

System Failures in the Implementation of the EIP-AGRI Interactive Innovation Approach in Bulgarian Agricultural Policy

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Abstract

The paper critically examines the capacity of Bulgarian agricultural policy to implement the EIP-AGRI interactive innovation approach within the national innovation system (NIS). Applying System Innovation approach (SI) and through the lens of the system failures concept it 1) analyses the national policy context in support of interactive innovations; 2) reflects on the top-down programming of the EIP measure within the Bulgarian RDP 2014–2020; 3) reviews the AKIS actors' bottom-up understandings of interactive innovation and 4) reflects on the results from a case study of interactive innovation partnership that was not funded by a national innovation support mechanism (OPIC), however proved to be successful and sustainable. The main assumption is that the Bulgarian agricultural policy, including through the national Rural Development Programme 2014–2020, has low potential to address the limited cooperation and knowledge transfer among science, farms and other institutions involved in the innovative process.

Key words: agriculture; interactive innovation approach; national innovation system; national innovation policy; EIP-AGRI

Системни неуспехи при прилагането на подхода за интерактивна иновация EIP-AGRI в българската селскостопанска политика

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Докладът критично разглежда способността на българската селскостопанска политика да прилага интерактивния иновационен подход EIP-AGRI (Европейско партньорство за иновации за селскостопанска продуктивност и устойчивост (ЕПИ-АГРИ)) в рамките на националната иновационна система (НИС). Прилагайки системния иновационен подход (SI) и през призмата на концепцията за системни неуспехи: 1) Анализира контекста на националната политика в подкрепа на интерактивни иновации; 2) Разсъждава върху програмирането отгоре надолу на Мяката за Програмата Достъп до информация (ПДИ) в рамките на ПРСР 2014–2020 г.; 3) Прави преглед на разбиранията на участниците в AKIS за интерактивни иновации; 4) Отразява резултатите от казуса на интерактивно партньорство за иновации, който не е финансиран от Оперативна програма „Иновации и конкурентоспособност“ (ОПИК), но се оказва успешен и устойчив.

Основното предположение е, че българската селскостопанска политика, включително чрез Националната програма за развитие на селските райони 2014–2020 г., има нисък потенциал за справяне с ограниченото сътрудничество и трансфер на знания между науката, фермите и други институции, участващи в иновационния процес.

Ключови думи: селско стопанство; интерактивен иновационен подход; национална иновационна система; национална иновационна политика; EIP-AGRI

Introduction

In recent years, in the field of social sciences, innovation is no longer considered as a simple, linear process. Instead, agricultural innovation is becoming recognised as “a complex, interactive process” (Klerkx and Leeuwis, 2008) of co-operation between actors with different types of knowledge. Namely cooperation is defined as a critical success factor for the production of innovation (Tödtling and Tripl, 2005; Edquist, 2006). This shift in the agricultural studies is echoed in the EU agricultural policies in support of innovation. For many years, the innovation regime supported through the European Commission (EU) Common Agricultural Policy (CAP) has followed the model of linear innovation. However, since the launch of the European Innovation Partnership for Agricultural Productivity and Sustainability (EIP-AGRI) in 2012, this regime is starting to change. The EIP-AGRI adheres to the “interactive innovation approach” (IIA), using bottom-up models and linking farmers, advisors, researchers, businesses in networks that are centred around the farmers’ needs. The EIP-AGRI initiative aims to be a leading instrument in promoting the IIA within the member states. The national Rural Development Programmes (RDPs), together with Horizon 2020 RI programme, are one of the two strongest policy pillars to introduce the concept throughout the EU. This means that the national policy context is a very important factor for the successful implementation of the IIA. As an EU member-state, Bulgaria transferred Regulation (EU) 1305/2013 regarding the implementation of the EIP-AGRI into its RDP 2014–2020 and programmed the respective EIP measure (*Measure 16 “Co-operation”*) and its sub-measures. However, since the beginning of the Bulgarian RDP 2014–2020 the Measure has been continuously postponed and one of its sub-measures 16.1. “*Support for the establishment and management of agricultural productivity and*

sustainability operational groups objectives” was only launched in February 2020. Neither the national RDP 2014–2020, nor sub-measure 16.1 regulations provide definition of “interactive innovation” or guidance for the application of the EIP-AGRI interactive innovation approach. The absence of a clear top-down definition of interactive innovation in the policy documents impact its bottom-up understanding of various AKIS actors, including members of the Thematic Working Group (TWG) formed to develop the regulation of sub-measure 16.1 within the RDP.

In such context, the question about the capacity of the agricultural policy and its financial instruments to address important challenge within Bulgarian national innovation policy (NIS) – the need of fostering cooperation between the AKIS actors – become of critical importance. Despite the huge interest of various AKIS actors in sub-measure 16.1 and the opportunities for cooperation that it provides, only 50 projects were submitted at its launch in February 2020. At the first stage of the evaluation process, 20 projects have already been rejected. How many projects/partnerships will be eventually supported is still not clear. However, what is already obvious is that the regulation of this instrument provided many restrictions for cooperation, and imposed administrative burdens and unclear requirements. As a result many potential (and already started to be formed) partnerships dropped from applying for the sub-measure. Against this background we found evidence that interactive innovation partnerships do appear in the national context, however outside the framework provided by various financial instruments in support of innovations. This evidence, illustrated with empirical data from a case study of innovative partnership, raises the hypothesis that the national policies in support of agricultural innovation do not correspond to the needs of the practitioners neither provide incentives for the empowerment of farmers in forming interactive innovative partnerships.

Material and Methods

The results presented in the paper are obtained as part of the EU Horizon 2020 project “*Better Rural Innovation: Linking Actors, Instruments and Policies through Networks*” (LIAISON) and its deliverable reports. The data received through various qualitative methods was gathered in the period May 2019–June 2020. The methods included: 1) desk-top analysis of 19 relevant policy documents and their innovation support mechanisms (national programmes and strategies, strategic plans, operational programmes, decrees, procedures, measures, guidance for policy implementation, etc.); 2) semi-structured interviews with 20 AKIS actors (officials from the Ministry of Agriculture, Food and Forestry (MAFF), members of the TWG responsible for the development of sub-measure 16.1 regulation within the RDP 2014–2020, agricultural academy and research institutes, NGOs, public and private consultancy organizations, farmer associations); 3) inclusive observation within the public discussions of the regulations of sub-measure 16.1 and 4) 11 semi-structures interviews with stakeholders from an interactive innovation case of development of a new type of beehive.

The data received was analysed through the application of a specific System Innovation (SI) approach – the “National Innovation System” (NIS) concept. The application of NIS in the agricultural studies emphasizes the role of partnerships among a wide range of stakeholders beyond agricultural research, advisory and education (Clark, 2002; Hall et al., 2004; Spielman, 2005). Within this concept, the primary role of the state and its innovation policy is to facilitate the emergence of well-functioning innovation system (Metcalfe, 2005) and to address various system failures (Woolthuis et al., 2005). The theory of “system failures” explains that flops in the cooperation between different actors in the innovation system are the main reasons for low innovation performance (Soete et al., 2009). System failures are innovation hindering incompatibilities or contradictions between organisations and institutions in the innovation system, as well as between various policies. According to the meth-

odology of the system failures theory the analysis should try to provide answer to two important questions: *where* system failures occur and *what* actors or interactions between them are hindered (Woolthuis et al., 2005). Applying the Innovation Systems Framework developed by Woolthuis et al., the analysis is centred around two specific types of failures within Bulgarian NIS: the “institutional” and the “interactive/network” failures. While the institutional failures refer to the formal framework of regulations that may hinder innovation, the interactive ones arise from lack of interactions and information flows between different actors of the innovation system, which in turn hinder interactive learning and the co-creation of new ideas (Ekboir, 2003; Woolthuis et al., 2005).

Results and Discussion

1. Institutional failures within the national policies in support of innovations in agriculture

One of the leading theoretical assumptions within the NIS approach is that a task of the innovation policy is to create and develop an environment, which guides actors to the search and implementation of innovations and promotes their innovation performance. In other words, the innovation processes seems to be largely dependent on the smooth functioning of the innovation system, including the effectiveness and coordination of innovation policy measures (Reiljan and Paltsier, 2015). However, this is not the case in the Bulgarian context. Examples of institutional failures can be found both within the general policy context in support of innovations in agriculture as well as in the process of implementation of the EIP-AGRI IIA within various national strategic documents and programmes, including in the RDP 2014–2020.

The general policy context in support of innovations in agriculture

The desk-top analyses of 19 policy documents show that in a number of them agriculture is defined as a key sector for the development of the Bulgarian economy (e.g. National Development

Programme – NDP BG2020, RDP 2014–2020). Innovation is also presented as a key factor for the development of the competitiveness of the Bulgarian economy. At the same time, innovations in agriculture are not subject to definition or problematization: no document (programme, strategy, strategic plan) has been identified to contain a definition of innovation in the forestry and beekeeping sector or innovation in rural areas. Three documents were identified to set out a definition of innovation in general, based on the OECD definition and one document containing a definition of innovation in agriculture (RDP 2014–2020, in the sub-measures related to investments – 4.1.; 4.1.2. and 4.2.). As long as the terms “agriculture” and “innovation” are mentioned in a same document, they often referred to innovation in combination with investments and/or in respect of processes of modernisation, technological upgrade, increase of labour productivity and qualification of employees (e.g. in the NDP BG 2020). The support for innovation is interpreted also through the concept of the so-called “knowledge triangle” (e.g. OP Science and Education for Smart Growth 2014–2020, National Strategy for Development of Research 2014–2020), which in practice views knowledge and innovation as generated in educational and scientific institutions, but not coming directly from practice. Although many of the reviewed documents acknowledge the low cooperation activities among the AKIS actors as an important system failure, only few of them address this failure and provide concrete measures in support of cooperation – RDP 2014–2020. Despite the proclamation of cooperation as an important driver for the production of interactive innovations in agriculture, there is only one official document providing a definition of it and this is not the national RDP 2014–2020, but Innovation Strategy for Smart Specialisation of the Republic of Bulgaria (RIS3). The analysis shows that there are other programmes to support the interactive innovation to a greater extent than RDP 2014–2020 (for example OPIC 2014–2020). However, even though there are other programmes providing mechanisms in support of interactive innovations, not all of them support the cooperation among actors with different type

of knowledge¹. Instead, these measures capture only a specific group of AKIS actors who already have experience in development of innovations, but limit the access of those who do not hold patents or utility model certificates for example and as a result stimulate inequality regarding the access to funding of interactive innovations.

On the basis of the results from the analysis we may argue that the national agricultural policies in support of innovations seem to prioritize investments in modernization, holding of patents and implementation of other horizontal priorities, thus limiting the opportunities for interactive innovation and cooperation. The concept of interactive innovation is either absent from the national programmes’ guidelines or where it exists it is not clearly explained. This in turn makes it difficult for AKIS actors to understand the nature of interactive innovation, creates uncertainty about what is expected from them as activities and prevents them from applying for measures (such as for sub-measure 16.1 from the RDP), which are supposed to be designed to support cooperation. This failure within the policy settings could be also illustrated by the process of programming sub-measure 16.1 and its formal regulations.

The process of programming sub-measure 16.1 and its regulations within the RDP 2014–2020

The analysis shows that although sub-measure 16.1 was programmed to address the systematic failures in the cooperation within the NIS, the very logic of its programming hinders its implementation and the impact that it might have on the interactive innovation process in the country.

¹ For example, the National Beekeeping Programme (NBP) from the previous (2017–2019) and current programming period (2020–2022) does not provide support for innovation. In fact NBP 2017–2019 has introduced a new measure – Measure E “Cooperation with specialized bodies for the implementation of applied research programmes in the field of beekeeping and bee products” (in short the measure is referred to as “Scientific Projects”). However, this measure provides for cooperation solely between scientific institutions: it funds research universities, colleges, research institutes and scientific organisations in the field of apiculture. Cooperation between different stakeholders within the meaning of EIP-AGRI is not in place. The measure in the same form is also included in the new programme for the period 2020–2022.

According to the data from the conducted interviews, the reasons for the repeatedly postponed launch of sub-measure 16.1. can be explained on the one hand, by the decision of the political leadership of the MAFF to open priority investment measures as a result of “pressure/interest from farmers”. On the other hand, an important factor is the political decision-making process regarding the regulation and implementation of the sub-measure, in which actors with different expertise and interests participated. In fact, three main stages can be distinguished in this process: 1) *Programming sub-measure 16.1 as a “scientific project”*: Within the MAFF, the sub-measure was originally developed by an expert who defines herself as a “person of science” and her work at the ministry as a “scientific project”. This expert also formed a TWG to prepare a draft of the Guidelines for the implementation of the sub-measure, the composition of which was dominated by representatives of the Agricultural Academy and agricultural universities in the country, while the participation of agricultural organizations was very limited. At this stage, the prevailing understanding expressed by respondents - members of the TWG – was that the sub-measure supports a linear approach to innovation, in which science plays a key role. This understanding does not correspond to the logic of the EIP-AGRI approach. 2) *Involvement of a wider range of stakeholders*: at this stage, the expert developing the sub-measure was fired and replaced by another, who in turn expanded the composition of the TWG to include a wider representation of actors - such as farmer associations, consultancy organizations and NGOs. However, the inclusion of a wider representation of AKIS actors did not lead to a change in the understanding of the logic of the EIP-AGRI approach. On the contrary, there was a clear clash of different understandings within the TWG about what innovation in agriculture is and what the objectives of sub-measure 16.1 are. 3) *Public discussions*: This clash was particularly strong and obvious in the context of the two public discussions of the Guidelines for the implementation of the sub-measure. The final version of the Guidelines reflected a limited part of the comments and suggestions received from

various AKIS stakeholders. The very content of the Guidelines, which do not offer a definition of IIA, “cooperation” and “interactive innovation”, as well as the inclusion of a representative of the scientific community as a mandatory participant in the partnerships supported by this sub-measure, does not reflect the expectations of potential beneficiaries. The decision to include the scientific community as a mandatory participant was taken despite the disagreement of the AKIS actors, especially farmer associations and their reluctance to cooperate with scientific circles. The data from the included observations team show that as a result of the unilateral decisions taken, a sizeable group of the stakeholders interested in the sub-measure did not apply for it. An illustrative example can be drawn from the case-study of interactive innovation partnership, where one of the participants wanted to apply for sub-measure 16.1, but ultimately changed his mind because of administrative burdens (requirements) that the measure impose and due to the ambiguity of what is meant by innovation: “*well, the state wants to support people who have innovative, inventive thinking to develop it, but everything is tied with tons of accounting work and such ... administrative burden that I tried ... right... I checked the terms of the programme in detail, I contacted two such consultant companies that prepare projects and it turned out to be absolute madness and people gave up because it is such a huge financial burden for those who want to do it in the first place, secondly the measure mentions innovation in only two places in three lines and everything else is something other than innovation....which is not innovation... there are some criteria for innovation that are insane... it turns out that in fact innovation as such has no place here....*” (Case study_Respondent 4).

The lack of clear top-down interpretation of the EIP-AGRI interactive innovation approach influenced AKIS actors’ bottom-up understanding of interactive innovation process, even of those who were directly involved in the elaboration of the draft regulation. Paradoxically, AKIS actors perceive quite differently what innovation in agriculture means, what the logic of the cooperation is and what the role of the farmer with-

in the interactive innovation process should be: a passive receiver of solutions developed by the science or an active co-creator of innovation. This formal regulation failure is simultaneously a driver and a result from another system failure in the national innovation system – the limited interactions, cooperation and information flows among the AKIS actors.

2. Interactive failures in the national agricultural innovation system

Within the NIS approach it is assumed that the interactions between institutions and organizations determine the innovation performance at national level (Nelson, 1992). These interactions not only involve relationships with other firms, but also the interaction with e.g. the government, public knowledge institutes, and third parties such as consultants. When there are limited interactions, cooperation, networking and partnership among these actors, then a system failure appears. The lack of interactions may be caused by lack of willingness to exchange ideas and knowledge, because of contradictory interests of the actors or because different institutions and organizations are linked so closely together that they do not notice opportunities coming from outside of their network (Woolthuis et al., 2005). In the Bulgarian context we may find many examples of failures in terms of interactions, cooperation, networking. Rusu et al. (2015) shows that the connections between AKIS subsystems (agricultural research, consultancy and education) in Bulgaria are weak as there is lack of coordination among them. Not of less importance is the finding that the participation of farmers in decision-making, thematic prioritization of research and experimentation is quite limited. Farmers are perceived as being more end-users of agricultural innovations rather than as partners in the process of innovation development. In other words, farmers' knowledge and experience and the central role they may play in the development and transfer of innovations is not considered by research, educational and extension institutions, which continue to follow rather linear innovation models. A more recent report of the AKIS (Bachev, 2020) show that although there are good interactions in terms

of cooperation and networking among scientific institutes and agricultural universities, there are still limited partnership initiatives of universities with farmers and private companies and consultants, scientific institutes with farmers and private companies, producers' associations among themselves and with private firms and consultants, etc. In correspondence to these reports, our findings show that competition between agricultural research and educational institutions for funding is a serious obstacle for cooperation between them and for sharing knowledge, information and co-creation of innovations. The report of Bachev also shows that the farmers' access to knowledge and information about innovations, internet, digital services is limited and concludes that there is a general need for improving the dissemination of knowledge and innovations in the sector (ibid). Our research found data showing not only the limited access of farmers' to knowledge, information, innovation, but also limited opportunities for cooperation between science and practitioners. Illustrative is an example from the interactive innovation case-study which indicates the broken link between science and farmers in terms of knowledge sharing and cooperation. Indeed, one of the activities of the beekeeping organizations in Bulgaria is to organize regular meetings with scientists and researchers. The meetings proceed in the form of lectures on particular themes, related to specific problems (e.g. bee diseases, application of traditional and veterinary treatments, etc.). However, according to the interviewed beekeepers the knowledge that the scientists share is not easily applied in practice. Common is the perception that the scientists are gaining more knowledge from the beekeepers than vice versa. In addition, the knowledge gained by the scientists from the beekeepers is used for writing scientific articles and not for the development of scientific expertise on practical problems. In this sense, from the point of view of the interactions between science and practice, we can observe a discrepancy between the expectations of beekeepers and the work of scientists: beekeepers expect science to offer solutions to their problems, while scientific work is focused on something entirely different.

Data from the in-depth interviews with members of the TWG developed sub-measure 16.1 regulations and representing different AKIS actors indicate that the knowledge and information flows among the AKIS actors are influenced by a variety of interpretations of what is (not) innovation in agriculture, what cooperation within the IIA approach means and what should be the role of the farmers in the process of innovation development. For example, for some of them agricultural innovation should be limited to the “*selection*” of plant varieties and breeds, for others it is simply “*something new be it a product, a process, a service*”, for third this is “*investment, but sprinkled with consulting services*”. Agricultural innovation is also associated with “*everything that facilitates the work of the farmer*”, “*idea that leads to a change*” and “*the innovation is like love: it is difficult for you to see it, but you feel it once it appears*”. The interpretations of the term “interactive innovation” are closely linked to the role that the farmers should play in the innovation process. Among the interviewed respondents prevail the understanding that farmers are rather passive participants in the innovation process as their role is limited to the implementation of the innovative solutions. Against this linear innovation model few interpretations capture the logic of EIP-AGRI and see the interactive innovation process as farmer-led and farmers as co-creators of innovative solutions for their practical needs. Unfortunately, this second interpretation is not included in sub-measure 16.1 regulations of its implementations. The different understandings hindered not only the process of elaboration of 16.1 regulation but also pose a risk of a ‘substitution’ of the logic of EIP-AGRI measure in the Bulgarian context. And more, the diversity of (often contradictory) interpretations not only hamper co-creative forms of innovation development, but also indicate a lack of coordination among the AKIS subsystems.

The interactive failures within the AKIS subsystems does not mean that interactive innovations could not happen in Bulgaria. On the contrary, our research identified several examples of such, however all of them are results either of private funding or of the financial support of EU or

foreign grant research programs and not through national innovation support instruments. From these examples we examined in-depth a case of interactive partnership in beekeeping among a private start-up and representatives of the beekeeping community.

3. A detour from system failures: an example of interactive innovation partnership

The case-study represents an active, creative and social collaboration process between a start-up company and farmers-beekeepers. Within this process, the beekeepers became active participants in the innovative activities of the company and took part in the development of a new, more effective beehive. The initial idea of the beehive was first developed as a project-application under Operational Programme “Innovation and Competitiveness” (OPIC), however after being rejected, a family couple with no experience in agriculture funded the development of the hive through their newly-established private start-up. This development happened through the partnership between the two co-owners and representatives of the beekeeping community. The aim of the partnership was to find a practical solution for a problem in the beekeeping in some regions in Bulgaria – thefts of beehives, especially in remote areas.

The interactions of the start-up with beekeepers were driven by and subjected to the identification of two interactive pathways of generating and applying beekeepers knowledge and experience in the development of the beehive: 1) “ask beekeepers” and 2) “build with beekeepers”. The “ask” interactive pathway included the identification of end-users’ needs and problems, development of pilot (draft) design solution to problems and using individual beekeepers and beekeeping organizations’ knowledge, experiences and ideas for improvements of the designed solution. The “build” interactive pathway represents the active involvement of an individual beekeeper in the design, the trial and the further development of the beehive. As a result from the application of these pathways three main forms of co-creation were identified: 1) The “creative co-designing partici-

pation” captures the interactions among those actors who were most influential in terms of value creation and who jointly worked for the development and the realization of the innovative idea. Within the case study, the co-creation relates to interactions between the two start-up owners and an individual professional beekeeper, opinion leader from the region of the start-up company. Apart from the start-up owners, this beekeeper contributed with a high level of creativity and problem-solving skills. 2) The “interactive consultancy participation” captures the interactions among the start-up owners, representative of the beekeeping science, a hobby beekeeper and professional beekeepers and opinion leaders from other regions of the country. The interactions here are based on the consultancy type of value creation and concept testing. The consultancy takes the form of an “arbitrage” and corrective opinion, which resulted in optional solutions and changes of some of the prototype functionalities. 3) The “interactive feedback participation” represents interactions between the two co-owners with about 20 beekeeping organizations. These interactions took the form of evaluation, suggestions and product requirements that also resulted in some improvements of the beehive.

The results from the case study provide various incentives for reflections on the institutional and interactive failures in the Bulgarian NIS. First, it seems that the regulations and the evaluation procedures of some mechanisms in support of innovations might overlook the potential of certain innovation initiatives. In this case, although the project application for the beehive was considered by the OPIC evaluation authorities as “lacking potential for sustainability”, the interactive partnership between the start-up and the beekeepers proves the opposite. This partnership appeared to be quite sustainable as it continues after the realization of the idea of the beehive. For the private start-up this partnership became a valuable resource for new ideas for innovative solutions as they realized that beekeepers integration may benefit the firm in a more active way where empowered stakeholders are potential sources of unique knowledge. Illustrative is also the reflection expressed by the Head of

the “Selection of Projects” Department at OPIC regarding the methodology used in the evaluation of beneficiaries: “...when we make evaluations, we usually evaluate also what is happening with supported enterprises, but it would be good to make such a monitoring on those who have not been supported, especially those in the field of innovation. And if we find that something innovative, sustainable happens in a large number of them, this would mean that something in our criteria is not properly set” (Case-study_Respondent 10). This opinion, showing an awareness of gaps in the evaluation criteria, allows the hypothesis of insufficiently effective targeting of the support of this particular financial instrument for the creation of innovative start-ups in the country. The owners of the start-up also perceive this sense of gaps. Their experience with submitting project proposals under OPIC creates a lack of trust in public financial instruments and gives rise to the feeling that there is no real support for innovation in Bulgaria, whether in beekeeping or in another sector, and instead everything comes down to meeting formal criteria, insensitive to the specifics and challenges of the process of creating an innovation. Both the private owners and the beekeepers perceive the programmes in support of various sectors in agriculture as providing more opportunity to “take subsidies”, and not to have real commitment, which in turn can imply accumulation of specific (administrative) knowledge and experience and, thereby, lead to a skewed value system which does not correspond to the EIP-Agri principles. Second, the beekeepers from the case-study expressed dissatisfaction and even disappointment from the fact that AKIS actors from various sub-systems and especially from the science and education are not interested in their practical needs and problems neither in cooperation with them. The broken link between the beekeeping science and the beekeepers limits the opportunities for cooperation between these actors, including in terms of finding innovative solutions for problems that the beekeepers experience in their practices. Apart from this problem, another one also seems to hamper the interactions among the actors in the beekeeping sector: the heterogeneity of the beekeeping com-

munity in terms of age, educational background, but also in terms of different interests, traditions, habits, even problems they face in their practices hinder cooperation and partnership. The lack of beekeeping guild with well-established professional standards and the presence of beekeepers without sufficient theoretical training further impacts knowledge and information flows within the community.

Conclusion

The analysis tried to provide answers to the questions of *where* and *how* system failures within the Bulgarian NIS appeared and *what* actors or interactions between them are hindered. We found that the national policies in support of innovations in agriculture from the current programme period have limited potential to implement the EIP-AGRI interactive innovation approach and to stimulate cooperation among the AKIS actors. The AKIS subsystems still lack coordination and generally do not provide incentives for interactive partnerships combining complementary types of knowledge at the expense of the diffusion of linear innovation models. The NIS in the field of agriculture also seems to overlook the importance of non-farmer contributions that might bring insights from other sectors. Although the case-study represents a successful story of interactive partnership, it appeared somehow “despite” and not through the support of national innovation instruments. The general message that can be drawn from this case study concerns the awareness of farmers (beekeepers) that they can make progress in the sector and on their own initiative, in partnerships with other actors, without the support of national and European programs.

The implementation of the EIP-AGRI interactive approach within the new program period, including through the new RDP 2020–2024 requires a higher level of coordination of the innovation policy measures with their potential beneficiaries. In other words, a recommendation to policy-makers could be to replace the top-down programming model with more active involvement of interactive innovation develop-

ers, implementers and end-users. This is expected to foster cooperation and knowledge transfer among science, farms and other institutions involved in the innovative process and to lead to more consolidated understanding among AKIS actors what interactive innovation is and what activities (such as cooperation and co-creation) it implies.

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