Wojciech Goszczyński
Institute of Sociology, Nicolaus Copernicus University
ul. Fosa Staromiejska 1a, 87-100 Toruń, goszczynski@umk.pl

Piotr Stankiewicz
Institute of Sociology, Nicolaus Copernicus University
ul. Fosa Staromiejska 1a, 87-100 Toruń, piotrek@umk.pl

Sandra Karner
Interdisciplinary Research Centre for Technology, Work and Culture
Schlögelgasse 2, 8010 Graz, Sandra.karner@aau.at

Nicoleta Chioncel
Independent researcher
nechioncel@gmail.com

LEAVING THE IVORY TOWER THROUGH SCIENTIFIC INNOVATION CO-OPERATIVE RESEARCH – A SOCIAL EXPERIMENT IN RESEARCH ON ALTERNATIVE AGRO-FOOD NETWORKS

Abstract
The paper presents a participatory pattern of conducting research for social science. A few projects based on the idea of 'co-operative research' have been funded within the 7th EU Framework Programme. Among them was the project "Facilitating Alternative Agro-Food Networks – Stakeholder Perspective on Research Needs" (FAAN). One of its goals was to test the potential of the co-operative approach in social research practice. This paper aims to present and discuss the experiences from the project to reflect upon the usefulness of co-operative research as a scientific innovation and a new research paradigm, as well as to propose its reframing based on the results of the project. The article ends with practical recommendations concerning management or research projects in a co-operative manner, stressing the need of competencies for team leaders in micro-management of heterogeneous research teams.

Introduction
The idea of co-operative research (hence CR) is rooted in a demand for democratizing science governance and related policy decisions to become more accountable for the values and interests that underpin both the governance of science and the role of research in the context of "evidence based" policy making. This implies recognising the framing of research (policies) and scientific evidence and underlying assumptions, purposes and inherent values, as well as the relevance of different forms of knowledge. We understand the concept of CR as it has been described within a report resulting from an expert workshop "From science and society to science in society: towards a framework for 'co-operative research'" [1] organised by the European Commission. Co-operative research is described there as "a new form of research process, which involves both researchers and non-researchers in a close co-operative engagement" [1: 9]. In contrast to many other engagement mechanisms, CR requires constant attention to trans-disciplinary engagement with stakeholders and public constituencies to explain the driving aims and purposes, the alternative orientations, and the wider social and environmental implications of research and innovation. Thus, this concept goes beyond involving multi-disciplinary or inter-disciplinary teams from specialist institutions and transgresses academic boundaries.

In relation to social sciences, co-operative research breaks many entrenched research habits. First, it opens social research areas typically perceived as reserved for natural sciences. It regards mainly areas of innovative, highly complex technologies, such as biotechnology or use of nanomaterials. Primarily because of social controversies related to those technologies, their course of development has become in the last years more inclusive for representatives of social sciences. Therefore, CR does not only introduce new types of knowledge

into social sciences, but also requires its integration. Second, on the methodological level, it introduces new ways of research process management; together with non-academic partners, new research methods, tools, concepts and notions are coming into social research practice. This requires an epistemology, methodology and organization that goes beyond disciplinary research, opens the research process, and integrates knowledge and values from outside the realm of science.

Such a new form of collaboration between science and society requires new standards and patterns of research work. Therefore, many question arise are related to the practical aspects of "doing CR": How does it work in practice (if at all)? What are the advantages and disadvantages of using CR in social research? Which challenges and opportunities does it bring about? What are the potentials and limitations for implementing such a co-operative approach in methodological framework? We will attempt to answer those questions by pursuing the <u>following goals</u> in this paper:

- <u>To describe the methodological framework of the project design</u>, which is based on the idea of co-operative research. The elaborated framework mainly applies to the meta-level of the research process, which relates to issues such as agenda setting, defining the goals and values, the work plan, communication between partners, social learning and decision-making processes.
- <u>To reflect upon the experiences with conducting co-operative research</u> from a point of view of research teamwork and day-to-day cooperation between academics and civil society representatives.

The research results presented in the paper are directly linked to the international <u>research project "Facilitating Alternative Agro-Food Networks – Stakeholder perspective on Research Needs" (FAAN)</u> funded within the 7th EU Framework Programme. The consortium consisted of representatives of 5 research institutions and 5 non-governmental organisations who jointly participated in setting up the project concept, the implementation of research activities and dissemination of the results. The project involved researchers representing a variety of disciplines, such as sociology, economics, political science and bioengineering. However, most of them came from social sciences. Representatives of the civil society came from organisations committed to the development of rural areas, local development, eco-development and sustainable food supply. The research lasted for 26 months and involved 5 EU member countries, including Austria, France, the UK, Poland and Hungary. Within the FAAN project, the focus was on civil society organizations (CSOs) acknowledging their growing role in science-society-interaction[1].

The paper consists of two parts. The first one presents the idea of co-operative research with its basic assumptions and main hallmarks. In the second part, experiences from the FAAN project are described and analysed. Three pillars of CR have been taken as reference points for this analysis: integration of different kinds of knowledge, upstream engagement and relation to the policy making process.

Co-operative research as a response to main problems of current science policy
CR – in a very broad sense – can be seen as a <u>response to the crisis in science governance</u>. This crisis has been described either as a crisis of trust in science [see 2, 3, 4], or as a result of new modes of science and knowledge production [5, 6, 7], such as post-normal science [8], mode 2 knowledge production [9] and transdisciplinarity [10, 11]. The main problem of science governance tackled by CR is the lack of effective possibilities to influence the direction of science development which would more widely reflect needs, interests, values and priorities of possibly many different social groups. In other words, CR tries to overcome the current situation in which agenda-setting for publicly funded research is often driven by interests and market mechanisms which do not always meet the needs of civil society. In this respect, CR is about "<u>bringing research closer to society</u>", and ensuring its societal relevance.
Therefore, CR can also be perceived as a <u>response to debates about the lack of democratic mechanisms</u> in regard to the governance and political legitimacy of science and technology and related agenda setting.

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[1] Institutions which participated in the project were Inter-University Research Centre for Technology, Work and Culture (AT); Nicolaus Copernicus University (PL); Agrocampus Rennes (FR); St. Istvan Univeristy (HU); The Open University (UK); Via Campesina (AT); CIVAM Bretagne (FR); Polish Rural Forum (PL); Genewatch (UK); Védegylet (HU). Reports from the project can be downloaded from the project website www.faanweb.eu

Although science and innovation policies are increasingly focusing on research and innovation that should be accountable to society and help to tackle society's great challenges such as food, climate change, health, and aging, there is concern that the European research agenda is being captured by commercial interests. For instance, within the recently launched Horizon 2020 research programme [12], research and innovation policies are often formulated against a "competitiveness" frame [13]. Horizon 2020 represents the financial instrument implementing the Innovation Union as a Europe 2020 flagship initiative, which aims at "developing an economy based on knowledge and innovation" [14]. In this context, research is essentially expected to contribute to economic growth and greater competitiveness, and it is considered as innovative if it takes "great ideas from the lab to the market" [15]. It leads to marginalization of both European society and social science from research frames. Balance in addressing societal needs beyond economic interests might be redressed by ensuring that the public and other key stakeholders than industry are given a stronger say in defining research and knowledge needs. This situation is connected again with shortcomings in existing participatory (or "democratic", "deliberative") approaches in science governance. Participation of the public in decision making about scientific innovations has turned out to be in many cases ineffective and/or used mainly to legitimize political decisions which have already been made [16]. However, CR does not intend to drop out the participatory approach as such; instead of doing that, it offers a significant reformulation of public and stakeholder participation in science governance, which aims at improving previous approaches.

Taking into account these features of CR one can say that it offers a promising approach to facilitate research on issues which [1] have a high degree of societal relevance and (2) have been up to now either neglected in the mainstream research or 'monopolized' and studied only in one dominating way.

Co-operative research positions have of vast tradition of participatory research ("participatory research", "action research", "transdisciplinary research", etc.). The issue of public participation have been one of growing interest to academics, practitioners, regulators and governments for many years. Fischer [17] describes public participation as "deliberation on the pressing issue of concern to those affected by the decisions at issue". For Rowe & Frewer [18], public participation is "the practice of consulting and involving members of the public in the agenda-setting, decision-making, and policy forming activities of organizations and institutions responsible for policy development."

In response to the lack of trust and confidence in science and policy, or as Felt & Wynne [4] called it, "public unease with science", new mechanisms or interfaces between "science and society" and "science and policy" are expected to be developed to make innovations and knowledge production more socially robust, to enhance the "public value" of innovation [3]. First, the concept must be abandoned that a lack of trust towards science and the rejection of certain techno-scientific developments can be explained by a lack of information in society. Informing the public is not enough, because people experience science through social relationships [16]. People do not simply need information, but a more open kind of dialogue, instead of one-way communication, which must be established by "moving outside the niche ghetto of science and society research to incorporate elements of public engagement as essential features in the funding cycle for conventional scientific and technological development activities" [1]. Second, practitioners – or the "users" of scientific innovations – hold valuable experiences that should be taken into account in addition to the "experts" [5].

With the introduction of "Responsible Research and Innovation" (RRI) as a cross-cutting issue in Horizon 2020 [15], the engagement of non-research actors in research and innovation activities might gain even more relevance. As outlined by Von Schomberg [19], RRI is "a transparent, interactive process by which societal actors and innovators become mutually responsive to each other with a view to the (ethical) acceptability, sustainability and societal desirability of the innovation process and its marketable products to allow a proper embedding of scientific and technological advances in our society". Furthermore, Owen et al. [20] highlights deliberation as an important dimension contributing to the substantive agenda in future programs of responsible innovation.

Three pillars of co-operative research in FAAN
The FAAN project was built on three main features of CR:
- Integration of different kinds of knowledge.
- Upstream engagement.
- Reference to the policy making process.

The first point is related to the way knowledge is being treated in Co-operative research. First, it is not seen as a static commodity, which is "out there", "as intrinsic property of the date, separate and independent of the knower and knowing process" [21] and can be transferred from one person to another (or from nature to scientists), like it is conceptualized in some forms of participatory research, where lay people are confronted with knowledge presented by experts. Instead, the concept of CR [1] defines knowledge as a relational actor-oriented process, and it stresses the process of social shaping of knowledge. However, this understanding of knowledge production generates certain problems in collaborative research processes. As Natasha S. Mauthner and Andrea Doucet notice, "If knowledge is produced through located, embodied and specific subjectivities, contexts and relations, 'putting knowledge together' entails reflexive research practices that recognize and articulate such contexts and specificities, and use them as sources of knowledge in their own right." [21]

By talking about "putting knowledge together", Mauthner and Doucet refer to the problem of integration of different kinds of knowledge produced by participating partners. Although their work on team-based research practices is not referring to teams with academics and non-academics, but to groups of researchers only, their examinations are in some points also relevant for trans-disciplinary research projects such as FAAN. Trying to find an answer to the question "how to translate theoretical postulates of collaborative research into research practice", they point out the following problem: "Team research relies on a division of labour that creates divisions and hierarchies of knowledge, particularly between researchers who gather embodied and contextual knowledge 'in the field' and those who produce textual knowledge 'in the office'" [21]. Existing research practices are reflected – in their opinion – in "hierarchies of knowledge", in which textual knowledge is regarded as more objective and accorded higher status than embodied and contextual knowledge, which is seen as more subjective. Fieldwork tends to be viewed as a technical activity that can be done by anyone, rather than an intellectual process in which meaning and knowledge are being shaped and created by subjective researchers.

The understanding of <u>knowledge production within co-operative research</u>, which has been taken from the tradition of collaborative research, brings about similar challenges for the constitution of the research process to that described by Mauthner and Doucet. It should be stressed that such an approach does not exclude scientific knowledge from this understanding. The way scientific knowledge is framed, which questions it answers, which values it fulfils, and whose interests it serves is shaped in a process of social negotiations and public engagement with stakeholders and representatives of civil society. It does not aim at undermining the value of scientific knowledge. As Andrew Stirling explicitly says, "The point is not therefore that interested stakeholders or randomly recruited members of the public can be better experts than the experts. The issue is rather one of acknowledging the crucial role played by cultural values, sectional interests and political and economic power in the shaping of knowledge" [1].

The idea of co-operative research itself originates from the field of "science governance" within Science and Technology Studies [22]. As such, it aims at integrating scientific knowledge (presented by experts) with other types of knowledge. This integration in the process of knowledge production is directed towards establishing reliable knowledge consisted of elements commonly perceived as scientific and non-scientific as well.

As a rather broad and general idea, CR can refer to both natural and social sciences. In the discussion within the "science governance" field of study, one can notice a certain tendency to concentrate more on natural, than on social sciences. However, in the FAAN project we were attempting to adapt CR to the social sciences in the area of agricultural food production.

<u>Integration of knowledge</u> is a crucial element of Co-operative Research. What distinguishes CR from many other participatory approaches is the fact that CR does not aim at simply producing "pure" scientific knowledge with the support of non-scientists. Such an approach would assume a preference of scientific knowledge over other kinds of knowledge held by non-experts. In the case of co-operative research, the goal is to produce knowledge that goes beyond the narrow term of "scientific" and consists of different kinds of knowledge represented by different actors participating in the CR process. Within FAAN, we were producing socio-economic-political knowledge, which is generated in broad socio-economic and political systems by integrating different kinds of knowledge. Therefore, when talking about co-operative research in the FAAN project, we should always keep at the back of our mind the broad framework of "knowledge production". Framing an issue in a participatory manner is based upon the assumption of equal status of different kinds of knowledge, which must be considered in the research design. It is no more the scientific knowledge alone, which plays the leading

role and prevails upon other kinds of knowledge, but also such kinds of knowledge as tacit, local, common-sense and non-expert knowledge becomes a part of the framework.

Upstream (or "bottom-up") engagement, another core aspect of CR, refers directly to the issue of framing. It emphasises the need to involve the public at the very beginning of a research process and let it co-shape the framework of the research process and decisions over "framing" a policy issue when it is still open to be influenced [23]. Upstream engagement designs the research according to the needs and values of wider groups of society to set specific goals and prepare an adequate base for the research, reflecting commonly shared assumptions, understandings and moral values. Upstream engagement is opposed to the "top-down" approach, where the public plays only a passive role – it is presented with readymade solutions at the end of a research or policy process and can only give feedback by expressing its opinions on ready-made facts. In such situations, the issue at stake gets a very narrow frame by excluding some options at the very beginning. Thus, the public can decide "yes" or "no" or "what to do", but not about "how to do it" or alternative choices. This brings us to the final point of CR, which concerns decision making on policy relevant issues.

The reference to the policy making process is in accordance with the goal of CR to bring research closer to society and connect it more with stakeholder needs. This can be accomplished only when the two previously described conditions – integration of different kinds of knowledge and upstream engagement – are fulfilled. To describe the situation, Stirling uses the opposition of "closing down" versus "opening up" the debate by public engagement [1]. The top-down approach is aimed at "closing down" a debate by letting the public decide what to do and choosing from proposed solutions. CR starts from the other end and involves the public at the earliest stages to "open up" a policy process and shape it within a desired framework. This characterises the difference between some other participatory approaches and CR: while the former prioritizes the process of informing decision makers by the public, the latter emphasizes the shaping and framing of decisions to be taken. In other words, CR is more about "decision making" than "decision taking".

Civil Society Organisations (CSOs) as the voice of the public?

Up to now, we have been referring to the "involvement of civil society" or "the role of the public" in research processes. Now we would like to underline the important role of **Civil Society Organisations (CSOs)**, which may be seen as a kind of connector between the 'general public' or particular groups of the public and decision makers. As the authors of the report "Governance of the European Research Area: The Role of Civil Society" mention, the term CSOs refers to the following kinds of organisations [24]: "The labour-market players (trade unions and employers federations', often referred to as the "social partners"; organisations representing social and economic players , which are not social partners in the strict sense of the term; non-governmental organisations which bring people together in a common cause, such as environmental organisations, human rights organisations, consumer associations, charitable organisations, educational and training organisations; community-based organisations , i.e. organisations set up within society at grassroots level, which pursue member-oriented objectives: youth organisations, family associations and all organisations through which citizens participate in local and municipal life; and religious communities." Over the last 20 years, an increasing number of CSOs have diversified from service provision into policy advocacy. They are being credited as having considerable impacts on global processes ranging from economic development to democracy. CSOs play increasingly an important role in science-society-interactions by actively addressing issues of public interest. Moreover, they mediate between the research community and 'normal citizens'. This mediator-role might be particularly important in democratising science governance. CSOs often have the inside knowledge of societal needs, and they have the capacity to generate questions for agenda setting. Still, until recently CSOs have rarely been involved in research policy issues and research activities. The involvement of CSOs mainly aims to facilitate implementation of results from research or political agendas. There are very few research activities, taking a bottom-up approach by involving CSOs at a very early stage in research and related policies, such as in agenda setting.

Co-operative research in practice – what can we learn from the FAAN project

In the preparation for empirical research and CR methodology, the FAAN project was divided into several modules by content and technique, which were supposed to help achieve the analytical objectives and support the communication process within the consortium. Within the content tasks, 10 case studies describing specific Alternative Agro-Food Networks (hence AAFN) were prepared. The case studies were supplemented with research into the public policies of the AAFNs development.

The implementation of the FAAN research project was supposed to enable the achievement of the following objectives:
- To test the co-operative research methodology in the practice of a large international research project.
- To identify the specific nature and the stage of development of the alternative food production, distribution and consumption networks in selected countries.
- To analyse the broad policy of support for the socialized forms of agriculture and its position in development programmes for rural areas at the European, country and regional levels.
- To create potential scenarios of local food systems development in areas covered by the study.

The specific nature of alternative forms of agricultural organisation and the practical orientation of the research have determined that the project, used the co-operative research methodology. As Krzysztof Gorlach notes, contemporary studies of rural issues encourage the use of instruments which will promote the fusion of local, tacit, managerial and scientific knowledge. "First, scientific (new environmental knowledge in this case) may be identified as a tool revalorising traditional, local knowledge. Thanks to that, traditional knowledge has become a part of current reality. Therefore, in fact, we have to talk about a kind of a hybrid structure in which important elements of traditional and scientific knowledge co-exist and interact with each other." [25]

In FAAN, the major assumption was to connect the representatives of research institutions with the representatives of civil society organisations who engaged in shaping changes in rural areas. Such a structure and formula of the research team gain specific significance in the case of the alternative networks of food production, distribution and consumption. It allows one to include in the research the point of view and objectives of individuals and institutions who directly engage in supporting local systems of agricultural production in rural areas. It leads far beyond technological change by treating food as a complicated societal issue.

Transdisciplinary process design
The FAAN cooperation was characterised by a strong bottom-up approach of already setting up partnerships in the incipient phase of developing the project idea and writing the proposal. In addition, we ascribed a crucial importance to a step by step process design to be developed and adjusted according to the results from process reflections.

In the FAAN project the process design has been elaborated based on concepts for the implementation of transdisciplinary research methods [26, 27], namely along alternating phases of "integration" and "differentiation" steps. Both phases were characterised by a process of interaction between project team members and further participants that allowed them to express their individual interests and viewpoints and knowledge to be exchanged, discussed and shared. While differentiation steps were supposed to make differences explicit, integration steps served to identify common grounds and to implement identified differences in a way which created the basis for agreement on the next step in the project. The core aim of all efforts in designing this process was to provide conditions which should allow for a meaningful integrated knowledge production.

Integration of different kinds of knowledge
The application of mechanisms allowing participants to merge different types of knowledge using a project as a platform was to be ensured in FAAN by means of:
- Mixed composition of the research consortium in which the representatives of academic institutions and NGOs engaged in the field of alternative forms of agriculture cooperated in designing the research on equal terms.
- Including in the project the participatory research methods and techniques to reach individuals and institutions operating at different levels. The research involved qualitative case studies in local communities, scenario-based workshops at the regional and national levels, and finally, a European conference and workshop which took place at the DG Science office in Brussels. The varied levels and partially active role of the respondents were supposed to: enhance the accuracy of the research, promote the engagement of actors representing diverse systems of knowledge. The structure of the

research instruments (especially the workshops) allowed for the construction of a two-way communication between the researchers and those investigated in the study.

The point in integration is to try to create a common understanding, seek common objectives, and work on the commonality of the identified differences. It is worth noting that in the practice of the FAAN project, the transition between these stages was not linear, and the defining and identifying meaning occurred throughout the whole period of the project implementation. The basic dividing line which emerged during the project execution was connected with the academic or CSO-related origin of the individual and their motivations to engage in the project. The partners' motivations may be generally divided according to the initial declarations on the objectives of participating in the project. As it had been assumed, initially, there were two prevailing types of motivations:

- Oriented towards resolving problems in the development of alternative food networks (practical orientation). In this case, strategies aimed at direct action dominated.
- Academic orientation towards understanding the phenomenon of social consequences of the development of new forms of agriculture, and connected with the attempt at questioning the dominant systems of knowledge on agriculture development and consumption (academic orientation).

However, such compositions of the research team led to a rather unique estimation of FAAN project aspects. The key factors pointed out by the partners pertaining to interpersonal relations, the secondary ones focusing on academic and practical effects of the project, and those treated as tertiary and valued the lowest - the backroom of science, intuitively reflects the specific nature of the co-operative research. It is aimed at the process of co-construction of knowledge, and the consortium is here a ground for forming relations and clashing opinions. Actually, this is quite an obvious effect – since the very beginning of this path of practising science, it was important to seek mediating discourse [28]. Within the consortium, the partners' initial objectives, research and practical questions were transformed in the process of discussing. The FAAN example shows that this way of conducting research causes that it is somehow being created again throughout the period of the project execution – and the results of the process may be surprising for the participants themselves. Paradoxically, this process is so complex that at a point it may overshadow the tangible results of the project. The aspects of the project that achieved the lowest values were those connected with methodology and, paradoxically, the role of science. One might argue that this is a weakness, but it is a specific characteristic of this mode of practising science. At the same time, however, it indicates the unique conditioning of the research process; it is the consortium composition, the skills at managing interpersonal relations and competences in solving conflicts that the actual effectiveness of the project consists in. When joining a team, every partner was primarily focused on solving a particular problem, either an academic or a practical one. Nevertheless, during the activities it turned out that this aspect became strictly dependent on the nature of relations between the actors: "So, this is the second thing I want to underline and this combination of CSO and academic partners, at least in our […] context has been very, very useful and it was something that we didn't really expect because, I think the main lesson for me, at least, it was this combination of university and activist context […] and this is if I think about the differences, for me a very important aspect." (Academic institution representative).

In general, the composition of partners in the research team was a facilitating rather than hindering factor of knowledge integration. However, the evaluation pointed out some elements which disturbed this process. During the project differences emerged in terminology, such as a different understanding of the notion of alternativeness depending on the country and the represented organisation. An equally substantive division pertained to the different cultural and institutional contexts. During the project implementation, there were claims for commonality of language and terminology used by different teams. The partners had to accept the variety of institutional models in which other operated. In the consortium, the cooperating individuals from countries of highly dissimilar experiences in both the functioning of scientific institutions, and the model of NGO activity, which demanded great deal of empathy and understanding of administrative barriers that emerged in the course of the research. The processes of integrating different types of knowledge were also hampered by extremely different ways of legitimising data sources and evidence. The academics based their findings on literature surveys and codified techniques of data collecting, while the representatives of the 3rd sector used more grey literature, as well as tacit and local knowledge. Connecting the various systems into a coherent whole proved to be a highly complicated task. "It was really an important aspect to pay attention to equally considering the input of the CSOs and academic partners. […] At the beginning of the project it was not

so clear why and how to consider and balance these inputs – shall we trust more the literature, how much shall we base the research design on the experience of the CSOs? I was not completely sure about how reliable they might be […] maybe they were just interested in bringing their lobbying work forward […] In the run of the project we realised that indeed such a combination of academic researchers and practitioners is very productive. In the end of the project people were convinced that specific contributions of each part were valuable […]" (Academic institution representative).

The idea of considering various types of knowledge on equal terms in the process of research design, execution and implementation poses specific challenges for the team who design and implement the research. The FAAN project demonstrated that the key element is the consortium's flexibility, willingness to modify the research objectives, instruments, perception of the research and its results. This requires more unusual methods of research design, which brings us to the next aspect of co-operative research, namely the upstream engagement.

Upstream engagement

According to the basic principles of CR, both academics and civil society organization members had to jointly construct frames of the proposed research. Demand for bottom-up approach led team members in front of challenges unusual for traditional way of conducting science.

More time was spent than traditionally on integrating the team, internal communication, and coordination of activities. Apparently controversially – a variety of financial, organisational and time-related resources were devoted for workshops on clear and precise articulation of differences, the issues of controversy and joint attempts to work on them. The instruments used within the FAAN project and promoting joint cooperation of members were [29: 31, modified]:

- Communication measures focused on improving the processes of information exchange within the research consortium. In the FAAN project, these were based on direct contact and workshops on the one hand, and cyber-instruments on the other, including primarily discussion groups, intensive use of communicators and the so-called 'FAAN wiki' – an adaptation of the Wikipedia mechanisms.
- Self-reflection and understanding of the need for compromise in connecting personal experiences into one whole. In this case, this process was most of all individual and required that each consortium participant alone reflected on their motivations and role in the project.
- Negotiations and coordination of the decision-making process. A separate function of 'co-operative research guardian' was distinguished – a person whose responsibility was to control the process of decision making and power distribution. Also, an important role was played by the personnel engaged on the side of the leader – they ensured the common nature of the activities.

In the FAAN project, the animation of upstream engagement processes was two-way – on the one hand, the mechanisms and communication tools were formally institutionalised, but on the other, the informal contacts between the researchers were highly important. In practice, it turned out that the latter channel is more important for the proper process of the co-operative research. Despite the coordinators' activity, the formalised channels of communication, Internet fora, or special websites the activity of consortium members failed to increase. Much more important were meetings, workshops and activities initiated bottom-up by the partners. This is the core of the issue with CR – they have a deeper sense when the motivations and expectations of people participating in the research allow for such a cooperation. The FAAN project experience proves that in this mode of conducting research, a much more important role than traditionally was played by the soft factors connected with participants' personality and behaviours. This also requires at least partial commonality of the objectives of the research team who join the project. In the FAAN project, this common element was the willingness to analyse and strengthen the new social forms of agriculture organisation; this mutuality of rudimentary interests promoted the later solving of conflicts connected with dissimilar systems of knowledge represented by the experts.

In practice, the selected model of research use of different tactics of micro-management within particular research teams and content modules, as well as other structures of the consortium itself. A less important role was assigned to hierarchical relations, typical of the academic entities. The researchers were made to redefine the ways of decision making. Each element of the project from the application, research concept and

instruments, to the ways had to be discussed with the consortium members. Additionally, the content modules were constructed so that they forced the mutual cooperation of scientists and CSOs activists.

It is necessary to discuss two additional, specific aspects of the co-operative research which emerged as significant in the project. The first is time allocation. The integration of various knowledge systems, precise definitions of differences and their commonality require vast amounts of time spent on achieving consensus. Assuming the scientific orientation, it must be stated that technically, in the FAAN project, the research itself could have been conducted faster – this was actually the reason for tensions within the group. Close cooperation of partners coming from various sectors allowed for diversifying the perception of the research subject in the FAAN project; however, one needs to bear in mind that in designing such types of research, the participants have to be given sufficient time for discussion, conflict and development of methods for solving it. The FAAN project was characterised by the non-linear nature of the research process. In contrast to the classic model, this required a larger amount of resources and time for the agreement on common position. The second element whose meaning should not be underestimated is language and the research team's communicative abilities. The question is not simply the command of the language. The research does require highly precise definitions, however, additionally, the mechanisms of integration make continuous reorientation of the consortium members a necessity. This is impossible if the linguistic competences of the team are limited.

It is also necessary to pay attention to the role and significance of trust in the FAAN project. Strong emphasis on the relationship and interlinking of the project effectiveness with quality of teamwork causes that the significance of this category substantially exceeds the standards of work in a classic project where the relations between the partners may be institutionalised and based on existing modes of cooperation. "In this project we established a close and a really productive co-operation, […] at a certain point this became a friendship, and this made it so easy to understand each other and work together, yes, this was very productive […] we will carry on our cooperation […] for sure we will do this" *(Academic institution representative).*

In the case of the FAAN research, there was no such possibility – good, personal relations within the consortium were indispensable. The role of the coordinating team was also of high significance. Apart from controlling the performance, schedules and expenditure, it had to focus on the nature of bonds, quality of connections and communication within the consortium as well. In practice, such balancing of the interests of partners proved to be rather difficult. The research evaluation showed the redirecting of focus towards practical objectives backed up by the civil society organizations. The representatives of scientific entities stressed that a great variety of data collected during the study might have been used more thoroughly. "Actually I think it was because of the nature of the project like maybe because it was more like looking at the CSO's interests as well in this way there wasn't kind of academic elaboration in the way that it might be if it were an academic centered project […]But from this aspect it was quite helpful as well because then there could be plenty of academic analysis which could be generated [..]." (CSO representative) This issue reflects a certain dilemma of the co-operative research. In a sense, they are always based on a compromise. Despite the research question, or science as a matter of priority, it is still necessary to reconcile its objectives with the practical orientation of some partners.

References to policy making process
This leads us to the third pillar of co-operative research, which is the policy making process. It is assumed that this notion pertains to the specific role played by the participatory model of practicing science. The objective of projects based on CR is not to provide a ready-made answer, or to close the debate, but rather to open it by letting new groups of citizens produce knowledge. It has to be stressed that contrary to knowledge integration and upstream engagement, this point refers to the modes of research team management to the smallest extent, and to the biggest one to the applied research techniques and ways of results dissemination. Coming back to the FAAN project, linking with the policy making process was supposed to occur by means of the specific construction of the empirical part of the study. The classic techniques of data collection, such as desk research, in-depth interviews, and focus group interviews, were complemented with workshop techniques based on a deeper and two-direction engagement of the study subjects and a two-way mechanism of results popularization.

The first of the elements opening the debate were scenario-analysis workshops. These were to engage key stakeholders, such as farmers, food processors, consumers, and officials in the debate on the future of the

alternative model of distribution and, at the same time, to introduce their expertise and their point of view into the research project. "Could a focus group bring additional value? We think that it cannot bring useful additional information […] we better use the resources for a second scenario analysis workshop […] this is a better method to reveal driving and hindering factors […]". *(Academic institution representative)*

Meetings at the country level were complemented with one European workshop within which key national and EU experts were to create models of new forms of agriculture development. In the evaluation, the workshops were indicated as one of the most important elements, a more valuable one than the classic techniques based on one-way information transmission. What was underlined was how strongly non-research actors, which in the classical mode of science had been rather passive respondents, got involved in them, as well as the density, the detailed character of workshop data description, which is, after all, one of the requirements of a rich, deep qualitative analysis. On the other hand, the number of meetings held was a major limitation. The teams organized one or two workshops, which drastically limited the actual effectiveness of this technique.

The second element, which is more difficult to assess, and which may influence the opening of the policy debate process, was connected with the <u>way of disseminating the project results</u>. There were two modes of communicating the project results. The first was the classic one that consisted of producing scientific materials such as conference papers, publications in ranked scientific journals, and scientific monographs. The second mode, based primarily on the CSO members – was aimed at popularizing the results among the practitioners concerned with the domain of food, and at engaging them in the process of developing alternative forms of food production or changing legal regulations applicable in certain countries. To achieve this, non-governmental organizations networks of contacts, workshops techniques, materials distributed by organizations participating in the project, discussion fora were used. Therefore, not only was there space for a wider reception of the study results by practitioners provided, but also the heat of the debate on the subject matter studied by the consortium was raised. We believe that, apart from the manner of managing and decision making, it was the mode of results popularization that was one of the most significant innovations within the FAAN project. Obviously, it has to be stressed that such a two-way direction of results disseminating also has some disadvantages, which were revealed in the course of the project execution. Basically, it means that the researchers' limited amounts of time and resources have to be devoted for scholarly publications and work with experts from outside the academy. In practice, this means a smaller number of hard points, publications or conference speeches which a scientist may be able to produce. Nevertheless, if we assume the deliberative role of science and the potential in opening to the society, also after the project completion, then the limitations, however adverse for a scientific career within the current academic system they may be, seem to be justified.

Conclusions: toolkit for co-operative researchers
<u>The added value of the co-operative research</u> in the FAAN project must be highlighted at the beginning. On the one hand, it enabled the researchers to go beyond the typical, analytical ways of perceiving the social aspects of food production. On the other, though, it provided the practitioners with a more critical approach to the subject of the development of socio-economic alternatives in agriculture. The FAAN project allowed for the inclusion in the research of scientific, practical, expert, local, national and tacit knowledge. As a result, this led the research in the direction which the researchers were initially unable to predict. At the same time, it has to be noted that to conduct co-operative research in practice is complicated. Most of all, it has a processual nature, each stage of the project must be analysed from two perspectives: the technical standard of practising science and the processes of knowledge integration occurring within the consortium and between the researchers and those investigated. The FAAN project was less linear in nature than the research projects in which the authors participated earlier. The objectives, definitions, and techniques evolved together with the participants. It was also a highly complex organisational undertaking. It was necessary to guarantee the possibility of deliberation and operation to approximately 30 persons from 10 organisations coming from 5 very different European countries. In the phase of the research design, the stages of commonality and differentiating, space for discussion and conflicts had to be considered. The specific resource distribution was determined by the key meaning of social interactions. A relatively large amount of resources was allocated for team meetings and the social component within which the processes of partners' integrating were observed. This required a radical change in the approach to research funding and schedule design.

The CR, with its inherent postulate for knowledge integration, upstream engagement and social learning, raises another issue overlooked in social science handbooks of methodology and research methods and techniques. What is meant here is the <u>micro-strategies of managing research teams</u> at the levels of consortium and national teams. Moderation of group processes, joint decision-making, building social relations and trust between team members, and resolving unavoidable conflicts becomes as important as analytical expertise in CR. In the environment defined in this way, apart from possessing strictly substantive competences, team leaders have to perform functions which are relatively new to scientists, namely, those of team managers and group processes promoters. It is only the combination of the role of researcher and moderator that increases the chances for proper integration of various knowledge systems within single research. If the research is to build a hybrid ground, connecting different research perspectives, especially the social scientists have to acquire new soft social competences seemingly unrelated to practising science. It can be added here that in the FAAN project, the role of experts, teachers in the process of communication and common decision-making was primarily played by NGOs activists who do it on a daily basis.

The FAAN project allowed for the development of a series of recommendations for individuals or teams who wish to execute the co-operative research model in the future [29]:

- <u>Bottom-up engagement:</u> if the research project is to connect different systems of knowledge and persons coming from different sectors, then a possibility to jointly plan research activities at the very project proposal stage needs to be ensured. The sense of co-responsibility and influence on the designed activities must be built as soon as possible.
- <u>Time:</u> in the co-operative research design, it is necessary to include in the schedule the additional time needed to developing relations and communication between partners. This kind of research will always take longer than those based on the classic hierarchical approach.
- <u>Reflexive project steering:</u> the research coordinator's role is a major one. They have to take into account the processes of differentiating and integrating of partners' experiences and the specific dynamics of group processes within the research team. The FAAN project showed that the leaders' coaching and animating skills play a significant role here – at the same time, it has to be stressed that in the case of CR, there is no single golden standard. The consortia vary just like the individuals who make them.
- <u>Flexibility:</u> as has often been underlined in this article, co-operative research is processual, and it cannot be designed in advance. Both the leaders and the researchers must be able to adapt to the changing objectives and the emerging issues and solutions.
- <u>Interaction:</u> the precondition for the process of knowledge integration, which is the essence of CR.
- <u>Transparency:</u> the success of building the relations of trust between the researchers within the team depends on it. It refers both to the way of making decisions and to the possibility of open participation in the team's discussions.
- <u>Use of language:</u> is necessary to ensure proper communication within the project. It implies both the technical expertise of languages and the commonality of senses, that is whether the team members use uniform definitions of the same notions.
- <u>Face to face meetings:</u> partners' communication should occur based on direct meeting of the whole team. The FAAN experience shows that the use of the new technologies, like fora, cyber-groups, Internet communicators, is not sufficient for the relationships between the group members to develop. The organisation of extra events (study tours, eating out together, sightseeing) additionally amplifies the processes within the group.
- <u>Partners' roles and expertise:</u> at the beginning of the project, the expectations and expert abilities of particular consortium members need to be very clearly specified. The planned activities have to take into account the differences in the competences of the team members.
- <u>Power relations:</u> lack of balance may lead to the halt of the integration processes. Choosing the CR mode, we agree to treat all types of knowledge equally. Also, within particular teams, it is necessary to aim at levelling the disproportions between persons of different scientific status.
- <u>Long-term relationships:</u> co-operative research does not end when the funding has finished. There emerge strong bonds within the group and there are practical and academic objectives. It seems that the sustainability of the bonds is a good indicator of how open and integrating the project actually was.

Finally, we would like to stress that the FAAN project showed us how complicated the process the co-operative research is. The time devoted to decision-making, the amount of resources allocated for the research, hours spent on the attempts to coordinate the expectations and our knowledge cannon though overshadow one key

aspect – in our view, the selected mode of conducting research allowed for a completely new perception of the subject under study. And this remains the biggest advantage of CR.

Acknowledgement

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