

First Experiences in Implementation and Evaluation of the EIP Approach in two Federal States of Germany

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Abstract

The implementation of the EIP-AGRI differs between the several federal states of Germany. The paper provides an overview of the current state of implementation of the EIP approach in Germany. The authors are involved in the implementation of the EIP-AGRI in two federal states in different ways: In Hesse the Institute for Rural Development Research (IfLS) is commissioned as the 'innovation support service' and in Baden-Württemberg as the evaluator of the EIP-AGRI approach. The paper presents the state of the implementation of the EIP-AGRI-Approach in Germany and compares the requirements and regulations of EIP-AGRI funding in the context of the two federal states' Rural Development Programme of Hesse and Baden-Württemberg. The third part of the paper focuses on the assessment concept for the evaluation of the EIP-AGRI in Baden-Württemberg.

Keywords:

Innovation, assessment concepts, evaluation, operational group, innovation support service, implementation, RDP, EIP-AGRI, network

1. Introduction and Outline

1.1 EIP-AGRI

In the context of the Europe 2020 Strategy, European Innovation Partnerships (EIP) were established to foster research and innovation in the EU. The EIPs in general are challenge-driven and should create societal benefits and improvement. Overall, five EIPs have been created in different sectors: active and healthy ageing, water, raw materials, smart cities and communities, and agriculture. Each EIP has specific aims. EIP 'Agricultural Productivity and Sustainability' (EIP-AGRI) tries to connect between research and farming practice (EIP Service Point 2015). The EIP-AGRI was launched under the European Agricultural Fund for Rural Development (EAFRD). The aim is to accelerate innovations – defined as the introduction of inventions in the market – and to connect research and practice. This was done through Article 35 (cooperation) of Regulation (EU) No 1305/2013, which offers the possibility in the EAFRD to promote so-called Operational Groups (OG) and the implementation of innovative projects. The EIP-AGRI is implemented in the rural development programmes (RDP) of the Member States, in Germany at the level of the federal states.

Furthermore, the EIP-AGRI is organised in a network of a range of actors that supports the approach in various ways (see Figure 1):

At the European level, the EIP-AGRI Service Point improves communication and cooperation between innovation actors through sharing knowledge, tackling challenges and connecting people. Among the tools, the so-called Focus Groups are to be mentioned. Groups of 20 researchers, farmers, advisors and other stakeholders work together and share knowledge and experiences to boost innovation. They are intended to function as an inspiration for Operational Groups (EIP Service Point 2015).

A more research-oriented approach is the EU Framework Programme for Research and Innovation – Horizon 2020. It also has a connection to the EIP-AGRI network. Thematic networks and multi-actor projects are to support multinational innovation projects. The results of the projects are shared through the EIP-AGRI network (EIP Service Point 2015).

At the national level, the Member States' rural support units also facilitate the communication and exchange between the various actors and participate in the EU activities. For example, the German National Rural Support Unit offers an online platform and a project database, as well as visits to connect the EIP actors in different federal states (Rocha 2015). Finally, some Member States and regions have provided structures such as the 'innovation support services' to assist the Operational Groups in different ways (see below).

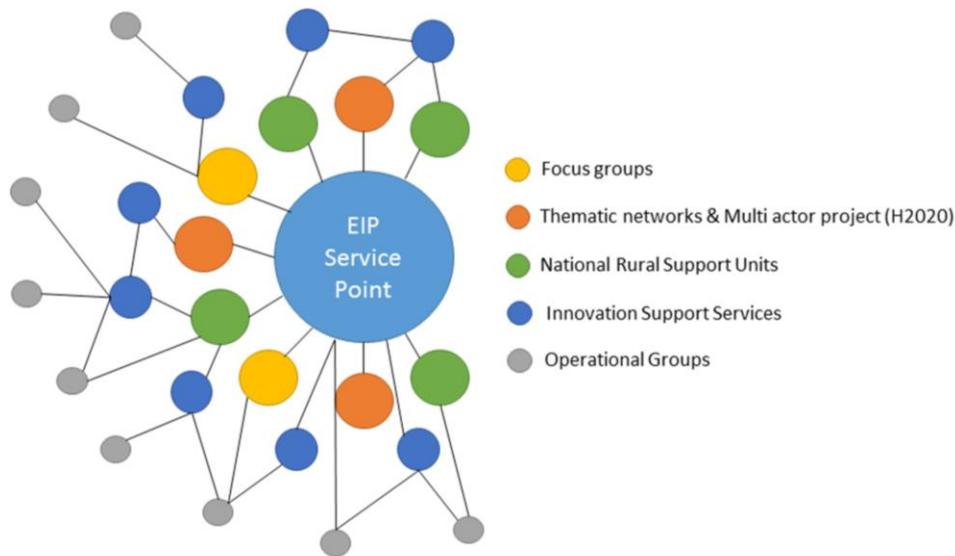


Figure 1: schematic illustration of the EIP-AGRI network
(Source: modified on Krause, Freese (2013); modified and translated by authors)

1.2 Outline of the paper

The results presented in this paper are based on practical experience with the implementation of the EIP-AGRI in the different federal states. The authors are part of EIP network and have a good insight into the implementation process in Germany.

Special emphasis will be on Hesse and Baden-Württemberg. The Institute for Rural Development Research is involved in the implementation of the EIP-AGRI in Hesse as the 'innovation support service' and in Baden-Württemberg as the evaluator for the RDP.

The paper is divided into three parts. First, the authors illustrate the status quo of the implementation in the German federal states. In a second step, the paper gives an overview of the Operational Groups funded in Hesse and tries to assess the given innovation potential.

The third part of the paper focuses on the assessment concept for the evaluation of the EIP-AGRI in Baden-Württemberg. The authors describe the planned evaluation process under special consideration of the implementation and support of transdisciplinary approaches, the enhancement of innovation clusters and the cooperation between the various stakeholders.

2. Implementation of the EIP-AGRI approach in German federal states

In Germany, the EIP-AGRI is implemented by twelve federal states (except Saarland and Hamburg) through the rural development programmes (RDP). In the following sections the authors provide an overview of the implementation's status quo in the federal states and focus on the funding conditions and implementation in Hesse and Baden-Württemberg. Finally, the work of the Hessian 'innovation support service' is introduced.

2.1 Status quo of EIP-AGRI implementation

The implementation of the EIP-AGRI in the twelve federal states proceeds differently. Nine federal states had already published their directives by March 2016 (see also Figure 2). It is expected that all federal states will adopt their directives until the end of 2016. The main differences between the directives are crystallised in the support rates, on the one hand between the rates for the running costs and the innovation projects. On the other hand, nearly all directives classify the support rates based on Annex I related to the Treaty on European Union and the Treaty on the Functioning of the European Union (Official Journal C 326, 26/10/2012).

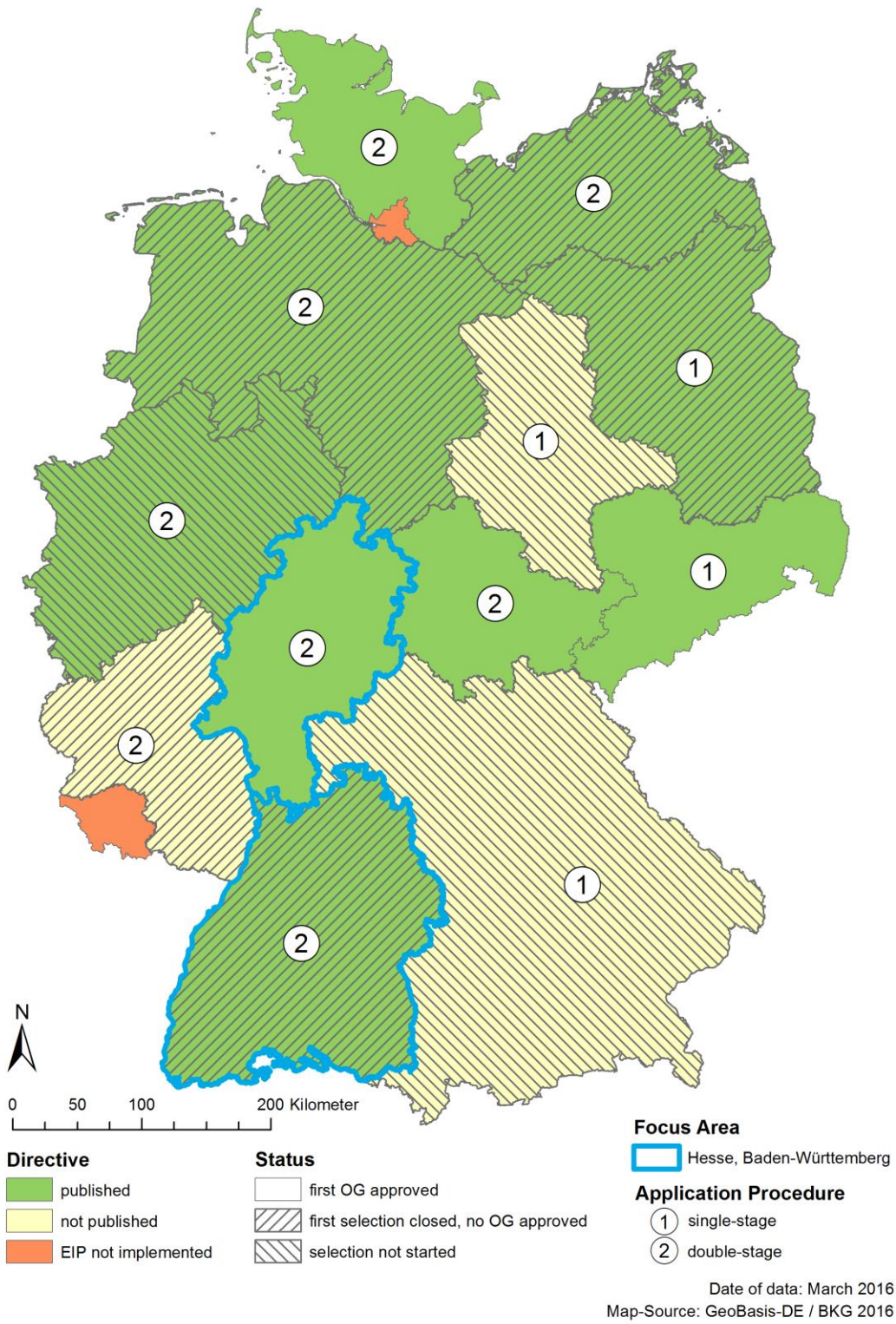
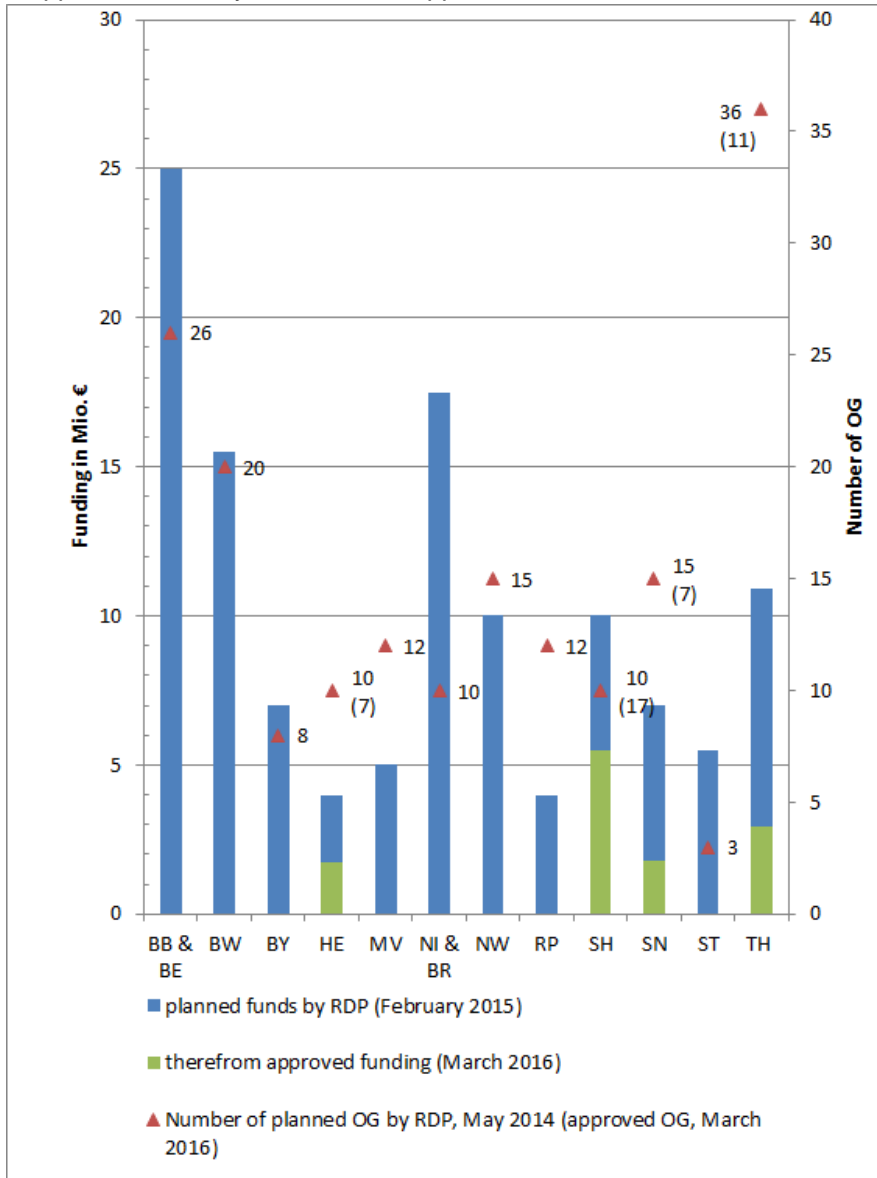


Figure 2: Differences in implementation and status of EIP-AGRI in Germany (Source: own illustration based upon a request of LfULG 2016)

The process of project selection is also different, as shown in Figure 2. Eight federal states provide a two-stage selection process. Four federal states use a one-stage selection. In the single-stage procedure, the Operational Groups submit a complete formal application. Two-stage selection process means that the Operational Group has to submit a so-called action plan and a cooperation treaty as a draft at the first stage. If the action plan is approved and the Operational Group is chosen, at the second stage the chosen Operational Groups are invited to submit a formal application. Finally, the financial appointments between the federal states are also different



(see

Figure 3).

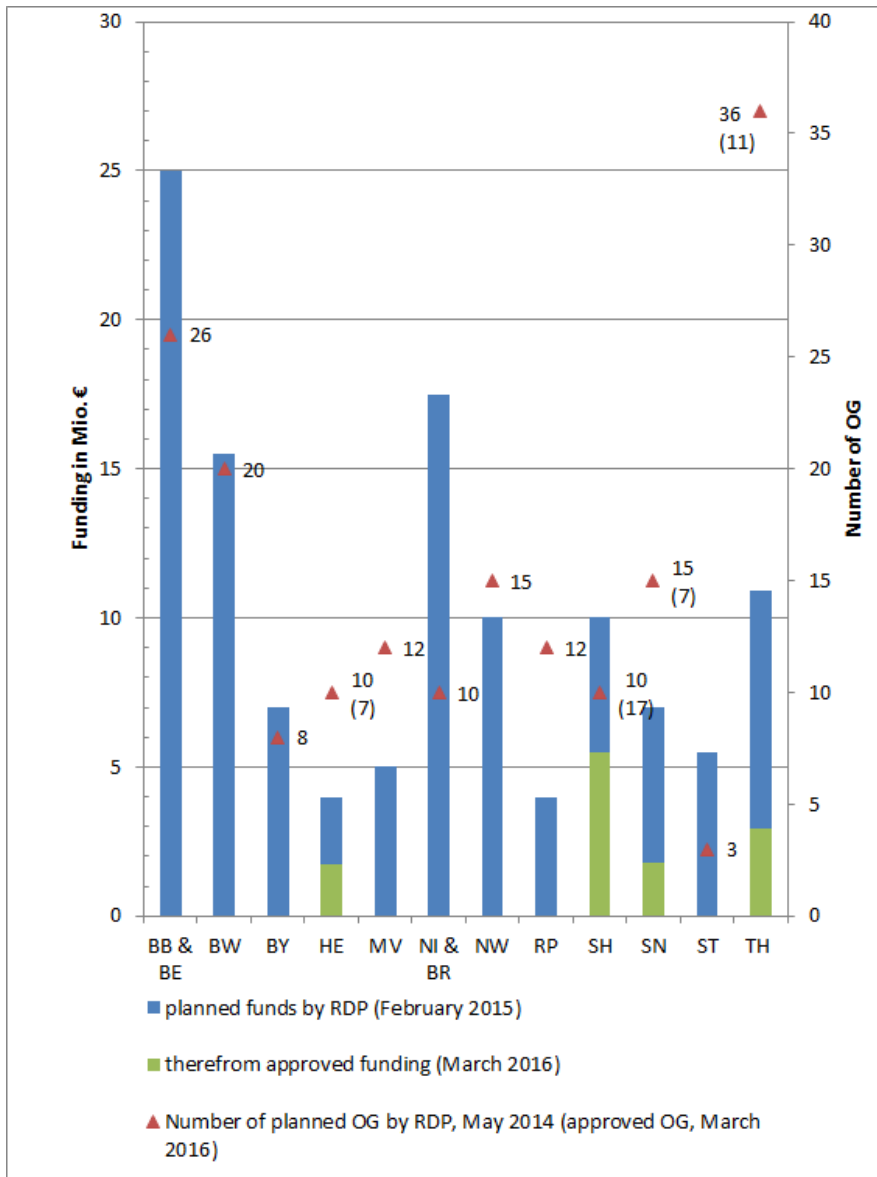


Figure 3: Financial allocation for EIP-AGRI in Germany – planning and actual status quo

Sources: Rocha (2015), LfULG (2016), own request 2016

(Abbreviations: BB & BE = Brandenburg & Berlin, BW = Baden-Württemberg, BY = Bavaria, HE = Hesse, MV = Mecklenburg Western Pomerania, NI & BR = Lower Saxony & Bremen, NW = Northrhine-Westphalia, RP = Rhineland-Palatinate, SH = Schleswig-Holstein, SN = Saxony, ST = Saxony-Anhalt, TH = Thuringia)

Altogether the federal states have foreseen 119 mio. Euro funding for the EIP-AGRI and 177 Operational Groups. So on average each federal state has planned ten million Euro and nearly 15 Operational Groups to become approved. To look at the federal states the average subsidies vary between four million Euro (Hesse and Rhineland-Palatinate) and 25 million Euro (Brandenburg & Berlin). As Figure 1 shows, four federal states have already approved the first Operational Groups. These states have already approved between 25 % and 55 % of the planned funding for Measure 16.1 (EIP-AGRI). Currently, some federal states are considering increasing the initially planned funds.

So far, nine federal states have already called on actors from the sectors of agriculture, forestry, food economy, horticulture and viticulture to submit their innovative ideas. Four federal states have already finished the first turn (see above). 48 Operational Groups have been approved. The first funding results indicate that this new instrument is well-accepted by the actors.

Hesse was one of the federal states to finish the first term and approve the first Operational Groups. For the first selection stage, Hesse used an additional informal process. Interested groups were asked to submit an expression of interest ahead of the kick-off event and present their idea during the event to find partners and additional ideas. Afterwards all interested groups received an offer for consulting services by the ministry, granting authority and the 'innovation support service'. These advisory services have been approved and are offered also in the second term.

Three federal states have already finished the first stage. For example, in Baden-Württemberg twelve Operational Groups were chosen out of 31 applicants. At the next stage, the chosen groups have to submit more detailed information about their project. Apart from Hesse, Baden-Württemberg promoted four specific topics and needs, which should be covered by the applicants. Hesse has focus themes in the regulation and the interested groups must demonstrate a connection to the needs of Hesse and a contribution to the EFRD priorities.

In conclusion, most federal states are at some point of the implementation process of EIP-AGRI and have communicated the funding conditions. The arrangements are nearly similar in the federal states. Nevertheless, it becomes apparent that there are many questions arising during the implementation process. The federal states try to face open questions by different working groups of the ministries, the granting authorities and the innovation support services.

2.2 Operational Groups

In this section the authors provide an overview of the seven Operational Groups in Hesse, their approaches to fostering innovation processes and the degree of novelty (routine¹, improvement² or radical³ innovation; Hartschen, Scherer, Brügger 2015) of the planned innovation.

In Baden-Württemberg the Operational Groups are not yet officially established and approved.

The thematic scope in Hesse is manifold, from boosting regional feedstuff, sustainable utilisation of 'senior laying hens', a sustainable productivity in the wheat sector and horticulture to the control of plant diseases. With the first call, Hesse funds seven Operational Groups with nearly two million Euros.

The Operational Group 'Aromatic Mint' focuses on cultivating and improving the quality of mint varieties with special aromas and additives in Hesse. Traditionally, Germany is among the most important locations for producing and processing medicinal and spice plants in Europe. Especially medium-sized manufactures which produce spices, aromas, food supplements, and herbal medicines hold a leading position at the international level. Expected result of the Operational Group are recommendations for the cultivation of mint varieties appropriate for the regional market of Hesse and Germany (IDL 2016a). The degree of novelty has to be assessed at the

¹ Routine innovation offers an additional benefit of a product, optimizing existing properties or reducing production costs.

² Innovation by improvement: substantial improvement. Some properties are improved by 30 %,

³ radical-innovation: new and high economic solutions. Are a paradigm shift and a permanent demarcation to competitors.

level of introducing new products which are suitable for the climatic conditions into a regional market. The level of novelty lies in the range of improvements. The established mint varieties could boost Germany's and especially Hesse's position in this market and could provide a competitive advantage in the medium term.

Strengthening the Hessian agricultural production with declared local feeding stuff is at the centre of interest of the Operational Group 'Value-added Chain of Domestic Soya in Hesse'. There is a need to increase the usage of declared domestic animal feed. The consumer demand for animal-based food which is produced using domestic animal feed is rising. Livestock farms react to this demand and increase their efforts to use domestic animal feed. Furthermore, the requirements of society in regard to an environment- and climate-friendly, multifunctional agriculture as well as the interests of Hessian farmers, support the approach to increasing the production of declared domestic animal feed. Additionally, the production of soya in Hesse is becoming economically attractive due to climate change and breeding progress. The aim of the project is to eliminate deficits along the value-added chain of domestic soya 'from the harvest to the feeding trough' (IDL 2016b). Other federal states have established conversion lines or other levels of the value-added chain.

The product could be a process innovation because the value-added chain can be improved in the project and it builds new possibilities to continue the whole chain in Hesse. If solutions are collectively developed within the project, the innovation is also to be seen as a management innovation. However, at this early stage of the project it is not possible to assess the level of innovation.

The Operational Group 'Organic Hen' started from an ethical and economic point of view. The present situation that organically raised hens – after their laying period – are only used as an industrial property is not satisfying. Throughout their whole life period the laying hens are raised with a high level of dedication using high-quality organic feed. Although these conditions are reflected in high-quality eggs and meat, there are no processing structures which could take the high meat quality into account. The regional sale as classic soup hens (boilers) is not very attractive and other marketing options are rare. Furthermore, the market prices for soup hens are too low and do not allow for the quality of the product. Within the project's scope innovative product lines should be discovered which satisfy the expectations of modern cooking behaviour alongside highest quality standards. Objectives of the project are to contribute to a new awareness of the high meat quality of organically raised laying hens and to stimulate the demand for them also when their laying period is over (IDL 2016c). The particularity of this Operational Group is that the members are actors along the value-added chain, mainly farmers. Additionally, associated partners from scientific institutions are included in the project. The members created a cooperative for the lead partnership able to work together beyond the funding period. This innovation project is a classical product innovation by improvement of the use.

Aim of the Operational Group 'Establishment of a More Sustainable and Environment-friendly Wheat Value-Added Chain' is to reduce soil fertilisation by nitrogen. The objective of the project is to establish an ecologically sustainable certified system of an adapted use of nitrogen along the value-added chain of baking wheat in the Wetterau model region. (IDL 2016d). The innovation level is mostly routine innovation because the additional benefit has to be seen in the improvement of the environmental impact and the economic benefit in saving fertiliser.

The root disease caused by the fungus *Rhizoctonia Solani* is a fundamental problem in the production of plant material for potato growing as for a successful cultivation, healthy plant material is of very high importance. The Operational Group 'Development of Professional Practice

and Optimisation of the Logistics Chain to Control the Pathogen' focuses on transferring research findings into practice, testing and improving them for the application in the field (IDL 2016e). This process innovation can also be regarded as an improvement in the realisation of competitive advantages.

Two Operational Groups are dealing with horticulture. One of them tries to solve the problem of 'yellow wilt' on lamb's lettuce (IDL 2016f). Until now it has not been possible to identify the reason for the disease's occurrence or to find scientific solutions. If the Operational Group can develop mitigation strategies, the innovation level can be considered as an improvement.

The second horticulture group, 'Innovation in Decision-making Support for Irrigation of Outdoor Vegetables', optimises and expands a support system for irrigation. The degree of novelty for this service innovation is located between improvement and routine or basic innovation.

In summary, most of the Operational Groups develop process innovations. Most groups are expected to reach the innovation degree of an improvement. The Operational Groups address issues at different levels: Some address specific problems and solutions relevant for a small geographic scope (Hesse or parts of it), but most Operational Groups address questions which are relevant beyond the Hessian borders and can be used by farmers in other regions as well.

2.3 Innovation Support Service in Hesse

The innovation support services are established in different ways. Five federal states have found internal solutions and five federal states have tendered the innovation support services. Hesse decided for the external solution and in 2014 assigned the Institute for Rural Development Research in Frankfurt/Main for the whole Measure 16. The tasks are financed under technical assistance and not as a part of the Measure.

The task of the innovation support service in Hesse is to support the managing authority for the Hessian RDP in implementing Measure 16, including 16.1, 16.4, 16.5, 16.7). For this purpose, the service provider cooperates with the responsible ministry, granting authority and the institutionalised agricultural extension services, the 'Landesbetrieb Landwirtschaft Hessen'. Furthermore, the innovation support service creates input for information and publicity, e.g. developing and designing leaflets, publishing articles and hosting events to inform and activate stakeholders.

The innovation support service is the first contact point for interested stakeholders and connects the different actors during the application and realisation phase. The intensity of consultation is high and the support service tries to harmonise the ideas of the stakeholders and the expectations of the EIP-AGRI.

3. Evaluation approach of EIP-AGRI in Baden-Württemberg

The implementation of the ongoing evaluation process in Baden-Württemberg is just starting and the methods and milestones have not been finally fixed yet. Up to now the range of topics and main evaluation questions have been discussed among the evaluator and the responsible administration for EIP-AGRI.

In the following section, general considerations of the focal issues of the evaluation of EIP-AGRI will be discussed. After this, potential evaluation methods and a first evaluation scheme for Baden-Württemberg will be presented.

3.1 General Considerations

Fundamental considerations are necessary regarding the evaluation of innovations and innovation processes: First, the funded innovations themselves, their degree of novelty (routine, improvement or basic innovation) and their range of change are of special interest (Hartschen, Scherer, Brügger 2015). Related questions are: Was it possible to realise incremental innovations of established products or processes? Was it also possible to trigger even radical innovations, which involve entirely new applications and processes? Furthermore, it should be of interest, if appropriate projects include a whole innovation process from the initiation phase up to the launch or if they focus on individual phases of the innovation process. As a result, this case raises the question whether funded projects are capable of shortening or accelerating innovation cycles.

Another aspect is the degree of transdisciplinary of the funded approaches. Here the question is who pointed at the problem to be solved or the task and who cooperates for its solution. Ideally, socio-economic and scientific issues are merged and a research subject is developed in a manner to have a high connectivity to practical and scientific methods and approaches (Jahn 2008). Finally, it is of interest whether through funded actions permanent cooperation between agriculture, industrial companies and science can be encouraged and possible innovation clusters on individual projects can also be established.

The main question in evaluating EIP-AGRI is, to which extent innovation, cooperation and building the knowledge base in rural areas were supported by the funding programme (Commission of the European Communities 2014b). To answer this question the implementation of the funding programme, the selection of projects and their results and effects have to be examined in more detail as part of the evaluation. In terms of implementation, the programmed funding objects, funding conditions and procedures are of particular interest. The main issue is whether the existing regulation is suitable to trigger innovations like the ones described above. In addition, the selection procedure and criteria guiding the decision-making on funding projects are of great importance and need to be considered as well.

The results and impacts of the projects can mostly be examined only after their completion. In addition to the type and quality of the implemented innovation itself, the question should be central to what extent the competitiveness of farms can be increased. Another question is whether progress toward sustainability has been achieved.

3.2 Objects, methods and instruments of investigation

The European Commission provides evaluation questions for orientation purposes such as: To what extent was the Programme for the Development of Rural Areas able to promote collaboration and improve the knowledge base in rural areas (Commission of the European Communities 2014b)? To answer such questions, a range of evaluation methods are needed, including quantitative and qualitative approaches to measuring the output, outcome and impacts of the funded EIP projects and OGs. The EC suggests the use of a mix of methods including desk research, focus groups, interviews, case studies, network analysis and workshops (European Commission 2015). Furthermore, other studies on the assessment of agricultural knowledge and innovation systems present innovative approaches, methods and tools to assess specific factors influencing the development of innovation in rural areas (Cristiano S.; Proietti P. 2014, World Bank, 2008; OECD, 2012).

Baden-Württemberg is currently developing the methodological framework for answering the questions raised, based on the following considerations: As an essential analytic dimension, the implementation of the EIP-AGRI approaches in the rural development programme of Baden-Württemberg needs to be investigated. Furthermore, the selection of innovative approaches / projects and Operational Groups is of special interest. As a third dimension, the results and effects of the funded projects need to be examined.

Implementation in MEPL III

The implementation of the EIP Agri approach is put into practice through the Rural Development Program (MEPL III) as well as through guidelines for the funding of appropriate projects. The objects of support, funding conditions and handling procedures for Operational Groups and overall objectives for funded innovation projects are defined there.

As research methods, document analysis and surveys are primarily intended here. The rural development programme and the implementation of policy guidelines will be examined by document analysis. Surveys will be conducted with the managing authority, granting and paying agent as well as with beneficiaries.

Regarding the examination, the focus is especially on the question whether the funded projects are capable to cope with the problems and identified needs presented and analysed in the RDP. It also has to be asked whether the stated rules of action allow the Operational Groups to act in accordance with their needs.

Selection of innovative approaches

The selection process and the selection criteria for projects play a central role in promoting EIP-AGRI projects. The main question is whether the 'right' projects are funded. With regard to the selection process, it is also of interest if there is only a limited amount of calls, or periodical calls, to select applicants.

Methodically, an analysis of the selection criteria and a comparison of the selection process with the EIP objectives should be made by the evaluator. In addition to the investigation of the selection process and rating system also the proposals of funded and rejected projects are to be assessed. A document analysis of funding data, project lists and in particular the action plans submitted should be undertaken. Individual aspects can be investigated in greater depth in the context of case studies on funded projects during the ex-post evaluation.

Essential criteria for the evaluation are e.g. the innovative nature and type of innovation of the funded projects, the composition of Operational Groups and in particular the potential contribution of the project to the EIP objectives.

Results and Impact

In order to assess the effectiveness of the funded projects, it is important to look at their outcomes and effects. Depending on the objective, different issues are in the focus of interest. The question to what extent progress towards sustainability has been achieved and whether the competitiveness of farms could be increased is of general interest.

For the investigation of the results and effects, particular document analyses (interim and final report) and case studies come into consideration. In addition, Operational Groups should

complete some kind of self-assessment / -evaluation of their activities and performance, which should be examined and rated by an external evaluator.

The following aspects are in the focus of the investigations: How useful are the results achieved in the projects (recommendations, products, processes, technologies)? With regard to the commercial launch, the dissemination of the results achieved (e.g. number of users) is of special interest.

Regarding the work of the Operational Groups, special benefit aspects of cooperation should be in the foreground. But also quantitative criteria such as duration of cooperation and frequency of meetings and distribution of tasks will be examined. However, the latter also serve as an indicator of the intensity of cooperation.

In terms of contributions to the implementation of rural development programmes, a comparison of the pursued and achieved goals should be made. It is also important to examine achieved results and effects with regard to the priorities of the RDP and how they have been accomplished with the measure examined (innovation, competitiveness, climate, biodiversity, etc.).

3. Conclusions and Outlook

The different status quo of implementing the EIP-AGRI in the German federal states is a challenge in terms of coordination and handling important questions related to the implementation. On the other hand, some federal states can learn from the 'early birds' which can be considered as a positive effect. Operational Groups are not yet approved and established in every federal state in Germany.

Another big challenge is to integrate the need of the compliance with regulations, questions on liability and legal entities, failure rate and financial sanctions with the thought of innovation and cooperation as well as the possibility to fail. Moreover, the reduced funding for projects and products which are not classified in Annex I referred to the Treaty on European Union and the Treaty on the Functioning of the European Union is less constructive for the EIP-AGRI approach.

However, EIP-AGRI is a new instrument for all Member States as well as the European Commission, so all actors need to become acquainted with this new flexible and creative approach. EIP-AGRI is a chance which should be used and further developed.

Due to the experiences of the authors the use of the EIP network cannot be assessed yet, but it seems that the output of other innovation funding instruments such as Horizon 2020 multi-actor projects and thematic networks as well as the outcome of the Focus Groups are increasingly used by the actors. It remains an open question in how far the funded projects fulfil the expectations: At what level of innovation are the funded projects located? What kind of innovations can be expected? What types of innovations are pushed? These are questions that will be answered in the course or at the end of the funding period. In addition, it will be of interest up to which extent the funded cooperation in Operational Groups could also achieve effects in terms of building regional or national 'innovation clusters', which could form the basis of more innovative processes and activities in future.

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