



REPORT ON POLICY IMPLEMENTATION TOOLS

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Executive summary

This report presents the policy recommendations developed in the context of the triennial EU research project SOLINSA. It is directed towards policy actors but shall also serve as a reference book for LINSA as well as for networks and groups which emerge in the context of EIP. Against the background of baseline studies on the national AKS resp. AKIS, the existing national and European support policies as well as of the analysis of 17 LINSA, the interactions of the researchers and the dissemination activities in the project, recommendations will be presented for a direct support of LINSA, for improved alliances between LINSA and AKIS, for a support of transition partners, and for an enhancement of the LINSA scope in new networks and in the EIP context.

The presented recommendations are connected especially to LINSA potentials and challenges as well as to the support LINSA received through the interaction with the research partners from the SOLINSA project. The experienced support in the LINSA-researcher co-operation had a strong process character. Strongest impulse has been the stringent participatory approach of the researchers. Resulting from this research result and with regard to the support of LINSA, the key position of actors supporting LINSA in their further development is emerging - the so-called transition partners. Transition partners are actors supporting LINSA temporarily in the accomplishment of learning and innovation processes as well as in the advancement of their networking activities. Aim of this interaction is developing underused potentials, initiating social learning processes, making development processes transparent and enabling self-reflection.

A manifold support framework is set by e.g. the Europe 2020 Strategy, the Innovation Union, or the Common Agricultural Policy (CAP). The particular measures which are recommended by the SOLINSA researchers for LINSA support, LINSA networking and for support of actors working with LINSA, consider the already existing support measures. In each proposed measure, it is outlined how LINSA can advance substantially through support, how this is related to the experiences made in the SOLINSA project, and which LINSA would especially benefit from the respective measure.

The recommendations especially consider the new European Innovation Partnership on Agricultural Productivity and Sustainability which could on the one hand be a chance for LINSA participating in or setting up Operational Groups (OG). On the other hand LINSA offer a long-term structure which allows continuing what has been developed in the more project-oriented and short-term OG. Resulting from the project experience and with some regard to the context of the EIP approach, the tasks identified to be fulfilled by EIP innovation brokers need to be combined with the broader set of tasks of transition partners. Particularly, this is about opening up spaces for creativity and experimentation, in which the development of social learning and innovation is possible.

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Abbreviations used in this report

AKIS	Agricultural Knowledge and Innovation System
AKS	Agricultural Knowledge System
BO	Boundary Objects
CAP	Common Agricultural Policy
CBW	Capacity Building Workshops
CF	Cohesion Fund
CIP	Competitiveness and Innovation Framework Programme
EAFRD	European Agricultural Fund for Rural Development
EATIP	European Aquaculture Technology Platform
EBTP	European Biofuels Technology Platform
EC	European Commission
EIP	European Innovation Partnership(s)
EIT	European Institute of Innovation and Technology
EP	European Parliament
ERA	European Research Area
ERC	European Research Council
ERDF	European Regional Development Fund
ESF	European Social Fund
ETPGAH	European Technology Platform for Global Animal Health
EU	European Union
FABRE-TP	Sustainable Farm Animal Breeding and Reproduction Initiative
FAS	Farm Advisory System
FET	Future and Emerging Technologies
FG	Focus Groups
FP7	EU Seventh Framework Programme
FTP	Forest-based Sector Technology Platform
GDP	Gross Domestic Product
GPS	Global Positioning System
HLSB	High Level Steering Board
ICT	Information and Communications Technology
ICT-PSP	ICT Policy Support Programme
IEE	Intelligent Energy Europe Programme
IDW	International Dissemination Workshop
JRC	Joint Research Centre
JTI	Joint Technology Initiatives
LAG	LEADER Local Action Group(s)
LINSA	Learning and Innovation Networks for Sustainable Agriculture
MANUFUTURE	The Agricultural Engineering and Technology Platform

NGOs	Non-Governmental Organisations
OG	Operational Group(s)
PLANTS	The Plants for the Future
R&D	Research & Development
RDP	Rural Development Programme
RSFF	Risk Sharing Finance Facility
SCAR	Standing Committee on Agricultural Research
SMEs	Small and Medium Enterprises
SOLINSA	Support of Learning and Innovation Networks for Sustainable Agriculture
SusChem	The European Technology Platform for Sustainable Chemistry
WP	Work Package

Abbreviations used for LINSA under study¹

E B&H	Brighton and Hove Food Partnership, England
E Perm	Permaculture Community (Permaculture Association and the Land Project), England
EU organ	The European Organic Data network
F RAD	Réseau Agriculture Durable D) – Network for a Sustainable Agriculture, France
F Charter	Charter of Good Agricultural Practices in Livestock production, France
G Women	Bavarian Rural Women's Association, Germany
G DLG	German Agricultural Society (Deutsche Landwirtschafts-Gesellschaft), Germany
H G7	G7 (Local Food Council of Gödöllő), Hungary
H Nat	The NATURAMA Alliance, Hungary
I CVR	Consorzio Vacche Rosse, Italy
I Crisop	Association for Solidary Economy Crisoperla, Italy
L Biogas	Veauge Biogas Production Network, Latvia
L Fruit	Fruit Growing Network, Latvia
N Care	Cooperative Boer en Zorg: Care Farmers in the Netherlands
N Dairy	Sustainable Dairy Farming, Netherlands
S ACDF	Association for the development of fodder production, Switzerland
S Naturli	Naturli Co-operative Cheese production, Switzerland

¹ For a detailed description of each LINSA under study please consult Ingram et al. (2013a)

1 INTRODUCTION

This report provides policy recommendations for relevant policy actors in the SOLINSA context as it was formulated in Task 7.3 of the SOLINSA Description of Work:

Firstly, draft recommendations for all relevant types of policy actors defined in 7.2 will be developed by P10 (University of Hohenheim).

These policy recommendations served as a basis for discussion in working groups of policy actors at the Workshop with EU and national policy actors (Deliverable 7.1) - the so called Final Conference in Brussels (December 3, 2013). The policy recommendations result in operational tools to aid and inform further policy implementation. At the same time, the collection of recommendations is directed towards the LNSA under study as well as networks developing innovations for sustainable agriculture. The empirically based recommendations, the back coupling to existing support mechanisms as well as the development of new areas for support therefore result in a reference work for the support of ongoing or new activities.

The suggested recommendations refer to a direct support of LNSA, to an improvement of the position of LNSA in the AKIS – which means to interlink LNSA with AKS² – as well as to the support of actors working with LNSA, so-called transition partners. **Transition partners are in the project understanding persons supporting LNSA with a learning and appreciating attitude. Depending on the support needs, transition partners might take up the role of facilitators, participatory researchers, boundary persons, trainers, experts or lecturers, intermediary persons as well as EIP innovation broker.**³ Major focus in the context of the LNSA-transition-partner-relationship is put on the mutual learning aimed at a strengthening of the LNSA.

The broader policy context in which LNSA are embedded, such as the EU support policy of European Innovation Partnerships (EIP) and Operational Groups (OG) as well as the role of "innovation brokers" as it is described in this context, is dealt with in a separate chapter. The process character of innovation development, learning processes and network development is highlighted in many of the recommendations. The analysis of such processes and interventions by researchers involved in these processes was core to the SOLINSA project. To use participatory methods, not only as a method for support but instead as a method for generating scientific data in a participatory and appreciative way, was a relatively new feature in the context of EU projects dealing with this topic. This approach reasons the triad of support measures:

² For a detailed description of the terms AKS and AKIS please consult Ingram et al. (2013a)

³ In the EU EIP context, **innovation brokers** are described as the connectors between managing authorities and possible partners (OG). They facilitate the difficult process of raising awareness for and animation of the participation in innovative actions resulting in the set up of operational groups and linking of possible innovation actors (farmers, researchers etc.).

LINSA - AKS - actors. The methodological approach itself is justified by the assumption that the existence of LINSA already is a discrete answer to handling complex problems. Social learning and common problem and problem solution orientation are approaches exclusively applied in networks, as individuals get engaged with networking expecting to be able to answering questions which they could not answer on their own. The SOLINSA research team implemented this logic of networking with theoretic and methodological approaches of co-learning and social learning consistently up to the policy recommendations. Apart from the participatory interventions in the LINSA, the experiences made with facilitated Capacity Building Workshops for researchers and experts (Deliverables 5.1 and 5.2) and with dissemination activities (Deliverables 6.1-6.6) served as empirical basis for deriving the recommendations.

The aim of this report is to describe measures for policy support of LINSA and to discuss them in the context of existing and new policies from a performance and resource perspective of LINSA. The tasks of alliances between LINSA and transition partners and LINSA and research will also be addressed. The objective is to point out the different levels - what affects LINSA directly, what affects the AKS, what affects transition partners? At the end, the learning effects from the SOLINSA project will be described.

1.1 Background – knowledge flows in AKS and niches

With the historic background of production increase in mind, knowledge in agriculture has been mostly generated outside farming as examples such as older innovations (e.g. automotive engineering in agriculture) or newer ones (e.g. GPS or ICT in agriculture) show. Often, this knowledge is considered to be transferred in a more or less linear way from knowledge creators to knowledge users (formal Agricultural Knowledge System, AKS; Knickel et al. 2009; Röling 2009; Leeuwis and Aarts 2011). This innovation approach limits farmers' participation in knowledge creation, the manifold and divers working backgrounds of farmers are not adequately considered, what results in inadequate outcomes and solutions which do not meet farmers' needs or only meet the needs of farmers oriented towards a highly productive and technologically driven agriculture (Klerkx et al. 2012; Knickel et al. 2009).

Parallel to this, it is also does not take into account the knowledge that is being generated on farms and bound to farms. Many farmers develop interesting alternatives, to overcome particular questions of farming. This knowledge therefore very often does not reach the official bodies of the AKS – or it takes very long time. In general, this knowledge is considered as experimental or indigenous knowledge and as very specific knowledge which does not fit into the so-called mainstream agriculture. Linear innovation thus can be considered as inadequate strategy for achieving sustainability.

As a result of this inadequate "knowledge flux" between AKS and such innovative farmers, new networks emerge involving a broad actor variety, such

as farmers, experts, NGOs, consumers or local authorities (Brunori et al. 2011). They are interested in alternatives regarding production, consumption and innovation, setting up their own rules and founded on the principles of sustainability. **In the context of the SOLINSA project, these networks are called LINSA (Learning and Innovation Networks for Sustainable Agriculture).** “*LINSA are defined as ‘networks of producers, customers, experts, Non-Governmental Organisations, Small and Medium Enterprises, local administrations and components of the formal Agricultural Knowledge System (AKS), that are mutually engaged with common goals for sustainable agriculture and rural development – cooperating, sharing resources and co-producing new knowledge by creating conditions for communication”* (Brunori et al. 2013a). Open questions at the beginning of the SOLINSA project were:

- How do LINSA learn?
- Are LINSA innovative networks?
- At which level are they innovative?
- How to handle the embedment/connection of LINSA to the AKS?
- How do LINSA evolve?
- What are LINSA potentials, and what are current challenges?

1.2 Social learning in LINSA – LINSA as transition drivers

Co-creation of knowledge and social learning are at the centre of the work of LINSA but also disconnect them from the formal AKS. Although formal AKS are changing, necessary reforms are still missing resulting, among others, in a lack of communication and connection with other actors as well as common cognitive frameworks. Knowledge and skills necessary for social learning processes are rather underrepresented. Thus, for reaching sustainable agriculture, formal AKS needs to undergo a transition process where it becomes better embedded in broader Agricultural Knowledge and Innovation Systems which incorporate LINSA and focus on institutional learning and co-creation of knowledge. Nevertheless, knowledge gaps exist concerning the barriers for this transition process and the policy measures to remove them.

The transition to sustainable agriculture can be considered as a radical innovation. LINSA, which show strong motivation to change and a will for co-operation, can help to bridge policy gaps and thus facilitate integration and adaptation of policies to given contexts. This might create pressure on the AKS to become more supportive towards LINSA and accelerate the transition process. **LINSA in this context are considered as major transition drivers** (see e.g. Bokelmann et al. 2012).

1.3 Diversity of LINSA – diversity of support

In this context it is important to be aware of the different types of LINSA, their different development stages (they can be new or old), different scales (small or large networks), and different level of integration (linked or not linked to AKS). At the same time it has to be considered that AKS actors and individual groups within these actors make sustainable agriculture one of their core topics and that by this, a change towards a more sustainable agriculture also happens within organisations of the AKS. These individual groups can be distinguished from LINSA as they are of organisational character and not networks. Depending on how these groups are positioned in their organisations, learning and innovation are an essential part of their work and can thus reach the AKS. In other cases, this is more complicated and the issue of niche innovations re-emerges in those AKS organisations in a similar way than in LINSA being real networks offering alternative solutions.

SOLINSA case studies show that **even strongly developed networks still have room for further development and do develop over time**. Change management can help them to be aware of this development, to plan it and to accelerate it. Nevertheless, LINSA receive only little support in this context and training on e.g. facilitation or management is an exception.

1.4 Innovation support policies in the EU

Concerning innovation in the context of networks like LINSA, **there are a number of policies at the European Level that could be beneficial for LINSA development**. Innovation has become one of the core topics of EU policy during the last decade. With the Lisbon Agenda in 2000, renewed in 2005 and 2010 (Europe2020), the EU aims at coordinating research and innovation at the European level to reverse the trend of falling behind other countries such as the U.S. and to make Europe world leader in economic competitiveness until 2020.

As latest instrument under Europe 2020 the flagship initiative "Innovation Union" started containing seven key initiatives. In the context of SOLINSA, the most important of these initiatives are the European Innovation Partnerships which include so-called Operational Groups (OG), Focus Groups (FG) and a European Innovation Network.

The EU Seventh Framework Programme (FP7) ran from 2007-2013 supporting research, technological development and demonstration activities across the EU. Agriculture is linked to FP7 through the "Food, Agriculture and Biotechnology" area. From 2014 on, FP7 will be replaced by Horizon 2020 supporting, among others, Focus Groups in agriculture and thematic networks across Europe.

Under the second pillar of the Common Agricultural Policy (CAP) the European Agricultural Fund for Rural Development describes, among others, how these Operational Groups, the European Innovation Network, so-called Innovation Brokers, and advisory services can be financially supported. Further support

under the CAP happens through the LEADER programme supporting Local Action Groups (LAGs) for rural development.

1.5 Innovation support policies addressing LINSA

Examining these policies leads to the question **how LINSA can be best addressed by public support**. How should innovation policy, research, education and advice be arranged to promote LINSA in a cost-efficient and effective way? This does not deal with creating a new AKS or abandoning the old AKS. It rather considers co-operation and new balances of power relations of AKS actors recognising and respecting LINSA. Furthermore it addresses the question of how LINSA, which do not benefit from AKS support, can gain influence on AKS, respectively the more process oriented AKIS. And it is also about transition partners: Which persons – coming from farm practice, advisory services, research, administration etc. – could be supportive to LINSA, what role do they have in the various processes, and what are their needs?

2 METHODOLOGY

For this report, results from work package (WP) 3 (Hermans et al. 2012; Hermans et al. 2011) were compared and contrasted with results from WP4 (Ingram et al. 2013a), 5 (Home et al. 2014) and 6 (e.g. Anh Joly 2013), and developed into policy recommendations. Results for the different WP were obtained as follows:

WP3: This WP consisted of a desk study in 2011 of policy documents that influence governance of innovation and learning in a diversifying agriculture and on related support policies at national level with special regard to farm advisory services (Hermans et al. 2012, Deliverable 3.1B). This information was completed by a discussion on new EU policies for innovations, especially the new European Innovation Partnerships (EIP), in 2013, with the aim of achieving a clear overview on new developments in this context. Another part of WP3 was the comparative analysis and synthesis report on the organisation and functioning of the Agricultural Knowledge Systems (AKS) in eight different European countries and the connection of the LINSA to the AKS (Hermans et al. 2011, Deliverable 3.1A).

WP4: This WP contained the empirical work with the LINSA. Data were obtained for 17 LINSA through interactive workshops with LINSA members, participatory observation of LINSA events / meetings, interviews with LINSA members and experts from outside the LINSA, site visits, working directly with LINSA (e.g. advising on strategies), discussions with other researchers involved in LINSA, and by studying existing documents like websites, books, articles, technical datasheets, or charters. Results are analytical descriptions of the different LINSA concerning:

- Constraints, opportunities and needs for support of successful LINSA
- Mechanisms of network development, learning and innovation processes and connection with the formal AKS
- Tasks, roles and emerging needs for the knowledge and skills of actors and institutions and consequences for education and training
- Policy principles, policy instruments and financial arrangements for successful LINSA in different national and regional contexts
- Evaluation criteria on effectiveness and cost efficiency of support arrangements exploited by LINSA
- Learning approaches, methods and tools used in LINSA, why they are used and if they are useful in the applied context
- Operational tools for AKS actors

A synthesis report of the empirical LINSA analysis has been provided in Deliverable 4.2A (Ingram et al. 2013a). This is complemented by Deliverable 4.2B (Ingram et al. 2013b) and 4.2C (Hermans et al. 2013a), the respective reports on analytical characteristics relevant to LINSA development and on sustainable agriculture perspectives.

In addition to the 17 LINSA under study, 7 show cases have been selected in the course of the project (Ingram et al. 2013d). The results of these show cases served to assure the LINSA results. For this report, the results of the show cases have not been considered.

WP5: In this WP, a transdisciplinary methodology for the project was developed (Home et al. 2014 (Deliverable 5.2); Helmle 2013a; Neumeister et al. 2013) to structure the process of learning in order to ensure processes of social learning and co-creation of knowledge between consortium partners and stakeholders. This learning methodology was then used during the empirical LINSA work (WP4), supervised and continuously improved. Capacity Building Workshops (CBW) for project members were held to ensure the appropriate implementation of the methodology and to help participants in improving their facilitation skills. The CBW as well as the project meetings gave room to the researchers to discuss about and reflect on the experiences made with the LINSA and led to a continuous development of the methodology.

WP6: This WP included two international dissemination workshops to create transdisciplinary learning spaces with stakeholders. The participants of the first workshop were stakeholders not directly involved in the SOLINSA project (e.g. researchers, advisors, or members of the Collaborative Working Group on AKIS in the Standing Committee for Agricultural Research (SCAR)). At the second dissemination workshop, preliminary project results were presented and discussed with people from the LINSA-under-study, researchers, experts and policy makers (Anh Joly 2013; Deliverable 6.5). The second part of this work package consisted of a training course – webinar and face-to-face training – for people working with LINSA, through which valuable insights could be gained on how to support transition partners in the future.

The main content of this report (WP7), namely the policy recommendations, has been obtained by contrasting and reflecting the background material on existing and new EU innovation policies on the one hand. In addition to that and as most important element stands the empirical evidence obtained during the field phase. Finally, the recommendations are also based on the participatory, joint analysis of LINSA, the experiences of the methodology development process and CBW as well as the experiences with two international dissemination workshops (IDW), the SOLINSA training course and the Workshop with EU and national policy actors. For the empirical analysis, the progress reports and 17 final reports of the LINSA under study (Ingram et al. 2013c; Curry and Kirwan 2013; Neumeister and Dockès 2013a; Neumeister and Dockès 2013b; Helmle 2013b; Burkart 2013; Nemes et al. 2013a; Nemes et al. 2013b; Brunori et al. 2013b; Brunori et al. 2013c; Tisenkopfs et al., 2013a; Tisenkopfs et al. 2013b; Hermans et al. 2013b; Hermans et al. 2013c; Sorg and Barjolle 2013a; Bourdin and Anh Joly 2013; Home and Moschitz 2013a) were collected and coded. By means of a content analysis, results could be structured, allocated and fed back into the empirical work. The code structure is the result of discussions and development processes in the context of four SOLINSA project meetings.

This resulted in the following 4 main groups of policy recommendations:

1. Direct support of LINSA
2. LINSA and AKS
3. Transition partners - Support of actors working with LINSA
4. LINSA-LINSA networks, EIP and OG

The recommendations (Chapter 5) are organised like index cards and follow the below mentioned scheme:

Recommendation #: Short title
<i>Long title</i>
<i>Goal/effect</i>
<i>Scope / areas of intervention of transition partners</i>
<i>Links to existing funding schemes</i>
<i>LINSA perspective - How would the measure strengthen LINSA?</i>
<i>SOLINSA perspective - How this is related to the work with the LINSA, to the SOLINSA methodology and to the dissemination activities</i>
<i>LINSA which would benefit from the proposed recommendation</i>

3 BACKGROUND INFORMATION ON LINSA RELEVANT EU POLICY DOCUMENTS

This chapter focuses on describing EU Policy Documents on innovation relevant for LINSA and their development and is thus a valuable addition to the SOLINSA "Review of relevant EU Policy Documents on Innovation" (Hermans et al. 2012, Deliverable No. 3.1B). As the report also serves as reference book for LINSA, it provides a very broad description of policy instruments in this chapter.

Information for this chapter has been gathered through review of EU policy documents, literature and internet sources and aims at providing an overview on the status quo of innovation policy in the European Union. The mentioned innovation policies and policy instruments are on the one hand promoting individual actors (e.g. individual farmers or enterprises) and on the other hand a network approach. Although SOLINSA focuses more on a network approach, the promotion of individual actors (e.g. actors within a LINSA) might be relevant as well. The table below categorises the innovation support instruments with relevance for LINSA according to individual and network support. They are described more precisely in the following subchapters.

Table 1 EU innovation support instruments focusing on individual and network support

Support of individuals	Support of networks
Horizon 2020	Horizon 2020
Structural Funds	Structural Funds
European Agricultural Fund for Rural Development	European Agricultural Fund for Rural Development
Competitiveness and Innovation Framework Programme	LEADER
Farm Advisory System	European Technology Platforms
	European Innovation Partnerships

3.1 General Innovation Policies at the EU Level

3.1.1 The Lisbon Agenda⁴

The Lisbon Agenda has been adopted in March 2000 after it had become obvious that Europe could no further compete with the United States and other (Asian) countries regarding research and innovation if no stronger coordination at European level will be established. Main goal of the agenda was for Europe to become "*the most competitive and dynamic knowledge-based economy in the world, capable of sustainable growth with more and better jobs and greater*

⁴ For a more detailed description please consult Hermans et al. (2012)

social cohesion" (EP 2000) by 2010. Through the Lisbon Agenda, attention was directed more towards innovation (Johansson et al. 2007). Among the priorities of the Lisbon Agenda was to make knowledge and innovation the main drivers of sustainable economic growth in Europe focusing on innovation from a rather socio-economic perspective. Due to unsatisfying results (EC 2004), the agenda was restarted in 2005. Nevertheless, this time clear target-setting was left out and each member state was from then on responsible for its own national reform programmes.

3.1.2 The Europe 2020 Strategy

In 2010, the Lisbon Agenda phased out and the new Europe 2020 Strategy has been introduced as follow-up programme for the years 2010 until 2020. With this programme, conditions have been set for the support of a "*smart, sustainable and inclusive*" (EC 2010a) economic growth and a stronger coordination of EU and national policy. This includes, among others, an increase of the investments in R&D (to at least 3% of the GDP) and the development of a new indicator to track innovation. Europe 2020 Strategy also comprises seven so-called flagship initiatives, a framework tool supporting EU and national authorities in the reinforcement of Europe 2020 priorities like innovation (EC 2010a). As one of these initiatives, the Innovation Union started in 2010 (EC 2010b).

3.1.3 The Innovation Union⁵

As latest initiative targeting innovation in the EU (EC 2010b), the innovation union has as aim to create an innovation-friendly environment facilitating the transformation of ideas into products. It contains over thirty action points like the strategic use of public procurement budgets to finance innovation, a comprehensive innovation scoreboard based on 25 indicators (ProInno-Europe 2011), and a European knowledge market for patents and licensing (EC 2005a). Other central elements of the innovation union are the Risk Sharing Finance Facility (RSFF)⁶ and the building up of a European Research Area (ERA)⁷. As a part of the ERA, the European Institute of Innovation and Technology (EIT)⁸ has been established. For the agricultural sector, the Standing Committee on Agricultural Research (SCAR)⁹ currently has an important role within the ERA.

⁵ For a more detailed description please consult Hermans et al. (2012)

⁶ RSFF supports high-risk research, technological development and demonstration projects through loans and guarantees.

⁷ ERA is a system of scientific research programmes integrating EU resources and focusing on e.g. multi-national co-operation, cross-border exchange, or increased mobility of researchers and knowledge workers (Directorate-General for Research 2007).

⁸ EIT is an autonomous EU body bringing together higher education, research and business sectors by connecting them through their knowledge and innovation communities. Main focus is put on the stimulation of innovation (EC 2000).

⁹ SCAR has been established in 1974 specifically for the coordination of agricultural research and later on transferred from DG Agriculture to DG Research. The delegates

Another new and central element of the innovation union is the initiative "*European Innovation Partnership*" (EC 2012) - a new approach to research and innovation (see subchapter 3.5).

3.2 Innovation, Governance and Financial Incentives

3.2.1 The Seventh Framework Programme

The EU Seventh Framework Programme (FP7) ran from 2007-2013 supporting research, technological development and demonstration activities across the EU with a budget of 53.3 billion euro. Its activities are implemented in four categories: 1) Co-operation, 2) Ideas, 3) People and 4) Capacities (EC 2006a). It also supports two research institutes: Euratom¹⁰ (EC 2006b) and the Joint Research Centre (JRC)¹¹ (EC 2005b). Agriculture is linked to the 7th Research Framework Programme mainly through the "*Food, Agriculture and Biotechnology*" theme. It covers farm management policies, food safety and rural development with three main activities: sustainable production; farm-to-fork food; and life sciences, biotechnology and biochemistry for non-food products and processes (EC 2006a).

3.2.2 Horizon 2020

From 2014 on, FP7 will be replaced by Horizon 2020 which will be running until 2020 with a budget of over 70 billion € (EC 2011a). Horizon 2020 will have three major fields of support: Strengthening of science within EU¹², strengthening industrial leadership in innovation¹³, and addressing major concerns of Europeans such as e.g. ensuring food safety and security (EC 2011a). Societal challenges will be addressed by bridging the gap between research and markets, which is considered a market-driven approach in which especially international partnerships should be created. Apart from this, Horizon 2020 will also contribute to a further development of the ERA and be the financial instrument for implementing the flagship initiative Innovation Union (EC 2011b).

come either from the different Ministries responsible for agriculture / rural areas or from (agricultural) universities.

¹⁰ Euratom is a research institute for research on nuclear energy.

¹¹ JRC supports (scientifically and technologically) "*the conception, development, implementation and monitoring of community policies*" (EC 2006).

¹² This includes support of talented researchers (European Research Council, ERC), funding of collaborative research (Future and Emerging Technologies, FET), provision of researcher training (Marie Curie actions), and ensuring world-class research infrastructure in Europe (EC 2011b).

¹³ This includes support for enabling and industrial technologies, increased access to risk finance, and innovation support for SMEs (EC 2011b).

3.2.3 The Competitiveness and Innovation Framework Programme

The Competitiveness and Innovation Framework Programme (CIP) has a budget of 3.6 billion euro and aims to encourage the competitiveness of European industry, with SMEs as its main target (EC 2006c). It promotes access to finance and supports the development of better innovation support services and policies. It funds trans-national business and innovation support services. It addresses clusters, public procurement and non-technological barriers to innovation. It helps with developing the information society by stimulating take-up and use of ICT and promotes the increased use of renewable energies and energy efficiency. The CIP is composed of three specific programmes: the Entrepreneurship and Innovation Programme, the ICT Policy Support Programme (ICT-PSP), the Intelligent Energy Europe Programme (IEE) (EC 2006c).

3.2.4 Structural Funds¹⁴

The structural funds are part of European Cohesion policy that aims to reinforce economic and social cohesion in Europe by redressing some of the main regional imbalances through support for the development and structural adjustment of regional economies. One of its focal points is the need to strengthen competitiveness and innovation. The three main structural funds under which research and innovation activities can be supported are (EC 2013a): The European Regional Development Fund (ERDF)¹⁵, The Cohesion Fund (CF)¹⁶, and the European Social Fund (ESF)¹⁷.

¹⁴ For a more detailed description please consult Hermans et al. (2012)

¹⁵ The ERDF aims at a strengthening of the economic and social cohesion in the EU through a reduction of disparities among member states. This happens through support of enterprises (investments), infrastructure development (e.g. for research and innovation), funding instruments for promoting regional / rural development as well as co-operation among cities and regions, and technical emergency measures.

¹⁶ The CF supports EU member states whose GDP/inhabitant is below 90% of the EU average in reducing their economic and social leeway and in stabilising their economy. This happens through project support in the fields of trans-European transport networks and environment.

¹⁷ The ESF aims at improving the employment situation within the EU through project support in the fields of adjustment measures of employers and employees, access to job markets, integration of socially deprived persons in the job markets, and human capital (reform of education systems, networking among educational institutions).

3.3 The Common Agricultural Policy and Innovation

3.3.1 The Farm Advisory System¹⁸

The CAP reform of 2003 made support of farmers through direct payments dependent on cross-compliance measures. Because compliance was considered to be rather complex and farmers were threatened of losing income, the Farm Advisory System (FAS) was established committing national authorities to offer advice to farmers since 2007 (EC 2009a). Advice on cross-compliance is financially subsidised with 80% of the costs and a maximum of 1500€ (EC 2009a). Within the FAS there exist three different roles of actors: the advisor¹⁹, the farmer²⁰ and the controller²¹. The organisation of the FAS was incumbent upon the member states and there were no EU regulations about the frequency of advice, qualifications of advisors or payments for advice. As evaluated by the EC, FAS helped farmers to become aware of material flows and environmental farm issues as well as to increase their financial management skills and bookkeeping (EC 2010c). From farmer side, the FAS was very often seen as a control mechanism resulting in few farmers seeking advice. The Commission has indicated that it wants to continue the FAS also in the future, and is taking measures to take away the distrust by placing more importance on the strict confidentiality of the advice to farmers. The commission intends to promote the FAS by 1) introducing flexibility in the content and 2) in the frequency and uptake of advisory services. The obligation to advice on all cross compliance fields is removed in order to make the advisory service more flexible and become more attractive for farmers as it can be used more targeted and more frequently.

3.3.2 The European Agricultural Fund for Rural Development

The CAP reforms of 2003 and 2004 introduced the European Agricultural Fund for Rural Development (EAFRD) as financial instrument for supporting rural development for the period from 2007-2013 (EC 2005c). For the years 2014-2020, the new EAFRD regulation will be valid. The main goal will be to strengthen EU rural development policy by simplifying its implementation (EC 2011c). The EAFRD financially contributes, among others, to activities strengthening the competitiveness of the agricultural and forestry sector. This includes measures for the promotion of knowledge and human capital (e.g. vocational training, advisory services), for the development of physical potential (e.g. modernisation of farm equipment, improved infrastructure), for product

¹⁸ For a more detailed description please consult Hermans et al. (2012)

¹⁹ Advisors should be general practitioners able to direct farmers to a specialist if necessary.

²⁰ Farmers are responsible for their own actions.

²¹ Controllers check whether the obligations for direct payments have been met and can impose sanctions.

quality improvement (e.g. assistance in compliance with rules), and provisional measures (e.g. aid to establish producer groups) for new member states (EC 2011c). The new EAFRD also describes how OG, the European Innovation Network and Innovation Brokers can be financially supported in the context of the new European Innovation Partnership for Agricultural Productivity and Sustainability (EC 2011c).

3.3.3 LEADER

Further support under the CAP happens through the LEADER programme for rural development which was established in the 1990s and has become part of the EU mainstream support for the period 2007-2013. Main features, characterising the LEADER approach and distinguishing it from other rural policy measures, are that all strategies and actions are area-based (homogeneous areas), are bottom-up (local actors participate in decision-making), involve public-private partnerships (Local Action Groups), facilitate innovation (freedom to LAGs in their activities), facilitate networking (e.g. for the exchange of achievements), facilitate co-operation (among LAG), and are integrated and multi-sectoral (EC 2006d). LAGs are thus actively involved in designing of and implementing the local development strategy in their respective area by using their local knowledge. Each LAG develops a local development strategy and in this context funds projects in its operational area. Projects must be community driven and beneficial for the community. The LAG have a manager and administration team, individual projects have their own responsible implementation team or individual or organisation.

3.4 Innovation Programmes supporting collaboration

3.4.1 Joint Technology Initiatives

Joint Technology Initiatives (JTI) are a funding scheme under FP 7 offering a framework for conducting research with high public and private investment (EC 2006e). Bringing together stakeholders around commonly agreed, industry-driven research agendas, Joint Technology Initiatives are intended to accelerate the generation of new knowledge, to enhance the uptake of the results of research into strategic technologies and to foster the necessary specialisation in high technology sectors which determine the EU's future industrial competitiveness. Potential Joint Technology Initiatives have initially been identified in six areas that offer significant potential for boosting Europe's innovative capacity (EC 2005d): Fuel Cells and Hydrogen, Aeronautics and Air Transport, Innovative Medicines, Nanoelectronics Technology 2020, Embedded Computing Systems, and Global Monitoring for Environment and Security.

3.4.2 European Technology Platforms

The European Technology Platforms are an initiative on knowledge transfer and intellectual property bringing actors from all over Europe together in technology areas. Led by industry, these actors define medium to long-term research and development priorities and focus on areas where progress is dependent on major technological and research advances. The initiative has been started to better align research with industry's needs and to ensure transformation of results into innovative and marketable products and services. For the agricultural sector, there exist eight official technology platforms (EC 2009b): The European Technology Platform for Global Animal Health (ETPGAH), the Forest-based Sector Technology Platform (FTP), the European Technology Platform for Sustainable Chemistry (SusChem) and its section Industrial Biotechnology, the Agricultural Engineering and Technology Platform (MANUFUTURE), the European Biofuels Technology Platform (EBTP), the Sustainable Farm Animal Breeding and Reproduction Initiative (FABRE-TP), Food For Life (Food), European Aquaculture (EATIP), and Plants for the Future (PLANTS).

3.5 European Innovation Partnerships

This subchapter deals more in detail with the so-called European Innovation Partnerships established under the umbrella of the Innovation Union. As the report also serves as reference book for LNSA, the topic of EIP is treated rather extensively.

3.5.1 General Information on EIP

EIP are a new instrument under the Innovation Union aiming to bridge the gap between research and the application of innovative ideas / approaches in practice. They *"are launched only in areas, and consist only of activities, in which government intervention is clearly justified and where combining EU, national and regional efforts in R&D and demand-side measures will achieve the target quicker and more efficiently"* (EC 2013c). EIP focus on connecting all relevant research and innovation chain actors at different levels (EU, national, regional) with four main aims (EC 2013c):

1. To increase R&D activities
2. To coordinate funding of demonstration/pilots
3. To foresee and accelerate essential regulations/standards
4. To better coordinate public procurement

In total, there exist / will be established five different EIP:

1. EIP on Active Health & Ageing
2. EIP on Agricultural Productivity and Sustainability
3. EIP on Smart Cities and Communities

4. EIP on Water

5. EIP on Raw Materials

In the context of SOLINSA, the EIP on Agricultural Productivity and Sustainability is of special importance and will be described in the following subchapters.

3.5.2 The EIP on Agricultural Productivity and Sustainability

The EIP concept was set out in the 2010 Commission Communication "*Innovation Union*" (EC 2010b). EIP are based on existing policies (Rural Development Policy, Research and Innovation Framework) and are no individual policy instruments of their own. Main aims are the achievement of synergies, EU value added and co-operation among partners. This is written down in the Communication on the EIP 'Agricultural Productivity and Sustainability' from 2012 (EC 2012). There, it is announced the creation of an EIP network at EU level and defined the implementation of the EIP by means made available by Rural Development Policy and Horizon 2020 (HLSB 2013).

Innovation is considered as one of the two major focus areas in the proposal on the support for rural development European Agricultural Fund for Rural Development (EAFRD). According to Article 5, innovation, co-operation and the development of the knowledge base in rural areas should be fostered and the links between agriculture, food production, forestry, research and innovation should be strengthened. Innovation is thus "*one of the cross-cutting objectives to which all RD priorities must contribute*" (EC 2013b). Article 9 states that specific needs for innovation should be assessed for identifying relevant responses. The RD programme should set up an approach for innovation including the EIP for agricultural productivity and sustainability. Furthermore, the availability of sufficient advisory capacity with reference to innovation shall be ensured. This means that "*rural development programmes have to address innovation. Managing authorities can use several measures to do so*" (EC 2013b).

The overall goal of the EIP on Agricultural Productivity and Sustainability is to support "*a competitive and sustainable agriculture and forestry that works in harmony with the environment*" (HLSB 2013). Main challenges behind this goal are the social, health and environmental issues related to the increasing global demand for food / non-food products. Research and innovation are needed to guarantee sustainable productivity gain on the one hand but economic viability and accessibility of possible solutions on the other hand. This requires the efforts of all stakeholders as well as coordinated policy responses. According to the High Level Steering Board (HLSB 2013) nominated by the European Commission, the establishment of a favourable innovation culture "*implies a change of the mind-set at all levels*" and "*positive attitudes towards innovation, risk taking and entrepreneurship can be boosted in particular through: facilitating exchanges between all actors, sharing traditional and scientific knowledge, relying on a bottom-up approach and strengthening networking, engaging in developing practical solutions, identifying and developing lighthouse projects, mobilising innovation brokering, and developing social and institutional*

innovation." The EIP therefore follows an interactive innovation model with an emphasis on partnerships. Against the background of encouraging the co-creation of innovation and easier spreading of innovations / ideas, bottom-up approaches should be used and the various actors should be linked in Operational Groups engaging in practical projects. With all the different agricultural EIP, "*a specific agricultural network at EU level (the EIP network)*" should be created, facilitating "*communication and knowledge exchange across borders, sectors and different groups of actors from research to practice*" (HLSB 2013).

In the EAFRD, the EIP for agricultural productivity and sustainability is described in Title IV and according to Article 61 it shall (EC 2011c):

- "(a) promote a resource efficient, productive, low emission, climate friendly and resilient agricultural sector, working in harmony with the essential natural resources on which farming depends;*
- (b) help deliver a steady supply of food, feed and biomaterials, both existing and new ones;*
- (c) improve processes to preserve the environment, adapt to climate change and mitigate it;*
- (d) build bridges between cutting-edge research knowledge and technology and farmers, businesses and advisory services."*

These aims shall be achieved by (EC 2011c):

- "(a) creating added value by better linking research and farming practice and encouraging the wider use of available innovation measures;*
- (b) promoting the faster and wider transposition of innovative solutions into practice; and*
- (c) informing the scientific community about the research needs of farming practice."*

For reaching these aims, EAFRD shall support so called "*EIP operational groups*" (Article 62/63) and the "*EIP network*" (Article 53) (EC 2011c).

EIP also receive attention in the Commission proposals for the Horizon 2020 Framework Programme for Research and Innovation stating that "*full account shall be taken of the relevant aspects of the research and innovation agendas established by the EIP*" (Article 12) (EC 2011a). Additionally, the implementation of project approaches matching with the EIP interactive innovation model is proposed and in this context, the EAFRD Operational Groups are mirrored as "*a multi-actor approach*" which "*will ensure the necessary cross-fertilising interactions between researchers, businesses, farmers/producers, advisors and end-users*" (EC 2011a). In this context, Horizon 2020 aims to support "*specific actions on communication, knowledge exchange and the involvement of various actors all along the projects*" (EC 2011a) for improving the impact of research results. Thus, "*the undertakings of Horizon 2020 will be complementary to the work undertaken by the 'Operational Groups' under Rural Development and will integrate a continuum from basic to applied research, with cross-border initiatives such as thematic networks and multi-actor approaches, demonstration*

projects. *The needs of the primary production sector for innovation support centres, as intermediaries to connect farmers and stakeholders with research, will be taken into account*" (HLSB 2013). Multi-actor approaches / projects shall have the following features (van Oost 2013):

- The research object must be relevant for end-users (e.g. importance of subject, demand driven)
- The composition of the actors must be targeted (e.g. coverage, complementarity)
- There shall be knowledge exchange and cross-fertilisation actions in the course of the project
- Dissemination shall be short-term (involvement of actors/ end-users) and long-term (understandable and accessible output)

3.5.3 Operational groups, EIP network, national rural networks, thematic networks, focus groups and innovation brokers

According to Article 62 of the EAFRD, **EIP operational groups (OG)** are an important part of the EIP for agricultural productivity and sustainability. Their establishment should result from co-operation among interested actors of the agriculture and food sector (e.g. farmers, researchers, advisors, businesses). OG should work transparent in their operation and avoid conflicts of interests. Article 63 defines the tasks of OG including the establishment of a plan containing "*a description of the innovative project to be developed, tested, adapted or implemented*" and "*a description of the expected results and the contribution to the EIP objective of enhancing productivity and sustainable resource management*" (EC 2011c). The format of the plan depends on the actors involved and the problem / opportunity to be addressed. With the implementation of these projects, OG should "*make decisions on the elaboration and implementation of innovative actions*" and "*implement innovative actions through measures financed through the rural development programmes*" (EC 2011c). Their results should be disseminated, especially through the EIP network. OG shall be formed on initiative of the innovation actors (bottom-up).

According to Article 53 of the EAFRD, **the EIP network** shall enable the networking of OG, advisory services and researchers and has the following tasks: help desk function (information concerning the EIP), animate discussions at programme level to encourage the setting up OG, screen / report on research results / knowledge relevant to the EIP, collect / consolidate / disseminate good practice relevant to innovation, organise conferences / workshops and disseminate information in the field of the EIP (EC 2011c). The EIP network can thus be considered as a "*Service Point at EU level*" and will be established in Brussels (EC 2013b). With reference to Article 55 of the EAFRD, **a national rural network** has to be set up by each Member State which provides services for innovation support. These national networks can be co-financed by the measures for technical assistance of the EAFRD (Article 51) (EC 2011c).

Thematic networks are described in the Horizon 2020 Framework Programme

and are an instrument to connect OG and other actors in Member States who have common interests or are working on specific topics. They shall not be pure research networks but involve all concerned actors. They should facilitate stocktaking and mapping of existing scientific knowledge / best practices and help to define needs as well as provide input for education and a database for end-users. Their themes can be linked either to sectors (e.g. pigs, arable crops) or subjects (e.g. crop rotation, farming systems) (Scheele 2013).

Focus groups consist of experts with project experience (up to 20 persons) meeting twice a year. They share knowledge and develop deliverables (e.g. reports or fact sheets). They map useful projects, give recommendations (e.g. about good practice, project ideas, research topics, needs) and provide dissemination material for the EIP website / events (Scheele 2013).

Innovation brokers can be considered as the connectors between the managing authorities and possible partners / OG²². They facilitate the difficult process of raising awareness for and animation of the participation in innovative actions resulting in the set up of OG. They interconnect possible innovation actors (farmers, researchers etc.). Precisely their tasks are: animating bottom-up initiatives, helping to refine innovative ideas, providing support for finding partners, providing support for finding funding. *"Their main task is to help to prepare a solid project proposal on which all actors of the operational group want to engage and agree that it will bring what they expect to be an innovative solution or opportunity"* (EC 2013b). This results in a chain of tasks for an innovation broker (van Oost 2013):

Finding the idea & refine it → searching for adequate partners → searching for possible support programmes → starting up an innovation project & team

Innovation brokering increases the chances of a project for passing the selection process. Concerning the competences of innovation brokers, they should have good connections to the agricultural sector, a profound understanding of agriculture and good communication skills. EAFRD describes various possibilities for funding innovation broker actions (Articles 51, 36, 16). Once a project is running, the innovation broker can become the facilitator of the project providing organisational support (funded under Article 36). This is not his core business but can extend his task chain (van Oost 2013):

²² The understanding of **innovation brokerage** in the context of EIP differs widely from definitions in literature. In this report, the use of the term is based on the EU definition only. A substantial overview on the terminology and use of the concept of innovation brokers is provided by Klerkx et al. (2009a). In Klerkx et al. (2009) innovation brokers are defined as *"persons or organizations that, from a relatively impartial third-party position, purposefully catalyze innovation through bringing together actors and facilitating their interaction. Innovation brokering expands the role of agricultural extension from that of a one-to-one intermediary between research and farmers to that of an intermediary that creates and facilitates many-to-many relationships. As an organization and function, innovation brokering differs from traditional extension and R&D because it represents the institutionalization of the facilitation role, with a broad systemic, multi-actor, innovation systems perspective."* The concept is closely related to the concept of transition partners used in this report.

Finding the idea & refine it → searching for adequate partners → searching for possible support programmes → starting up an innovation project & team → coordinating the progress of the project → communicating the project results

3.5.4 EIP implementing mechanisms

Action within an EIP can have several funding sources like e.g. rural development funds, national funds, Horizon 2020, private funds. Member States / regions should ensure the placement of funding mechanisms and encourage EIP activities (HLSB 2013). The EAFRD refers to innovation many times and highlights several measures facilitating / funding innovation in the EU which could be applicable (but not exclusively) to the EIP context (EC 2011c). However, at the moment it is still not clear how much of the funding would be allocated, as that is down to the National Governments. These measures include²³:

Article 15: Knowledge transfer and information actions: Covering of vocational training and skills acquisition (e.g. training courses, workshops, coaching → but: shall not be part of normal education programmes), demonstration activities and information actions (e.g. investment costs, travel and accommodation costs, per diem expenses, farmer replacement costs), as well as short-term farm management exchange and farm visits.

Article 16: Advisory services: Support measures to ensure advisory services for improvement of economic and environmental performance as well as climate friendliness and resilience of farms, forest holdings and SMEs in rural areas (max. 1500€/advice), to set up advisory services for farms and forestry (degressive over a maximum period of 5 years from setting up), and to promote training of advisors (max. 200.000€/3 years of training). Authorities/bodies providing advice should have appropriate resources (e.g. regularly trained and qualified staff, advisory experience, reliability). Advice shall be linked to at least one Union priority for rural development (e.g. agricultural practices beneficial for climate and environment, climate change mitigation, sustainable development of the economical activity).

Article 18: Investments in physical assets: Covering tangible/intangible investments to improve the overall performance of agricultural holdings, the processing/ marketing/ development of agricultural products, the infrastructure related to the development/ adaptation of agriculture, the non productive investments (e.g. linked to agri-/forest environment commitments or biodiversity conservation). Support varies between 40 and 90% of the investment amount (except for the non productive investments) depending on development/ remoteness of farms/regions, age of farmer, natural constraints, collective investments or operations supported in the EIP framework. Support under this article requires the set up of an OG.

Article 20: Farm and business development: Covering of business start-up aid (e.g. for young farmers, non-agricultural activities in rural areas, small farm

²³ The funding measures are described in a detailed way to provide profound information to LINSA and other network stakeholders.

development → business plan required), investments in non-agricultural activities (e.g. for micro-/small enterprises in rural areas, members of farm household), and annual payments for farmers participating in the small farmers scheme transferring their holding to another farmer. Maximum amounts of payment are: 70.000€ per young farmer/ small enterprise under 33 and 15.000€ per small farm under 33. Support for farmers participating in the small farmer's scheme should be 120% of the annual payment received under the scheme.

Article 22 and 27: Investments in forest area development and improvement of the viability of forests / Investments in new forestry technologies and in processing and marketing of forest products: Support of afforestation and creation of woodland, establishment of agro-forestry systems, prevention and restoration of damage to forests (e.g. from fires, natural disasters), investments improving the resilience and environmental value as well as the mitigation potential of forest ecosystems, and investments in new forestry technologies and in processing and marketing of forest products. There exist limitations for support (e.g. tropical forests of the Azores, Canary Islands or French overseas departments). A forest management plan is required for holdings above a certain area. Support for investments in new forestry technologies and in processing and marketing of forest products shall be granted to private forest owners, municipalities and SMEs adding value to forest products. Support ranges from 40 to 75% of the investments depending on development/ remoteness of regions.

Article 28: Setting up of producer groups: Support of setting up of producer groups with the purpose of adaptation of production/ output to market requirements, joint product placement on the market (e.g. preparation for sale, centralisation of sales), establishment of common rules on product information (e.g. harvesting and availability), and other activities carried out by producer groups (e.g. development of business/ marketing skills, organisation/ facilitation of innovation processes). Groups must be officially recognised by the Member States' competent authority on the basis of a business plan. Support shall be calculated on the basis of the group's annual market production. Up to 1.000.000€ market production, 1st and 2nd year support 10%, 3rd year 8%, 4th year 6%, and 5th year 4%. Above 1.000.000€ market production, 1st and 2nd year 5%, 3rd year 4%, 4th year 3%, and 5th year 2%. In both cases, the maximum amount of support per year is 100.000€

Article 36: Co-operation: Support of co-operation approaches among different actors in the Union agriculture and food chain, forestry sector, and among other actors, that contribute to achieving the objectives and priorities of rural development policy. Support of the creation of clusters and networks. Support of the establishment and operation of operational groups of the EIP. Co-operation includes e.g.: pilot projects, the development of new products/ practices/ processes/ technologies in agriculture and food sectors, the organisation of joint work processes with shared facilities and resources (small operators), horizontal and vertical co-operation among supply chain actors, promotion activities in a local context, joint action for climate change mitigation/ adaptation, or collective approaches to environmental projects/ practices. Results of pilot projects and operations by individual actors should be disseminated. The following costs can be supported in the context of co-operation: studies of the area concerned (e.g.

feasibility studies, business plans, local development strategies), animation of the area concerned (e.g. organisation of training, networking and recruitment), running costs of the co-operation, direct costs of specific projects (e.g. implementation of a business plan or local development strategy), and promotion activities. Co-operation among actors located in different regions/ Member States should be eligible for support. Maximum duration of support: 7 years (except: collective environmental action). OG projects can be funded as "a global amount" meaning the inclusion of the OG's running co-operation costs as well as direct project costs and the combination with support under other measures (e.g. Article 15, 16 etc.).

Article 51: Funding technical assistance: EAFRD may use up to 0.25% of its annual allocation to finance, amongst others, the setting up and operating of the EIP network.

Concerning eligibility conditions and selection criteria for the establishment of OG, managing authorities of the Member States / regions have the responsibility to specify subject, focus and composition of OG, as well as to combine the implementation of OG with the measures proposed in the EAFRD articles described above. Nevertheless, authorities shall keep "*eligibility conditions simple and controllable*" (EC 2013b). With reference to Article 36, the OG is the beneficiary of all support named in Article 36 and thus Member States shall be able to identify OG. For identification there do not exist any rules but it is recommended that OG have a legal identity or a documented rule / charter attributing liability among the members. This might help the authority to define responsibilities among OG members for received funds. This document will be extremely helpful in case of financed projects containing an investment as it will define "*who will be liable, who will the private provide co-financing and who will be the owner of the investment once the project is finalised and the investment still has value*" (EC 2013b) and thus avoids disputes if money needs to be reimbursed.

4 LINSA AND EXISTING SUPPORT

4.1 Levels of support

The SOLINSA project showed that some of the LINSA under study already received or at the moment receive some kind of support at EU level, national level, regional / local level or private level.²⁴

a) EU level support includes:

- Financial support through European projects (F RAD)
- Soft support (e.g. capacity building) through European action research projects (H Nat)
- EU and nationally co-funded support measures (L Fruit)
- EU-cross border and European Regional Development Fund projects, e.g. INTERREG (L Fruit)
- Project support from RDP LEADER Axis (H Nat)

b) National level support includes:

- Financial support for practical or research projects (G DLG²⁵, F RAD)
- Rural development project funding (S ACDF)
- Co-operation funding for rural networking (H Nat)
- Establishment of National Support Centres (N Care)
- Technical, planning, coordination and organisational support (F Charter, S ACDF, E B&H)
- Creation of structural opportunities such as technology / infrastructure development, capital investment, R&D, public education, or subsidies (L Biogas, S ACDF)

c) Regional / local level support includes:

- Financial support for regional / innovation projects (F RAD, S Naturli, I Crisop, E B&H, G Women)
- Financial support for linking people and network creation (I Crisop)
- Support in communication with public / Promotion efforts for products (H G7, S Naturli)
- Staff funding (E Perm)
- Infrastructural support such as providing rooms (H G7)
- Regional advisors / Training activities (G Women, F Charter, I Crisop)

²⁴ For a more detailed description please consult Ingram et al. (2013a)

²⁵ See also Burkart and Schäfer (2013).

d) Private level support includes:

- Volunteering: LINSA actors invest own money and time (most LINSA)
- Membership fees (e.g. G DLG²⁶, S ACDF, E Perm, Hungary)
- LINSA product sales and events generate income and support LINSA work (e.g. G DLG, S ACDF)
- Charity donations (E B&H)
- Private project funding (Switzerland, N Care)

Ingram et al. (2013a) divide the existing support measures for LINSA into external and internal support measures. External support measures include all public funding schemes or project support at EU, national, and regional / local level but also non-financial policy measures (e.g. technical or planning support) as well as private external support (e.g. charity donations). Although external support is sought for at different LINSA development stages, it is most critical in the early ones. External support can be both strategic and target-oriented (e.g. for a special project or purpose) or long-term (e.g. for core costs). Internal support is the type of support provided by LINSA members (e.g. membership fees, volunteering, private donations) or through LINSA activities (e.g. product sales, events). Most LINSA combine internal and external support during their development process.

4.2 LINSA critique on existing support

As can be observed, the existing external support measures are to a great extent of financial nature but also non-financial policy measures (e.g. technical support) play a role. Concerning the internal support, soft support e.g. through volunteering becomes a central element for LINSA. Although there exist external support measures at EU, national, regional/local and private level as well as internal LINSA support, critique coming from LINSA related to support is numerous and includes e.g.:

- Generally very few external support measures available, eligibility becomes a central criteria for many LINSA
- LINSA projects do not fit in the programme of the fund, limiting creativity and innovative potential
- High administrative barriers / bureaucratic burdens for grant / project application (e.g. requirements, time consuming)
- Lack of capacities of LINSA members to apply for large grants (e.g. expertise, time)
- Financial support is not high / long-term enough to ensure LINSA development / sustainability
- Low efficiency and effectiveness of public support
- Distortions by public support (e.g. the introduction of quotas in the Latvian biogas sector, L Biogas)

²⁶ See also Burkart (2013).

- Excessive and one-sided support (e.g. quotas and subsidies but no educational offers) limits LINSA development and sustainability
- Public support is directed to political aims thus making LINSA (which are not devoted to political aims) ineligible for mainstream support instruments
- Volunteering of LINSA members is becoming more and more knowledge and time intensive

4.3 Support gaps within LINSA context

This topic is described in detail in Deliverable 4.2A (WP4 Synthesis Report). Therefore, this subchapter only serves as an overview on the support needs expressed by the 17 LINSA under study referring to Deliverable 4.2A (Ingram et al. 2013a).

The expressed support needs can be divided into three main groups which are described in the following:

1. Organisation:

- Support for improving LINSA governance and management
- Support for enabling better internal discussion and communication
- Better external political support (e.g. recognition, LINSA status)

2. Knowledge, skills and communication:

- Technical support and support for product branding
- Support for capacity and skills development and mentoring
- Support for the obtainment of better communication skills (also relevant for intra-LINSA networking)

3. Resources:

- Availability of more permanent resources, especially financial support
- Reduction of administrative, bureaucratic burdens to financial support

4.4 Transition partners

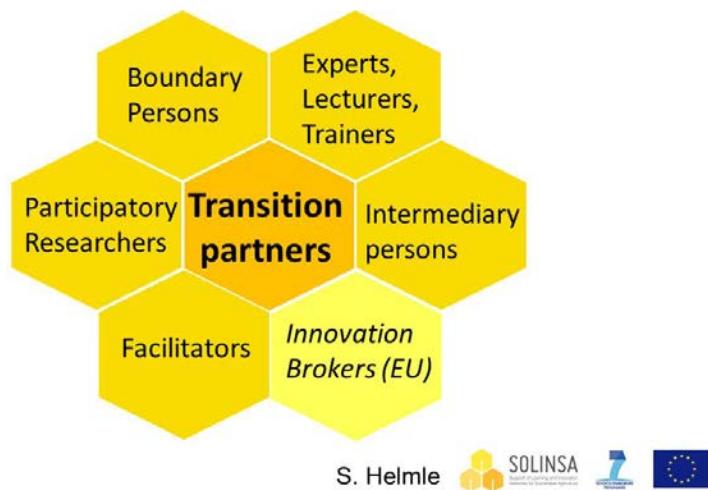
Author: S. Helmle

During the transdisciplinary research process, the involved scientists operated as researchers, facilitators, boundary persons, advisors and experts in the respective LINSA. The LINSA considered this type of support to be a strengthening element contributing to their development. The concept of transition partners has been derived considering the different roles the involved researchers took up during their interactions with the LINSA.

In the context of the SOLINSA training course (Task 6.4 and Deliverable 6.7), the question has been taken up who could be transition partners in the LINSA context, and what competences those people should have. Figure 1 gives an overview on the different functions and tasks of transition partners. Common

ground is that in all functions and tasks the concerns and advancement of the LINSA come to the fore.

Figure 2 Transition partners for learning, innovation and networking towards sustainable agriculture and sustainable rural development



Transition partner is a collective term for actors supporting LINSA in their development in a co-operative way. Important is that these actors show a self-understanding of being learners and listeners. Basic attitudes are authenticity, empathy and appreciation, as well as patience and sincere curiosity. The intention of transition partners is to stimulate social learning processes, new developments respectively advancements of innovations, and network development with the aim of supporting sustainable development.

Support through transition partners happens in different roles and functions:

1. Internal strengthening and advancement of the LINSA, in the role of a **facilitator**
2. Participatory data collection and analysis with a group of LINSA members, in the role of a **participatory researcher**
3. Methodological support in the development and establishment of boundary objects, in the role of a **boundary person**
4. Technical support in the development and establishment of boundary objects, in the role of an **expert, lecturer or trainer**
5. Support in improving recognition of LINSA in the AKIS and in increasing networking activities, in the role of an **intermediary person**
6. Support of LINSA in developing European Innovation Partnerships and Operational Groups, in the role of an **innovation broker**

Transition partners operate with different tasks and functions. The definitions are given in Table 2. Commonalities are the use of participatory methods and

the intention to initialise social learning processes. The concept of transition partners as well as the tasks and functions refer to the empirical evidence of the LINSA-researcher co-operation during the SOLINSA project (see the concept of innovation brokerage provided by Klerkx et al. 2009a and Klerkx et al. 2009b)

Table 2 Definitions of the different transition partners

Type of transition partner	Definition
Facilitators	Persons with high methodological and technical competences for the support of learning and reflection processes in groups. They can be understood as learner, discoverer, and catalyst. Facilitation is supported through techniques of visualisation and it is worked with an interconnected dynamic of action, reflection and feedback.
Participatory Researchers	Due to the participatory research approach in the SOLINSA project, facilitation and the experiences made with facilitation have been used for data acquisition. Facilitating participatory researchers thus have a twofold interest. They initialise insight processes in LINSA through facilitation. This insight is becoming the scientific database, through scientific analysis it is made visible to the academic and non-academic public.
Boundary Persons	Facilitators, whose mandate is to develop specific boundary objects over a defined period of time. The roles of process-companion and expert might overlay each other in practice, e.g. in the design of flyers, logos, project proposals.
Experts, Lecturers, Trainers	Persons, whose mandate is to introduce specific, mainly technical, knowledge to LINSA.
Intermediary Persons	Facilitators, whose mandate is to establish and connect different groups resp. actors over a defined period of time.
Innovation Brokers (under EU definition)	<p>Due to the support mechanisms in the EIP context, the term innovation broker is used in the narrow sense of the EU (see chapter 3.5.3). In this context the task of innovation brokers “<i>is to help to prepare a solid project proposal on which all actors of the operational group want to engage and agree that it will bring what they expect to be an innovative solution or opportunity</i>” (EC 2013b). This results in a chain of tasks for an innovation broker (van Oost 2013, see chapter 3.5.3): Precisely, their tasks are: animating bottom-up initiatives, helping to refine innovative ideas, providing support for finding partners, providing support for finding funding.</p> <p>An overview on the literature dealing with innovation brokerage is provided by Klerkx et al. (2009a). The concepts described there go much beyond and vary from the above mentioned definition given by the EU (see also the definition of Klerkx given in footnote 22).</p>

5 POLICY RECOMMENDATIONS

This chapter presents policy recommendations aimed at supporting LINSA and actors working with LINSA in a more effective and efficient way. It is divided into 4 subchapters²⁷ and 19 policy recommendations as listed below:

1 Direct support of LINSA

- 1-1: Soft skills development
- 1-2: Reflection periods and process monitoring
- 1-3: Boundary object development
- 1-4: Travel costs / expense allowances
- 1-5: Operational / running costs
- 1-6: Training / Educational offers
- 1-7: Restructuring of funding schemes

2 LINSA and AKS

- 2-1: Recognition of LINSA
- 2-2: Consulting LINSA knowledge
- 2-3: Research funding
- 2-4: LINSA and AKS co-operation

3 Transition partners - Support of actors working with LINSA

- 3-1: Transition partner training
- 3-2: Transition partner networks
- 3-3: Cross-sectoral activities – intermediary persons
- 3-4: Training for participatory research
- 3-5: Incentives for practice-research co-operation

4 LINSA-LINSA networks, EIP and OG

- 4-1: LINSA-LINSA networks
- 4-2: LINSA operating as OG
- 4-3: Using a participatory approach in OG

²⁷ The first ideas for these subchapters emerged during the discussions at the SOLINSA project meeting in Paris and have been continuously developed during the following project meetings at Dabas, Stroud and Riga (see also Chapter 2 – Methodology).

5.1 Direct support of LINSA

This subchapter gives recommendations on how to support LINSA directly. Direct support can be either of financial or technical character. It helps to relieve volunteering LINSA members on the one hand (e.g. from administrative tasks) and sets resources (e.g. time, money, knowledge) free for the co-creation of knowledge, the development of innovations, or social learning.

5.1.1 Soft skills development

Recommendation 1-1: Soft skills development

Technical support of LINSA should be directed towards soft skills development instead of development of core knowledge (e.g. technical knowledge).

Goal/effect:

Enables improved networking and exchange, increases problem-solving capacity, and supports network development and planned change.

Scope / areas of intervention of transition partners:

Support for the development of skills related to facilitation:

- Project management
- Management, marketing, accounting
- Organisational development, change management, strategy development
- Personality development
- Conflict management / mediation

Related to the support via boundary persons, and experts

- Internal / external communication and co-operation, Public Relations, Web2.0

Related to the support via facilitators and trainers:

- Facilitation techniques (e.g. presentation skills, steering of group dynamics)
- English language skills
- Computer literacy

These skills can mainly be obtained through training activities and this could partly be funded under Article 15 of the EAFRD but also through the ESF (training that works²⁸). In this context, eligibility of LINSA for support should be considered, as funding through the above mentioned schemes is directed rather to individuals than to groups.

LINSA perspective - How would the measure strengthen LINSA?

By obtaining these soft skills, LINSA will improve their organisational structure resulting in the exertion of their core activities in a more effective and efficient way. Additionally, they will improve co-learning and be able to spread their outcomes more easily as well as to co-operate with other national / international actors inside / outside the AKS. This will facilitate the exchange and further development of ideas and practices.

How this is related to the SOLINSA work/the work with the LINSA:

The SOLINSA project showed that LINSA mostly do not require support related to their

²⁸ see EC (2013f)

core knowledge (technical scope) and that they are aware of their key competences and their knowledge advantage. Instead, they consider the field of soft skills (e.g. management, communication, trust building, planning processes, and decision-making) as most relevant for support. The wish for a support in soft skills development was expressed by most LINSA under study as through the participatory interventions of the researchers, many untapped resources have been set free in the LINSA what has been considered as strengthening element by all of them.

LINSA which would benefit from the proposed recommendation

E Perm, S ACDF, S Naturli, N Dairy, F RAD, F Charter, H G7, H Nat, I CVR, I Crisop, G Women

5.1.2 Reflection periods and process monitoring

Recommendation 1-2: Reflection periods and process monitoring

Support of intensive periods of reflection in LINSA and ongoing monitoring of current processes.

Goal/effect:

Self-determination of LINSA: raises LINSA's awareness for their own innovative potential, increases LINSA ability to work on their critical processes, initiates new developments. Transition partners are involved in the function of facilitators and / or trainers.

Scope / areas of intervention:

Money for / Support of:

- Transition partners i.e. facilitators and/or trainers
- Infrastructure (e.g. rent) & Material (e.g. pin boards, flipcharts, pens)
- Coverage of opportunity costs of participants

The costs for training activities could partly be funded under Article 15 of the EAFRD but also through the ESF (training that works²⁹). In this context, eligibility of LINSA for support should be considered, as funding through the above mentioned schemes is directed rather to individuals than to groups.

LINSA perspective - How would the measure strengthen LINSA?

In collaboration with facilitators or trainers, LINSA will be able to start periods of reflection helping them in their process of self-determination. This will assist in detecting critical processes or developments in the LINSA / LINSA work and prepare them for finding solutions. It will also help them to become aware of their innovative potentials and to set free untapped resources. Both points will assist in initiating new developments and thus enhance the creation of knowledge and ideas.

How this is related to the SOLINSA work/the work with the LINSA:

The SOLINSA project showed that LINSA were often not aware of all ongoing processes and developments within their organisation. Reflection with the working participatory researchers and facilitators helped them to get an understanding of their day-to-day business and in finding adequate strategies for further LINSA work and development.³⁰

LINSA which would benefit from the proposed recommendation

E B&H, E Perm, S ACDF, S Naturli, N Care, N Dairy, L Biogas, L Fruit, F RAD, F Charter, H G7, H Nat, I Crisop, G Women, EU organ

²⁹ see EC (2013f)

³⁰ The phases and results of such a development and strengthening process have been described in Helmle (2013a) and Helmle (2013c).

5.1.3 Boundary object development

Recommendation 1-3: Boundary object development

Technical and financial support for the development of boundary objects (BO)³¹ should be made available to LINSA.

Goal/effect:

Facilitates spreading of LINSA ideas to the outside world, creates LINSA identity and awareness.

Scope / areas of intervention of boundary persons:

- Financial support: for projects for the creation of BO (e.g. transdisciplinary research), for the production of BO (e.g. graphic designer, material, printing, computer), for the dissemination of BO (e.g. marketing)
- Technical support for: brand / label development, development of standards, development of rules / codes

At the moment there does not exist a suitable policy / measure to support the development of boundary objects.

LINSA perspective - How would the measure strengthen LINSA?

The internal effect is the creation of a LINSA identity through BO (e.g. LINSA brands and logos). This helps LINSA to become an entity and facilitates the acquisition of new network members. The external effect is that BO facilitate the spreading of LINSA ideas to the outside and by this, help them to get in contact with new people interested or working on the same topics. This leads to a higher awareness of the LINSA as a group and of the topics they work on. Boundary persons can help in developing and disseminating BO but BO can also be developed by non boundary persons, and also serve for LINSA internal learning.

How this is related to the SOLINSA work/the work with the LINSA:

The SOLINSA project showed that LINSA often do not have the financial means for the development of BO and that also some technical knowledge is missing. This results either in the non-development of BO and thus in a lack of dissemination of LINSA ideas or in the development of BO which do not adequately respond to the needs of the LINSA (related to content or design).

LINSA which would benefit from the proposed recommendation

E B&H, E Perm, S ACDF, S Naturli, N Dairy, L Biogas, L Fruit, F RAD, F Charter, H G7, H Nat, I CVR, I Crisop, G Women, G DLG, EU organ

³¹ For a more detailed description of the term “boundary object” please consult Brunori et al. 2011

5.1.4 Travel costs / expense allowances

Recommendation 1-4: Travel costs / expense allowances

Financially weak / not independent LINSA should be supported so that they can compensate travel costs and adequate expense allowances to their members and collaborators for voluntary commitment. This should be gender-equal³².

Scope / areas of intervention:

Support of financially weak / not independent LINSA for:

- Compensation of travel costs
- Adequate expense allowances (competitive in the (inter-)national context)
- Compensation of missing work force at the farms (opportunity costs)

These costs could partly be funded under Article 15 of the EAFRD.

Goal/effect:

Voluntary LINSA work becomes more attractive resulting in higher commitment, facilitation of co-learning and the creation of ideas, as well as in an increase of cost-efficiency and effectiveness.

LINSA perspective - How would the measure strengthen LINSA?

Voluntary LINSA work becomes more attractive to LINSA members and thus commitment will be higher. This will facilitate co-learning and the creation of new ideas. It will also increase effectiveness and cost-efficiency of LINSA. LINSA members will not have to choose between a voluntary LINSA position and their core activity for earning money (e.g. farm work).

How this is related to the SOLINSA work/the work with the LINSA:

The SOLINSA project showed that volunteering is crucial for the functioning of LINSA. But it has also become so highly-qualified, technically complex and time-consuming that it is almost no more manageable as voluntary work. During days of volunteering, the missing work force has to be compensated at farms; resp. volunteering can only be done by people possessing financial and temporal resources and willing to use them for LINSA purposes. Smaller farms, women and farms with a high share of manual labour are strongly affected and often not able to contribute to LINSA work without personal shortages.

LINSA which would benefit from the proposed recommendation

S ACDF, S Naturli, F RAD, F Charter, H G7, H Nat, I Crisop, G Women³³, EU organ

³² Practice examples show that there still exist pay gaps between the genders

³³ In LINSA G Women, there exists a small department within the overreaching organisation, which does preliminary work for the volunteering women. This shows how important it is to support voluntary work with full-time employees. At the same time however, this happens at a low level. Financial support in this context would help the volunteering women in reaching self-determined learning and innovation spaces which are independent from the overall organisational structure.

5.1.5 Operational / running costs

Recommendation 1-5: Operational / running costs

Financially weak / not independent LINSA (e.g. young LINSA³⁴) should be supported so that they can cover their operational / running costs and hire full-time employees for LINSA administration and operational work.

Goal/effect:

Relief of volunteering LINSA members, facilitation of co-learning and the creation of ideas, increase of cost-efficiency and effectiveness.

Scope / areas of intervention:

- Long term financial support for full-time employees in administration and at operational level

These actions could partly be funded under Article 36 of the EAFRD. This support is directed towards co-operation of at least two actors. As LINSA are co-operatives of several actors, this could be an option to them for covering the running costs of their co-operation activities.

LINSA perspective - How would the measure strengthen LINSA?

The use of full-time employees for administrative or operational LINSA tasks will relieve volunteering LINSA members from a workload not directly related to their core competences (e.g. book-keeping) and thus release their work force for the creation of new ideas and co-learning. At the same time, LINSA will become more effective and cost-efficient because of employing qualified personnel for the different areas as well as through co-operation with transition partners. This is not about the transformation from a LINSA to a formal organisation and thus not about a strict formalisation of LINSA. Instead, it is about focusing on communication and decision-making processes within LINSA.

How this is related to the SOLINSA work/the work with the LINSA:

The SOLINSA project showed that (fast growing) LINSA often have problems with administrative and operational tasks. This results in a lack of human and financial resources and tasks have to be conducted by volunteering LINSA members. This often leads to inefficient and ineffective administration bodies of LINSA as most volunteering members do not possess the necessary knowledge for conducting these tasks adequately. At the same time, the volunteering LINSA members lose time and spirit for their core LINSA activities: the creation and spreading of new ideas and knowledge.

LINSA which would benefit from the proposed recommendation

E B&H, E Perm, S ACDF, N Care, N Dairy, L Biogas, F RAD, F Charter, H Nat, I Crisop, G Women, EU organ

³⁴ Young LINSA could be important for OG as they develop around a specific project and can continue the project idea after the project end through their LINSA structure. In this context, it has to be remarked that young LINSA do not always have the operational structure which allows writing project / funding proposals. This stands in contrast to established and professional networks and signifies one of the highest barriers for development. At the same time, too much formalisation / institutionalisation of young LINSA could lead to a decrease of free spaces for trial and error as well as idea development.

5.1.6 Training / educational offers

Recommendation 1-6: Training / educational offers

Training / educational offers of and for financially weak / not independent LINSA should be supported.

Goal/effect:

Improvement of offers, increase of scope / coverage, increase of LINSA awareness, creation of possibilities for networking and co-learning.

Scope / areas of intervention:

Financial support of:

- Fees for and travel costs of trainers / lecturers
- Infrastructure (e.g. rent for rooms), Material (e.g. pin boards, flipcharts, pens)
- Coverage of opportunity costs of participants

The costs for obtaining education could partly be funded as training / soft skills acquisition under Article 15 of the EAFRD and through the ESF (training that works; EC (2013f)). In this context, eligibility for support should be considered, as funding through the above mentioned schemes is directed rather to individuals than to groups.

LINSA perspective - How would the measure strengthen LINSA?

The ability to pay for adequate transition partners in the function of lecturers or trainers will improve the educational offers of LINSA resulting in a higher level of knowledge of members and in more attractiveness of offered events. A higher quality of such events will increase the scope and coverage and increase the awareness of the LINSA. This will create possibilities for networking, co-learning and co-creation of knowledge. LINSA members receiving external trainings / knowledge will bring new information / ideas into the LINSA and thus enhance knowledge / idea creation. Transformation of experiences into knowledge and reflection are essential parts of these trainings. Trainers possess much knowledge after such trainings as they learn from participants. An additional mandate is to spread this knowledge afterwards. In this context, the strong sensitivity has to be considered to not endanger the trustful dynamics of the co-operation.

How this is related to the SOLINSA work/the work with the LINSA:

The SOLINSA project showed that LINSA on the one hand offer a broad variety of trainings / information to their members and to outsiders, but that they also need help from the outside to either complete their own offers or to obtain knowledge themselves. Nevertheless, most LINSA are financially not that well-equipped that they neither can afford to host / organise many educational offers, nor facilitate trainings to their members. With regard to the content, these offers are partly directed towards technical expertise but some LINSA also show efforts to host trainings related to soft skills development or communication for being prepared for increased networking activities.

LINSA which would benefit from the proposed recommendation

E B&H, E Perm, S ACDF, N Dairy, L Fruit, F RAD, F Charter, H G7, H Nat, I Crisop, G Women³⁵, EU organ (in future)

³⁵ The LINSA G Women has a strong basis of experiences in this area and continuously develops educational offers. Support of new developments requires respective resources.

5.1.7 Restructuring of funding schemes

Recommendation 1-7: Restructuring of funding schemes

Funding should be long-term and LINSA should be supported in application processes and in connecting different funding streams.

Goal/effect:

Ensures long-term LINSA development and sustainability. The innovative potential of the LINSA can be fully exhausted.

Scope / areas of intervention:

- Reduction of the bureaucratic burdens for grant application (less paperwork)
- Assistance of LINSA in grant application processes (e.g. innovation brokers in the case of a LINSA involved in a OG)
- Ensuring long-term grants for special projects
- Eligibility of LINSA for public support

LINSA perspective - How would the measure strengthen LINSA?

LINSA will be able to obtain funding more easily and for longer periods. This will on the one hand ensure their economic survival and on the other hand (also by reducing the time needed for grant application) set free resources which can be used for the development and spreading of new ideas.

How this is related to the SOLINSA work/the work with the LINSA:

The SOLINSA project showed that there exist high burdens for grant application including administrative barriers and missing capacities of the applicants (e.g. time, knowledge). Grants are normally also rather short-term not giving financial stability to the LINSA in a long run and increasing transaction costs due to the necessity of continuous grant application. Some of the LINSA thus are not able to follow their innovative ideas and to work sustainable.

LINSA which would benefit from the proposed recommendation

S ACDF, S Naturli, N Dairy, F RAD, F Charter, H G7, H Nat, I CVR, I Crisop, EU organ

5.2 LINSA and AKS

A number of LINSA consider themselves to be in a marginalised position in their relation with and their recognition by the AKS. They know about their own strengths but are not able or willing to integrate themselves into the AKS. Potential risks of collaboration are seen by the LINSA, for example, in a loss of autonomy due to norms and bureaucracy. Partly, LINSA operate in several knowledge systems and create linkages through their activities. However, they feel that this weakens their own "corporate identity". At first sight, LINSA seek to explain their marginalised position with time constraints and limited financial resources. Opening the view towards the importance of sustainability often is taken as chance to overcome the disequilibrium of the different players, when both sides realise the benefit of mutual access to knowledge as well as the possibility to influence certain political and social developments. It is not about an integration of LINSA into the AKIS but instead of strengthening the co-operation between them.

5.2.1 Recognition of LINSA

Recommendation 2-1: Recognition of LINSA

The AKIS should support LINSA in increasing their awareness.

Goal/effect:

Increases LINSA awareness, significance and influence. Legitimisation of LINSA practices, credibility and validation for LINSA.

Scope / areas of intervention:

a)³⁶

- Policies to support e.g. regional products or sustainable production
- Recognition of professional qualifications

b)³⁷

- Recognition of niche actors (LINSA)
- Development of standards and certification for LINSA methods / products
- Regional promotion of LINSA products / activities

LINSA perspective - How would the measure strengthen LINSA?

Through this type of support by AKS, LINSA will gain in credibility helping them to get out of their niches and to become more visible to and accepted by other actors. This will increase the opportunities of accessing funds, for collaboration and the creation of new alliances between LINSA and AKS actors. Those alliances will be beneficial for both, and help to overcome existing tensions and prejudices among actors.

This is not about embedding LINSA into the AKS but about co-operating for a mutual benefit. It is helpful to involve transition partners in their function as facilitators and intermediary persons in those alliances who help in establishing trust and co-operation projects among strongly differentiating actors. It is important in this context to search for

³⁶ Part a) mainly requires policy intervention

³⁷ Part b) requires the involvement of intermediary persons

commonalities and to develop common visions.

How this is related to the SOLINSA work/the work with the LNSA:

The SOLINSA project showed that LNSA mostly operate in niches and at the margin of AKIS and thus often have (or perceive) a credibility problem outside their narrow network. This limits the access to information and due to this, to knowledge and funding offered by AKIS. Result of this circle-process is an inadequate or not existent advisory offer from the AKIS. Both are restricting LNSA development and LNSA recognition. LNSA as niche actors increase the offer of action alternatives in agriculture by creating valuable knowledge and offers, what finally gets lost if there are only limited chances for being connected with the AKIS.

In the LNSA-researcher relation it could be observed the value of connecting different - beforehand the co-operation unknown - perspectives. This has been evaluated with emphasis on the diversity of network actors. In the beginning, difficulties arise above all in engaging with and listening to each other. This is especially valid for gender perspectives which are related to a strict gender separation in the agricultural sector. Women's expertise in agriculture is only marginally considered.

LNSA which would benefit from the proposed recommendation

S ACDF, N Care, N Dairy, F RAD, F Charter, I CVR, I Crisop, G Women

5.2.2 Consulting LINSA knowledge

Recommendation 2-2: Consulting LINSA knowledge

AKIS actors should be more open towards LINSA, provide space for dialogue with LINSA, recognise the potential of LINSA for sustainable agricultural development and consult their experience, ideas and opinions instead of favouring "one-way / linear support". This will need the help of transition partners in the function of facilitators and / or participatory researchers.

Goal/effect:

Increases LINSA awareness and influence. Legitimisation of LINSA practices and credibility for LINSA. Enables co-learning / exchange. Helps AKS in policy formulation.

Scope / areas of intervention of intermediary persons:

- Create enabling frameworks for exchange of ideas / experiences e.g. common events
- Give LINSA opportunities to teach at e.g. agricultural colleges or to co-operate with technical institutes in their work fields
- Co-operate with LINSA for field research to co-create scientific knowledge, and to increase the awareness for bottom-up initiatives
- Consult LINSA / LINSA knowledge for policy formulation processes
- Consider the LINSA bottom-up approach of learning as a chance to foster innovation and change within the AKS

The exchange between LINSA and AKS might involve intermediary persons and / or researchers serving as motivators and for bridging the gaps. Especially through participatory research, protected space for trial and error can be established for long-term helping in reducing barriers for co-operation. Apart from technical knowledge, it is indispensable that researchers possess high competences in participatory methods.

LINSA perspective - How would the measure strengthen LINSA?

Through enabling frameworks for exchange, LINSA will be more visible in AKIS and gain credibility. AKIS actors can learn from LINSA as they become accepted opinion leaders for specific niches. This will help AKIS in reaching the goal of a more sustainable agriculture and one that accepts the high level of diversity of farms and logics of farm development. By passing their knowledge through formal AKIS channels, LINSA will gain credibility and legitimisation. AKIS actors will learn from LINSA and a co-creation of knowledge can happen. AKIS will be able to make use of the advanced knowledge base of LINSA (as experts in their specific niches).

How this is related to the SOLINSA work/the work with the LINSA:

The SOLINSA project showed that LINSA often have similar problems than AKIS actors, but that AKIS offers (i.e. advisory services) do not fit well to LINSA needs. Thus, they developed their own advisory systems mostly as bottom-up approaches. In their special field they are opinion leaders and experts, and can contribute to policy formulation and formal agricultural education of the AKIS without necessarily being part of it. Nevertheless, knowledge about processes and products in LINSA stays mostly unknown outside LINSA borders. It is perceived merely by interested individual actors.

LINSA which would benefit from the proposed recommendation

S ACDF, S Naturli, N Care, N Dairy, L Biogas, L Fruit, F RAD, H G7, H Nat, I Crisop, G Women

5.2.3 Research funding

Recommendation 2-3: Research funding

Research funding should be directed more towards research for the solution of practice-related problems and towards transdisciplinary and participatory research.

Goal/effect:

Fosters the co-operation and co-learning between research and end-users. Innovations are developed for practice relevant problems. Helps to increase trust and respect between researchers and practitioners. Helps to close the gap between research and practice and to overcome linear ideas of knowledge transfer (due to participatory research).³⁸

Scope / areas of intervention for participatory research.³⁹

Funding should be available for e.g.:

- Transdisciplinary, participatory or applied research projects
- Developing the research focus together with practice partners⁴⁰ = beginning of participatory research (facilitator, participatory researcher)
- Development of new technologies and production methods in co-operation with end-users (considering the tasks of boundary persons and experts)
- Experiential training activities (field days, demonstrations, visits, seminars, etc.)
- Production of user-oriented learning tools (e.g. videos, manuals), developed and tested in co-operation with end-users (boundary persons)
- Field trials in co-operation with practice partners / end-users: field experiments involved in research and scientific approaches, in order to answer the reality "of the field".

Transdisciplinary and participatory research should be encouraged and researchers should be motivated to learn from the participatory, supportive and process-based collaboration between SOLINSA-researchers and LNSA:

- Mix of classic quantitative and qualitative socio-empirical methods, accompanying research, action research / participatory research
- Co-operation of young and experienced researchers is favourable
- In action research and participatory research, the possibility of a researcher-coaching to be able to stay in clear roles and the necessary outsider position has to be considered.
- Education / training possibilities (e.g. summer academies) for young researchers to learn about transdisciplinary research and for methodological advancement.

In this context, multi-actor projects as proposed in the Horizon 2020 programme might lead to more practice orientation (EC 2013b).

³⁸ See Probst et al. (2007)

³⁹ In this context Home and Moschitz (2013b) recommend to "create and promote new evaluation criteria for funding research proposals that reward not only disciplinary excellence but also achievements in inter/transdisciplinary work", to "include practitioners/experts along with scientific experts on selection committees for project funding and evaluation processes for research proposals", and the "creation of new evaluation criteria for the performance of institutions that include achievements in interactive research."

⁴⁰ See Klerkx and Leeuwis (2009)

LINSA perspective - How would the measure strengthen LINSA?

LINSA members as end-users as well as producers of new knowledge / innovations will be better able to bring in their practice related problems / ideas into research. This will create co-learning and lead to innovations which are really needed in practice helping to close the gap between research and practice.

How this is related to the SOLINSA work/the work with the LINSA:

There exist some barriers between AKS research and LINSA like e.g. differing foci of interest (the researchers are interested in experiments under laboratory conditions, while practitioners need fast solutions to practical problems under real conditions of production); different value systems (the researchers being more concerned with biodiversity, sustainability, promotion of scientific knowledge, while producers are more concerned with economic performance and social capacity); organisational barriers (some producers blame research for passivity in responding to their proposals to carry out joint research in real production situation). This leads to scientific research which is not really practice-relevant resulting in gaps between practice and research and an insufficient / inadequate offer of knowledge for end-users. LINSA started producing particular knowledge because of these discrepancies. Involving such types of end-users could help to bridge the existing gaps between science and practice.

The SOLINSA researcher-LINSA collaboration has been successful. The process orientation, with open communication and recognition of all voices heard, is a supportive working style which helps to stimulate learning and collaboration among different actors. However, this type of collaboration needs trust which has to develop with time. At the same time, research results are methodologically very complex and challenging. SOLINSA researchers had reflection rounds through the CBW, which over and over directed the necessary analytical view to the LINSA-SOLINSA relation. The exchange among researchers about research methods was very fruitful and emphasised the relevance of the process-oriented and result-open approaches of the researchers.

LINSA which would benefit from the proposed recommendation

E B&H, E Perm, S ACDF, S Naturli, N Care, N Dairy, L Biogas, L Fruit, F RAD, H G7, H Nat, I CVR, I Crisop, G Women, EU organ

5.2.4 LINSA and AKIS co-operation

Recommendation 2-4: LINSA and AKIS co-operation

Co-operation among LINSA and intermediary persons could be helpful for establishing co-operation between AKIS and LINSA, can assist LINSA development and should therefore be promoted⁴¹.

Goal/effect:

Increases efficiency and effectiveness of co-operation, social learning, co-creation of knowledge and knowledge exchange. Increases LINSA awareness in AKIS, empowers LINSA.

Scope / areas of intervention for intermediary persons:

Persons who establish, facilitate and manage closer links between AKIS and LINSA and who assist in (facilitate) the development process of LINSA. These intermediary persons could come from different areas including practitioners, advisors or researchers.

LINSA perspective - How would the measure strengthen LINSA?

Intermediary persons will help LINSA and AKIS to better co-operate. They will:

- facilitate the animation of bottom-up initiatives, help to refine innovative ideas, provide support for finding partners or actors who work on similar topics, provide support for finding funding / assistance
- facilitate partnerships of learning: facilitate the analysis of existing processes and the stimulation of an open process of reflection
- document processes (of learning, innovation) and make them available to the broader public, facilitate knowledge exchange

These activities will result in a more efficient and effective co-operation between AKIS and LINSA and thus give opportunities for LINSA development and a shift of the AKS towards more sustainability.

Intermediary persons in this understanding could partly be funded under Article 16 of the EAFRD. The Draft Horizon 2020 Work Programme 2014-2015 focuses on a multi-actor project approach which requires facilitation between the different actors and "*openness to involve additional actors/groups of actors during the project*" (EC 2013d).

How this is related to the SOLINSA work/the work with the LINSA:

The SOLINSA project showed that there is a need for intermediary persons to connect LINSA and AKS: LINSA members evaluate AKS respectively the further developments in the AKIS as a useful, but 'standing apart' body which is not properly responding to LINSA needs. At the same time, LINSA are incapable to a great extent to formulate their knowledge demand collectively and propose collaborative mechanisms to researchers. This results in a lack of co-operation and limits LINSA development.

LINSA which would benefit from the proposed recommendation

S ACDF, S Naturli, N Dairy, L Biogas, L Fruit, F RAD, H G7, H Nat, I CVR, I Crisop, G Women

⁴¹ How such persons should be supported is described in subchapter 5.3

5.3 Support of Transition Partners

As described in the subchapters 3.5 and 4.4, special skilled actors are needed to facilitate change processes in LINSA, to enable co-operation between LINSA and AKS or LINSA and other actors, as well as to promote innovation and network development within LINSA. This subchapter provides recommendations on how to support transition partners, so that they can become qualified and skilled to offer appropriate support to LINSA.

5.3.1 Transition partner training

Recommendation 3-1: Transition partner training

Actors working with LINSA should be encouraged to consider the complexity of content, process-orientation, and complex social dynamics of LINSA in their specific context. This requires specific analytical know-how, as well as know-how on group dynamics and participatory methods. In this context, it is about quality assurance in the sense of a methodologically sound work.

Goal/effect:

Increases the level of trust in transition partners, in adapted methods, and clarifies the responsibilities of the various actors involved in the development processes and the concern. It helps transition partners to be aware of their competences and the different roles and functions. Increases efficiency and effectiveness of co-operation. Helps to maintain LINSA relatively independent from AKS but at the same time to establish valuable co-operation.

Scope / areas of intervention:

Transition partners should be encouraged to e.g.:

- Build upon the specific capacities and knowledge of the LINSA, learning tools to analyse LINSA within their complexity and dynamics
- Maintain LINSA independent from extension, in especial by maintaining and supporting LINSA self-responsibility for their decisions made during the co-operation process.
- Accompany LINSA through necessary change / development processes and assure that they take the appropriate decisions on their own
- Avoid standardisation of methods and extension elements; there are no blueprint approaches.

Transition partners should be encouraged and supported in obtaining know-how related to e.g.:

- Agriculture: a close connection with agriculture, knowledge of specific agricultural topics related to their working area
- Profound knowledge of the AKS and current developments in the AKIS
- Knowledge of new trends in agricultural policy (laws, regulations, funding opportunities, etc.)
- Analytical competences, especially about learning, networking, and diffusion of

innovations

- Methodological competences⁴²: facilitation methods and social learning in small and in large groups, group dynamics and topic-focused interaction, non-directive but active conversation techniques, conflict management, collegial team counselling and reflection⁴³
- Competences in organisational development, especially change management

LNSA perspective - How would the measure strengthen LNSA?

This measure will help LNSA to identify own, self-defined paths for development and to increase own action and co-operation spaces.

Transition partners will be able to improve co-operation among LNSA actors and between LNSA and AKS, if they possess the relevant methodological know-how. This methodological know-how is essential for trust building between the actors and gives credibility to the person and the concern.

LNSA benefit in especial from methodologically well educated transition partners. In academic education, this is offered only marginally. Basic educations during academic studies as well as in-service trainings consolidate the necessary methodological know-how and open up spaces for a collegial development. Development is important especially as a combination of physical trainings and webinars, and of the development of LNSA processes and sustainability aims.

How this is related to the SOLINSA work/the work with the LNSA:

The SOLINSA project showed that trust building is one key process to a successful co-operation with LNSA.⁴⁴ Assisting LNSA in finding own solutions was very helpful in this context and showed that SOLINSA researchers were seriously interested in the development of the respective LNSA. Moments, in which researchers have started to identify themselves strongly with the LNSA, as well as moments, in which researchers provided directive propositions to the LNSA, decrease the independence and self-responsibility of LNSA. Aim is to strengthen and empower LNSA.

The SOLINSA project showed that scientists working with LNSA could fulfil the whole set of functions and roles of transition partners during the collaboration period. Clarity about roles and avoiding role conflicts are important in this context. It also showed that the process of trust building is long-lasting, involving loads of negotiations from the early beginning until the real collaboration in the end after approximately 2 years. In this context, as a researcher to possess the knowledge mentioned above was very helpful.

LNSA which would benefit from the proposed recommendation

S ACDF, S Naturli, F RAD, H G7, H Nat, I CVR, I Crisop, G Women, EU organ

⁴² A practice-related description is available in Bollinger and Zellweger (2007) and Gerster-Bentaya and Hoffmann (2011).

⁴³ Reflection platforms for supportive actors are described in Recommendation 5-1.

⁴⁴ Helmle (2013a)

5.3.2 Transition partner networks

Recommendation 3-2: Transition partner networks

Transition partners should have opportunities to meet with colleagues for reflecting and further developing their work.

Goal/effect:

Helps to maintain a professional distance to the LNSA and to work as qualified transition partners⁴⁵. Provides room for participatory exchange about development processes or setbacks, the adequate methodological instruments and the content-related setting up. In this context, participatory exchange and collegial support should be central elements.

Scope / areas of intervention:

Creation of platforms for exchange such as e.g.:

- Transition partner meetings to exchange experiences and reflect on the own work, clarification of the mandate and its limits due to the experiences made
- Space for reflection of own visions of change, what is the transition partners' motivation to work with a LNSA
- Capacity Building Workshops to train transition partners on new, participatory methods to work with groups, but also to give space for exchange and collegial reflection

These platforms should be created in both a national and international context.

In the EIP context, the Brussels-based EIP Service Point offers support to OG through "focus groups, seminars and workshops, the establishment of data bases (...), support for partnering, and help desk functions." Focus groups are established "to share knowledge and practical experience from concrete innovative projects" (EC 2013e). Focus groups might be a platform for LNSA facilitators to meet and exchange.

LNSA perspective - How would the measure strengthen LNSA?

These networks are to be understood as forum for exchange, clarification and education helping transition partners in being up-to-date and following recent developments. It will also help transition partners in maintaining their role as outsiders and not to become dominant drivers for change but to be still able to assist the LNSA in relevant processes and to maintain the logic of partnership. It will help transition partners to recognise the actual advancement of the LNSA work and make them able to intervene through methods which stimulate participation of LNSA actors. In practice, it is often a question of keeping the balance of methodological competence in the hand of the transition partner, and the content competence in the hand of the LNSA. These are very complex processes in practice, and development work in the context of the competences of transition partners is important for being able to reach high quality accompanying processes.

How this is related to the SOLINSA work/the work with the LNSA:

The SOLINSA project showed that, from a methodological point of view, it was important that researchers maintained an appreciating and receiving attitude towards

⁴⁵ This is understood as clarity about roles and the relation between LNSA and facilitators. The risk is that facilitators become insiders with the effect that they take over internal views and perceptions making it difficult to introduce new perspectives

the LINSA without becoming a part of the LINSA themselves. This did not happen automatically but was a result of reflection processes within the research team, trainings for researchers and the Capacity Building Workshops (CBW) during the SOLINSA project meetings. The continuous reflection of the relation between the researcher and the LINSA, the critical reflection of researchers interventions and LINSA reactions, the collegial exchange and support in the context of case study discussions were supportive to development and to assure a good quality.

LINSA which would benefit from the proposed recommendation

S ACDF, S Naturli, N Care, N Dairy, F RAD, F Charter, H G7, H Nat, I CVR, I Crisop, G Women

5.3.3 Cross-sectoral activities - intermediary persons

Recommendation 3-3: Cross-sectoral activities – intermediary persons

Frameworks should be enabled to give intermediary persons of the agricultural sector the chance for exchange with actors from other knowledge systems (e.g. health, education).

Goal/effect:

Enhances the scope of transition partners in the role of intermediary persons and the awareness for LINSA work. Facilitates the work of LINSA operating in various sectors and creates new possibilities for networking and learning.

Scope / areas of intervention for intermediary persons:

- Cross-sectoral meetings or conferences for transition partners, coming from different sectors (e.g. agriculture, health, education) to deepen the methodological knowledge as well as the knowledge on the knowledge systems of other sectors.
- Interactive platforms (e.g. blogs, websites) for cross-sectoral exchange. It has to be distinguished between the methodological-organisational challenges for moving in-between different sectors and the relevant technical knowledge.
- Common method trainings for transition partners i.e. intermediary persons from different sectors improves knowledge exchange and the various approaches to development issues.

LINSA perspective - How would the measure strengthen LINSA?

LINSA who operate in different sectors – i.e. agriculture and health – at the same time will receive a more holistic type of support helping them in performing better in all of their activities and in connecting them. It will also help to identify actors from other sectors for exchange and networking.

How this is related to the SOLINSA work/the work with the LINSA:

The SOLINSA project showed that some of the LINSA under study emerged within the agricultural sector but direct their activities also to other sectors. As examples can serve the LINSA G Women (agriculture and education) and N Care (agriculture and health). The cross-sectoral activities lead to various challenges for the LINSA such as e.g. recognition problems, access to knowledge from other sectors, or eligibility for funding resulting from unclear responsibilities. LINSA are also challenging to arrange with two, sometimes diverging, systems (e.g. hygiene and safety regulations).

LINSA which would benefit from the proposed recommendation

E B&H, G Women, N Care

5.3.4 Training for participatory research

Recommendation 3-4: Training for participatory research

Researchers should have access to soft skills training (capacity building) for being able to co-operate with LINSA.

Goal/effect:

Preparation for work in more co-operative and transdisciplinary research projects. Increases networking and co-operation among researchers and end-users. Increases efficiency and effectiveness of co-operation. Prepares researchers to combine data collection and analysis with LINSA collaboration.

Scope / areas of intervention for transition partners in the role of participatory researchers⁴⁶:

Researchers should receive training for e.g.:

- Methodological competences: facilitation methods, group dynamics, conflict management, reflection
- Communication and co-operation, leadership, organisational development and change management
- Methodologically sound application (data acquisition / analysis happen systematically and research processes / researcher interventions are inter-subjectively traceable)
- Further development of systematic data analysis tools for participatory research / action research
- Development of quality criteria for such research processes, which follow the logic of data acquisition and intervention

LINSA perspective - How would the measure strengthen LINSA?

Researchers receiving soft-skills training will be more able to contribute to participatory research projects where more co-operation and partnerships are essential. This type of project fosters the co-operation between end-users (LINSA) and researchers resulting in more practice-relevant outcomes. It also helps researchers to be supportive.

How this is related to the SOLINSA work/the work with the LINSA:

The SOLINSA project showed that scientists working with LINSA could learn new methods and soft skills during the Capacity Building Workshops (CBW) or other trainings (e.g. facilitation training) which they could immediately apply to the LINSA context in their function as facilitators, boundary persons, and intermediary person. This could contribute to the process of LINSA development. At the same time, criteria for the assurance of research quality (repeatability, transferability, scope) were only applicable to a limited extent and related to the individual cases. This criteria gained importance through the comparison of the 17 LINSA. The relatively concentrated approach of the researchers, training and advanced training supports the recognition of such research settings which are used rather seldom in agriculture.

LINSA which would benefit from the proposed recommendation

N Care, N Dairy, F RAD, F Charter, H G7, H Nat, I CVR, I Crisop, G Women, EU organ

⁴⁶ In this context Home and Moschitz (2013b) recommend to "develop targeted training courses for undergraduates, graduates, doctoral students and experienced researchers to enhance the necessary skills for effective science-practice interaction"

5.3.5 Incentives for practice-research co-operation

Recommendation 3-5: Incentives for practice-research co-operation

Researchers should be given incentives for supporting networks like LINSA, especially in their start-up phase.

Goal/effect:

Increases their willingness and contribution to LINSA development. Contributes to LINSA awareness, learning and idea dissemination. Reduces the gap between research and practice. Supports practice-relevant education of young researchers.

Scope / areas of intervention:

- Researchers could get 1/2 or 1 day off from their day-to-day business at their institute for actively supporting LINSA
- Reflow of insights into the education of students and in the formal agricultural education
- Development of practice seminars, work with case studies for the research on LINSA
- LINSA partnerships with institutes and technical colleges
- Reduction of prejudices of farmers and networks for collaborating with researchers
- Researchers need incentives for publishing practice relevant research results / LINSA innovations in non-scientific media⁴⁷

LINSA perspective - How would the measure strengthen LINSA?

Participatory researchers could help LINSA in particular in the starting phase and in phases in which they plan extensive development changes (e.g. generation change, expansion, new projects, development of new boundary objects). Involving scientists in LINSA work will bring in new ideas and perspectives into LINSA work and thus contribute to learning, knowledge creation and innovation development. With the help of participatory researchers, LINSA results can be more easily published in scientific or non-scientific media contributing to a dissemination of ideas and raising awareness. A co-operation between research and LINSA will reduce the gap between research and practice. LINSA gets in contact with young, curious researchers.

How this is related to the SOLINSA work/the work with the LINSA:

The SOLINSA project showed that for LINSA it is often very difficult to build personal connections to interested researchers. This is a typical task for participatory researchers and intermediary persons. Research organisations are facing different challenges: to find resources and mobilize funding, to publish the results of research (as it is the main evaluation criteria) and finally, to answer to the identified knowledge needs. The third aspect has not always the main priority as the needs are often practice- and development-oriented, the results difficult to publish and the activities difficult to fund on a project base⁴⁸. At the same time, the project showed that these

⁴⁷ In this context, Home and Moschitz (2013b) recommend to "establish an easily accessible database/repository for high-quality, non-academic publications/articles", to "include assessment of a researcher's (non-academic) societal impact into the overall evaluation of his/her performance" and to "support sabbaticals or short-term visits/internships of junior and senior researchers in industry, political and administration units or civil society organisations"

⁴⁸ In the case G Women, researchers chose the way of publishing results in a weekly agricultural newspaper (Helmle 2012a; Helmle 2014) and to produce a short video about

contacts between networks (LNSA) and researchers are extremely important for LNSA development. Reports about SOLINSA at conferences and in teaching were observed to be very interesting for the stakeholders, because research has been experienced as practice-relevant and job-oriented.⁴⁹

LNSA which would benefit from the proposed recommendation

S ACDF, S Naturli, N Care, N Dairy, L Biogas, L Fruit, H G7, H Nat, I Crisop, G Women, EU organ

the research phase. Motivation was to disseminate the knowledge and to provide the results in a non-academic, focus-group-specific format. The video was uploaded to the results website of the SOLINSA project.

⁴⁹ As example might serve the Autumn Academy for Young Researchers, which took place in September 2012 at the University of Hohenheim, Germany. SOLINSA researchers offered a 1-day workshop for actor analysis in rural areas and reported about the methodological approach to the plenary (Helmle 2012b).

5.4 LINSA-LINSA networks, EIP and OG

This subchapter shows which role enlarged co-operation of LINSA – so called LINSA-LINSA networks – as well as the newly established idea of EIP and Operational Groups could play in the LINSA context, and what can be learned from LINSA for OG.

5.4.1 LINSA-LINSA networks

Recommendation 4-1: LINSA-LINSA networks

Enabling frameworks for networks should be created in both a national and international context.

Goal/effect:

Network development for co-operation: facilitates the exchange of experiences / ideas and the co-creation of knowledge, enables reflection, and clarifies perspectives. Increases LINSA awareness.

Scope / areas of intervention:

Support for the creation of e.g.:

- Conferences, Discussion groups, Workshops
- Field visits, Demonstrations, Fairs
- Projects

Support for the payment of e.g.:

- Transition partners in the role of intermediary persons and facilitators
- Material, facilities
- Persons documenting events / processes / results (e.g. journalists, young researchers) to open up rooms for discussion and reflection
- Travel expenses

For development of soft-skills see Recommendation 1-1

In an international context support of e.g.:

- Language trainings (especially English)
- Multilingual transition partners

Important: Actors can meet and discuss without fixed / predetermined expectations / results

These actions/costs could partly be funded under Article 15 of the EAFRD.

The support of networking among LINSA can be linked to the concept of Operational Groups in the EIP approach.

LINSA perspective - How would the measure strengthen LINSA?

Through these frameworks for networking, LINSA will have the possibilities to meet other people interested in their work or working in the same field and to share and discuss their results / experiences / ideas with them. Such events provide the opportunity to share non-formalised and implicit knowledge. This will enable a refinement and the co-creation of new knowledge. At the same time, it will give LINSA an opportunity for reflection and thus help in clarifying perspectives. LINSA or LINSA members are able to achieve a goal on different occasions, to modify the goal according to their experiences or to even reject the goal (double-loop learning).

Networking helps bringing together different innovators who are very often considered as trouble makers in their social environment. This bringing together helps them to decrease insecurity, to increase a corporate feeling and to strengthen them in their innovations.

How this is related to the SOLINSA work/the work with the LINSA:

The LINSA workshops of the SOLINSA project showed that the exchange of experiences and reflection stimulate processes of learning and innovation if the events succeed in clarifying different perspectives and experiences. In the course of the project, it could also be observed that regional or over-regional networking is very limited at the moment resulting from a lack of finances, lack of skills, missing knowledge of networking opportunities, language barriers, or an insufficient number of possible partners. The 2nd SOLINSA Dissemination Workshop in Riga gave LINSA participants the possibility to link with each other, to exchange ideas and concepts and to create new alliances. This event was very much appreciated by the LINSA members.

LINSA which would benefit from the proposed recommendation

E Perm, S ACDF, N Care, N Dairy, L Biogas, L Fruit, F RAD, F Charter, H G7, H Nat, I CVR, I Crisop, G Women, EU organ

5.4.2 LINSA operating as OG

Recommendation 4-2: LINSA operating as OG

LINSA could form OG around specific projects and by this, have access to the funding sources in the EIP context. Innovation brokers will be needed in this context.

Goal/effect:

LINSA can obtain funds and maintain / extend their work, LINSA can share their results as OG in the EIP network.

Scope / areas of intervention:

As OG around a specific project, LINSA could access support of the EAFRD for the following actions:

- Knowledge transfer and information actions: e.g. vocational training and skills acquisition, demonstration activities and information actions, farm visits (Article 15)
- Investments in physical assets: e.g. to improve overall performance, the processing / marketing / development of agricultural products, or infrastructure (Article 18)
- Farm and business development: e.g. start-up aid, investments in non-agricultural activities (Article 20)
- Setting up of producer groups: e.g. setting up of the group, joint product placement, establishment of common rules (Article 28)
- Co-operation (support of the establishment and operation of OG): e.g. pilot projects, development of new products / practices / processes / technologies, horizontal and vertical co-operation, running costs of OG, direct costs of specific projects (Article 36)

The setting up of OG around a specific project might involve the help of innovation brokers – in the EIP context being the connectors between the managing authorities and possible OG.

LINSA perspective - How would the measure strengthen LINSA?

LINSA becoming OG will have higher possibilities of obtaining funding, especially under the EAFRD providing means for the set up and operation of OG. This will help LINSA to increase their work and facilitates new ideas and co-learning activities. As OG, LINSA would have the chance to disseminate their newly developed ideas, results and outcomes through the EIP network across Europe, resulting in an increase of awareness and new possibilities for exchange and learning alliances. The formation of an OG around a specific project gives room for trial and error to the LINSA. This will enhance development. After finishing the project of the OG, the LINSA provides the structure which is necessary for a further development and spreading of the new ideas.

How this is related to the SOLINSA work/the work with the LINSA:

The SOLINSA project showed that LINSA mostly develop around a concrete project and involve a number of different actors. Both issues will be requirements for future OG. This should make possible for LINSA to build up their new projects as OG - especially with the intervention of innovation brokers - and by this, get access to funds. Obtaining adequate support is at the moment very difficult for LINSA and could be eased by the establishment of OG.

LINSA which would benefit from the proposed recommendation

E Perm, N Care, N Dairy, L Fruit, F RAD, F Charter, I CVR, G Women, EU organ

5.4.3 Using a participatory approach in OG

Recommendation 4-3: Using a participatory approach in OG

OG should be encouraged to learn from the participatory, supportive and process-based collaboration between SOLINSA scientists (acting as facilitators) and LINSA.

Goal/effect:

Projects as open spaces for learning and co-operation are being stimulated. Analytical reflection phases are being enabled supporting the development of the network and balancing the development of innovation towards the development of OG.

Scope / areas of intervention:

- To apply the methodological SOLINSA toolbox in OG
- Learning from participatory SOLINSA events, reports and documents
- Consider social dynamics in innovation processes, and place people in OG with a strong motivation to continue after developing an innovation, and to discover the whole set of potentials and risks, efforts and failures.

LINSA perspective - How would the measure strengthen LINSA?

Projects are the most important boundary object of LINSA. LINSA can apply to become an OG within a really new project approach. Experiences of networking help LINSA to interact with very different partners in an OG.

The foundation of an OG is similar to the experiences young LINSA made. At the beginning, there is mostly a technical development, a technical fascination. Social processes of collaboration, communication and leadership are only considered at a marginal level. At the same time, these are the mechanisms, which, apart from the project content bringing together the actors, maintains the functioning of the networks respectively the OG. With regard to innovation processes in which things are tried out, results are being developed, and in which backlashes happen, it is important the different partners do not lose their motivation even in critical phases. It is also important that OG have access to exchange platforms to be able to learn from other OG. In this context, social dynamics should also play a role apart from technical developments.

OG pass through similar processes as LINSA. OG and LINSA can be distinguished by the fact that OG exist for a defined period of time whereas LINSA are installed in perpetuity, that OG follow concrete aims whereas LINSA have long-term goals, that there exists more clarity about which actors belong to an OG and that OG show more continuity and group characteristics than LINSA.

Accompanying research with social scientists enhances the knowledge of the effectiveness and functionality of OG, of planned innovation processes and the question in how far OG really support innovation. Accompanying researchers can take over tasks of transition partners. But it can also be accompanying research which is descriptive-observational and not intervening. Transition partner do not replace innovation broker but have to be considered as accompanying elements in the sense of the other tasks of transition partners. A separation of tasks and clarity about roles is essential.

How this is related to the SOLINSA work/the work with the LINSA:

The SOLINSA project showed that LINSA were mostly unaware of new methods. As they were brought in, LINSA were first sceptical but then learned about the benefits resulting in an increase of attention and good results concerning learning and

collaboration processes.

LINSA which would benefit from the proposed recommendation

N Dairy, N Care, F RAD, I CVR, I Crisop, G Women, EU organ

6 CONCLUSIONS

The presented recommendations - which are linked to existing support mechanisms and the AKS - show which type of support LINSA received through the SOLINSA project. In most cases, support had strong process character and in almost all recommendations framework conditions are described through which a supportive, methodological assistance of LINSA can take place. The strong pronunciation of social processes corresponds to the functioning of LINSA. Learning in LINSA happens through co-operation. Networking means that there exists no constant group which meets regularly but instead actors meeting each other in different intervals and constellations, perceiving success and failure, and inspiring each other - this leads to advancement. Sustainable agriculture and sustainable rural development are very complex issues. It is thus self-evident that learning and innovation is not happening in solitary puzzling but in co-operation of actors working on issues for the future. Descriptions of the AKS, the transformation to an AKIS and the wilful mostly marginal influence of LINSA on the AKS show that there exist many friction losses and that information and knowledge, which are theoretically available, do not reach those actors who could develop it further. Knowledge capable for practice stays within LINSA as they are missing the power to promote it to a broader public - and this is just one example.

6.1 Conclusions related to new and existing support frameworks

During the last decade, innovation, and in this context collaboration / co-operation, have been placed among the main topics in EU policy. Innovation, collaboration and bottom-up knowledge creation have been approached, among others, by the Lisbon Agenda / Europe 2020, the 7th Framework Programme, or the LEADER Programme within the CAP. The SOLINSA project shows that some LINSA have been supported by different measures at EU, national, or regional/local level. Nevertheless, there exist only few support measures out of which most are criticised because they are e.g. difficult to access (high administrative burdens), only of short-term character or mainly of financial nature.

LINSA projects often do not fit into the programme of the fund (e.g. CAP). This limits LINSA in their development, in their learning processes and in the creation of innovations / knowledge. Thus, most LINSA activate and depend on other, private sources for at least being able to follow their day-to-day business. The most important resource is the spirit of volunteerism. The most important financial sources are membership fees and, donations. LINSA, which can broadly develop mainly by the use of private resources, are rather scarce. This makes an adjustment or redevelopment of policy measures indispensable.

The new European Innovation Partnership on Agricultural Productivity and Sustainability, which will be implemented as a key initiative under the Europe 2020 flagship initiative "*Innovation Union*", could be a chance for LINSA to

participate as Operational Groups in the European Innovation Network and to have access to funding and training under the new EAFRD and Horizon 2020.

Resulting from the project experience and with some regard to the context of the EIP approach, the tasks identified to be fulfilled by innovation brokers need to be combined with the other tasks of transition partners. In the consideration whether it is about innovation or about the people developing innovation, transition partners can help to open up creative and experimental spaces in which the development of innovation is possible. But aim is the strengthening of the people respectively the LINSA on their way to a sustainable development.

6.2 Establishing LINSA, future continuation of OG

With regard to LINSA networks (e.g. with AKS actors or AKS projects) or establishing new LINSA, the main support task is the interlinking of potential actors. This includes e.g. identifying potential actors / innovative projects, establishing relationships, developing visions, discussing the question of leadership and governance, clarifying motivations and willingness to participate, analysing background information, setting up a working environment, or building action plans. This requires strong facilitation, communication and leadership skills as well as knowledge on participative methods. The capacity to apply such methods is an important element for social learning, participatory development and the strengthening of the relations within LINSA. At the same time it is important that transition partners possess the necessary and relevant technical knowledge on agriculture and knowledge on policies (e.g. rural development). Parallel to the extension approaches that highlight the self-responsibility of the clients for their decisions (see Hoffmann et al. 2009), this knowledge often stays in the background. But it is important for knowing if solutions which have been developed in a participatory approach really are sustainable. At a first glance, this seems to be equal to the tasks of an innovation broker in the EIP context. But it has to be understood rather in a way that a LINSA could result out of a EIP or OG at a future point of time and in that case, the tasks and goal-orientation change. A short-term structure would be the EIP and the respective subunits, a long-term structure would be LINSA.

6.3 Potentials of transition partners

It is important to realise that not one person can and should take over all tasks of a transition partner. Division of labour, also in the context of clarity about roles and mutual support, contributes to working with LINSA. LINSA are interesting for the EIP as through their long-term structure they can advance innovations which have been developed in OG. Innovation periods are often much longer than three years which can be considered as the classical project support period. EIP can also learn from the open process of the SOLINSA project. SOLINSA accompanied LINSA in their ongoing work. The SOLINSA data acquisition through participatory workshops opened up experimental reflection spaces out of which emerged innovation and conscious learning for innovation.

Also substantial advancements and the strengthening of the actors through reflection of the LINSA identity helped to gear such change processes. As strengthening in these processes have been perceived the high transparency of own resources and the increasing respect of the actors for each other as they got involved with each other outside their everyday business. This type of support - totally result open and not demand driven - has been perceived as resource of motivation and identity by the LINSA. This result is rather cumbersome with regard to support which is oriented towards measurable actions and results. But the strong methodological approach of the SOLINSA project and the orientation of the proposed measures underline such a process orientation. Underlying principle is that:

- **LINSA emerge from a shared interest for a thing; the actors bring in respective expertise**
- **Transition partner support LINSA in setting free and mobilising untapped - and often unknown - resources**
- **Social learning does not happen on its own. It is linked to processes of trust building, trial and error and mutual support. Social learning is an answer to very complex issues. To mutually reflect on knowledge and to consciously gear different perspectives to one common matter enhances the portfolio of potential solutions. Transition partner support social learning and the related group dynamic processes especially through a methodological approach**

Important in this context is to distinguish process, method and content competences of those actors. On the one hand they are experts – if it really is about bringing in know-how, which LINSA explicitly ask for. Much stronger they are catalysts for social learning – and as result for such learning processes of innovation (see Hoffman et al. 2009, Gerster Bentaya et al. 2011). To maintain legitimacy, it is sometimes better that different persons execute the different roles (Klerkx et al. 2009b).

Main challenges for transition partners are for sure to build up a good technical knowledge base concerning sustainable agriculture and regional development. But beyond that - and in this context, there exists almost no opportunity for acquisition through the formal agricultural education system - stands methodological competence for the company of innovation and learning processes. **Participatory methods for education with adults, methods allowing the establishment of trust and appreciation among different actors and, in addition, knowledge of psychology and change processes become central elements in this context because developing something new means questioning the established and old routines.**

6.4 Social development in transition partner networks

The facilitation mandate in the participative research process was transcending the regular facilitator-client-group-relation. Through the research background, it was made possible to report about LNSA, their internal views and development processes. The data is sensitive as it very often revealed the identity, strengths and weaknesses of the LNSA. For the researchers this means to handle the data with care and responsibility. At the same time it became obvious that the debate among the researchers about the gained insights and their publication had a strengthening effect on the LNSA. As strengthening elements have been perceived the increased public awareness as well as the feedback of the researcher debates which has been introduced into the practice-research collaboration. These experiences result in the special recommendation to clarify as a LNSA facilitator explicitly the aspect of passing profound LNSA knowledge to the outside world. Through that, learning and innovation processes are increasingly becoming visible and facilitators rather hold the position of intermediaries who cross the LNSA borders to a large extent. **The support of transition partners through an own network enables to gain clarity about this task. Collegial advise helps in clarifying complex problems and in finding inner distance to ongoing working processes.** Parallel to the LNSA development process - if those transition partners have the mandate - new knowledge or ideas should be distributed to other actors and made public. The creation of an online resource (platform) – based on the webinar⁵⁰, which was part of the SOLINSA training – to enable communication among Transition partners and people who are interested in LNSA could be an additional element of the network.

6.5 Setting free resources through reflection of daily routines

LNSA are facing specific challenges: they generate knowledge which is suitable and relevant for them, they bring actors together which are relevant for their plans, they mobilize voluntary forces to a strong extent and have learned to operate with very low resources. The main characteristic of LNSA is that they share a common vision for a sustainable society and that they transform this vision into specific projects. LNSA characterise themselves as a long-term structure which means that projects are among their most important boundary objects. Through projects, LNSA knowledge becomes relevant; in projects, innovations originate and become visible if any market for those innovations exists.

Many LNSA showed that they are well positioned concerning their day-to-day business, that their projects and plans are continuously being advanced. New development work, new projects, or new room for trial and error became more

⁵⁰ see also the website of the SOLINSA webinar:
<https://sites.google.com/site/solinsatraining/home>

efficient during the SOLINSA project through adequate and appreciative support by the participatory researchers. The objective of direct support through transition partners respectively participatory researchers in the current project is thus to foster the partnership approach with participatory methods (Bollinger et al. 2007; Gerster-Bentaya et al. 2011; Helmle 2013a). The main tasks of those transition partners in the role of participatory researchers were e.g. induce strategic reflection in LINSA by using the interest of the researchers to understand LINSA, improving communication skills of LINSA actors by using the interest of researchers to understand governance, managing diversity within LINSA by using the interest of researchers to enable different people to co-operate, or reflecting the patterns of leadership and power relations within LINSA, to understand governance as well. In this context, it is important to consider who is involved in the LINSA-researcher-relationship respectively in the LINSA-transition-partner-relationship. That means to know with which actors of the LINSA really is worked with. Are they LINSA subgroups, is it the LINSA board or is it a leader-/core-group within the LINSA? What happens with actors who are not involved? How are experiences and processes communicated?

In some LINSA, researchers took over the dissemination task - through which it can be reported about such set free resources and the related dynamics - and published in practice-relevant media, produced short videos or reported at larger events. For transition partners and LINSA it is important to anchor this task in the collaboration and to support it as an own field of work. In the recommendations this is considered by the mechanisms facilitating a better access to the AKS, respectively a better appreciation in the AKIS, for LINSA. This substantially supports LINSA in their further development.

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