	3	900	0	0	0	0	0	0	4	1200	0	0
Master thesis	50	0	0	4	200	3	150	0	0	12	600	5	250	6	300	7	350	1	50	12	600	1	50
Development of strategic methods	100	0	0	0	0	0	0	1	100	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Impact on industries and society			3020		1770		1530		2330		1670		4790		490		490		1060		720		680
Publication in subject-specific journal/newspaper	50	20	1000	13	650	6	300	19	950	7	350	26	1300	5	250	2	100	8	400	3	150	5	250
Procedure for authorities (policy brief)	100	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Procedure for practitioners/farmers	100	11	1100	1	100	9	900	0	0	6	600	15	1500	0	0	0	0	3	300	2	200	0	0
Lecture	20	1	20	14	280	1	20	2	40	1	20	0	0	0	0	0	0	0	0	1	20	0	0
Feature article, newspaper article, general public	20	1	20	0	0	0	0	10	200	1	20	6	120	0	0	0	0	0	0	0	0	8	160
Interviews to nationwide radio or television, video	20	1	20	0	0	0	0	0	0	1	20	3	60	0	0	0	0	0	0	3	60	0	0
Subject publications in relation to the project	20	3	60	6	120	8	160	10	200	0	0	1	20	1	20	1	20	1	20	2	40	1	20
Subject meeting/ workshop	20	34	680	25	500	2	40	26	520	26	520	70	1400	10	200	17	340	14	280	10	200	11	220
Newsletter	10	6	60	4	40	8	80	33	330	6	60	16	160	0	0	0	0	0	0	0	0	0	0
Homepage/ Website	10	6	60	8	80	3	30	9	90	8	80	23	230	2	20	3	30	6	60	5	50	3	30

Annex 5: Stakeholder engagement analysis: additional figures

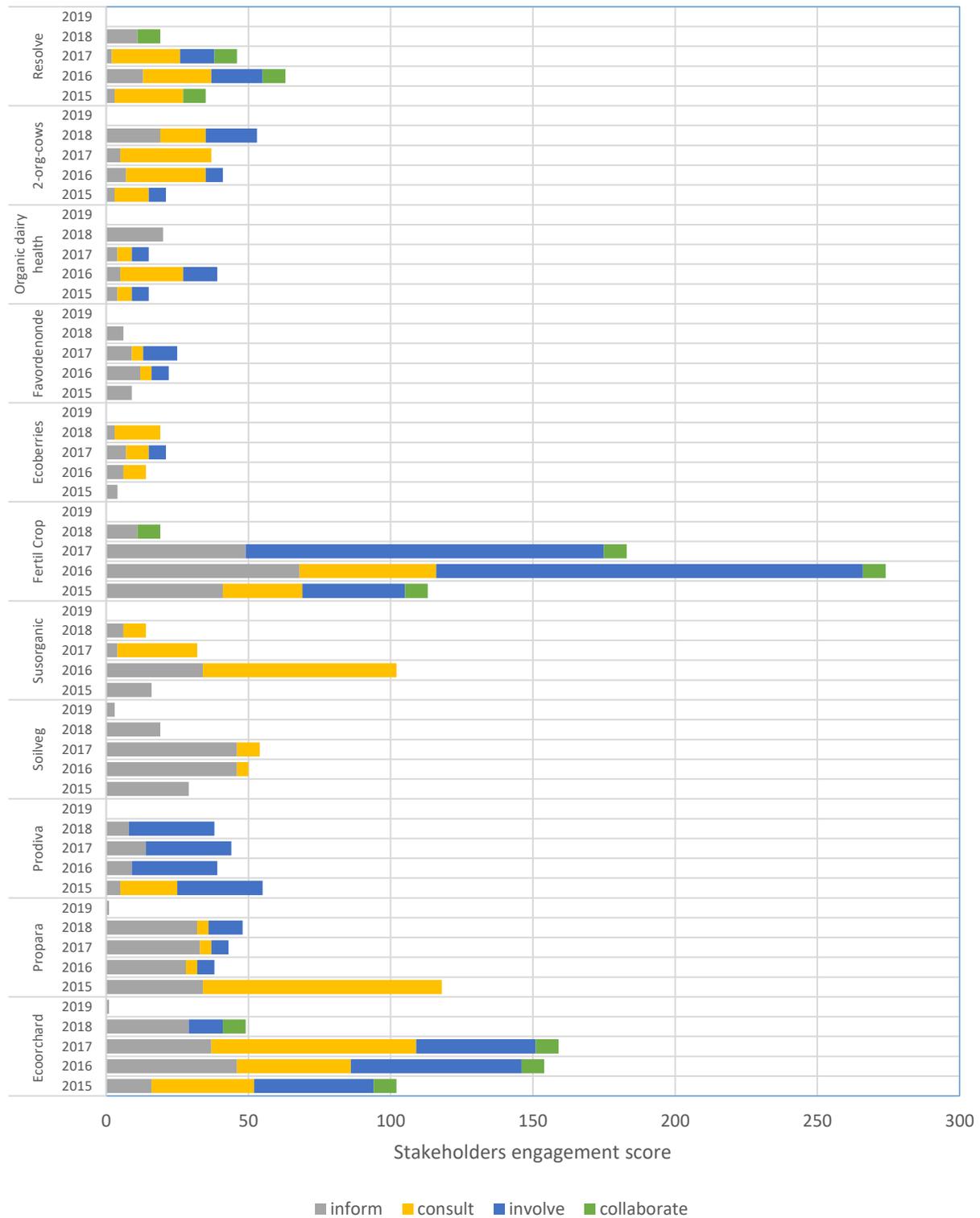


Figure 27: Stakeholder engagement score in 11 CORE Organic Plus project during the project period per level of engagement

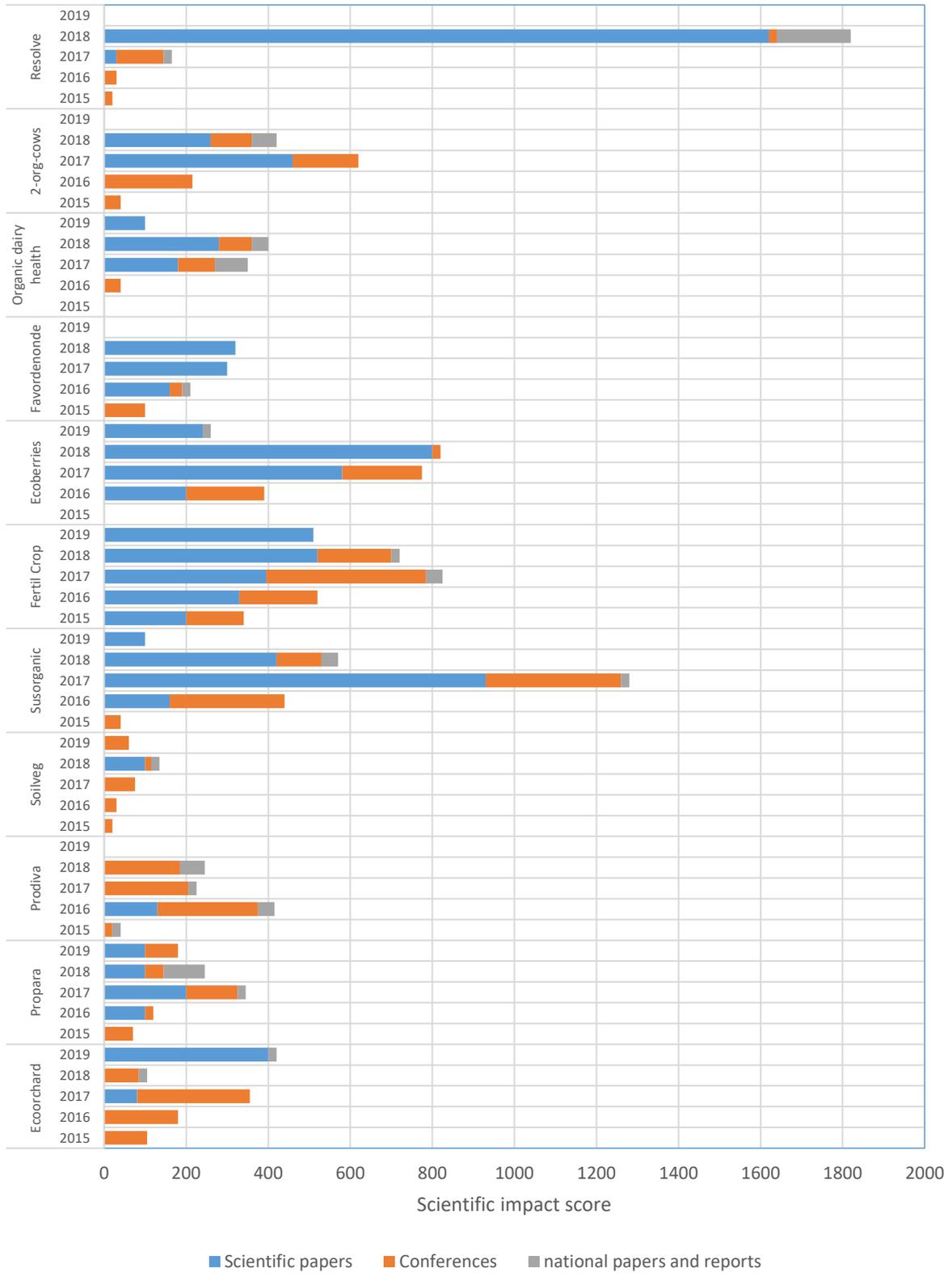


Figure 28: Scientific impact score per project year in CORE Organic Plus projects

