SOLINSA
Support of Learning and Innovation Networks for Sustainable Agriculture

Agricultural Knowledge Systems In Transition:
Towards a more effective and efficient support of Learning and Innovation Networks for Sustainable Agriculture

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WP4 Synthesis Report

Authors: J. Ingram, N. Curry, J. Kirwan, D. Maye, K. Kubinakova

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Partners in the Solinsa projects are :

- Heidrun Moschitz, Robert Home, Research Institute of Organic Agriculture (FiBL), Switzerland
- Gianluca Brunori, Elena Favelli, Adanella Rossi, Antonella Ara, University of Pisa, Italy
- Julie Ingram, James Kirwan, Chris Rayfield, Nigel Curry, Damian Maye, CCRI (University of Gloucestershire and University of West of England), United Kingdom
- Dirk Roep, Laurens Klerkx, Frans Hermans, Wageningen University, The Netherlands
- David Bourdin, Kim Anh Joly, Pierre Praz, Niels Rump, AGRIDEA, Switzerland
- Dominique Barjolle, Loredana Sorg, Federal Institute for Technology, Switzerland
- Talis Tisenkopfs, Sandra Sumane, Ilse Lace, Baltic Studies Centre, Latvia
- Anne-Charlotte Dockès, Delphine Neumeister, French Livestock Institute, France
- Volker Hoffmann, Simone Helmle, Stefan Burkart, University of Hohenheim, Germany
- Gusztav Nemes, Judit Kis, Viktória Tési-Páll, Zoltan Bakucs, Institute of Economics of Hungarian Academy of Sciences, Hungary

Executive summary

Aims

The aims of this report are to address the objectives of WP4 concerning the LINSA (Learning and Innovation Networks for Sustainable Agriculture). The Report was prepared by undertaking analysis of 17 individual LINSA (case study) reports completed by SOLINSA partners in eight countries. It is complemented by the WP4 Analytical Characteristics Report Deliverable 4.2b (Ingram et al., 2013) which presents a synthesis of analysis of the following analytical characteristics for all 17 LINSA: origin and function, scale, network integration, level of innovation, level of learning and governance. The WP4 report Perspectives on Sustainable Agriculture Deliverable 4.2c (Hermans, 2013) also complements this report. Building on analysis in these two reports the research reported here specifically addresses the WP4 objectives but with a particular focus on:

- Mechanisms of network development, learning and innovation processes and connections with the formal AKS systems
- Learning approaches, methods and tools used in LINSA
- Evaluation criteria for assessing the effectiveness and cost efficiency of support measures
- Tasks, roles and emerging quality needs for the knowledge and skills of actors and institutions
- Support measures which are most effective and cost efficient
- Constraints and opportunities for LINSA within their particular context and the support needs for successful LINSA
- Fostering LINSA development

Mechanisms of network development, learning and innovation processes and AKS-LINSA interactions

There is great diversity across LINSA, however they all share the commonality of coming into being as a result of a perceived need for change and an intention to improve the sustainability of food supply chains in some way. The nature and strength of the relationship with the Agricultural Knowledge System (AKS) varies. Some LINSA work closely with AKS actors or parts of the AKS, at the other extreme, LINSA have grown out of a perceived deficiency in the traditional AKS in terms of good practice, knowledge and values, and have emerged at the margins in the wider AKIS. Some operate between these two extremes.

LINSA grow and develop in different ways. A common pattern of development is to begin in a small way, often under the enthusiasm of individual personalities

and the willingness to share knowledge and cooperate. Through growth this co-operation gives way to regulation, 'professionalization' and bureaucracy. In terms' of structure, the extent of top down and bottom up management varies. The majority remain closed LINSA, by invitation only and growth is achieved here through co-option. Others, structurally, are open, with people joining and leaving the freely. Innovation is both context and time dependent. In terms of context, LINSA innovations can be radical at the local level but only incremental at a European Level. In terms of time, innovation often begins as radical but becomes more incremental as it is more widely accepted.

Learning approaches, methods and tools used in LINSA

The approach to learning is related to the nature of LINSA, to the extent of its development and to its relationship with the AKS. As LINSA develop and expand, learning tends to become more institutionalized. LINSA with uncoordinated and informal approaches to learning are associated with diffuse networks, few links with AKS, and low priority given to learning. LINSA which are more developed tend to have some formalised learning concerning specific topics or using localised group activity, but overall coordination is limited. LINSA with a high level of coordinated learning are associated with well-developed networks often linked to the AKS where expansion, accreditation, changing structures, possible extension of the brand and newcomers to the LINSA has necessitated a more coordinated and formalised approach.

Tasks, roles and emerging quality needs for the knowledge and skills of actors and institutes

Tasks and roles of actors and institutes are diverse for LINSA and related to their overall aims. In some LINSA roles are more traditional and well defined while in other LINSA new roles have emerged to meet varying needs. Although many producers articulate the need for technical and scientific skills, a number also express the need for economic and market knowledge, and for learning in management, IT, and administrative skills. For those responsible for supplying knowledge the challenge is often keeping up to date and coping with the diverse knowledge demands of producers. Advisory services also have to be able to combine generalist and specialist knowledge and to develop skills as motivators and knowledge brokers. Emerging knowledge needs for organisations include managing relationships with government and consumers, as well as improving organisational structures which includes enhancing ability to organise, coordinate and administer networks. As LINSA develop their knowledge needs change; learning requirements evolve according to new research, legislations, new social/consumer expectations and emerging technologies.

Support measures which are most effective and cost efficient

In general terms, support across the 17 LINSA can be categorised as either external or internal support. External support measures typically involve some

type of financial input in the form of grants from national and regional funding streams often linked to EU policy programmes. Internal support measures comprise membership fees and other internal revenue sources such as sales, events. A significant proportion of internal support also comes through soft support including volunteering, animation, facilitation, knowledge exchange and brokerage, political and social/ethical support. Typically LINSA combine external and internal support in both strategic and opportunistic ways. A number comment on the difficulty and continual struggle of identifying funding support. There is no 'one size fits all' model for providing effective support to LINSA.

'Effectiveness' and 'cost efficiency' are terms not widely used in LINSA vocabulary. However there are examples where support has helped to develop LINSA and to contribute towards a broader aim of sustainable agriculture. External financial and political support is important and can benefit LINSA at certain stages in their development. Support funds can be effective in initiating and consolidating networks, either through one off projects, individual facilitators or EU collaborative support instruments. A distinction is made between effectiveness and cost efficiency with respect to the funders' and the beneficiaries' perspectives.

Evaluation criteria for assessing the effectiveness and cost efficiency of support measures

Determining suitable evaluation criteria for initiatives such as LINSA is not straight forward and few LINSA use specific evaluation criteria and do not specifically evaluate effectiveness and cost efficiency. In this respect, a number of the LINSA are focused on 'soft' outcomes, such as developing the capacities of individuals and organisations concerned with changing values; outcomes which are notoriously difficult to measure and evaluate – especially in terms of effectiveness and cost efficiency. While some LINSA do have established monitoring and evaluation more usually evaluations of LINSA are *implicit* in nature, reliant on the personal reflections of those involved rather than being based on specific evaluation criteria that are examined by external bodies. Formal evaluations tend to be undertaken from the funders' perspectives, implicit evaluations from the beneficiaries' perspectives.

Constraints and opportunities for LINSA within their particular context and the support needs for successful LINSA

Constraints and opportunities can be grouped into the following sets: Organisation, Skills, Knowledge and Communication, Resources, Attitudes and Values. The largest single constraint was considered to be a lack of finance. However organisational capacity and status, itself linked to skills and resources, was also highlighted as a key constraint. Opportunities were more diversely expressed. The most commonly articulated opportunities were good relationships with the state, with the public, and with the AKS and a good volunteer and sustainability ethos. With respect to support needs, general requests for more funding were the most commonly expressed although the following were also highlighted: technical and market branding areas; improved

governance or management; better internal communication; better external political support, and skills development through mentoring.

Fostering LINSA development

It is clear from the analysis that there is no 'one size fits all' approach to supporting LINSA. This is due to the diversity of LINSA drivers, aims, contexts, actors, structures and stage of development. There is however some commonality in terms of the expressed needs, as follows.

- The need for support to improve organisational capacity (governance, project management, leadership, decision making and coordination) in LINSA was widely articulated. The LINSA which operate outside of the AKS structures and are loose networks are more likely to require this sort of support. Facilitation, training and mentoring can be used to strengthen capacity.

- Broader recognition and acceptance from policy makers and AKS as well as visibility is regarded as desirable in a number of LINSA. Enhancing networking and cooperation has also been identified as a crucial factor in LINSA development, particularly for consumer oriented LINSA which operate with new sets of actors at the margins of the AKS.

- Support of learning, technical support, research and dissemination are common areas in need of support in food/energy production oriented LINSA where traditional training and dissemination support is more appropriate. Additionally cooperation in research through partnerships and collaboration can be effective for learning.

With respect to mechanisms for support LINSA, providing smaller grants or seed funds, and reducing the time and administrative burden of the application process, would enable that LINSA with limited capacity to access support. Changing eligibility requirements for some support measures would make some funds accessible to a wider set of LINSA particularly those that fall between sectors or outside mainstream agricultural sectors.

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Abbreviations

LINSA	Learning and Innovation Networks for Sustainable Agriculture
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 – 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 Association, 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	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
Other Abbreviations	
NoP	Network of Practice
CoP	Community of Practice
AKS	Agricultural Knowledge System
AKIS	Agricultural Knowledge and Innovation System

1 INTRODUCTION

1.1 Aims

This report aims to address the objectives of WP4 concerning the Learning and Innovation Networks for Sustainable Agriculture (LINSA), as follows:

Objectives

4.1: To enhance the understanding of constraints, opportunities and needs for support for successful LINSA.

4.2: To enhance understanding about mechanisms of network development, learning and innovation processes and connections with the formal Agricultural Knowledge Systems (AKS) systems.

4.3: To enhance understanding tasks, roles and emerging quality needs for the knowledge and skills of actors and institutions and consequences for education and training, in particular for professional advisory systems.

4.4: To collect empirical evidence on policy principles, policy instruments and financial arrangements for successful LINSA in different national and regional contexts.

4.5: To develop evaluation criteria on effectiveness and cost efficiency of support arrangements exploited by LINSA and to evaluate such arrangements.

4.6: To enhance understanding learning approaches, methods and tools used in LINSA, why they are used and if they are useful in the applied context.

4.7: To develop operational tools for AKS actors, summarising the findings of exploration of LINSA.

The Report was prepared by undertaking analysis of 17 individual LINSA (case study) reports completed by SOLINSA partners in eight countries. A list of these is provided in Table 1, one page report summaries are presented in Appendix 1 and the individual reports are available on www.solinsa.net.

The report is complemented by the WP4 Analytical Characteristics Report Deliverable 4.2b (Ingram et al., 2013) which presents a synthesis of analysis of the following analytical characteristics for all 17 LINSA: origin and function, scale, network integration, level of innovation, level of learning and governance; and the WP4 report: Perspectives on Sustainable Agriculture Deliverable 4.2c (Hermans, 2013). In addition the WP4 Show Case Summary Report provides further insights from seven LINSA 'show cases' in countries outside the consortium. This report, together with the seven individual show case reports, is available on www.solinsa.net.

Table 1 List of LINSA

Brighton and Hove Food Partnership, England (E B&H) This is a 'network of networks' concerned to improve the patterns of both food consumption and production in a large urban area. There are strong links between voluntary organisations (concerned with school food, organic food and over 60 community food growing projects) and the local state. It now embraces over 200 organisations in the state, private and voluntary sectors concerned with all stages of the food chain.
Permaculture Community (Permaculture Association and the Land Project), England (E Perm) The LINSA studied comprises: the project Leaning And Network Demonstration (LAND), its parent body The Permaculture Association (PA), and the wider community of Permaculture practitioners in England. The Permaculture community has originated outside of mainstream agriculture and is operating outside public funding and established policy and knowledge frameworks. It is a diffuse network of individuals, projects and groups all interested in, or practicing, Permaculture (defined broadly as a design system for creating sustainable human environments).
The European Organic Data network (EU Organ) This organic market data network consists of a core group of members who formed an OrganicDataNetwork project, and stakeholders, including data collectors and end users, who are involved with organic market data in Europe. The network emerged to enable access to relevant organic market data and seeks to involve stakeholders in the network formation by conducting surveys and hosting workshops.
Réseau Agriculture Durable– Network for a Sustainable Agriculture, France (F RAD) The Sustainable Agriculture Network is an informal network of farmers groups, created and developed outside the AKS. The main objective of the RAD is improving the effectiveness of the systems regarding ecological, social and economic issues. It emerged as an alternative way of thinking about agriculture in response to gaps in AKS knowledge and practice. RAD involves 3000 farmers (from 2000 farms), mainly from the west of France, gathered in 32 groups. Learning is a top priority of the RAD who gives value to bottom-up view of innovation and participatory learning processes I farmer groups The RAD is facing different opportunities of development and needs to choose how to growth and expand its knowledge
Charter of Good Agricultural Practices in Livestock production, France (F Charter) The Charter for Good Agricultural Practices promotes the quality of the cattle profession in France. It accompanies farmers in their practices (traceability, herd's health, food, milk quality, animal welfare and environment), helping them to meet the expectations of both their partners and citizens. The Charter is the leading farmer quality assurance scheme in Europe and brings together 105 000 farmers: over 90% of milk and over 77% of beef produced in France come from a farm that adheres to the Charter. The Charter benefits from the expertise of engineers from the French Livestock Institute and about 2500 technicians from extension organisation and food industry. It was launched after the mad cow crisis in a context of mistrust between food production and society; after twelve years of existence, the Charter needs to define new actions and strategies to answer food chain's, farmers' and society's needs.
Bavarian Rural Women's Association, Germany (G Women) The Rural Women's Group of the Bavarian Farmers Union in South Germany has a long learning and innovation culture. The group was founded in 1948, as a subpart of the Bavarian Farmers Union. Today it numbers ~6.500 local women groups, 72 local chapters, 7 district chapters, and one State Executive Committee. An essential part of the group is a diversified

educational work based on topics of direct relevance to farm women. The LINSA has a good, acknowledged standing in society, but is considered as a small player in the AKS. They link the farm sector with the health-, nutrition- and education-sectors.

German Agricultural Association, Germany (G DLG)

The German Agricultural Association (DLG) is a LINSA with a very long history of learning and innovation around agriculture. It was founded in 1839 and very soon became the most important knowledge broker in the German AKS. Today membership is ~25.000, these are mainly farmers but also researchers or representatives from agribusinesss. Its main tasks are to collect, discuss, and rearrange information and innovations related to agriculture and disseminate them among its members. Effective networking is considered to be the key for successful dissemination of information and innovations.

G7 (Local Food Council of Gödöllő), Hungary (H G7)

G7 is an informal network (voluntary partnership) of local organisations, entrepreneurs and citizens in Gödöllő, a major city of the Budapest agglomeration, hosting the largest agricultural university of Hungary. The main objective to which actors in this voluntary partnership are all committed is to achieve a more sustainable and healthy food system for the town. They intend to realise this through: (1) acting as information brokers – organising events, disseminating information and building databases, connecting producers, customers, organisations, entrepreneurs who want to support food sovereignty and sustainability; (2) acting in the political domain, building social support and negotiating with local authorities for a local sustainable food strategy.

The NATURAMA Alliance, Hungary (H Nat)

NATURAMA Alliance is a loose, informal network of networks of 9 Hungarian LEADER Local Action Groups (LAGs). Created through a transdisciplinary action research project in 2009, - NATURAMA soon became a self-maintaining domestic network, with a strong transnational interest. Its main aim – creating knowledge, learning from each other and from best practices in the EU – is in line with the LEADER approach, however, Hungarian AKS did not support such activities. NATURAMA keeps regular meetings, organised study tours, ran shared development projects, organised big events and provided expertise on various levels of rural policy making and implementation.

Consorzio Vacche Rosse (CVR)

Consorzio Vacche Rosse (CVR) is a cooperative dairy that produces Parmigiano Reggiano (P-R) cheese from milk of Reggiana breed cows delivered by its members. Like most of the local dairy farms and milk processing plants of the territory, CVR belongs to the larger Comunity of Practice (CoP) whose geographical coverage is defined by the Code of practice of the PDO cheese “Parmigiano Reggiano”. The community is strongly aligned with membership to the “Consorzio di tutela del formaggio Parmigiano Reggiano” (CFP R) that is the depositary of the PDO collective brand.

Association for Solidary Economy Crisoperla, Italy (I Crisop)

Crisoperla is a cultural non-profit organization which emerged in 2006 to promote organic farming and organic production, encouraging synergies between producers, consumers and technicians. It operates mainly in the Tuscan Province of Massa Carrara and, partly, in the Province of La Spezia, in adjacent Liguria Region. The actors of the network belong to different social groups: organic farmers (producers of vegetables, honey, wine, oil, beef), two fishing cooperatives, a cooperative for social farming, two agronomists (initiators of the network),

consumers organized in GAS, a consumers' association (ACU). In addition it increasingly interacts with local institutions and other networks. The association was formalised in 2009
Biogas Production Network, Latvia (L Biogas) The Latvian Biogas network was formed about six years ago to develop production of biogas, in response to renewable energy policy goals and availability of generous public funding. The network is small (about 50 participants) and dispersed, interactions are motivated by the need of technological, economic, agricultural learning to localise the use of borrowed biogas technologies. There are several centres of knowledge sharing, and a lot of controversy on what is acceptable practice. The development of biogas production depends on availability of public funding, which is now suspended. However, the network has difficulties to mobilise itself for a joint response.
Fruit Growing Network, Latvia (L- Fruit) The Latvian Fruit-growers network formed more than a decade ago around the goal of developing integrated fruit-growing in Latvia. This includes objectives on production, marketing, research, advisory, policy making, consumer education, environmental management. There are about 400 members, both individuals and organizations: producers and their cooperatives, research, business companies, NGOs, etc. The network is nation-wide, with several centres of closer connections around research institutes, the Fruit-growers' Association, regional cooperatives. The network is strong on peer-learning among farmers as well as inter-institutional learning and collaboration between researchers and practitioners. There is a shared set of norms on proper fruit-growing. Innovation is oriented towards private and public good.
Cooperative Boer en Zorg: Care Farmers in the Netherlands (N Care) The 'Boer en Zorg' (Farmers and Care) co-operative currently connects over 130 care farmers in the Mid-Eastern part of the Netherlands. Care farms use their animals, plants, gardens, forests and the landscape to create recreational or work related activities for people in need of care. Work on farms delivers evident results, focusing on the capabilities of each individual patient, resulting in an alternative vision of health care and therapy. The Boer en Zorg cooperative operates on the intersection of two existing policy fields; the agricultural sector and the health care sector. These two sectors provide both opportunities and constraints for innovation.
Sustainable Dairy Farming, Netherlands (N Dairy) This is a network of dairy farmers experimenting with the implementation of low external input farming practices. The network started in the Dutch province of Drenthe, but similar networks have started in other provinces as well. Managing and closing nutrient cycles can be an important mechanism for dairy farmers to improve the environmental impacts of their operations. Over a period of 10 years different projects were organised that applied the concept of low external input farming using farmer study clubs. The study club method facilitated by a number of expert consultants and in Drenthe has proved to be a very good way to get farmers involved, transfer knowledge and facilitate learning processes among dairy farmers.
Association for the development of fodder production, Switzerland (S ACDF) The association brings together some of the AKS (research, education and advisory) institutes, seeds firms and farmers with the objective to foster fodder production and conservation based on the natural resources of Swiss farms. The board of its technical commission "CT-ADCF"

enables experts with different interests (research, education, extension, seeds sale) to exchange knowledge and to develop practical solutions (based on scientific evidences and field experiences) to address the needs of farmers. Solutions are then shared inside this network through so-called boundary objects, such as labelled seeds-mix for pastures and grasslands, technical datasheets on fodder production, training for extensionists and visits dedicated to farmers.
Naturli Co-operative Cheese marketing platform, Switzerland (S Naturli) The Natürli co-operative has evolved around the regional trademark "Natürli aus der Region Zürcher Berggebiet". A regional entrepreneur-cheese maker and the regional development manager of the Zürcher Berggebiet, a mountainous region in the vicinity of Zurich, Winterthur and St. Gallen, initiated the network in 1993. The main aim – to collect, bundle, distribute and promote high quality regional dairy products in order to keep alive the regional dairy structures – only could be achieved through multifaceted collaboration. The 15 municipalities of the region own the trademark "Natürli" but nowadays e private entrepreneurs, cheese dairies and milk producers, the regional development center and shops are member of the co-ooperative "Natürli" accesses sporadically public funding and grants of private foundations for specific sub-projects but it also tries to work economically successful on its own.

1.2 AKS- LINSA interactions

SOLINSA is concerned with understanding the relationship between LINSA and the AKS with respect to how they benefit from support. Both AKS and LINSA and their respective actors operate within the wider AKIS. These concepts are defined as follows:

Agricultural Knowledge System (AKS): The AKS describes institutionalised and formalised tasks of research, education and advice, organizationally reflected in research, education and extension/advisory institutes.

Learning and Innovation Networks for Sustainable Agriculture (LINSA): Networks of producers, customers, experts, NGOs, SMEs, local administrations, as well as official researchers and extensionists, 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., 2013).

Agricultural Knowledge and Innovation Systems (AKIS): this concept seeks to encompass and influence the complexity of knowledge and innovation processes in the rural sphere. It draws on the notion of Agricultural Innovation Systems (AIS) which is defined as 'a network of organisations, enterprises, and individuals focused on bringing new products, new processes, and new forms of organisation into economic use, together with the institutions and policies that affect the way different agents interact, share, access, exchange and use knowledge'. AIS consists of, not just researchers, extension agents and farmers, but all types of public, private and civil society actors, such as inputs and processing industry actors, agricultural traders, retailers, policymakers, consumers and NGOs (EU SCAR, 2012).

The AKS describes institutionalised and formalised tasks of research, education and advice. It represents an institutional approach to knowledge and knowledge

transfer in agriculture organised around research, education and extension/advisory institutes. Thus AKS refers to the formal part of the overall AKIS which is a more comprehensive and encompassing concept. In AKIS innovation is considered the result of a process of networking and interactive learning among a heterogeneous set of actors. AKS are structured to support and advise agriculture and farmers, although they are often fragmented, with a proliferation of new knowledge producers and providers, and are unresponsive to newly emerging societal concerns, demands and actors. The AKIS offers a more comprehensive concept for accommodating these concerns and the newly emerging coalitions of actors, which are pursuing different, sometimes competing goals (EU SCAR, 2012).

LINSA are thematically-focused learning networks centered around individual innovations and are part of the overall AKIS approach. They can be made up of different actors, within and outside the formal, institutionalized AKS. They may develop within AKS and be strongly supported by parts of the formal AKS, or they can develop apart from the official AKS emerging at the margins.

LINSA interact with subsystems of AKS, educational or research institutes, research and educational programmes, and with AKS actors. AKS-LINSA interactions are therefore shaped by the agents and activities in the AKS and the research, education and advisory programmes, projects and other arrangements they are involved in. These interactions can be varied in nature and extent with multiple actors and roles, and with different parts of the AKS participating. AKS-LINSA interactions can be formalised to different extents These interactions are all framed by the wider AKIS.

This report examines these interactions and the extent to which actors and activities in the AKS engage with or support LINSA. It considers how effective such engagement and support might be both from the policy point of view supporting LINSA and from the LINSA perspective as (potential) beneficiaries. It also considers how LINSA develop where they do not receive AKS support.

1.3 Methods

1.3.1 LINSA selection

Two LINSA were selected as case studies per country partner, together with one European LINSA, making a total of 17. Guidelines for LINSA selection (Deliverable 4.1, see Appendix 2) were developed following analysis of WP2 and WP3 outputs, a policy and AKS review (Hermans, 2012) and a conceptual framework (Brunori et al., 2012) respectively. A selection framework was developed based on the following selection criteria: origin and function, scale, temporality, links to the AKS, network integration, level of innovation, level of learning, governance. It was also based on the requirement to represent three ‘types’ of LINSA:

- *consumer oriented networks* (e.g. direct marketing, urban food networks),

- *non-food oriented networks* (e.g. biomass, energy, tourism) and
- *purely agricultural networks or networks for sustainable land use* (e.g. soil conservation, biodiversity). To include both more conventional agricultural sectors and more alternative forms of agriculture.

1.3.2 LINSA research

An analytical framework was developed through analysis of the conceptual review. Questions were identified and guided the partner research. Partners completed a report template analysing the following analytical characteristics Origin and Function; Scale; Level of Integration; Level of Innovation; Governance; Level of Learning; Links between AKS and LINSA; and Efficiency and Effectiveness of Support in the context of each of their respective LINSA. These reports were analysed and the results presented in a separate WP4 report Analytical Characteristics Report Deliverable 4.2b (Ingram et al., 2013). Building on this analysis the final phase of the research reported here specifically addressed the WP4 objectives but with a particular focus on:

- Emerging quality needs for the knowledge and skills of actors and institutions; support measures which are most effective and cost efficient
- Effectiveness and cost-efficiency of support measures that are exploited by LINSA (at the level of policy instruments, financial arrangements)
- Constraints and opportunities for LINSA within their particular context and the support needs for successful LINSA
- Fostering LINSA development

A template was completed by each partner and the results have been analysed to prepare this report. The analysis involved a comprehensive content analysis of the 17 LINSA reports. Drawing out the key points from each LINSA report for preparation of this synthesis report has inevitably meant that some of some of the diversity and rich case study data is not fully captured. Readers are encouraged to consult the individual LINSA reports for in depth analyses in particular contexts (see www.solinsa.net).

The transdisciplinary research methodology that underpins SOLINSA is described in the report on Evaluation of transdisciplinary learning in SOLINSA Deliverable 5.2 (Home, 2014). Each partner used participatory workshops and interviews with their respective LINSA and a number of research methods appropriate to this approach. These are briefly described in the individual LINSA reports and elaborated in Deliverable 5.2.

2 MECHANISMS OF NETWORK DEVELOPMENT, LEARNING AND INNOVATION PROCESSES AND AKS-LINSA INTERACTIONS

This section address the WP4 objective: To enhance understanding about mechanisms of network development, learning and innovation processes and connections with the formal Agricultural Knowledge Systems (AKS) systems.

The accompanying Analytical Characteristics Report (Deliverable 4.2b) provides a detailed discussion of these network development, learning and innovation processes. Sections 2.2 and 2.3 provide a synopsis of these findings.

2.1 AKS-LINSA interactions

As described in Section 1.2 LINSA can develop within AKS and be strongly supported by parts of the formal AKS, or they can develop apart from the official AKS emerging at the margins but within the overall AKIS.

Although the AKS is largely concerned with formalised, institutionalised public tasks and institutes (research, education and advisory) related to agriculture, AKS agents engage in and interact with LINSA and this interaction is shaped in different ways. LINSA agents also cross the borders of organizations and make flows of information and learning processes possible between individuals. Thus interaction between agents in both occurs.

This section presents empirical data and analysis of different kinds of AKS-LINSA interactions and examines how they are shaped or formalised. Interactions are varied in nature and extent with multiple actors and roles involved and different parts of the AKS participating. Interactions can be formalised to different extents. All interactions are framed by the wider AKIS.

Despite great diversity across LINSA, they all share the commonality of coming into being as a result of a perceived need for change. In some cases, this change has come through working closely with parts of the AKS and the LINSA is embedded within it from the outset. F Charter has for example frequent and durable interactions with AKS institutes such as research stations and thus well able to exploit AKS resources. G Women's embeddedness is particularly valuable for media contacts. L Fruit has a strong AKS relationship, particularly through research. Older LINSA tend to be more fully absorbed into the AKS (G DLG).

At the other extreme, LINSA have grown out of a perceived deficiency in the traditional AKS in terms of good practice, knowledge and values, and the need to do something different (H Nat, I Crisop). They see themselves as an antidote. Of these, some chose to remain outside of the AKS because they feel they are too informal to belong (HG7) or because they see themselves as being part of a number of other information networks (health, sustainability) and not just food (HG7, N Care, E B&H). Others have set up their own, independent AKS (E

Perm) and others still, perceive the AKS not to be relevant (EU organ, L Biogas).

Between these two extremes, there are degrees of strength in the relationship. Some have a formal relationship, because of funding dependency or historic ties (I CVR). In the latter case the AKS has provided scientific support that has allowed CVR to develop production. Others have a loose relationship because of co-incidental cross membership and some information sharing (H G7) or relationships with one specific part of the AKS (for example, research stations – L Biogas, the use of consultants, N Dairy).

For a number of LINSA, their origin was independent of the AKS, often developed because they wanted to 'break away' (F RAD), but subsequently they have moved towards convergence as the LINSA has become more part of the 'establishment' and the AKS has become more alive to the precepts of sustainable agriculture (F RAD, I Crisop). In some cases of coalescence it has been the AKS that has approached the LINSA rather than the other way round (E B&H). The AKS became interested in N Care, as part of multifunctionality, for example. Some LINSA act as bridges between the AKS and farmers (S ACDF).

Many LINSA members feel that independence from the AKS was good, even where relationships were good (F RAD). New knowledge and methods require risk taking and it is often difficult to impose this new knowledge proactively from a top down position, because needs often become clear only when innovations take place at the local level. Here, the AKS needs to be responsive to new knowledge needs by being alive to local innovation through both CoP and NoP LINSA.

However close the relationship between LINSA and AKS, tensions and barriers were commonly reported because of different value systems and ways of working between the two. Mostly, the AKS is not radical enough for the LINSA in accepting the values of sustainable agriculture, but there are cases where the AKS does not accept the more traditional values of agriculture.

Growing links to the AKS: Network for a Sustainable Agriculture, France (RAD)

The RAD is a network of farmers' groups, created and developed outside the AKS in 1980s as an alternative way of farming which stresses sustainable farming (ecological, social and economical). It emerged in opposition to the top-down and conventional approaches of the traditional AKS. From late 1990s onwards recognition grew and the RAD took part in state funded research-development projects. Although now connections to the AKS do exist, the network still claims its independency. However RAD faces financial issues due to uncertainty, irregularity and gets little support from the AKS. The RAD is now facing a dilemma concerning strategic decisions: whether it gets more connected to the AKS, how it continues its development, whether it takes part or not in more projects. Slowly ideas defended by the RAD are becoming more important in the traditional AKS and the network is becoming more recognised for its work but this has not brought any financial support.

2.2 Mechanisms of Network Development

2.2.1 Growth

Despite a common genesis in the need for change, LINSA have developed in very different ways. Some are very new, having been formed since 2009 (H G7, I Crisop, EU organ) and new ways of thinking still enthuse members. Some are large (E B&H), well established and with a long history (G DLG, G Women). A common pattern of development is to begin in a small way, often under the enthusiasm of individual personalities (EU organ) but through growth, the modus operandi of trust and co-operation give way to regulation, 'professionalization' and bureaucracy (E B&H, EU organ, I CVR). This can be more politically influential but less consensual. S Naturli began informally but became more formal when a contract with a national supermarket chain was offered. This growth can shift the locus of the LINSA from singular and radical to multiple- interest and more conservative as membership grows and a consensus with more people is still sought.

Some LINSA remain with no formal rules (H Nat, L Biogas) choosing to operate through more informal association. There are no legal obligations or explicit a priori responsibilities within the networks.

LINSA growth can be considerable in a short space of time (F RAD) but this can lead to instabilities and uncertainties. Some LINSA have gone into decline as the raison d'etre passes or was never really that strong in the first place. In S ACDF, LINSA decline has come about partly because the farming population is declining but also because it has been considered by many to have become too mainstream.

2.2.2 Structure

In terms' of structure, some LINSA remain top down from the outset with strong personalities seeking to remain in control (EU organ). The majority remain closed LINSA, by invitation only (EU organ, H Nat) and growth is achieved here through co-option (F RAD). In S ACDF, Board members are chosen against specific criteria (for example, cantonal representation) and with strong links to practice. Some limit membership so that they do not water down their belief systems and some limit their membership for commercial reasons (I CVR – cheese appellation d'origine).

Others, structurally, are open, with people joining and leaving freely (H G7, E B&H) but this can lead to weak decision-making, and shifts in the nature and precepts of the LINSA as new people shift its focus (N Care). Some are outward looking: G Women collaborates with other local groups (health and nutrition sector, schools, church) and E B&H links with all sustainability interests.

There are tensions within LINSA in network development because of the different ambitions within the LINSA membership and because of the relationship of the LINSA to society more generally (F Charter). Tensions can

arise, too, when there are commercial competition considerations within the LINSA (I CVR, L Biogas), which can inhibit the development of the Community of Practice (CoP). The more complex the LINSA becomes the more tensions can arise through lack of trust and different values (L Biogas). In N Dairy, this has led to the formation of different networks with different specialisms and as a result the LINSA as a whole is becoming more diverse.

2.2.3 Values

Where LINSA are formed by likeminded groups, there is consensus (HG7,) but little radical innovation as all are in agreement at the outset. L Fruit has common activities, common policies and common support measures, with shared values. Some LINSA are formed, however, to try and marshal disparate interests (LBiogas, N Care) or as a result of funding requirements, and this can be more conflictual (H Nat), but potentially lead to more radical innovation.

Some are based on commercial collaboration (L Fruit, I CVR, S Naturli, N Care) some are more squarely ideological (EU organ, E B&H, I Crisop), remaining as loose associations (E Perm). The latter tend to be more conservative as ideological values tend not to change. Some LINSA have sustainable principles at their core, for others it is possibly more of a commercial 'branding'.

2.3 Learning and Innovation Processes

2.3.1 Innovation

The nature and extent of innovation is both context and time dependent. In terms of context, many LINSA characterise their innovations as radical at the local level (local adaptation) but only incremental at a global or European Level (L Biogas, H Nat). In terms of time, innovation often begins as radical but becomes more incremental as it is more widely accepted (S Naturli). In many of the LINSA the importance of social innovation and retro innovation (E B&H, L Fruit) – (re)learning from the past - are stressed in counter-position to technological innovation – it is one of the defining distinctions between the LINSA and the AKS. These processes are explored in depth in the accompanying Analytical Characteristics Report.

2.3.2 Learning

In LINSA where there is an emphasis on social and retro innovation learning–on the whole is less formal but with formal research having a role to play. Learning tends to follow innovation and has, for many LINSA an emphasis on local knowledge as much as scientific knowledge. In radical innovation, learning is often less well defined as the things that need to be learned are often less clear (N Care, E B&H). Some feel that their innovations are rather eccentric and therefore not widely transmitted (E Perm). An emphasis on social and local

learning seems also to make learning mechanisms slightly less formal than in the conventional AKS. There is a lot of mutual learning or co-learning, particularly in situations where the 'established' knowledge has not caught up with the needs of the LINSA or is at variance with it. Table 2 ranks the learning means. These processes are explored in depth in the accompanying Analytical Characteristics report and elaborated in Section 3 where the distition is made between individual learning, skills and capacities built and joint learning and collective capacities built.

Table 2 Dominant learning means- loosely ranked by formality

Dominant learning means	LINSA
Self-realisation, individual understanding	G Women, HG7, H Nat
Social Learning	I Crisop.
Informal learning, mutual learning and co-learning (for example, farm based discussions, regular member meetings), CoPs	F Charter, F RAD, G Women, H G7, I Crisop, L Biogas, L Fruit, N Dairy, S Naturli, S ACDF, E B&H
Educating the public	H G7, H Nat, G Women, L Fruit
Exhibitions and information events.	H Nat, G DLG, H G7, S Naturli, L Fruit
Seminars	G Women, G DLG
Internet, Skype and virtual meetings	EU organ, L Biogas, L Fruit
Publications and mailing lists	G DLG, I Crisop, L Fruit, H Nat
External experts	F Charter, G Women, I CVR, N Dairy
Training Courses	F RAD, G DLG, L Biogas, L Fruit, E Perm, G Women
Formal research	F RAD, I CVR, G DLG, S ACDF

2.4 Key points

- The nature and extent of the AKS-LINSA interactions vary considerably.
- A common pattern of development is expansion, formalisation and professionalization.
- In LINSA with a closed structure members join by invitation only and growth is achieved here through co-option. LINSA with an open structure have people joining and leaving freely but this can lead to weak decision-making, and shifts in focus.
- The nature of the innovation is context dependent. Innovations can be characterised as radical at the local level but incremental at an European Level. Innovations are also time dependent, they can begin as radical but become incremental as they become more widely accepted.

3 LEARNING APPROACHES, METHODS AND TOOLS USED IN LINSA

Three broad approaches to learning can be identified in the LINSA. These are distinguished by the extent of coordination and formalisation of learning. These are not hard and fast categories but are useful for framing a discussion of approaches and the associated methods and tools.

3.1 Uncoordinated and informal approach

Uncoordinated and informal approaches to learning are associated with large, fragmented and diffuse networks (E B&H, EU organ); poorly developed networks that lack a strong identity (H Nat) or where learning is low priority (S Naturli); and where LINSA have few links to the AKS. In S Naturli, for example, there is no need for coordinated learning among the milk producers in the region, as they each seek out any knowledge they need using the AKS. These LINSA tend to have poorly developed or no communication infrastructure and there are no established platforms of knowledge exchange (I CVR, S Naturli). Learning mechanisms have not become institutionalised in LINSA and capacity for learning is not well developed. LINSA with weakly coordinated approaches have informal and diverse structures and mechanisms for learning. Learning occurs in an ad hoc manner often through negotiated interpersonal relationships. There are few codified learning instruments. Knowledge sharing is based on direct, mostly bilateral, talks or emails (S Naturli, EU organ) or is characterised by the assimilation of tacit knowledge rather than direct learning (E B&H). There is an emphasis on individual learning, rather than organisational learning (H G7). Any publications or strategies that do exist are placed on the LINSA website which provides a communication framework.

3.2 Some level of coordination and formalisation

In more developed networks there is a degree of formalisation and coordination of learning. The approach to learning, however, remains quite individualistic. Experiential, hands-on learning to provide local solutions is favoured, although there are opportunities for more formal learning and for advice if needed. Some LINSA have focal points such as co-operatives (N Care) and associations (L Biogas, E Perm) which provide opportunities for learning (for example training, consultants), although these do not always systemically organise and co-ordinate learning processes. Often learning is introduced in response to specific needs and this occurs in activities such as projects (L Biogas organised by the Association); in Working Groups (N Care cooperative) and occasional study circle or training (I Crisop). Producers also hire consultants for specific services (N Care).

Some LINSA have established programmes of courses or group activity with some level of coordination. In N Care, for example, a programme has been developed within the cooperative to provide courses for farmers on health care topics, specific agrarian skills, and organisational and financial and aspects of running a care farm. In E Perm accredited courses are provided on permaculture design. Group learning is an established practice in some LINSA (e.g. F RAD, N Dairy). In F RAD this allows learning to be managed at a local level (rather than the national level) in autonomous small groups which address the specific needs of farmers. Although these groups do not interact there is some degree of coordination with channels in place for outcomes from group discussions and experiments to be communicated to the rest of the LINSA (F RAD). N Dairy is fairly centralised in its governance and communication structure and this makes it easy to manage information flows and promote learning in the whole provincial network, beyond the individual participants and groups.

Methods and tools include working groups, study circles and facilitated groups which address specific topics. Farmer groups working with a facilitator allow farmers to share successful experiments and reflect together. Farmers have the freedom to discuss various topics and look for local solutions, they must however be willing to share knowledge. Consultants can play a very important role in organising and facilitating groups and study clubs, they can also connect the different groups and different regions together.

Learning through Study Clubs: Sustainable Dairy Farming, Netherlands (N Dairy)

The sustainable dairy farming network, in the province of Drenthe, experimenting with low external input farming practices, has had a strong focus on learning. The core of the working method is the study club approach in which farmers come together with a facilitator and discuss different aspects of low external input farming. Within the study club the farmers have the freedom to discuss various topics, although they are guided by facilitators, consultants, and experts. Since 2009 the project was divided into two main groups: an experimental group of experienced farmers who were long-time participants in the network. These groups were tasked with trying to take the low external input farming to its limits and try to find the breaking points of the system. This was a form of learning-by-doing and using the farmers as a *'field laboratory'*. The other groups were composed of 'new' farmers who were introduced into the low external input farming production style. In these last groups there may have been some more emphasis on transfer of some forms of codified knowledge.

3.3 Coordinated and formalised learning

A high level of coordinated and formalised learning can be found in larger, more developed (and sometimes complex) and established LINSA. Links to the AKS are strong, and the general process of learning and innovation is integrated into the AKS structure (F Charter, S ACDF). There is a greater level of

organisational learning with a development history expressed as events, logo, common principles, rules and charters (G DLG, G Women, F Charter). LINSA systemically organise and co-ordinate learning and develop infrastructures accordingly. Learning happens around established institutes of research, dissemination and education. For example G DLG has the DLG academy and a plant breeding research centre where trials are conducted and products are tested. In L Fruit learning occurs around nodes: research institutes with their sub-networks of knowledge transmission to farmers; the Fruit-growers association; and smaller regionalised producers groups and cooperatives. Formal mechanisms such as expert committees, working groups are in place; these develop research, dissemination and education programmes and strategies (G Women).

Mechanisms for learning are formal and rely largely on codified knowledge. Large scale (size and spatial) LINSA like F Charter need uniform codified knowledge and rules to be able to operate effectively across France and to accommodate newcomers to the network. There are established programmes of seminars (L Fruit), training and regular meetings for information exchange (G Women, G DLG). Traditional information transfer activities are common (factsheets, field days, training courses etc.) (S ACDF). Some LINSA have a clear dissemination remit and are constantly developing publications, standards and certifications (as management tools for farmers) and holding events (fairs, exhibitions, or conferences) (G DLG). However, alongside this formal knowledge transfer there are opportunities to share non- formalised and implicit knowledge (S ADCF). Different mechanisms of learning commonly co-exist including peer to peer learning among farmers, transfer and dissemination, experience sharing collaboration between researchers and practitioners (S ACDF, L Fruit, L Biogas).

The nature, intensity and means of communication differ according to the domain: technical, markets, economic, etc. LINSA members have diverse interests. For example in L Fruit members want to learn about growing technologies, available state support, organisation of collective marketing, storage, transportation, sales, branding, management of co-operatives; while in L Biogas they interested in biogas technologies, economic performance issues, the relations with local communities and local authorities, and government policy. Not all LINSA participants are involved in all domains to an equal degree, this is particularly evident in the large more complex LINSA. Also participants use different methods. In the L Fruit more specific and locally coordinated learning happens in sub-networks such as producer groups and cooperatives, while more generalised learning (political-cultural discussions) occurs in informal individual networks. Methods also vary with stage of LINSA development. In the early stages, organic farmers in I Crisop used intense peer-to-peer learning to exchange of information and pool experience about organic farming techniques.

The level of engagement with different mechanisms also varies. Sometimes only a core group of the most active participants are likely to be using many of the infrastructures and channels of communication (L Biogas). The internet is seen as providing equal access to all members, whereas communication mechanisms that require more effort and input such as projects, meetings etc preclude some members due to required time, effort and expense. Also people

attach different levels of importance to the LINSA as a learning space and interact with it accordingly (H Nat).

3.4 Key points

- The approach to learning is related to the nature of LINSA and extent of its development.
- As LINSA develop and expand, learning in them tends to become more institutionalised and formalized in projects, programmes and son on.
- Large and diffuse networks with few links with AKS, and where learning is not a priority, have an uncoordinated and informal approach to learning.
- LINSA which have some formalised learning (e.g. in a programme) addressing specific topics or in localised group activity can occur, but overall coordination is limited.
- LINSA with high levels of coordinated and formalised learning are associated with well-developed networks where expansion, accreditation, changing structures, possible extension of the brand requires a more formalised learning approach.
- LINSA use a range of channels for learning (social media, mailing list skype, face-to-face meetings, projects, research, building databases, etc.) and for distributing information (publications – paper and electronic; events, consultation, etc.)

4 TASKS, ROLES AND EMERGING QUALITY NEEDS FOR THE KNOWLEDGE AND SKILLS OF ACTORS AND INSTITUTES

This section addresses WP4 objective: to enhance understanding tasks, roles and emerging quality needs for the knowledge and skills of actors and institutions and consequences for education and training, in particular for professional advisory systems.

4.1 Tasks, roles of actors and institutes

Tasks and roles of actors and instituties are diverse for LINSA and related to their overall aims. In more conventional agricultural LINSA linked to the AKS, the roles tend to be more defined (i.e. clear roles of knowledge producers, providers/brokers and consumers) than in LINSA operating outside or on the margins of the AKS. Similarly actors in larger more complex LINSA have more distinct roles than those in diffuse networks. Whilst the role of the food producer remains central in some LINSA (F RAD), in others this role is peripheral with respect to learning activities (S Naturli). Facilitators (N Dairy), technical experts (S ACDF) and educators (G DLG) have a key responsibility in some LINSA whilst non-traditional actors such as consultants, entrepreneurs, market experts, consumers and volunteers have a key role in other LINSA. Leadership (individuals or boards) is important for giving direction to and sustaining momentum of learning processes as well as consolidating and developing organisational learning. However, in some LINSA the organisational know-how can become concentrated in a single person or a few members of the board and is likely to get lost from the organisation as a whole if they leave (N Care, E Perm, S Naturli).

4.2 Emerging quality needs for knowledge and skills

LINSA incorporate diverse actors often with specialist knowledge, experience and professional skills, however, they recognize that there is a continuing need to learn and acquire new knowledge, both to meet individual needs and those of the LINSA overall. Learning is seen as a priority for most LINSA but the focus of this learning varies according to the nature of the LINSA, its aims, subject area and stage of development. Individuals, groups and organisations also have differing knowledge needs which vary according to different tasks, roles and objectives.

4.2.1 Emerging farmer/producer knowledge needs

The need for technical and scientific skills remains central in a number of LINSA (S ACDF, F Charter, G DLG, G Women). In the F Charter, for example,

technical knowledge on accreditation requirements (identification, animal food, herd health, milk quality, animal welfare, environmental protection) is important. These technical knowledge needs can be highly specific, for example, L Biogas looks for technological solutions concerning: adaptation of foreign technologies to local conditions, technologies for heat production and utilisation of the by-products of biogas production (e.g. digestate as organic fertiliser).

The need for economic and market knowledge is also expressed, with respect to reducing production costs and remaining competitive (F RAD, F Charter, L Biogas). In L Fruit emerging knowledge needs are primarily related to the need for institutionalised cooperation to optimise competitiveness and ability to develop the links with retail chains. This poses questions of storage, sorting, quality standards, marketing and administration. Knowledge of the market is seen as crucial. I Crisop, together with farmers, wants to carry out an analysis of the formation of price of organic products (principles, modes of price formation, etc.) in farmers' market.

As well as technical and economic knowledge, a clear need is expressed in most LINSA for social or soft skills, such as: management, administrative, marketing skills, communication and IT (E Perm, I Crisop). This is often associated with building capacity in the LINSA. Accreditation brings the need for administration and management skills and some LINSA offer training and support to its members to meet this need (N Care, I Crisop). Some LINSA have found that particular skills are needed for applying for financial support, loans from banks or subsidies (S Naturli).

In meeting producer needs, for those LINSA with a wide-ranging profile there is a challenge of coping with diverse knowledge demands. The G DLG expert committee, for example, needs to remain up to date with new scientific findings and practice-related developments in a wide range of topics (e.g. plant breeding, animal nutrition, farm management, product testing, certification, consumer-dialogue, sustainability). Similarly in G Women the spectrum of educational work, public relations work and representation of interests is very broad and complex (social issues, farm-administration, as well as agricultural techniques and agricultural policy) requiring LINSA actors to keep a pace with all these issues.

For the advisory services the challenge is to be able to combine generalist and specialist knowledge. Advisors and facilitators need to seek out and be competent in a range of areas. For many this is an individual task, group facilitators in F RAD have to build their knowledge by using their own contacts and sources. Advisors also need to develop skills as motivators and knowledge brokers, to bridge the gaps between LINSA and supporting organisations. The need for soft-skills for interacting with farmers was also identified, particularly with respect to translating scientific information to make it suitable for farmers.

In some cases farmers feel they have sufficient technical skills (I Crisop, I CVR) but they want to find other knowledge. I Crisop want to organize another study circle on agricultural legislation, in particular on the procedure for access to land. Some LINSA do not envisage any learning needs, for example, I CVR is a relatively closed network where experience and practice coincide and where there is no expressed need for any further assistance, new skills and abilities. In

E B&H knowledge needs are less pressing in the 'science' of sustainable development and more in reconciling this approach with more conventional approaches to food in terms of values, policies, finance, and developing networks of action. In this LINSA and in E Perm the notion of 'professionalization' would not be that prized an aspiration relative to 'inspirationalism'. However within E Perm, although the Permaculture Association serves this community well for knowledge about permaculture, there is a recognition that their knowledge of 'mainstream' agriculture networks, sources of information, support and relevant academic research networks is very limited. Similarly H Nat seeks technical knowledge about implementing the relevant rural development policy (LEADER), understanding legislation procedures, etc.

4.2.2 Emerging organisational knowledge needs

Managing internal and external relationships is seen as a skill that needs developing in many LINSA. L Biogas identified managing relationships with local communities and local governments, as well as demonstrating the "good deeds" of the sector to the general public as important. The F Charter mentioned skills for managing relationships with government and consumers as a priority. As part of this, communication skills are regarded as important for linking LINSA with other bodies and consumers and for internal communication (I Crisop). I Crisop envisages a need for a trained animator to enable and facilitate the dialogue among its different components (organic producers, consumers, associations, cooperatives). Similarly other LINSA highlighted the need to develop communication among the network to facilitate exchanges (F RAD, E Perm).

Needs for organisational improvement: G7 in Hungary (H G7)

G7 is an informal, voluntary partnership, a Network of Practice, uniting local actors committed to

establish a more sustainable and healthy local food system in Gödöllő, a major city of the Budapest agglomeration. The local government of Gödöllő invited G7 to co-operate in planning a new, sustainable local food strategy. This is therefore a critical point of the organisation's development. To perform this task successfully, not only organisational structure and communication, but also learning, knowledge transfer, and creation of knowledge need considerable improvement within the organisation. Organisational development (learning) is a priority in the following areas:

- Stabilize internal management, procedures, communication, and decision-making process;
- Co-operate effectively both with other NGOs, and the local government, and improve communication, negotiation strategy, local social and political embeddedness, etc. Although they are professionals, members of G7 need to improve in management as well as in social, mediation, facilitation, co-operation and communication skills that are so vital to run volunteer organisations.

Improving organisational management is a priority for some LINSA. To operate more effectively and deliver required strategies, more diffuse LINSA (H G7, H Nat) need better organisational structure, development and culture as well as structures for knowledge transfer, and the creation of channels for external knowledge relations. Members in such LINSA also need to improve in project management. In I Crisop the need to acquire expertise on group management and organisation emerged, the study circle organised on this subject was an opportunity to that end. Dealing with contracts is another skill area identified. At the level of the the Cooperative in N Care learning has been taking place in recent years on how to organise the Care Kind contracts, how to deal with the regional care offices and how to deal with the internal organisational processes. The results of these learning processes are reflected in the increased professionalization and standardisation of the internal procedures and mechanisms of the cooperative.

Skills and capacity for coordinating networks were also identified as needing enhancement. In EU organ the fragmented nature of the network, and the ad hoc means of learning, has led to serious problems in the exchange of organic market data. They identified the need for a position to organise, coordinate and administer the network, and in particular to address lack of comparability of data, unwillingness to share data, and incomplete and inaccurate data.

As LINSA develop their knowledge needs change. Learning requirements evolve according to new research, legislations, new social/consumer expectations and emerging technologies (F Charter, N Care, L Biogas). As networks develop there is often a shift from needing technical knowledge to needing knowledge about other supply chain aspects. For example, L Fruit members initially needed knowledge about varieties, cultivation techniques etc., but now they require knowledge about economic issues of marketing, collective organisation of supply chain and communication with consumers. Similarly in the early stages of I Crisop, organic farmers needed to learn about organic farming techniques, in later stages they needed information on managing marketing actions. Some LINSA anticipate changing needs, in S Naturli, for example, if the brand is extended and farms convert to organic production, formal education and training will be needed.

4.3 Consequences for education and training, in particular for professional advisory systems

With respect to meeting LINSA learning demands the situation varies. Some LINSA participant needs are already serviced by their associations and cooperatives through study circles and specific training courses. Where LINSA, and learning needs, are less complex the LINSA are able to supply the required knowledge, for example, G DLG provides well developed, professional knowledge and training to make its members more competitive and efficient. In some cases the ability of institutional actors to provide for the knowledge needs is hampered by the project-based funding of their activities (and therefore supply led), sometimes by insufficient ability to find common ground

(researchers-practitioners), as well as the somewhat fragmented state of networks (L Biogas, L Fruit).

A range of knowledge and skills needs were identified, some beyond the usual remit of professional advisory services. Expanding programmes of education and training to include technical, economic and market issues can ensure that advisors acquire new and broader skills. However, there is still a need for advisors to provide high quality specialist technical expertise. Training in new skills in facilitation, brokerage and translation of research could also be offered to suitable candidates, although traditional teacher-led training will not always be appropriate. A new cadre of professionals is also needed to support organisational development and network coordination, as this is not within the scope of advisory services.

4.4 Key points

- Learning is seen as a priority for most LINSA but the focus of learning varies.
- Specific needs differ considerably and are highly individualistic.
- Technical or scientific skills are still important for some LINSA.
- In many LINSA there is a need for learning in management, IT, administrative skills as well as organisational management and managing relationships.
- As LINSA change and develop their learning needs change.
- Some LINSA do not envisage any learning needs.
- A portfolio of approaches is required to professionalise and up skill advisors.

5 SUPPORT MEASURES WHICH ARE MOST EFFECTIVE AND COST EFFICIENT

This section addresses WP4 objective: to collect empirical evidence on policy principles, policy instruments and financial arrangements for successful LINSA in different national and regional contexts. It considers the range of support LINSA use and the underlying policy principles and arrangements. Effectiveness and cost efficiency from the viewpoint of the funder are discussed. A distinction is drawn between the funders' and the LINSA's perspective of effectiveness and cost efficiency of support measures. Section 6 continues this discussion examining evaluations of LINSA support which are often conducted from the LINSA perspective.

5.1 Description of support measures

This section focuses on the support measures and their effectiveness and cost efficiency. Further details about policy instruments and financial arrangements are in the Analytical Characteristics Report (Deliverable 4.2b).

Table 3 identifies and describes the range of support measures for each LINSA. Different types of support are evident in terms of funding, technical, training, information, volunteerism, political support, social / ethical support, etc. Support comes from different sources as well, in general terms, support across the 17 LINSA can be categorised as external or internal support. These are detailed below. The nature of the LINSA and the stage of its development determine the type of support sought. For many LINSA the support arrangements are complex and dynamic.

5.1.1 External support measures

External support measures typically involve some type of financial input in the form of grants from national and regional funding streams (F RAD; S ACDF, I Crisop). A number of LINSA have had some project or grant specific external support, which varies in size, although most report receiving relatively small grants. National support is important is a number of cases, for example G DLG received government support for the development of the Sustainability Standard. Grant support includes in some cases EU and nationally co-funded support measures (L Fruit); support mechanisms for marketing cooperatives and producers' groups (L Fruit); EU cross-border and ERAF projects (L Fruit). Where the LINSA is a loose network it is those actors in the network who receive support (rather than the LINSA) through their own funded initiatives (H Nat -LEADER/LAG budgets) or through AKS organisations (S-ADCF, F Charter). Support can also involve some non-financial policy measures (e.g. land use planning support - E B&H; technical support – F Charter, S ACDF). Political support in particular is mentioned as important to the development and recognition of LINSA (F Charter).

Those LINSA which are more established and have stronger networks and/or closer links and alignment to mainstream agriculture are more likely to use (and be eligible for) traditional support measures. For example F Charter benefits from different financial sources and political support from the industry sector and from the French government. The latter has been a long term provider for the Charter through specific state and regional allocations. In some cases agricultural policy instruments were not accessible for the LINSA because they are not given to private enterprises. For example in the case of S Naturli the LINSA had to rely on regional policy instruments. Those LINSA on the fringes of, or unconnected with, mainstream agriculture tend to look for external support from non-conventional sources such as charities (E B&H). Support is sought and used at different stages in LINSA development; it is often critical in the early stages. For example, INTERREG funds were used to initially link networks in the L Fruit. Similarly in I Crisop regional funds were used to support two agronomists to initially link organic producers and create a network for exchanging knowledge.

Some LINSA (F RAD; E Perm) spend a significant proportion of time trying to attract new funds, as most funding streams are project-based and temporary. There are high administrative barriers/bureaucratic burdens and LINSA do not always have the capacity or knowledge to develop proposals. Attracting funding remains a persistent challenge. Some LINSA facing financial issues due to uncertainty and irregularity face a dilemma about potentially compromising their independence/ principles by getting support from mainstream sources (which may come with restrictions). External support can be strategic and one-off targeted at meeting certain needs. I Crisop, for example, used municipality funds to organise management training through ‘study cycles’ to help improve decision making capacity. Alternatively it may be long term covering core costs (F Charter).

5.1.2 Internal support measures

LINSA internal revenue sources include membership fees, seed sales or events to sustain their activities (G DLG, S ACDF). In LINSA with a commercial - orientation, their products and services underpin the financial arrangements (N Care). I CVR, for example, is a market-based organisation, its economic sustainability is exclusively based on the results of its business, the production and marketing of Parmigiano-Reggiano cheese. In S Naturli the farmers and cheese dairies provided some capital funding in addition to that provided by the municipalities.

A significant proposition of internal support comes through ‘soft support’ including animation, facilitation, knowledge exchange and brokerage, political and social/ethical support. In some cases ‘soft support’ and volunteer input is critical to the running and profile of the LINSA (I Crisop, E B&H, E Perm). The importance of *volunteerism* is mentioned in a number of the case study reports. Financial independence is important to some LINSA (G DLG, H G7). However, while not participating in funding competitions provides independence and saves time and energy it does means significant financial uncertainty and vulnerability.

In a few exceptional LINSA cases, despite significant national level support for certain types of 'innovation', the LINSA has developed independently of the AKS, without any external support. This is evident in the care farm case in The Netherlands. N Care has not received any support or funding, all activities are paid for by the cooperative members. Their cooperative is not part of the National Federation for Care Farming and they are keen to promote individual entrepreneurship and remain autonomous. In a number of LINSA there is an underlying ambition to be self-sustaining and self-reliant, where possible (E Perm).

Typically LINSA combine external and internal support in a number of complementary ways which might be strategic or more opportunistic, for example:

- N Dairy receives provincial funds, national rural investment funds and farmers' in-kind contributions. It developed as a series of projects co-opting study groups as and when project money was available.
- In G Women membership fees give a financial frame together with income generation from events supplemented by ministry funded project-bound funds.
- S ADCF gets direct support from the Ministry of Agriculture and from the farmers /users through the sales of labelled seeds as well through membership fees.
- In I Crisop the Cooperative receives public funding (Regional Government of Tuscany), whereas money for the Crisoperla Association is mainly derived from membership fees, dissemination activities and public events.
- In I CVR early soft support as facilitation and brokering activity provided by brokers of local institutes facilitated links giving the opportunities of exploiting hard support from local and regional institutions for the development of the initiative.

Table 3 Support measures for LINSA

LINSA	External Support	Internal Support	Effectiveness and cost efficiency	Future support needs (elaborated in Sections 7 and 8)
E B&H	Range of small income streams including local health authority and city council	Informal soft support is the central form of support - mentoring, volunteering, facilitating		Subsidies for social enterprises in urban agriculture
E Perm	No policy support measures; LAND project funded by Local Food grant (Lottery fund) LAND funds staff members	Hard- PA is membership funded training courses Soft - relies on a strong volunteer community	LAND project was evaluated favourably according to quantitative monitoring of outputs such as visitor numbers	Small seed/project funding to strengthen the capacity of the PA and LAND to enable network and partnership development
EU organ	Organic Data Network is an EU FP7 research project, 2011-2014. This was used to initiate the network		Project evaluation criteria will be based on milestones/ deliverables. The 'real' cost effectiveness will be long term network establishment	Permanent funding is needed to maintain the network after the research project has finished
F RAD	Financial support from regional and national MoA and MoE for specific projects Also financial support via European projects; gov funds for training. Local/regional agencies fund day to day business, projects and research	Hard- finance via membership fees and selling 'products'. Soft- voluntary work / support from farmers and facilitators is very important	Evaluation criteria include: Satisfaction with training; number of: activities, members, farmers changing practices, water quality, visibility of the organisation	Technical support- specific areas (production cost, health, etc) Long term financial support Political support on national and international level
F Charter	State and regional allocations for period 2000- 2010 for facilitation of the scheme, training of advisers, and farm visits. Technical, coordination and	Political support from the industry sector is very important - representatives defend the Charter at different scales.	Public financial support was important at the start to help the LINSA become established The cost efficiency of the support evaluated annually for the funders	Financial support - working on involving all farmers; political support and better communication in relation to state, local governments, media

	organisation from the French Livestock Institute. Financial support from the Livestock National Confederation		mostly using a monitoring system based on indicators.	and public
G Women	Limited external support. Policy instrument to support educational courses. Financial support for the development of its Sustainability Standard through cooperation between LINSA and private and public research institutions	Hard- membership fees support networking Soft- skills important for communication and networking.		Support to enable recognition and appreciation of G Women's activities
G DLG	Minimal external financial support but funding for 2005-2008 from the German Environmental Foundation for development of the Sustainability Standard as a co-operation between the DLG and public research institutions	Hard- financially independent and funded via membership fees and income from product tests/events;	Support for the development of the Sustainability Standard was evaluated to be successful –the standard was developed within the 3 year project (a short period therefore efficient use of resources).	Financial and technical support for developing and disseminating important ideas/information/ Fostering networking activities
H G7	. LINSA is not a legal entity and receives financial support via member organisations for projects - from EU and national applications and local government	Soft - vocal support from the local authority and the Mayor helps empower LINSA work and reinforce legitimacy; informal support is important	cost-efficient in the sense that there is need to spend money or/and energy on fundraising, etc., but can still implement projects under its name. However this is not always effective	Financial uncertainty and vulnerability; need to transform LINSA basic strategy and secure funding for management and projects shortage in human and financial resources has jeopardized projects
H Nat	An informal network -it has not received funds but it has benefited from the LAG's functioning budget paid to individual network	Soft support - facilitation, capacity building, networking – is important in this relatively early stage.	It is highly efficient in using money indirectly received for networking and for common projects. LEADER support - comes with especially	Central hard support: small grants for project management; simple funds for networking and capacity building, large grants for

	members. Small co-operation funds (through the LAGs) for specific projects	Information and political support from national and international sources also important.	heavy bureaucratic burden.	transnational cooperation projects Financial/professional helps for acquiring capacity building, organisational development.
I CVR	Ministry of Agriculture provides funds for Association's institutional activities. The RDP provides payments to all breeders to maintain the breed.	Hard- the association receives a membership fee from farmers 'Soft support'- important, especially early on for facilitation to enable the association to exploit 'hard' support measures.	Effective because support has ensured the survival and preservation of the local breed. Evidence is the increased % in herd size. Indications of increased income of farmers.	Specific measures of RDP to support collaboration between farmers and research institutes for specific projects or investments.
I Crisop	Regional funds for rural development supported early stage of the development of the network. Municipal administration funds a small projects e.g. for marketing products; training	Hard -membership fees Soft - Animation, facilitation, networking (esp. by key individuals), volunteering; voluntary work is crucial but under valued	Collective benefits and Individual benefits evident, No official evaluation. Some simple indicators such as number of participants on training courses are used	Need for specific support for networking, organisation and management, development of collective capacity/ cooperative action. Support might find funding under Articles 15 16 and 36
L Biogas	Legislation and significant support measures for producers (subsidized investment in biogas plants, production quotas, 10 year price guarantees for electricity)	Soft support' in form of mutual knowledge sharing is used in smaller producers groups. At a higher level soft support mechanisms are inhibited by distrust between farmers and landless biogas operators.	A small number of producers benefitted from a protected mode of production that received quotas. Public gains were marginal and sustainability questionable	Improve public image. Support of new learning issues- localization of technology and social innovation
L Fruit	EU and nationally co-funded support measures to growers; support for marketing cooperatives and producers' groups; EU cross-border and ERAF	Hard- membership fees of the Association of Fruit growers covering salary of office administrator, the website and	Evaluations of funding agencies show that even a limited financial support has been successful in promoting fruit production, consumer relations, and	Applied and participatory research projects, trans-border cooperation, web and ICT learning tools (ICT skills for farmers and

	projects, EC funding for School Fruit scheme	annual conferences Soft support - to network members in form of mutual knowledge sharing in producers groups, Fruit Growers Association website, consultations offered by research institutes.	environmental effects	English highlighted)
N Care	LINSA received no direct funding support or other financial instruments. Although at national level there have been subsidies for care farms from the Ministries of agriculture and health care	Hard- activities are funded by members themselves, they rely on their own entrepreneurship	National scheme evaluation concluded that was it was time to stop the subsidy to let sector stand on its own feet. However, the new national Federation for care farmers struggled and this was interpreted as – subsidies had made the care farmers 'lazy' and less entrepreneurial The LINSA itself is involved in the further development of a measuring instrument called 'Social return on investment'	Farmers need to organize themselves at a local level. Need to facilitate new organisational structure and re-visit cooperative governance and networking
N Dairy	Financial support for study cubs 2001-2010 by the Drenthe provincial government supplemented by national funds	Soft -consistent 'soft support'/political backing of the concept by the provincial government and nationally; advisory council	Evaluation found positive water quality and farmer practice change, although these could not all be attributed to project. The study club is a good but expensive approach. 200 farmers over 10 years is a low number compared to the population of	Search for most cost effective method for promoting low external input agriculture to replace study clubs

			dairy farmers in Drenthe (1,125 dairy farms in 2012)	
S ACDF	Financial support from Ministry of Agriculture. Each organisation taking part in the CT-ADCF is indirectly financially participating in paying the salaries of the participants	Hard- funds via farmer membership fees, sale of products (labelled seeds, trainings, publication). AKS organisations who have experts on the board provide indirect technical support	Criteria used for evaluation: Numbers of members and participants at events, satisfaction level of the participants, changes by farmers (impact)	Funding for technical commission's activities Recognition and valorisation of quality fodder within policy and market context
S Naturli	Interest free loans from Swiss regional policy for logistics; New Regional Policy (NRP): grants for the label/ marketing development capital funding from municipalities.	Hard- farmers and dairies invest in enterprises Informal support at canton and community levels are important to promote the label / knowledge exchange; particularly strong at the community/local level	Logistics platform is effective in giving a common marketing basis for producers in the region. Group of 15 municipalities bundles its efforts. NRP measure was evaluated with and found that an increase in turnover is expected, so cost efficiency is good.	Financial support for investment into infrastructure and further development of the trademark and sales promotion. Support in management accounting and fundraising.

5.2 Policy arrangements

The principles of economic, environmental and social sustainability underpin the support measures used by a number of LINSA. Those LINSA which are developing innovations within mainstream agriculture more easily benefit from central or regional government funds, and from EU and nationally co-funded support measures; including RDP, cooperation funds and support mechanisms for marketing cooperatives and producers' groups and EU cross-border and ERAF projects (L Fruit). LINSA have political support when they address problems in agriculture such as F Charter which emerged from the BSE crisis and consumer loss of confidence in production methods.

L Biogas benefited from support under the national policy which aimed to increase the proportion of renewable energy in national energy production in line with EU bioenergy goals. N Care operates in agriculture and health policy areas, although it was the introduction of the 'personal care budget' within health policy that led to an increase in demand for the services of care farms. From the agricultural sector, the care farming sector has been seen as a promising form of multifunctional agriculture, now however, the sector been brought under the umbrella of the new broader 'top sector' innovation policy which uses Public Private Partnerships to work on innovations. Interestingly this LINSA remains independent of this and tends to look to charities and other less traditional organisations for support.

LINSA concerned more with innovations which use food to promote wider social benefits (access to good quality food, health, community) (E Perm, E B&H, H G7) operate outside of agricultural and rural development policy arenas and are not eligible for associated support. The multi-purpose nature of some LINSA (E Perm, E B&H) makes it particularly hard to attract funding because they does not fit any one funding 'silo'. Creativity is required to access funds.

Some LINSA originated under different policy principles now find that they align to current or emerging principles. S ADCF was originally set up under the principles of national self- sufficiency in animal food (grass based fodder as opposed to imported grain) but now aligns to the new policy direction of conservation of fodder species and resource use efficiency principles. In another example the G DLG has shifted its emphasis from Progress in Agriculture to Sustainable Progress in Agriculture reflecting policy interest. However, in the case of F RAD although their ideas about sustainable livestock management have become more relevant to policy and the network is becoming more recognised for its work it has not yet brought any financial support.

In some cases the LINSA themselves have paved the way for policy change, in the case of CVR the policy of the Consortium of Parmigiano Reggiano cheese has changed due to a greater consideration for the initiatives of product differentiation of the PDO managed by the producers. LINSA also contribute to the development of policy arrangements such as cross compliance in the case of S ACDF.

5.3 Effectiveness and cost efficiency

A distinction needs to be drawn between the funders' perspective of effectiveness and cost efficiency of support measures, which focuses on meeting objectives and pre-determined criteria, and the LINSA's perspective, which focuses more on the beneficiaries.

There is a general view that a number of LINSA have benefited from support but few explicit attempts have been made to assess effectiveness and efficiency of support measures from the point of view of the provider/funder – because such evaluations are deemed unnecessary or because such assessments have not been carried out. 'Effectiveness' and 'cost efficiency' are terms not widely used in LINSA vocabulary since these are typical accountability terms, to account for and legitimize public support/funding. Some LINSA however do undertake some form of implicit evaluation where they consider the benefits form the viewpoint of the beneficiaries (as discussed in Section 6).

As noted above, some LINSA rely heavily on internal support measures, often soft support, and formal evaluation is therefore not a priority or framed in such terms, with greater emphasis paid to changing values, for example. There are, however, some important messages to be drawn out from the LINSA case studies in terms of effectiveness and cost efficiency of support. The key points are summarised below. Table 3 lists some measures of effectiveness as reported in the LINSA reports.

5.3.1 Effectiveness of support measures

Effectiveness in standard evaluation terms assesses whether a support measure is effective in reaching its objectives from the funders' perspective. The LINSA cases generally define effectiveness in more open terms, and often from their own perspective rather than from the perspective of the funder. One measure of effectiveness, additionality, whilst not explicitly considered, does appear to be relevant as it is clear that a number of LINSA would not have been able to develop without some form of external support. Whilst the effectiveness of some support can only be measured in very general terms such as helping to meet the LINSA's objectives; for example, for S Naturli support helped to pay a good price to the producers and to keep the cheese dairies in the region, or for I CVR where evidence of effectiveness was preservation of the breed. However some tangible outputs and outcomes are evident in some of the LINSA accounts. For example:

- In E Perm the externally funded LAND project (National Lottery funds) has been effective in bringing together a previously diffuse network of practitioners and providing network and governance structures. The funders judged the use of funds as effective in quantitative terms (numbers of participants etc).

- In L Fruit the support provided from EU and nationally co-funded support programmes (e.g., 'Support to modernisation of farms', 'Support to new farmers' and 'Support to integrated growing') and sustainable food and public health programmes (developing new marketing channels for local fruit) was deemed effective. It benefitted a broad range of growers which has improved the fruit growing sector and benefitted wider society due to the availability of locally grown fruit (and grown according to integrated management practices).
- In the N Dairy case financial support from provincial government was considered effective in that more farmers are able to participate in low external input farming than would be possible without support. It resulted in good outputs such as environmental gains in terms of improved water quality; and good outcomes, in terms increasing the level of trust between farmers, government and environmentalists, and in extending the low external input farming network.
- In G DLG the Sustainability Standard (a project developed over three years in collaboration with different practice and research institutions) was deemed successful in that the goal of the project was met. Additionally standards have been developed which may be a prototype for wider national application.

The dangers of unbalanced support: The Latvian biogas network (L Biogas)

The Latvian biogas network includes about 100 members who deal with the production of electricity and heat energy from processing agricultural biomass. Actors involved in the network include biogas producers, scientists, service providers, suppliers, policy makers, investors, consultants, municipalities, banks, environmental agencies and NGOs. State subsidies have strongly influenced the development of the Latvian Biogas LINSA. The crucial stimulus for development was the political decision in 2009 to provide state support for green energy and distribute quotas to biogas producers at a higher-than-market price for 10 years. The actors in the LINSA responded to this top down decision and biogas production expanded on the basis of what effectively amounted to a guaranteed price. Substantial state support for biogas in Latvia was justified on the basis that it would use agricultural residues, process manure and reduce gas emissions.

However, permissions to open biogas stations were open to operators outside agriculture. Most gains from biogas were captured by a small number of producers. Consequently, quotas have distorted the functioning of the sector and there are controversies about the environmental impact since unsustainable practices such as growing crops specifically for energy production have resulted. Evaluations suggest public gains were marginal and the case study highlights the ineffectiveness and dangers of one-sided support measures that focus too much on production. Excessive production support in this case did not encourage joint interests and did not stimulate LINSA development. A new, more balanced, package of support is therefore now being developed.

There is, therefore, evidence of effective forms of support, particularly in terms of supporting farmers in implementing more sustainable farming practices and enabling network development. However, there are some cases where support measures have not been effective. L Biogas provides some further important lessons about the effectiveness of support measures, particularly with respect to support of sustainable practices (see Box). Also indications from the Netherlands are that support for care farming at the national level has made the farmers lazy, while lack of support at the local level has stimulated independence and entrepreneurship.

5.3.2 Cost efficiency of support measures

Comments about cost efficiency and the most effective way resources have been used by LINSA are variable, with some not able to report outputs in this way because support is mostly informal or not recorded. However, there are some useful messages to note.

- In some cases support is cost efficient if it is twinned with multiple purposes (e.g. physical and mental health – E B&H). This makes the money go further. The main cost-effectiveness of the LINSA thus comes through the pursuit of multiple objectives simultaneously.
- In the Biogas case study in Latvia the cost efficiency of supporting the production side of the sector, in terms of quotas, etc., is questionable, as evaluations suggest policy measures have not been successful in developing a viable sector – biogas stations would be inefficient in an open market. This warns against focusing too closely on specific forms of LINSA support (in this case production/supply aspects).
- The N Dairy example provides useful comments about the study club method. No cost-benefit calculations on the efficiency of the support given are provided. However, Drenthe province considers the study club method effective in reaching pioneers although it was less effective and cost efficient in reaching ‘mainstream’ dairy farmers. The study club method has therefore proved to be relatively expensive for the small share of dairy farmers reached. The province of Drenthe is now looking at the most cost efficient methods to promote the approach. Certification schemes are one option, as dairies or water boards could pay participating farmers a higher milk price.
- F Charter is one of the least expensive schemes of its kind – most cost is funded by organisations already present in the farming environment.
- H Nat operates very efficiently using the very limited resources effectively for learning and networking
- In S Naturli the last support measurement in the course of New Regional Policy was evaluated. Looking at the future development of the trademark / LINSA an increase in turnover is expected, so cost efficiency is good.

5.4 Key points

- This analysis shows that there is no ‘one size fits all’ model for providing effective support to LINSA.
- Many LINSA have benefited from support measures although often there is no formal evaluation to provide evidence for this.
- External financial and political support is important and can benefit LINSA at certain stages in their development.
- Support funds can be effective in initiating and consolidating networks, either through one off projects, individual facilitators or EU collaborative support instruments.
- Soft support (volunteers etc) is particularly important in more diffuse networks (social innovations) operating outside mainstream agriculture.
- Typically LINSA combine external and internal support in a number of complementary ways, although finding external funds can be a challenge.
- Financial independence is important to some LINSA.
- Financial support can distort the functioning of the sector.
- Social innovations (community food and health LINSA) do not access agricultural support instruments and rely on funding from other sources.
- Support has been effective in a number of LINSA in enabling sustainable agricultural practices

6 EVALUATION CRITERIA FOR ASSESSING THE EFFECTIVENESS AND COST-EFFICIENCY OF SUPPORT

This section addresses the WP4 objective: to develop evaluation criteria on effectiveness and cost efficiency of support arrangements exploited by LINSA and to evaluate such arrangements. In reviewing evaluation of support it is important to make a distinction between evaluations conducted by the funder, who consider effectiveness and cost efficiency of support measures with respect to their own objectives, and LINSA's own evaluations, which are undertaken from the perspective of the beneficiaries.

Specifically itemised evaluation criteria by which to assess the effectiveness and cost efficiency of support measures that have been exploited by LINSA are often lacking in the individual LINSA reports. Instead, the criteria used tend to be derived from implicit assumptions. In a number of the more recently established LINSA it is stated that there has not as yet been any form of evaluation (H G7, H Nat, EU organ). This lack of formal evaluation criteria amongst many of the LINSA is surprising, given that in a number of instances it is specifically stated that the LINSA would not function in the absence of external intervention/funding. However it does reflect the complex support arrangements some LINSA develop and the nature of the LINSA which may receive external support indirectly (H Nat).

6.1 Established network evaluation criteria

In some cases, especially where the LINSA has been established for some time and is institutionalised, it is clear that evaluation criteria are built into the organisational structure of the LINSA. For example, in the case of F Charter Livestock National Confederation implement a monitoring system and range of indicators of efficiency enable reports to be made annually to the supporters involved. There are also built in criteria with the G Women and G DLG LINSA. In the case of the former, these include analysing the registration statistics in order to assess demand for the services being offered, feedback after events (e.g. seminars), as well as actively tracking the use and interpretation of the brand 'we rural women' in order to ensure its continuing relevance. In the case of G DLG, the development of its 'Sustainability Standard' was evaluated scientifically through a number of indicators measuring sustainability, and practically in terms of its uptake.

6.2 Specific evaluation criteria

In a minority of cases, LINSA have had evaluation criteria in place that are intended specifically to assess the effectiveness and cost efficiency of support measures. In the case of L Biogas, the key criterion of success was the impact of support measures on the electricity price for various groups of consumers. In practice, while public support has demonstrably increased production, prices have increased and, as a result, public support has been temporarily withdrawn. With L Fruit, evaluations have demonstrated that policy instruments have been successful in promoting the establishment of new orchards (a key aim of the LINSA), but at the same time the cost of production is still recognised to be very high. As a result, policy measures are now increasingly targeting the establishment of cooperatives as a means of improving the expenditure to profit ratio. In the case of N Dairy, financial support has resulted in demonstrable improvements to the environment. Evaluations has shown positive gains for the environment and farmer practice change however there are difficulties attributing change directly to the project and to the support it hass received. The LINSA has not conducted any cost benefit calculations on the efficiency of the support given, nor are there any figures available on the additionality of the support given in terms of increasing the numbers of low external input farmers.

Evaluating impact on the environment – Sustainable Dairy Farming, Netherlands (N Dairy)

Two evaluation criteria were used to gauge the effectiveness if provincial support for study clubs in Drenthe- water quality (nitrates) and farmer practice change as a result of the projects. The most frequently mentioned practice change by surveyed farmers was reduction in artificial fertilizer used. This was confirmed by the on-farm measurements of nitrate in groundwater. The comparison with conventional dairy farms within the provincial borders showed that, on average, farmers participating in the DBB projects were able to remain within the 50 mg/l nitrate directive over the years 2002-2006, while the conventional dairy farmers could not. Although most of the participating farmers credited their participation in the project with the positive environmental gains, it is impossible to say that all the positive effects realized can be attributed directly to the DBB projects.

Although the project is considered successful, the feeling is that the study club approach is a very expensive method, with 200 of the 1125 dairy farmers in the province participating over 10 years. The province has indicated that they were willing to accept these high costs in the beginning, but now there is a tendency to look at other methods that will help spread the information and practice of low external input farming more cost effective.

6.3 Implicit evaluation

Individual LINSA often form part of a wider initiative, which may have explicit evaluation criteria that have not necessarily been extended down to the LINSA itself; nevertheless, it is clear that some kind of *implicit* evaluation is being undertaken in a variety of ways within LINSA. S Naturli, for example, utilises the personal reflections of those involved in its management to evaluate its progress and success. Within I Crisop, those involved identify both the collective and individual benefits enabled by support, seeing them as deriving from the connections made possible by the Association. Such internal reflection (or implicit evaluation) is also recognised as being able to identify weaknesses in the organisation: in this case, through an overreliance on volunteer time. Likewise, I CVR does not explicitly evaluate the financial support it receives, but at the same time recognises that the support received has sustained the network's governance activities and ensured the survival of a local breed.

Implicit evaluation is clearly important, but also likely to be partial. In the case of S ADCF, continuing membership, participation at organised events and the use of labelled seeds are recognised as indicators of the interest shown by farmers as members of the Association, but at the same time there is no systematic recording of data more broadly on participation.

Implicit evaluation is also a joint reflection and joint/collective learning which can contribute towards and capacity building. This reflection allows validation and consolidation of shared values and reinforces the on particular vision the LINSA has for sustainable agriculture. It can also be a strong driver creating strong internal relationships and identity as discussed with respect to Communities of Practice in WP4 Analytical Characteristics Report Deliverable 4.2b.

6.4 Different perspectives

In the case of E Perm, while the overall permaculture community in England does not benefit from any policy support measures, the LAND element of the LINSA does receive public funding and, as such, is evaluated against a range of criteria. Nevertheless, there is concern that these focus too much on quantifying outputs by way of justifying the funds spent, rather than looking at the long-term qualitative outcomes. This highlights the difficulty of setting criteria for the effectiveness and cost efficiency of LINSA, in that they may be focused on outcomes that do not sit well within established evaluation frames or perspectives. This applies to a number of LINSA (F Rad, H G7, I CVR), and is most likely to affect those that are more focussed on soft outcomes, such as developing the capacities of individuals and organisations. In the case of N Care, determining suitable evaluation criteria is complicated by the hybrid nature of the LINSA, which operates at the intersection of two sectors - health care and farming. Similarly within S Naturli, there is a recognition that the efficiency and effectiveness of the LINSA will be valued differently by each of the two key elements of the network. The logistics platform of S Naturli wants to be

economically efficient while the regional development office wants to be effective in developing the regional economy as a whole.

Determining suitable evaluation criteria for initiatives such as LINSA is not so straight forward. There is a need to relate them to the wider environment in which the LINSA has been developed, as well as recognising the value systems specific to the LINSA itself, as revealed in the discourse analysis on perspectives on sustainable agriculture in Deliverable WP4.2c (Hermans, 2013). This is exemplified in E B&H, where 'efficiency and effectiveness' are not really part of the vocabulary of the LINSA, which is more concerned with changing values and increasing community cohesion: outcomes which are notoriously difficult to measure and evaluate.

6.5 Key points

- Formal evaluation criteria is not common in LINSA although some have established monitoring and evaluation systems
- Implicit evaluation and reflections are often on-going in LINSA
- Soft outcomes of many LINSA do not fit well established evaluation frames
- When determining suitable evaluation criteria for LINSA there is a need to relate them to the environment in which the LINSA has been developed, as well as recognise the LINSA value systems

7 CONSTRAINTS AND OPPORTUNITIES FOR LINSA AND SUPPORT NEEDS

This section addresses WP4 objective: to enhance the understanding of constraints, opportunities and needs for support for successful LINSA.

7.1 Constraints

These are grouped into four below in descending order of the frequency with which they were noted. The largest single constraint, as might be expected, was considered to be a lack of finance (seven LINSA), but different internal values were considered constraining in six LINSA. All of the other constraints are fairly broadly distributed across issues.

Table 4 Constraints- Organisation

Constraint	LINSA	Number of LINSA
Declining membership/ static membership	F Charter; F RAD; E Perm	3
Geographically Dispersed/ remote	F RAD; E Perm; EU organ	3
Falls between sectors	N Care. G Women	2
Organisational complexity	F RAD	1
Hierarchal structure	G Women	1
Lack of stability	H Nat	1
Lack of legal status	F Charter	1
Uncertainty about long term	H Nat	1
Poor position externally	I Crisop	1
High external regulation	S Naturli	1
Limited administrative capacity	E Perm	1
		16

Table 5 Constraints- Skills, Knowledge and Communication

Constraint	LINSA	Number of LINSA
Little established knowledge/ few precedents	L Fruit; S Naturli; E B&H	3
Communication needs improvement	F RAD; G Women	2
Learning needs change/ unconventional	L Biogas; E B&H	2
Knowledge gaps	G Women; N Care	2
Lack of technical development	S ACDF	1
Not enough public exposure/recognition	H Nat	1
Differential learning needs with growth	N Dairy	1
		12

Table 6 Constraints - Resources

Constraint	LINSA	Number of LINSA
Lack of finance, esp capital and long term	F Charter; F RAD; H G7; H Nat; N Care; S ACDF; E B&H	7
Lack of human/time resources	F RAD; H Nat	2
Increasing administration costs	S Naturli	1
Lack of land	E B&H	1
Outputs are costly and time consuming	G DLG	1
Dependent on personalities	E Perm; EU organ	2
Uneven rates of growth	N Dairy	**1**
		15

Table 7 Constraints - Attitudes and Values

Constraint	LINSA	Number of LINSA
Different internal values	H G7; H Nat; I Crisop; L Biogas; E Perm; E B&H	6
Lack of consensus/ trust	H G7; L Biogas; H Nat	4
Not prioritised amongst membership	F RAD; H Nat	2
		12

7.2 Opportunities

These were more diversely expressed but can still be grouped into the same four sets as the constraints. Many fewer resource issues were seen as opportunities than constraints. The most commonly articulated opportunities were good relationships with the state, either in terms of legal, policy or institutional arrangements (seven LINSA), good relationships with the public, either as citizens or consumers (six LINSA), and good relationships with the AKS, either with all of it or parts of it (particularly research) (six LINSA).

Table 8 Opportunities - Organisation

Opportunity	LINSA	Number of LINSA
Favourable legal/ policy/state position	N Dairy; S ACDF; E B&H; F RAD; L Biogas; N Dairy; N Care	7
Strong voluntary cooperation/ethic	F Charter; G DLG; G Women; E Perm	4
Good leadership/entrepreneurship	F RAD; N Care	2
Geographically broad membership	G Women; N Care	2
Democratic structure	H G7, I Crisop	2
Well established	E Perm, G Women	2
Good access to urban centres	S Naturli	1
		20

Table 9 Opportunities - Skills, Knowledge and Communication

Opportunity	LINSA	Number of LINSA
Embedded in all or part of the AKS	F Charter; F Rad; I CVR; L Biogas; L Fruit; N Care	6
Good internal networking/communications/dissemination	G Women; G DLG; E B &H; N Dairy	4
Much knowledge sharing	G DLG, H Nat, I Crisop	3
Good consumer and producer links	F Charter; L Fruit; G Women	3
Good focal point for sector/community	L Biogas; E B&H; EU organ	3
Broad educational base/established training	G Women; E Perm	2
Good facilitation	L Biogas	1
Good media coverage	S Naturli	1
Good international contacts	H Nat	1
		24

Table 10 Opportunities - Resources

Opportunity	LINSA	Number of LINSA
Large membership	F Charter, G Women; EU organ	3
Growing membership	L Fruit	1
Good financial support	N Dairy	1
		5

Table 11 Opportunities - Attitudes and Values

Opportunity	LINSA	Number of LINSA
Good societal reputation/consumer trends	G Women; S Naturli; S ACDF; E B&H; F Charter;; G Women	7
Strong sustainability ethos	I CVR; E Perm; E B&H; F RAD	4
Good community building	H G7; I CVR, H Nat	3
Motivation and expertise	F RAD, G Women	2
Traditional production heritage	I CVR	1
		17

7.3 Support needs

Support needs have possibly a direct bearing on policy, to the extent that these needs might be able to be met through some form of state response. In the country reports, however, most of these needs were not articulated in very specific ways, but were more general 'wish lists'. Fewer support needs were articulated than opportunities or constraints, and the range of them was narrower too. Although general requests for more funding were the most commonly articulated support need, it was nevertheless expressed by fewer than half of the LINSA (seven LINSA). Five LINSA articulated support needs in technical and market branding areas and four LINSA requested support needs in the areas of improved governance or management; better internal communication; better external political support, and skills development through mentoring. This is explored further in Section 8.

Table 12 Support needs - Organisation

Support needs	LINSA	Number of LINSA
Improved governance/ management	EU organ; H G7; H Nat; I Crisop	4
Better internal discussion/ communication	G Women; G DLG; H G7; L Biogas	4
Better external political support	F Charter; F RAD; L Biogas; N Care	4
Better external public support/image	I Crisop; L Biogas; L Fruit	3
Better monitoring	G Women; H G7	2
Formalising the network	EU organ	1
		18

Table 13 Support needs - Skills, Knowledge and Communication

Support needs	LINSA	Number of LINSA
Technical support/ product branding	F RAD; G DLG; I CVR; L Biogas; S Naturli	5
Capacity and skills development/ mentoring	H Nat; S Naturli; S ACDF; E Perm	4
Improved communication skills	F Charter; G Women; E Perm	3
		12

Table 14 Support needs- Resources

Support needs	LINSA	Number of LINSA
More permanent resources/ financial support	EU organ; F Charter; F RAD; G DLG; H Nat; L Biogas; E Perm	7
More workspace/ infrastructure	H Nat; S Naturli	2
More research support	S ACDF, G Women	2
Larger membership	F Charter	1
		12

Table 15 draws together the constraints, opportunities and support needs based on the frequency with which they were mentioned. There are clear links between organisational constraints and the need for skills and resources to build and strengthen capacity to develop LINSA over the long term. This reflects the uncertainty regarding short term and ad hoc funding that many LINSA have to rely on (Section 6). Building capacity will enable the LINSA to exploit the opportunities of strong volunteership and growing membership, as well as enhance their status and recognition.

Table 15 Main constraints, opportunities and support needs

	Constraints	Opportunities	Support needs
Organisation	Capacity Status: legal, recognition Small membership	Strong voluntary cooperation and ethic Good leadership and entrepreneurship	Improved governance and management Better internal discussion and communication Better external political support
Knowledge, skills and communication	Little established knowledge/ few precedents/poor knowledge base	Embedded in all or part of the AKS	Technical support and product branding Capacity and skills development and mentoring Better communication skills
Resources	Lack of finance, especially capital and long term/ lack of human/time resources	Growing membership	More permanent resources especially financial support
Attitudes and Values	Different values, lack of consensus	Good societal reputation/consumer trends Strong sustainability ethos	

7.4 Key points

- Lack of funding is a key constraint but poor organisational capacity and resources were also highlighted
- The main opportunities are good relationships with the state, the public, and with the AKS for some LINSA; also a strong sustainability ethos and good volunteer base.
- Support needs are funding and training to build organisation capacity and develop skill and knowledge base.

8 FOSTERING LINSA DEVELOPMENT

LINSA reports identify a range of support needs and suggest a collection of actions to address these, ranging from tailored support linked to specific LINSA requirements to more generally applicable ideas/proposals. Traditional tools and policy instruments are not always relevant to the LINSA, particularly for those that operate and remain outside mainstream agriculture. For this reason specific operational tools that could be used to improve the support of LINSA have not been widely identified in the LINSA reports.

This section elaborates further the LINSA support needs referring to activities that have been effective in supporting LINSA development, performance and function. Specific recommendations for operational tools will be presented in the final report of work package 7, Deliverable 7.2 Report on Policy Implementation Tools (Helmle and Burkart, 2014).

8.1 Support needs

This discussion builds on the analysis in Section 4 on emerging knowledge needs, Section 5 (Table 5.1 lists some areas for future support identified in the individual LINSA,) and Section 7 (constraints, opportunities and support needs). The nature and extent of LINSA development has a direct impact on needs and future areas of support. Also as LINSA evolve their support needs, and relevant activities to address those needs, change. The range of support needs expressed reflect the number and diversity of the LINSA studied. The main support needs are considered below.

8.1.1 Funding support

As the analysis in Section 7 shows the largest single constraint to LINSA functioning was considered to be a lack of finance, and more funding was the most commonly articulated support need. Seven LINSA identified funding as a particular need and these include a range of LINSA types. This is not surprising given that funding is critical to many activities envisaged as important to the functioning and development of LINSA. The level of funding needed varies according to reliance on, and security of, external and internal funding sources. Funding needs also reflect the nature of the LINSA, its ambitions, and the stage of development. In general terms large scale, long term funds are desirable to sustain more established LINSA (F Charter) and to further develop, coordinate and sustain networks (EU organ). Smaller short term grants, project and seed funding are seen as a vehicle for supporting one off or new activities, such as staff development and training, peer to peer learning and network enhancement. Not all LINSA seek external funds, some prefer to address resource needs by increasing internal income through membership, for example.

8.1.2 Organisational support

The need for support to improve governance, project management, leadership, decision making and coordination in such LINSA was widely articulated (H G7, H Nat). The LINSA which might be termed social innovations which operate outside of the AKS structures and include new actors and comprise networks of networks are more likely (but not exclusively) to require organisational capacity building support. In particular complex LINSA (network of networks, hybrid networks) have distinctive challenges in this respect. It is considered that supporting capacity building can enable LINSA to fully capitalise on the strong voluntary cooperation ethos in some LINSA (E Perm, H Nat). In particular in voluntary organisations, where people engage to satisfy personal, intrinsic motivations, enabling personal connections through facilitation can be very effective. The need for support of leadership is commonly mentioned in LINSA, some need support with respect to improving bonding and bridging capacities and collaborative leadership (shared, collaborative, visionary) leadership.

Lack of long term secure funds bring uncertainty and remove the ability to plan ahead and build capacity. Also poorly resourced voluntary organisations improved project management is essential as the work burden, personal tensions etc. can easily emerge, damaging the organisation itself. Facilitation, coaching, mentoring and study circles/ training courses have played a significant role in developing capacity in LINSA (H G7, L Fruit, I Crisop, H Nat), the continued support of such activities is regarded as important.

8.1.3 Recognition, visibility and political support

Broader recognition and acceptance from policy makers and AKS as well as visibility is regarded as desirable in a number of LINSA (F Charter; F RAD; L Biogas; N Care) and a better public image is desired by some (I Crisop, L Biogas, L Fruit). Recognition can have a direct influence on access to financial streams at different levels- regional, national and international (EU). For example, political support and recognition on a national and European scale is seen as essential for continued existence and financial support for F Charter and F RAD.

8.1.4 Learning and dissemination support

Learning (individual and collective), technical support, research and dissemination are areas in need of support in these LINSA. Individuals in LINSA linked to agricultural or energy production tend to require support for technical learning and dissemination. They use established structures, actors and links with the AKS and aim to meet, in the most part, producers' technical needs. Access to training funds (F RAD) as well as specifically targeted action research funds (G Women, L Biogas, L Fruit) and research development project funds (S ACDF) are proposed by partners as ways to strengthen and improve individual's performance in LINSA. Also with respect to individual learning, many LINSA members expressed the need to enhance skills such as management, marketing and product branding, communication, ICT/web learning. This could

be achieved through training support.

For informal learning which relies more on joint activities, experimental and practise based forms of knowledge exchange such as field days, study tours, demonstrations, on-site training (L Fruit) are underlined as needing support for some more agriculturally oriented LINSA to mobilise knowledge. Peer to peer learning, bottom up approaches, participatory methods and recognition of alternative knowledge processes (F RAD, E Perm) should also be more widely supported. Building on the ethos of knowledge-sharing that exists in many LINSA is proposed. Study clubs (N Dairy) and similar co-learning mechanisms (F RAD) provide good models. Dissemination through co-organisation of public events and spreading knowledge on specific issues and knowledge exchange are also highlighted as important and needing continued support.

8.1.5 Networking and network development support

Enhancing networking and cooperation has been identified as a crucial factor in LINSA development. Supporting internal and external network development and knowledge exchange is critical to access both technical and market knowledge. Internally facilitation with one off funding has been effective in the short term for nurturing some networks. However, for fragmented networks, there is often a need for longer term support, for example, in the case of EU organ, long term funding and leadership to coordinate and sustain the network after the project funding ceases is seen as crucial. The LINSA which link food production to consumers and operate with new sets of actors at the margins of the AKS in particular require support for networking, for network coordination and for accessing specific economic and market.

Improving network capacity Crisoperla Association, Italy (I Crisop)

Crisoperla is a cultural non-profit organization which promotes organic farming and organic production, encouraging synergies between producers, consumers and technicians in Tuscany and Luguria. Current external, as well as internal support is no longer sufficient and does not address the LINSA needs. The future support needs to be targeted towards: improving the network capacity and related learning processes, strongly based on peer-to peer exchange; enhancing the effectiveness and efficiency of network internal management through a suitable governance mechanism; developing collective strategic capacities; and identifying and implementing collaborative projects and knowledge/experience exchange.

Operational tools that could support LINSA development in these areas would ideally be placed within the strategies for research and rural development of the EU and filtered down to local level. EFRD would be a suitable funding source, especially Article 15 (training and information), Article 16 (Advisory services) and Article 36 (cooperation).

With respect to external networking, encouraging good relationships and cooperation is also important (G DLG, L Fruit, H G7, G Women). Cooperation projects (regional, national, trans-national) have proved to be effective in this respect (H G7, G DLG, L Fruit, G Women, I Crisop, N Care).

8.2 Key points

- The need for funding support for a number of LINSA activities is expressed.
- Recognition, visibility and political support are important to foster LINSA growth.
- Support of capacity building is important particularly to LINSA not engaged directly with production.
- Networking development needs support through facilitation and cooperation projects.
- Learning and dissemination are important but mostly to LINSA engaged win production and can be supported through a range of activities
- Several articles within the new RD regulation can respond to some of the needs.

9 CONCLUSION

9.1 Aims

The aims of this report were to address the objectives of WP4 concerning the LINSA (Learning and Innovation Networks for Sustainable Agriculture), as follows:

Objectives

4.1: To enhance the understanding of constraints, opportunities and needs for support for successful LINSA.

4.2: To enhance understanding about mechanisms of network development, learning and innovation processes and connections with the formal AKS systems

4.3: To enhance understanding tasks, roles and emerging quality needs for the knowledge and skills of actors and institutions and consequences for education and training, in particular for professional advisory systems.

4.4: To collect empirical evidence on policy principles, policy instruments and financial arrangements for successful LINSA in different national and regional contexts.

4.5: To develop evaluation criteria on effectiveness and cost efficiency of support arrangements exploited by LINSA and to evaluate such arrangements

4.6: To enhance understanding learning approaches, methods and tools used in LINSA, why they are used and if they are useful in the applied context.

4.7: To develop operational tools for AKS actors, summarising the findings of exploration of LINSA

9.2 Mechanisms of network development, learning and innovation processes and AKS-LINSA interactions

There is great diversity across LINSA, however they all share the commonality of coming into being as a result of a perceived need for change and an intention to improve the sustainability of food supply chains in some way. This is unsurprising given that this was a selection criteria. The nature and strength of the relationship with the AKS varies. Some LINSA work closely with actors in the AKS, at the other extreme, LINSA have grown out of a perceived deficiency in the traditional AKS in terms of good practice, knowledge and values. Some operate between these two extremes.

LINSA grow and develop in different ways. A common pattern of development is to begin in a small way, often under the enthusiasm of individual personalities and the willingness to share knowledge and cooperate. Through growth this co-operation gives way to regulation, ‘professionalization’ and bureaucracy. Sometimes growth leads to uncertainties and dilution of original values.

In terms of structure, the extent of top down and bottom up management varies. The majority remain closed LINSA, by invitation only and growth is achieved here through co-option. Others, structurally, are open, with people joining and leaving the freely but this can lead to weak decision-making. Where LINSA are formed by likeminded groups, there is consensus but where interests and values are disparate relationships in LINSA can be more conflictual. Some LINSA are based on commercial collaboration, some are more squarely ideological.

Innovation is both context and time dependent. In terms of context, LINSA innovations can be radical at the local level but only incremental at a European Level. In terms of time, innovation often begins as radical but becomes more incremental as it is more widely accepted.

9.3 Learning approaches, methods and tools used in LINSA

The approach to learning is related to the nature of LINSA, to the extent of its development and to its relationship with the AKS. As LINSA develop and expand, learning tends to become more institutionalized. Three broad categories can be identified, distinguished by the level of coordination.

LINSA with uncoordinated and informal approaches to learning are associated with diffuse networks, few links with AKS, and low priority given to learning. LINSA which are more developed tend to have some formalised learning concerning specific topics or using localised group activity, but overall coordination is limited. LINSA with a high level of coordinated learning are associated with well-developed networks often linked to the AKS where expansion, accreditation, changing structures, possible extension of the brand and newcomers to the LINSA has necessitated a more coordinated and formalised approach. Although these broad different approaches and associated methods can be identified, overall there is an emphasis on social learning complemented by AKS inputs such as technical expertise or research where appropriate. Also LINSA participants use a range of complementary methods (formal and informal) according to subject needs and according to their links with the AKS.

9.4 Tasks, roles and emerging quality needs for the knowledge and skills of actors and institutes

Tasks and roles of actors and institutes are diverse for LINSA and related to their overall aims. In some LINSA roles are more traditional and well defined while in other LINSA new roles have emerged to meet varying needs (e.g. brokers, facilitators, mentors, investors). LINSA incorporate diverse actors often with specialist knowledge, experience and professional skills. Learning is seen

as a priority for most LINSA but the focus of learning varies. Specific needs differ considerably and are highly individualistic. Different needs for knowledge and skills were expressed for producers, knowledge providers and organisations.

Although many producers articulate the need for technical and scientific skills, a number also express the need for economic and market knowledge, and for learning in management, IT, and administrative skills. For those responsible for supplying knowledge the challenge is often keeping up to date and coping with the diverse knowledge demands of producers. Advisory services also have to be able to combine generalist and specialist knowledge and to develop skills as motivators and knowledge brokers. Emerging knowledge needs for organisations include managing relationships with government and consumers, as well as improving organisational structures which includes enhancing ability to organise, coordinate and administer networks. As LINSA develop their knowledge needs change; learning requirements evolve according to new research, legislations, new social/consumer expectations and emerging technologies

With respect to consequences for education and training, in particular for professional advisory systems, expanding programmes of education and training to include technical, economic and market issues as well as soft skills such as brokerage and facilitation can ensure that advisors acquire new, broader skills. A new cadre of professionals is also needed to support organisational development and network coordination, as this is not within the traditional scope of advisory services.

9.5 Support measures which are most effective and cost efficient

LINSA have differing financial arrangements and support needs. They also have different perspectives about, and approaches to, obtaining support for LINSA. In general terms, support across the 17 LINSA can be categorised as either external or internal support. External support measures typically involve some type of financial input in the form of grants from national and regional funding streams often linked to EU policy programmes. With respect to policy instruments, grant support includes in some cases EU and nationally co-funded support measures; support mechanisms for marketing cooperatives and producers' groups and EU cross-border and ERAF projects. Internal support measures comprise membership fees and other internal revenue sources such as sales, events. A significant proportion of internal support also comes through soft support including volunteering, animation, facilitation, knowledge exchange and brokerage, political and social/ethical support. A number of LINSA demonstrate the importance of voluntary work and personal motivation. Typically LINSA combine external and internal support in both strategic and opportunistic ways. Combining short term (through project funding) with in-kind support and volunteers is a common arrangement. A number comment on the

difficulty and continual struggle of identifying funding support. There are high administrative barriers and bureaucratic burdens and LINSA do not always have the capacity or knowledge to develop proposals. This analysis shows that there is no 'one size fits all' model for providing effective support to LINSA.

LINSA operating in the mainstream agricultural or rural development context, with close links to the AKS, naturally look towards central or regional government support. Their aims are aligned to those of agricultural and rural development policy principles and there is familiarity with the use of certain policy instruments. LINSA operating outside of mainstream agriculture and the AKS, often have different value systems and are less likely to seek, or be eligible for, traditional agricultural support. They tend to look to other sources of support (e.g. charities) but due to their diverse nature often do not fit into any category of funding. In a number of LINSA there is an underlying ambition to be independent and self-reliant, where possible.

'Effectiveness' and 'cost efficiency' are terms not widely used in LINSA vocabulary either because they are deemed irrelevant given the types of support they receive or because evaluations are not carried out. Although the general view is that LINSA have benefited from support, evidence for this is often missing. However there are examples where support has helped to develop LINSA and to contribute towards a broader aim of sustainable agriculture. External financial and political support is important and can benefit LINSA at certain stages in their development. Support funds can be effective in initiating and consolidating networks, either through one off projects, individual facilitators or EU collaborative support instruments. Support has also been effective in a number of LINSA in enabling use of sustainable agricultural practices. A distinction needs to be made between the perspective of the funder and the perspective of the beneficiaries with respect to effectiveness.

9.6 Evaluation criteria for assessing the effectiveness and cost efficiency of support measures

Determining suitable evaluation criteria for initiatives such as LINSA is not straight forward and few LINSA use specific evaluation criteria and as mentioned above do not specifically evaluate effectiveness and cost efficiency. In this respect, a number of the LINSA are focused on 'soft' outcomes, such as developing the capacities of individuals and organisations concerned with changing values; outcomes which are notoriously difficult to measure and evaluate – especially in terms of effectiveness and cost efficiency. As a result, specific evaluation criteria for assessing the effectiveness and cost efficiency of support measures used by LINSA are not that common, although example do exist. Evaluations are undertaken from the perspective of the funder and from the perspective of the beneficiaries. With respect to the latter, more usually evaluations of LINSA are *implicit* in nature, reliant on the personal reflections of those involved rather than being based on specific evaluation criteria that are examined by external bodies. It is clear that while this approach can help assess the on-going functioning of the network concerned, it is unlikely to be able to

assess its 'effectiveness' and 'cost efficiency'. As a consequence, although the general view is that LINSA have benefited from support, evidence to substantiate this is largely missing. There is a need to relate evaluation criteria to the wider environment in which the LINSA has been developed, as well as recognising the value systems specific to the LINSA itself.

Constraints and opportunities for LINSA within their particular context and the support needs for successful LINSA

Constraints and opportunities can be grouped into the following sets: Organisation, Skills, Knowledge and Communication, Resources, Attitudes and Values. The largest single constraint was considered to be a lack of finance. However organisational capacity and status, itself linked to skills and resources, was also highlighted as a key constraint. Opportunities were more diversely expressed. The most commonly articulated opportunities were good relationships with the state, with the public, and with the AKS and a good volunteer and sustainability ethos. With respect to support needs, general requests for more funding were the most commonly expressed although the following were also highlighted: technical and market branding areas; improved governance or management; better internal communication; better external political support, and skills development through mentoring.

9.7 Fostering LINSA development

LINSA reports identify a range of support needs and suggest a collection of actions to address these. Traditional tools and policy instruments are not always relevant to the LINSA, particularly for those that operate and remain outside mainstream agriculture. A need for funding support is frequently mentioned by LINSA however the level of funding required varies according to reliance on, and security of, external and internal funding sources. Funding needs also reflect the nature of the LINSA, its ambitions, and the stage of development. It is clear from the analysis that there is no 'one size fits all' approach to supporting LINSA. This is due to the diversity of LINSA drivers, aims, contexts, actors, structures and stage of development. There is however some commonality in terms of the expressed needs, as follows.

- The need for support to improve organisational capacity (governance, project management, leadership, decision making and coordination) in LINSA was widely articulated. The LINSA which operate outside of the AKS structures and are loose networks are more likely to require this sort of support. Facilitation, training and mentoring can be used to strengthen capacity.

- Broader recognition and acceptance from policy makers and AKS as well as visibility is regarded as desirable in a number of LINSA. Enhancing networking and cooperation has also been identified as a crucial factor in LINSA development, particularly for consumer oriented LINSA which operate with new sets of actors at the margins of the AKS.

- Support of learning, technical support, research and dissemination are common areas in need of support in food/energy production oriented LINSA where traditional training and dissemination support is more appropriate. Additionally cooperation in research through partnerships and collaboration can be effective for learning.

With respect to mechanisms for support LINSA often need small amounts of funds or support to nurture certain aspects of the network (e.g. skills training, peer to peer learning) at certain points in their development. Providing smaller grants or seed funds and reducing the time and administrative burden of the application process would mean that LINSA can exploit these opportunities even if they have limited capacity. Furthermore some LINSA fall between sectors or outside mainstream agricultural sectors, even though they aspire to sustainable food production and consumption. This often makes them ineligible for mainstream support instruments. Widening the eligibility criteria for some grants would enable these LINSA to access such support. Deliverable 7.2 Report on Policy Implementation Tools will elaborate on these conclusions and propose operational tools and polices which will meet these support requirements.

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APPENDIX 1 LINSA SUMMARIES

Brighton and Hove Food Partnership, England (E B&H)

This is a 'network of networks' concerned to improve the patterns of both food consumption and production in a large urban area. There are strong links between voluntary organisations (concerned with school food, organic food and over 60 community food growing projects) and the local state. It now embraces over 200 organisations in the state, private and voluntary sectors concerned with all stages of the food chain.

The Brighton and Hove Food Partnership (BHFP) is a 'network of networks' concerned to develop localised food systems in an *urban* area in an holistic sustainable context that embraces equity, prosperity, environmental quality, fair trade and physical and mental health. It originated from a local state (health authority) desire to improve the quality of food in hospitals and to use food as a means of health improvement. It now embraces over 200 organisations in the state, private and voluntary sectors concerned with all stages of the food chain. The City council is an active member and has adopted a number of the BHFP's ideas as 'legal' policy. Its funding basis is short term and reliant on bidding for funds.

The study was conducted using 9 separate research methods and these methods (and the focus of the research itself) were conducted in full partnership with the LINSA wherever possible, through research *co-production*. The main findings of the case study are:

- The BHFP sits outside of the conventional agricultural system and has no connection with the AKS.
- It has the local state (municipality, health authority), voluntary sector and private companies within its membership.
- It is a radical innovator and not risk averse.
- It operates on trust and co-operation rather than regulation.
- Learning processes are informal and can be seen to take place at the individual, group and organisational levels.
- Much developmental knowledge within BHFP is internally generated. Tacit knowledge also has an important role to play.
- There is no assurance of the quality of knowledge within the LINSA.

- Formal support for the LINSA comes through a range of small income streams and through local policies for land use planning.
- Informal support comes through mentoring, volunteering, facilitating and good communications channels.
- Efficiency and effectiveness are not really part of the vocabulary of the LINSA; it is more concerned with changing values and increasing community cohesion.
- That said, the main cost-effectiveness of the LINSA comes through the pursuit of multiple objectives simultaneously.
- One of the main strengths of the LINSA is in the support of a large number of the lay population of the area, actively as well as ideologically.

In conclusion, it is important to evaluate LINSA within the value systems which they themselves hold. Also, it is important when assessing sustainable agriculture, to recognise different interpretations of its meaning.

Permaculture Community (Permaculture Association and the Land Project), England (E Perm)

The LINSA studied comprises: the project Learning And Network Demonstration (LAND), its parent body The Permaculture Association (PA), and the wider community of Permaculture practitioners in England. The Permaculture community has originated outside of mainstream agriculture and is operating outside public funding and established policy and knowledge frameworks. It is a diffuse network of individuals, projects and groups all interested in, or practicing, Permaculture (defined broadly as a design system for creating sustainable human environments).

A combination of methods was used in the research including five participatory workshops, 20 interviews, observation at meetings and involvement in telephone conferences, as well as frequent communication.

The Permaculture community has originated outside of mainstream agriculture and is operating outside public funding and established policy and knowledge frameworks. It is a diffuse network of individuals, projects and groups all interested in, or practicing, Permaculture. The PA is a membership organisation of 1200 people which has emerged to facilitate networking and communication and coordinate training in this community. The LAND project is a 4 year project set up with external funding to facilitate networking, learning, demonstration and outreach opportunities.

The network is centralised with stronger bonds between the PA and its members than between the members themselves. The LAND project was set up in response to this weak networking between Permaculture people/plots.

The community has the characteristics of a Community of Practice (CoP) because, as a group Permaculture practitioners share a common set of values and practices, as well as a repertoire (including history, language and resources). There is evidence of situated learning and of the key elements of CoP: mutual engagement, joint enterprise and shared repertoire. As a CoP, the community is somewhat insular with a strong identity and an allegiance to the group. This is due to the unique nature of Permaculture and its associated value system. As such there are boundaries around the community which tend to restrict interaction with the mainstream agricultural community and the AKS

Permaculture has been defined broadly as a design system for creating sustainable human environments. It is an approach to the design of

community and agricultural systems according to the principles that mimic ecological systems. With respect to innovation, the LINSA can be described as a radical (second order) innovation, as it is advocating a paradigm shift from 'business as usual' agriculture, both; with respect to the application of Permaculture design principles but also with respect to its vision for lots of smallholders producing food in communities rather than large, individual farm enterprises. It symbolises the features and novelty of grassroots innovations.

The PA has its own knowledge system (KS) which has emerged to meet the needs of practitioners in the absence of any relevant information from the AKS. The approach to learning combines informal and formal activities which are complementary. Individual learning takes place experientially through practice and observation on holdings. These are validated and reinforced by networking and by taking a set of progressive training courses coordinated by the PA. There is an emphasis on sharing knowledge and there is a distinct knowledge culture surrounding Permaculture characterised by tacit knowledge. This makes it hard to establish links with the AKS which is underpinned by codified knowledge. Whilst internal learning is strong, external learning is not well developed. Individuals make personal links outside the community and the PA also networks at an organisational level but overall this does not lead to established linkages and partnerships with other communities. Technical knowledge needs are met by the PA, however, there is lack of managerial (marketing, finance, IT etc.) skills amongst practitioners.

PA and LAND, by virtue of bringing together a previously diffuse network of practitioners and providing network and governance structures, has been more effective than the individual sites would have been if they acted independently of one another. However, there are some areas which have not worked so well including outreach to non-Permaculture communities. An evaluation of LAND criticised the monitoring as putting too much focus on quantifying outputs by way of justifying the funds spent rather than looking at long term qualitative outcomes. This reveals the difficulty in setting criteria for effectiveness and cost efficiency for LINSA.

The community does not currently benefit from any policy support measures. Instead they look for support from charities and sources such as the Local Food Fund (lottery) for funding. They would benefit most from small seed funding to strengthen capacity and allow network and partnership development. Their strength is in an ethos for self-reliance and a desire to be self-sustaining without funding. This might be achieved to some extent through PA membership and training course fees and by using the soft resources of a strong volunteer community.

The European Organic Data network (EU organ)

This organic market data network consists of a core group of members who formed an OrganicDataNetwork project, and stakeholders, including data collectors and end users, who are involved with organic market data in Europe. The network emerged to enable access to relevant organic market data and seeks to involve stakeholders in the network formation by conducting surveys and hosting workshops.

There is no organisation or structure that enables access to relevant organic market data, so individuals have established personal networks to supply their data needs. The collective sum of these networks is called the organic data network. The reliance on personal individual networks means that entry is difficult and a lack of connections forces many to live with inadequate data. The people with whom the organisation could be developed may be physically distant from each other and quite possibly unknown to each other. Many of the problems associated with organic market data can be attributed to the ad hoc and unstructured nature of the network. To address these problems, an EU FP7 research project called OrganicDataNetwork was formed and has served as the SOLINSA access point to the network. The aims of the OrganicDataNetwork project include establishment of a self-sustaining network of stakeholders with an interest in organic market data.

The findings in this report are primarily based around five main interactions between the network and SOLINSA, and especially on an action plan that was developed during a two-day workshop that was hosted by the SOLINSA project. The action plan is a roadmap for implementing measure to take the network from its existing state to a state that was identified by network members as desirable. The network members who took part in the participatory processes were approximately evenly distributed between partners in the OrganicDataNetwork project and members of the wider network. Efforts were made to include a broad spectrum of participants from both developed and less developed markets in Europe.

Because of the unstructured and ad hoc nature of the existing network, the primary support need of the network is the establishment of an office: either an individual or a commission, to oversee and provide the driving force for network development and maintenance. To achieve these goals, the network needs both funding resources and a legal basis for existence. The roles of the OrganicDataNetwork project will include lobbying decision makers at the EU level for allocation of funding to establish the office, and for implementation of appropriate regulation.

A range of tasks were identified that will be initiated by the OrganicDataNetwork project but which should also be continued if the establishment of a coordinator office is successful. In that way, the actions of the OrganicDataNetwork project will provide the basis for the transformation of the existing network into the desired network. The tasks include the creation of communication platforms to address the difficulty of the geographic dispersal of the network; to identify standardised methods of data collection based on best practice, and to implement and disseminate these methods in the form of handbooks and data templates.

The European organic data network faces a unique set of challenges in that there is a recognised need for change, but the geographic dispersal and the seemingly incompatible systems within individual countries and regions, make the prospect of network establishment unlikely without external intervention. The interactions between the organic data network and SOLINSA appear to have been successful in that the network has a reasonably clear plan for network development after the interactions with SOLINSA have come to a close.

Réseau Agriculture Durable– Network for a Sustainable Agriculture, France (F RAD)

The Sustainable Agriculture Network is a non institutional network of farmers groups, created and developed outside the AKS. The main objective of the RAD is improving the effectiveness of the systems regarding ecological, social and economical issues. It emerged as an alternative way of thinking about agriculture in response to gaps in AKS knowledge and practice. The RAD involves 3000 farmers (from 2000 farms), mainly from the west of France, gathered in 32 groups. Learning is a top priority of the RAD who gives value to bottom-up view of innovation and participatory learning processes I farmer groups The RAD is facing different opportunities of development and needs to choose how to growth and expand its knowledge.

The study of the RAD was conducted using different research methods: individual interviews with members of the LINSA, literature reviews and 6 workshops involving 6 to 40 members of the LINSA.

Our main findings are the following:

- The RAD is a non institutional network of farmers groups, created and developed outside the AKS as an alternative way of thinking to answer a specific demand not taken in charge by the traditional AKS. However connections exist with the AKS thanks to national projects and working groups.
- The RAD is a national disposal. Farmers ensure the governance of the RAD but leave to the groups the choices of the subjects and the way of functioning.
- The main objective of the RAD is improving the effectiveness of the systems regarding ecological, social and economical issues. Sustainable development is essential.
- The RAD promotes a radical innovation process, but step by step, which aims to help alternative farmers to build their own pathway towards sustainable agriculture.
- Learning is a top priority of the RAD who gives value to bottom-up view of innovation and participatory learning processes. Learning processes contrast with learning in the traditional AKS.
- The forage rami is an example of advisory tool which aims at placing users in management situation and its originality is based on the articulation of scientific and empirical knowledge.
- The RAD faces financial issues due to uncertainty, irregularity but also lack of recognition. Very few supports come from the AKS.

- The RAD is now facing a dilemma concerning strategic decisions: whether it gets more connected to the AKS, how it continues its development, whether it takes part or not to more projects.
- Slowly ideas defended by the RAD become more and more important in the traditional AKS: the network is being more and more recognised for its work but it has not brought yet financial valorisation.

The RAD case study illustrates the potential use of innovative learning processes among the AKS (forage rami) and stresses the factors necessary to reach LINSA's objectives which do not match to the traditional AKS ones. The SOLINSA approach enabled to show the role of participatory methods in the learning processes and to compare the difference between researchers' expectations and LINSAs' ones.

Charter of Good Agricultural Practices in Livestock production, France (F Charter)

The Charter for Good Agricultural Practices promotes the quality of the cattle profession in France. It accompanies farmers in their practices (traceability, herd's health, food, milk quality, animal welfare and environment), helping them to meet the expectations of both their partners and citizens. The Charter is the leading farmer quality assurance scheme in Europe and brings together 105 000 farmers: over 90% of milk and over 77% of beef produced in France come from a farm that adheres to the Charter. The Charter benefits from the expertise of engineers from the French Livestock Institute and about 2500 technicians from extension organisation and food industry. It was launched after the mad cow crisis in a context of mistrust between food production and society; after twelve years of existence, the Charter needs to define new actions and strategies to answer food chain's, farmers' and society's needs.

The study of the Charter was conducted using different research methods: individual interviews with members of the LINSA, literature reviews and 5 workshops involving 20 to 90 members of the LINSA. Our main findings are the following:

- The Charter is completely embedded in the AKS: it was created, developed and supplied by the AKS. Consequently connections are rather high. AKS stakeholders are strongly involved in its coordination, facilitation and decision process.

- The Charter is a widespread national disposal, with regional implementation, involving a high number of farmers. The governance is professional and interprofessional.
- The Charter is a global scheme but focuses on individual farmers. It uses a rather top-down approach to convey its technical innovations.
- The Charter deals with incremental changes, as it helps most of the French farmers to make their practices evolve through a set of 41 items connected to six areas.
- Learning is the reason of existence of the network: helping farmers to develop better practices and to communicate with the citizens.
- The Charter provides different levels of learning: regional coordinators, technicians, farmers
- The Charter evolves towards sustainable development through a progressive evolution of the content of the Charter, which

infers continual learning. Stakeholders are consulted to define a content which fits the expectations of the general society.

- The Charter has to deal with a strong inertia due to the large amount of members.
- The Charter exists thanks to different kinds of supports but is facing financial uncertainty.
- The Charter works in symbiosis with the AKS: the AKS uses the LINSA to convey some evolutions and the LINSA uses the AKS to benefit from technical and financial supports.
- A monitoring system and a follow-up dashboard enable to set efficiency indicators.

The Charter case study shows how incremental changes can be slowly conveyed within farming systems and stresses the fact that LINSA developing among the AKS also have specific needs which cannot be found within the AKS. The SOLINSA approach enabled to show the role of participatory methods in the learning processes, and to compare the difference between researchers' expectations and LINSA's ones.

Bavarian Rural Women's Association, Germany (G Women)

The Rural Women's Group of the Bavarian Farmers Union in South Germany is a LINSA within a long learning and innovation culture. The group itself was founded in 1948, as a subpart of the Bavarian Farmers Union. Today it numbers ~6.500 local women groups, 72 local chapters, 7 district chapters, and one State Executive Committee. An essential part of the LINSA is a diversified educational work based on topics of direct relevance to farm women. The LINSA has a good standing in society, but is considered as a small player in the AKS. They are a cross-sectoral player, linking the farm sector with the health-, nutrition- and education-sectors.

The LINSA is characterized by a high degree of formality and complexity, and relatively low diversity of actors involved. The LINSA is considered to be a community of practice. The group notes considerable changes in the clientele due to the high diversification of the farm sector and farm women's livelihoods. The increasing diversity stimulates the necessity to find new answers for how to deal with new and partly unknown demands.

Essential part of the LINSA is a diversified educational work based on manifold topics directly for farm women. Beyond this the LINSA has a good, acknowledged standing in society. Profound agricultural expert knowledge is coming together with knowledge about local development processes, with knowledge from the health and nutrition sectors as well as consumer information. This knowledge is being used as pool, internally for stabilising and developing farms and externally for representing agriculture in the public.

The total BBV is gender-balanced with ~50% men and ~50% women in the membership. Even with a high focus on collaboration and team orientation, many of the activities are carried out in separated spheres. This is one explanation of the fact, that the Farmer's Union is an inherent part of the AKS and the Women´s Group is a niche player. They are recognised as a partner, when agricultural issues are related with social issues. In the technical parts of the AKS, and the parts where political decisions are taken, women are strongly underrepresented.

For the women, change means to become aware of the influence they want to gain, of the perceptions they want to bring in, and how insistent they want to be. The main issue is to reach participation in decision-making, both in the Farmer´s Union and in the AKS.

The LINSA-SOLINSA cooperation was used as an opportunity window to take up a latently started change process actively and to use the protected area of research work for facilitated reflection. The LINSA considered the workshops as free space for thinking and reflection, and as a basis for a much more conscious planning. Trust building and a high degree of openness was needed, this matured over time as a group process. SOLINSA practice partner in the narrower sense is the State Executive Committee with eight voluntarily engaged women and a managing director. The committee is elected for five-to-five year periods; the current group was newly composed in March 2012, four months after starting the SOLINSA workshop series. Within this break, the six SOLINSA workshops were considered as a chance for change, as a chance to redefine the work of the group.

German Agricultural Association, Germany (G DLG)

The German Agricultural Association (DLG) is a LINSA with a very long history of learning and innovation around agriculture. It was founded in 1839 and very soon became the most important knowledge broker in the German AKS. Today membership is ~25.000, these are mainly farmers but also researchers or representatives from agribusiness. Its main tasks are to collect, discuss, and rearrange information and innovations related to agriculture and disseminate them among its members. Effective networking is considered to be the key for successful dissemination of information and innovations.

This report describes the main findings and conclusions resulting from the SOLINSA work with the German LINSA DLG (German Agricultural Association - Deutsche Landwirtschafts Gesellschaft). Of general interest in this context was to get insights into the LINSA, its functioning, organisation and history. In a narrower sense, work was related to the organisation and activities of the LINSA's Working Group for Sustainability and its recently developed boundary object "DLG Sustainability Standard".

Methods used in the context of this study were qualitative expert interviews with (former) DLG representatives, qualitative interviews with DLG member farmers, participation in DLG events, as well as literature review. Main focus was put on information related to the DLG Working Group for Sustainability and the DLG Sustainability Standard.

The organisational structure is pyramidal with 1 president, 1 managing director, a strategy council, an executive board, a general board, and a meeting of members. Learning happens mainly in 86 voluntary expert committees representing the different areas of agriculture (e.g. pig production) consisting of honorary members from different working fields (e.g. science, industry, agriculture). Organisational and executive tasks are conducted by ca. 200 full-time employees. DLG's main tasks are to collect, discuss, and rearrange information and innovations related to agriculture and disseminate them among its members. In the DLG information is spread through different communication channels and boundary objects like, for example, seminars, conferences, fairs, or publications.

The strong networking activities of the LINSA create much room for learning and also facilitate the dissemination of innovations and knowledge. Effective networking is considered to be the key for successful dissemination of information and innovations. In this context, the LINSA constantly develops new boundary objects (such as publications, standards, events). This is not always such an easy process, as mostly it is very time-consuming, cost-intensive, and requires much organisational effort. As the LINSA is mostly financially independent (through e.g. membership fees, income from product tests or events), external financial support is seldom used. As one example for external support, it serves the development of the Sustainability Standard which happened in cooperation with public and private research institutions, and was financed by the German government. The broad variety of seminars and other offers shows that the needs of the actors are addressed and taken seriously. Emerging needs are taken up into discussion and by this, the offer changes continuously. The demand for existing offers is taken up as evaluation criteria for the quality of the LINSA work.

Although, the LINSA exists since more than 125 years and works in a perfectly organised way, there exists room for improvement. This includes for example the adequate compensation of travel costs and expense allowances for honorary members. Nevertheless, other LINSA could learn from the DLG in terms of e.g. the organisational structure, boundary objects, financing schemes, or communication issues. For the step of LINSA-LINSA connection, external support will be required.

G7 (Local Food Council of Gödöllő), Hungary (H G7)

G7 is an informal network of local organisations, entrepreneurs and citizens in Gödöllő, a major city of the Budapest agglomeration. The goal of G7 is to create a partnership of non-governmental organisations, entrepreneurs, and political actors in the vicinity of Gödöllő in order to raise awareness of conscious nutrition and establish a sustainable local food system for the town. They intend to realise this through: (1) acting as information brokers – organising events, disseminating information and building databases, connecting producers, customers, organisations, entrepreneurs who want to support food sovereignty and sustainability; (2) acting in the political domain, building social support and negotiating with local authorities for a local sustainable food strategy.

During SOLINSA standard tools of qualitative sociology and action research were applied, including: semi structured interviews, informal conversations, focus group meetings, participant observation, and workshops with G7 members and other local stakeholders. We had 7 workshops altogether in 2012-13.

G7 consists of basically three kinds of members:

1) Action based organisations (Communities of Practice) - these are local activists (in formal associations) effectively working for local sustainability, (organising events, markets, shops, applied research, etc.) normally also making their living with this.

2) AKS based organisations (Communities of Scientific Practice) - these are members of the local or the national formal AKS (established research institutes, university or a connected company) who normally do research and theoretical or support work

3) Committed individuals - these are local people (entrepreneur, retired vet, mothers) interested in the topic for personal motivations.

Different members of G7 have different values, aims and objectives, thus seek different roles for G7. Group (1) wants first of all an "umbrella organisation" that unites forces, helps networking, etc. Group (2) and (3) also wants to implement projects, thus besides an "umbrella" they also want an "action organisation". The two kinds of course should not be exclusive, however they require quite different kinds of management, decision making, organisational structure, etc. By the time of SOLINSA entering the process, the lack of G7's decision about the appropriate model resulted in problems, such as; unclear objectives and value

system, insufficient funding, weak project management, internal tensions between members, failing external communication, etc.

Innovation initiated by G7 is fundamentally incremental, and its history can be divided in two phases. First phase activities aimed to (1) raise awareness of the local population about food sustainability and (2) connect local producers to customers (through events, providing information, building databases, etc.). This boundary work produced interactions and objects that can one by one be seen as novelties, but come together nicely as a more or less comprehensive niche. They clearly contribute to first order change, becoming part of the regime, connecting AKS and society and enhancing local sustainability.

The second phase is the current process of developing the "Local sustainable food strategy" for the city. This is still incremental innovation. It is also supported and partly initiated by the mayor and his deputy principal depositories of the ruling overall regime. They intend to change the local food system to fit better the overall landscape of Gödöllo becoming an ecological city, thus the process at first sight it is likely to remain a first order change. However, to succeed, local leaders need to overcome well established local economic and political interests (forming part of the local AKS, mainly in public catering and retail) opposing regime change. G7 as an umbrella NGO with strong connections to both local civil society and the AKS represent an ideal alliance for this. Already the process of developing the food strategy has initiated significant changes of the regime, such as: (1) bringing together important stakeholders in a neutral communicative space; (2) introducing a new style and tools (workshops, facilitation, neutral communicative space,) to social and political discussion. If the "local sustainable food strategy" is ever completed and fully implemented, the local food system is likely to change significantly entailing at least some characteristics of second order change too.

SOLINSA started to co-operate with G7 in a critical moment, when it already demonstrated its effectiveness and became an important local actor, however, some major projects revealed the internal limits and difficulties of the organisation, and G7 was in a process of searching for functional ways of operation. To successfully complete the challenge of developing a sustainable food strategy in partnership with the City G7 needed some assistance. SOLINSA arrived in the right time with the right offer to create new dynamism and bring some impetus into G7's work at a critical point of its organisational development. Otherwise, SOLINSA was providing three kinds of soft support:

1) Definition of organisational problems followed by organisational development (we have reached good results, but G7 would probably need more of this kind of assistance).

2) Couching throughout the development of a sustainable local food strategy (with special regard to working out the process of how to involve local stakeholders efficiently).

3) Facilitation on meetings and events, and capacity building (introducing workshop methods, mediation, conflict resolution, etc.).

We suggest that such kind of soft support for building capacities, skills, communication and reinforcing the identity and functioning of the organisation is, in general, one of the most important channels of assistance that LINSA can receive from external sources. G7 has made considerable progress during our co-operation, and if the overall circumstances (political support, "landscape") do not change, they have a good chance to develop further. However, we also suggest that at least occasional couching and externally facilitated organisational development workshops at least once a year would be very beneficial for their work in the future**.**

The NATURAMA Alliance, Hungary (H NAT)

NATURAMA Alliance is a loose, informal network of networks of 9 Hungarian LEADER Local Action Groups (LAGs). Created through a transdisciplinary action research project in 2009, - NATURAMA soon became a self-maintaining domestic network, with a strong transnational interest. Its main aim – creating knowledge, learning from each other and from best practices in the EU – is in line with the LEADER approach, however, Hungarian AKS did not support such activities. NATURAMA keeps regular meetings, organised study tours, ran shared development projects, organised big events and provided expertise on various levels of rural policy making and implementation.

NATURAMA emerged to fill knowledge gaps in the AKS (concerning domestic and transnational networking and the LEADER method) for rural development, and to meet the knowledge demands from LEADER LAGs in these topics.

NATURAMA as a LINSA is a multilayer network comprising:

1) An alliance of LAGs, clearly functioning as a network of practice (NOP), creating, sharing, distributing knowledge; and

2) A close community of the managers of these LAGs functioning as a community of practice (COP), having mutual trust, shared understanding, etc.

Network activities are normally undertaken by the COP members; they meet regularly, communicate with each other, run projects and broker information within the network and towards the rest of the AKS. However, the final aim is to 'take the knowledge home' and perform better rural development at their own LAGs.

For the COP members NATURAMA means three different communities, also representing different opportunities/functions:

1) learning community - to improve rural development work (through animation, networking, innovation, etc.) and to establish structural development;

2) professional 'trust community' - where they can meet other LEADER LAG managers, share problems, get psychological, personal support;

3) *problem solving* and *information community* - to provide practical legal and procedural information required to implement the policy and channel public funds -essential for survival.

NATURAMA members first focused on *learning* and *advocacy*, aiming for significant regime changes. However, as rural development landscape became more hostile and NATURAMA more important for the members as a trusted community, they decided not to risk its existence with open conflict. Thus, organisational development of NATURAMA as a LINSA stopped, it remained informal, almost a "hiding organisation". The initial 'shared network governance' was never exceeded, not even to manage significant common projects. At the same time, COP members' intensions and energy to induce regime change took other ways (through other emerging networks, institutions). NATURAMA became gradually less important. Differences in values, working styles, and personal motivation intensified, leading to tension, management problems and the erosion of trust and co-operative capacities.

Compared to LEADER principles NATURAMA did nothing new, however for Hungarian AKS its activities were radically novel. For NATURAMA NOP it brought significant internal innovation (a niche at least), however, as a 'hiding organisation' it had little effect on the formal AKS. On the other hand, NATURAMA COP members (intentionally NOT as a network) have been champions of original LEADER values, acting as information brokers and boundary spanners, aiming for radical regime change (effective reformism).

Our action research co-operation with NATURAMA started well before SOLINSA. This had advantages (established trust, intimate knowledge, much interaction, etc.) and disadvantages ("too close relationship", strong involvement, etc.). During the course of the research, standard tools of qualitative sociology and action research were applied including: participant observation, workshop methods, facilitation, mediation and participatory video played especially strong roles. SOLINSA facilitated the creation of boundary objects and interactions and achieved considerable success in identifying problems, and setting long term objectives with NATURAMA. A methodological conclusion is that established relations greatly helped the project; however, involving an additional, new researcher (facilitator) and very strict and comprehensive documentation were essential circumstances.

Consorzio Vacche Rosse, Italy (I CVR)

Consorzio Vacche Rosse (CVR) is a cooperative dairy that produces Parmigiano Reggiano (P-R) cheese from milk of Reggiana breed cows delivered by its members. Like most of the local dairy farms and milk processing plants of the territory, CVR belongs to the larger Comunity of Practice (CoP) whose geographical coverage is defined by the Code of practice of the PDO cheese "Parmigiano Reggiano". The community is strongly aligned with membership to the "Consorzio di tutela del formaggio Parmigiano Reggiano" (CFP R) that is the depositary of the PDO collective brand. The birth of a sub-network of "red cows P-R" producers in the area is the outcome of an innovation process which started more than 20 years ago thanks to the initiatives promoted by the CVR's founders.

The socio-economic context in which it occurred makes their experience original, considering how knowledge and innovation are usually conveyed in closed and "traditional" communities of agricultural producers. All the major innovations introduced in P-R productive system had been the results of processes of knowledge sharing supported by formal AKS, aimed at increasing productivity, enhancing efficiency of production processes, and diminishing working loads in compliance with the limits imposed by the PDO's quality and productive standards. Several examples could be quoted concerning mechanization, automation systems, feeding techniques, storage and processing facilities, that in the past were introduced in both farms and dairies. Geographical proximity, face-to face interactions, and the common specialization are factors which have enabled processes of social learning and knowledge convergence. This has somewhat synchronised the spread of the innovations and the shift of the technical and cultural frontiers of the CoP.

Conversely, the development of the network of red cows breeders took origin from the refusal by a small group of farmers towards the on-going technical innovation process, causing autochthonous cows within the herd to be replaced by more productive species. Diverting from the innovation path embraced in that period by the rest of the local community, they came somehow in conflict with the socio-technical system they were embedded in. The implementation of their project required the mobilisation of resources and knowledge not immediately available inside the CoP nor provided by formal AKS. A shared evaluation of the need of preserving biodiversity worked as boundary object, able to link motivations, expertise and skills from different social and institutional spheres at the boundary of the CoP.

Collaboration with food technologist researchers offered the opportunity to deepen a new born field of research focused on the interaction between genetic variants of milk and cheese characteristics, and at the same time it legitimized on scientific grounds the attempt of recovering the local breed. Actors belonging to institutes for the dissemination of innovation in agriculture played the voluntarily role of brokers between the group of farmers, university researchers and local and national administrations. They provided information about the opportunity to find public financial support for carrying out experimental trials on separated milk processing. This in turn led to the start-up of a farmers Consortium (CVR) for the production and sales of the products obtained from milk of Reggiana cows. The results of the researches, and the growing appreciation of consumers and media for that initiative, enhanced the interest of local authorities towards the issue of biodiversity preservation.

The initiative has led to the creation of a sub-network within the local PDO COP, which now involves other farmers and dairies producing Parmigiano Reggiano cheese from milk of Reggiana Red Cows. From the initial multistakeholder form, functional to the implementation of the project, - the network has assumed all the characteristic of a CoP; this is in terms of homogeneity of participants, similarity of goals and activity performed. The effects of expansion has required the establishment of a form of network governance suited to ensure both internal and external legitimacy. The process of “institutionalisation of the network” has resulted in the official recognition of the Association of Reggiana Breed (A.Na.Bo.Ra.Re.) that is also the depositary of the collective brand ”Razza Reggiana”(Reggiana’s breed).

Association for Solidary Economy Crisoperla, Italy (I Crisop)

Crisoperla is a cultural non-profit organization which emerged in 2006 to promote organic farming and organic production, encouraging synergies between producers, consumers and technicians. It operates mainly in the Tuscan Province of Massa Carrara and, partly, in the Province of La Spezia, in adjacent Liguria Region. The actors of the network belong to different social groups: organic farmers (producers of vegetables, honey, wine, oil, beef), two fishing cooperatives, a cooperative for social farming, two agronomists (initiators of the network), consumers organized in GAS, a consumers' association (ACU). In addition it increasingly interacts with local institutions and other networks. The association was formalised in 2009.

Crisoperla arose in 2006 from an early collaboration among farmers aimed at purchasing collectively input for organic farming (mainly seeds and seedlings). With formalization, in 2009 members specified the mission of the association, that is promoting organic farming, exchange of experiences among producers and consumers and, more generally, the local economy. The area in which the LINSA operates includes some small towns and extended rural territories, and has been affected during the past decades by intense economic crisis and phenomena of social marginalization. The LINSA has developed in this context, integrating country and urban dwellers, economic and social needs.

According to the working definition of LINSA, the case-study aimed at understanding this network structure and functioning, included learning processes and knowledge creation and sharing, governance mechanisms, the identification of strengths/weaknesses and of most suitable forms of support. To that end it combined the SOLINSA research methodology (five workshops) and other qualitative research methods (interviews, documents and communication flow analysis, participation as observers in LINSA activities). The following are the main findings.

As a network aimed at creating an alternative system of knowledge and practices around food, Crisoperla LINSA was born and developed with the intention of placing itself in a position of autonomy compared to local main actors of the official AKS, whose attitude and actions were considered inadequate. The shared willingness to support and enhance organic farming was the early factor fostering cooperation and

hybridisation among actors. The further structuring of the network saw the institutionalisation of the relationships (through the establishment of a formal association and a cooperative), and the related definition of the fields of activity: production and marketing and relational, cultural and political activities. These two operational areas and the related networks represent important relational spaces where learning processes have continued to occur and the conditions for members to align around the shared 'enterprise' and to impact on local context have further developed.

The features and the experience of Crisoperla show the potential of hybrid learning networks to define and achieve sustainability goals. It supports the importance of the interaction among farmers, between these and organized groups of consumers and, more generally, civil society organizations; the encounter between the world of production and consumption and other areas of social mobilization and citizenship; the new communication forms between this new food network and public institutions. But the analysis of the structure and of the mechanisms of functioning and governance of this network also highlights some weaknesses in the management and organizational aspects, from the way to face the need of work to the internal governance (especially regarding the management model).

It so emerges how the main needs for support are related to the improvement of the network building capacity and the related learning processes, strongly based on peer-to-peers exchange and on boundary works; the enhancement of the effectiveness and efficiency of network internal management, through definition of suitable governance mechanisms; the availability of tools to support the development of collective strategic capacities, the definition and implementation of joint projects and cooperative initiatives; the possibility of exchanges with other similar experiences.

Biogas Production Network, Latvia (L Biogas)

The Latvian Biogas network was formed about six years ago to develop production of biogas, in response to renewable energy policy goals and availability of generous public funding. The network is small (about 50 participants) and dispersed, interactions are motivated by the need of technological, economic, agricultural learning to localise the use of borrowed biogas technologies. There are several centres of knowledge sharing, and a lot of controversy on what is acceptable practice. The development of biogas production depends on availability of public funding, which is now suspended. However, the network has difficulties to mobilise itself for a joint response.

The LINSA develops around a radical technological innovation with related social and organisational innovations. Structurally it is a network of networks. The LINSA is constituted by a **diverse range** of actors: biogas producers, scientists, equipment suppliers, service providers, investors, consultants, banks, municipalities, environmental agencies, NGOs. The entities involved in the LINSA may be estimated at 100, where the number of biogas producers (farmers and enterprises) may be estimated at about 35-40. The **active core** of producers linked in network and the Latvian Biogas Association is around 12-20 entities. The **central nodes** are the Latvian Biogas Association, Vecauce study farm, Ecodoma energy consultants, some of the more active producers, applied research projects developed within the Latvian Agriculture University.

The story of the LINSA is one of a fast up-scaling and then a hiatus, following controversial developments in the socio-technical regime. A crucial stimulus for development was the political decision in 2009 to provide state support for green energy and distribute quotas to biogas producers at a higher-than-market price for 10 years, with decreasing support for the subsequent 10 years. The LINSA responded by forming a grass-root niche. Later on the drivers for biogas sector were mostly political and top-down (quotas, financial support mechanisms). However, it is now considered that the public support mechanisms failed to achieve a balance of energy production, environmental protection and efficiency considerations. Support is being reconsidered by the Ministry of Economy; this contributes to an already controversial image of biogas production. Thus the sector is now in a hiatus; it cannot yet function according to market principles. However production continues within the previously gained quotas, and learning needs are as topical.

Collective and organised learning is mostly project-based (e.g. organised by the Association); there is little coordination of learning in LINSA. The approach works only because of the relatively small scope of the network. A new knowledge need is related to managing social relationships and public relations in biogas sector. However, the relatively sheltered niche of biogas production (up to now) has not been conducive to extensive and open collective activities.

Now the need for more coordination has been repeatedly voiced by some key actors.

Contribution to sustainability of the LINSA is ambivalent; with differences between groups of agents (landless investors, agricultural producers, researchers). The shared concern is for the localisation of borrowed technologies.

Fruit Growing Network, Latvia (L Fruit)

***The Latvian Fruit-growers' LINSA is a network formed more than a decade ago around the goal of developing integrated fruit-growing in Latvia. This includes objectives on production, marketing, research, advisory, policy making, consumer education, environmental management. There are about 400 members, both individuals and organizations: producers and their cooperatives, research, business companies, NGOs, etc. The network is nation-wide, with several centres of closer connections around research institutes, the Fruit-growers' Association, regional cooperatives. The network is strong on peer-learning among farmers as well as inter-institutional learning and collaboration between researchers and practitioners. There is a shared set of norms on proper fruit-growing. Innovation is oriented towards private and public good*.**

Fruit LINSA is a **network of networks** or a constellation of practices. The LINSA is characterised by **multifunctional** objectives (production, marketing, research, advisory, policy making, education, environmental management), several **directions** of innovation (technical, social, economic) and **hybridity** in terms of participants (organisations, individuals, groups; public and private partners).

The LINSA is engaged in intensive technological, economic and policy learning. There are three main nodes of interaction in the network around which knowledge is shared and learning happens in quite dense interaction: research institutes with their sub-networks of knowledge transmission to farmers and co-learning with them; the Fruit-growers association; smaller regionalised producers groups and cooperatives.

The LINSA represents a dynamic balance of diversity and commonality. The network is integrated by structural factors (economic equality of farms, similar size), the common knowledge needs, a strong sectoral identity and political recognition. The object of mutual engagement is learning and innovative projects aimed at long-term development of farms and the fruit-growing sector in general. Despite the diversity of actors, there is a shared set of norms with regard to proper conduct of activities in fruit-growing. The mode of operation in LINSA is cooperation, not competition.

Fruit LINSA represents a combination of incremental, radical innovation and retro-innovation (valorisation of traditional values, varieties, etc.). LINSA supports the socio-technical transition to sustainability through environmental, social, health, employment and rural livelihood contributions. The LINSA contributes to local embeddedness of fruit-growing practices and technologies and facilitates the sector's development in a participatory manner. Fruit LINSA stimulates also social innovation – establishment of cooperatives, producer

groups, collaboration with schools and state institutions, involvement of general public.

The links with AKS are well established and strategic for sustainable development of fruit sector. Boundary interaction between LINSA and AKS (especially research and advisory service) is explicit and it enhances innovation. Public support to LINSA has been moderate but has stimulated modernisation of individual farms, establishment of producers' groups and activation of AKS links with farmers.

Cooperative Boer en Zorg: Care Farmers in the Netherlands (N Care)

The LINSA 'Boer en Zorg' (Farmers and Care) is a cooperative that currently connects over 130 care farmers in the Mid-Eastern part of the Netherlands. Care farms use their animals, plants, gardens, forests and the landscape to create recreational or work related activities for people in need of care. Work on farms delivers evident results, focusing on the capabilities of each individual patient, resulting in an alternative vision of health care and therapy. The LINSA operates on the intersection of two existing policy fields; the agricultural sector and the health care sector. These two sectors provide both opportunities and constraints for innovation.

In the last decade, care farms have been gaining popularity in the Netherlands. Care farms use their animals, plants, gardens, forests and the landscape to create recreational or work related activities for people in need of care. Work on farms delivers evident results, focusing on the capabilities of each individual patient, resulting in an alternative vision of health care and therapy.

The LINSA 'Boer en Zorg' (Farmers and Care) is a cooperative that currently connects over 130 care farmers in the Mid-Eastern part of the Netherlands. Data gathering involved a mix of participatory workshops and more traditional research methods as interviews with key-informants and experts. An important role has been played by several students who were given an assignment to work on the communication plan as part of a course in Academic Consultancy Training.

The LINSA is shown to operate on the intersection of two existing policy fields; the agricultural sector and the health care sector. These two sectors provide both opportunities and constraints for innovation. From the agricultural sector, care farming is seen as a typical example of multifunctional agriculture and from the health care sector it is seen as one of the new service providers that have joined the liberalised health care 'market'. The specific support for the care farming sector from these two existing sectors therefore focuses on the separate elements of care farming in isolation.

The results show how internal dynamics of the LINSA development together with external pressures provided by the health care policy environment, have shaped the development of the cooperative. The

increased popularity of the cooperative can be explained by the general popularity of care farming on the one hand, but more important has been the financial regulations of the health care sector that forces care farmers to organise themselves collectively. Since Boer and Zorg was officially recognised under the AWBZ as a health care organisation, the interest of many care farmers to join has increased. The growth in membership put a strain on the organisation and forced it to professionalise its operation and governance form. Over the years, the LINSA has experimented with a number of different governance forms before it has organised itself in a formal cooperative.

The constraints of the care farming, and by extension also the Cooperative, has to do with the enduring uncertainty over the financial arrangements care farmers depend on to get paid for their services. The cuts in the Personal Care Budgets and the decentralisation of health care to the municipal level have only contributed to this insecurity. This means that the care farmers will now have to organise themselves at the local level as well and the cooperative must somehow facilitate these new organisational units within its own governance structure again. As a result the tension between collective action and individual entrepreneurship within the cooperative is likely to intensify within the next few years.

Sustainable Dairy Farming, Netherlands (N Dairy)

This LINSA is formed by the regional low external input dairy farming network formed in the Dutch province of Drenthe. Managing and closing nutrient cycles can be an important mechanism for dairy farmers to improve the environmental impacts of their operations. Over a period of 10 years different projects were organised that applied the concept of low external input farming using farmer study clubs. The study club method facilitated by a number of expert consultants and in Drenthe has proved to be a very good way to get farmers involved, transfer knowledge and facilitate learning processes among dairy farmers.

Managing and closing nutrient cycles can be an important mechanism for dairy farmers to improve the environmental impacts of their operations. The concept of low external input agriculture (in Dutch '*kringlooplandbouw*') has become a catchphrase that has attracted the interest of farmers, researchers, consultants and politicians as a means to work on the sustainability of the dairy sector. The innovative idea is to optimise (and not maximise) the flows on the farm, improving environmental performance and economic performance at the same time.

We have chosen the regional low external input farming network formed in the Dutch province of Drenthe as our LINSA. Over a period of 10 years different projects were organised that applied the concept of low external input farming using farmer study clubs. Data gathering involved a mix of participatory observation and in-depth interviews with some of the most important people involved in the low external input farming practice, not only in Drenthe but outside of Drenthe as well.

The results show how the practice of low external input farming is heavily influenced by discussions and developments at the national level. We have distinguished two somewhat archetypical Communities of Practice that implement the idea of low external input farming differently. These two communities have their roots in the environmental cooperatives of the Northern Frisian Woodlands, but over time have developed in two separate directions. These two approaches are adopted by different farmers in different regions and thus connect farmers across provincial boundaries.

Consultants play an important role in connecting the different groups and different regions together. They have been able to cater to all groups and have established themselves as reliable and expert partners on the different aspects of low external input farming. The study club method facilitated by these expert consultants in Drenthe has proved to be a very

good way to get farmers involved, transfer knowledge and facilitate learning processes among dairy farmers. The provincial LINSA was fairly centralised in its governance and communication structure. This made it easy to manage information flows within the province and promote learning on the level of the whole provincial network, beyond the individual participants. As a result the water quality around participating farms has increased measurably according to the provincial water quality monitor. Furthermore the level of trust between farmers, government and environmental movement has increased and in recent years the provincial network has broadened with the involvement of veterinarians and the feeding industry. However, the study club method proved to be relatively expensive for the small share of dairy farmers reached.

At this moment the province of Drenthe is therefore looking at most cost effective methods to promote the approach. Certification of the low external input agriculture practice is looked at a promising option for the future in this regard and in the project Kringloopwijzer (developing a nutrient compass), some boundary work is done that brings the two national approaches of kringlooplandbouw together. The formalisation of the calculation methods of nutrient flow should facilitate the establishment of such a certificate.

Association for the development of fodder production, Switzerland (S ACDF)

The LINSA is an association gathering some institutions of the Agricultural Knowledge System (AKS), seeds firms and farmers with the objective to foster fodder production and conservation based on the natural resources of Swiss farms. The board of its technical commission "CT-ADCF" enables experts with different interests (research, education, extension, seeds sale) to exchange knowledge and to develop practical solutions (based on scientific evidences and field experiences) to address the needs of farmers. Solutions are then shared inside LINSA through so-called boundary objects, such as labelled seeds-mix for pastures and grasslands, technical datasheets on fodder production, training for extensionists and visits dedicated to farmers.

The LINSA is a boundary organisation acting as a bridge between the AKS and the practitioners. The main objective of the association fits to the current trend towards sustainable development challenges (climatic change and resources scarcity), the Swiss agricultural policy objectives (maximize grass in cattle food) and the consumer preferences (meat and dairy products based on a grass-fed animals). The great challenge remains to ensure the continuation of this fruitful collaboration while needs for further support appear at two levels: (1) the availability of resources within the network for the technical commission's activities, research at national level and extension at a more regional level and (2) a policy and market contexts that value the quality of farm fodder based animal husbandry.

The French section of the Association for the development of fodder production "ADCF" was our main partner in the project. Throughout our collaboration, different interactions took place. After a preliminary desk study, we facilitated five interactive workshops (i.e. SWOT analysis, outcome mapping) over 2 years at CT-ADCF board meetings. To deepen the analysis of data and address LINSA's and SOLINSA's issues, 4 semi-structured interviews with members of the board of CT-ADCF and a satisfaction questionnaire to farmers were conducted.

The CT-ADCF is a community of practices with mutual engagement through regular participation to meetings, joint enterprise as roles a clearly shared to meet a common goal and shared repertoire with a strong common culture. It validates and reifies innovations and knowledge from a larger network of both researchers and farmers. Main boundary objects are products and activities described above but do not overlook the importance of founding documents of the association (i.e.

principles, goal, and strategy) and the logo. Even if radical innovations do not take place within the association, it has tools to identify, support and disseminate novelties and of course support incremental innovations.

The contribution of the ADCF to learning and innovation requires better communication. Policy actors and the AKS must recognise that boundary objects (products and activities) are indicators of on-going learning and innovation processes. Boundary objects have a broader added-value where invisible results are continuous training of advisers, identification of research topics and information sharing between peers. In a context where public resources for AKS organisations are getting scarce, competitiveness and the need for visibility from the different organisations are gaining importance, the association is strongly affected by extension and research organisations' or private seed firms' strategies. Actual context and market trends remain decisive for innovation in the field of fodder production and conservation. The association's influence on this context could be reinforced.

Naturli Co-operative Cheese marketing platform, Switzerland (S Naturli)

The LINSA natürli has evolved around the regional trademark "natürli us de Region Zürcher Berggebiet". The initiative has been started 20 years ago (1993) by a regional entrepreneur-cheese maker and the regional development manager of the Zürcher Berggebiet, a mountainous region in the vicinity of Zurich, Winterthur and St. Gallen. The main aim – to collect, bundle, distribute and promote high quality regional dairy prodsucts in order to keep alive the regional dairy structures – only could be achieved through multifaceted collaboration. The 15 municipalities of the region own the trademark "natürli" but the members of the LINSA today also comprise private entrepreneurs, cheese dairies and milk producers, the regional development center as well as sales shops. "natürli" accesses sporadically public funding and grants of private foundations for specific sub-projects but it also tries to work economically successful on its own.

Züri-Natürli - a brand, owned by the municipalities of a mountainous region in the Canton Zurich).The milk of 100 farmers is processed in 10 different cheese dairies, which delivers the cheeses to a middle-man. This initiative markets more than 10 millions litre milk / year, as niche products sold at a very high price. The initiative benefits mostly the smaller dairies and the producers.

"natürli" accesses sporadically public funding and grants of private foundations for specific sub-projects but it also tries to be economically successful on its own.

.The research process was discussed with the main actors of "natürli" from the beginning on and included a variety of different methods that were chosen based on the needs and possibilities of the LINSA members.

The main findings of the case study are:

- "natürli" has clear economic objectives to achieve all the while it holds to its vision of supporting close-to-nature production and processing in the region.
- It was developed and accompanied by the regional development office, so links to the AKS were always present.
- "natürli" created a radical innovation at the beginning with minor incremental innovation steps later on.

- “natürli” operates on trust without written rules and conventions unless public funding or official certification is concerned.
- Learning processes are not a primary concern of “natürli”. Nevertheless they take place at individual and group level, but almost never at organisation level.
- As it was one of the first projects in regional marketing in Switzerland, there was little knowledge that could be provided by the AKS.
- Formal support has always been and still is acquired through the regional development office.
- Informal support also can reach the logistics platform directly but this does not involve financial support (rather knowledge exchange or personal incentives).
- Depending on the actors, efficiency and effectiveness are valued differently. The logistics platform wants to be economically efficient while the regional development office rather wants to be effective in developing the regional economy as a whole.
- The main cost-effectiveness comes through the logistics platform, which started very early to give a common marketing basis for all milk and cheese producers in the region. Human and financial capital thus could be bundled.

In conclusion this LINSA is difficult to analyse along the set characteristics within this project because “natürli” does not focus so much on learning and value systems as LINSA are supposed to. It is concerned with promoting high quality products and keeping agriculture alive in the region, through conserving and innovating rather than passing on knowledge.

APPENDIX 2 SELECTION OF LINSA FOR IN DEPTH STUDY

1. Case Studies Offered

The final selection criteria for the LINSA to be chosen for in-depth study were produced on 20 May 2011 in paper P 4.1. By August 3 2011 the following numbers of case studies had been proposed.

Hungary	**4**
Netherlands	**4**
France	**4**
Italy	**4**
Latvia	**4**
Germany	**2**
Switzerland	2 (French) + 3 (Swiss) = **5**
United Kingdom	**4**
EU level	**2**
TOTAL	**33**

Two of these are to be selected from each of the participating countries and one international (EU level) one also, identified by FiBL. There are therefore to be 17 case studies in total. This note briefly reviews the case studies on offer and makes proposals for those that might be selected as detailed case studies.

2. The case studies offered.

These fall into one of three groups as identified by country in the following table.

	Consumer oriented network	Non-food oriented network	Purely agricultural networks or networks for sustainable land use
Hungary	1	1	2
Netherlands	1	1	2
France	1	1	2
Italy	2	0	2
Latvia	1	2	1
Germany	0	0	2
Switzerland	2	1	2
United Kingdom	1	1	2
EU level	0	0	2
TOTAL	9	7	17

This seems a good distribution of LINSA across types accepting that there is likely to be an emphasis on agricultural LINSA. Clearly the EU one and the two German ones will be agricultural networks. For all other countries (the remaining seven) it is suggested that the distribution of the case studies should be such that no country has two LINSA in the same category. Using this consideration, the distribution of the 17 might be:

= 9 or 10 = 3 or 4 = 3 or 4

A summary of each of the case studies is offered in section 4 below. Fuller profiles are available on file.

3. Narrowing down the case studies

Our approach to the selection of the 17 case studies has not been a strictly scientific one. This is not really possible because of the wide range of interrelationships that have to be taken into account. Also, many of the examples that have been offered are not narrowly classifiable into only one grouping although we have attempted to do so for heuristic purposes. Thus, some LINSA chosen have elements of more than one group in them.

We have adopted four broad criteria in our process of selection. These are as follows.

- Those that look inherently exciting as LINSA
- A balance between the three types
- A balance between the 'profile' sheets'
- People's expressed preferences.

The main issues in refining this initial selection that might most appropriately be considered at the Frick meeting are as follows.

- Is the process we have adopted a satisfactory one?
- Are colleagues satisfied with the brief characterisations of all of the possible case studies, set out in section 4, including the profiles?
- Is the balance between the three types of LINSA about right?
- Should there be any countries that have only agricultural case studies within them (you will see below that there are two – France and Germany).
- What other choices would people make?

We recognise that this selection process is never likely to be perfect and therefore will have to be subject to some negotiation. Our preliminary proposals are as follows, with the codes used in section 4 to identify individual projects.

These proposals were accepted however in Hungary G7 replaced Ormánság Foundation, and in France the F Charter replaced Reseau Ecophyto as these LINSA were unable to commit to the project with respect to time and activities.

	Consumer oriented network	Non-food oriented network	Purely agricultural networks or networks for sustainable land use
HUNGARY – two preferences of the team		**H1** – relevant as a rural development project but might need more justification	**H2** – clear relevance to sustainable agriculture
NETHERLANDS	**N3** – distinctive in its urban focus		**N1** – distinctive in its focus on agricultural resources
FRANCE			**F1** – innovative in its actions **F2** – distinctive in terms of pesticide use.
ITALY	**I3** – large group and good consumer example		**I1** – distinctive in terms of local breeds
LATVIA		**L2** – good on sustainable energy **L3**- important for reinstating culture	
GERMANY – these were the only two offered			**G1** **G2**
SWITZERLAND		**S5** – good on community energy and energy reduction	**S4**- important for integrated production
UNITED KINGDOM	**UK1** – good on consumer interface		**UK 4**- important for permaculture
EUROPEAN UNION			**EU 2** – an explicit training network.
	3	**4**	**10**

4. Quality Assurance

This process has been quality assured by Anne-Charlotte Dockes and Gusztav Nemes. During this process it was suggested that there might be

over representation of agricultural LINSA and we should at least discuss this issue at our September 2011 meeting.

In respect to the other parameters that we need to take into account, however, Anne-Charlotte Dockes has helpfully produced the following diagram which shows the distribution of the provisional short-listed LINSA across the LINSA characteristic framework. Issues that we might discuss in respect of this table are in the right hand column.

Shortlisted LINSA against characteristics

						Comment
Scale	*Small*		*medium*		*large*	Medium and large rather than small but acceptable. Anyway not much small project proposer (H4, F3, S2)
	N3	L3 H2 I3	L2 F1 F2	I1 H1 N1 G2 UK4	G1 S4 S5 UK1 EU2	
Origin and function	*market*		*Pluralistic*		*Non market*	OK (a bit more "non market or pluralistic projects)
	I1 L2 L3 UK1		I3 H2 H1 UK4	F1 N3 G1 S4 S5 EU2	N1 N2 G2	
degree of integration	*alone*		*networks*		*Communities*	OK
	H2	I3 L2 L3 S4	F1 N1 N3 S5 UK1 UK4	H1 F2 G1	G2 EU2	
Links AKS LINSA	*Low*		*medium*		*strong*	OK (a bit more projects with strong links)
	I3 UK1 UK4 EU2		L3 N1 F1	L2 F2 H1 G1 G2	I1 H2 N3 S4 S5	
Level of learning	*Imposed*				*Co-learning*	Not much imposed learning, but that's not a problem I think
	H2	L2 G2 S4 S5	G1L3 F2	I3 N3 I1 N1 UK4	F1 H2 UK1 EU2	
Level of innovation	*Incremental*				*Radical*	OK (a bit more projects with strong links)
	N1 UK1	G2 S4	I1 H1 F2 G1	L2 L3 I3 F1 S5 EU2	UK4H2 N3	
Governance	*Top down*				*Bottom-up*	OK
	I1 F2 G2 EU2	N1 G1	L2 L3 I3 F1 N3	S5 UK1	UK4 H1 H2 S4	
Temporality	*old*		*medium*		*Young*	OK
	H2 F1 L3 G1 G2 S4		I3 S5 EU2	L2 I1 N1 H1 UK4	N3 F2 UK1	

5. Country case studies

HUNGARY

The four organisations are as follows in Gustav's rank order

H1. NGOs working in local/rural development – NATURAMA Alliance

Non-food oriented network

Naturama is 11 LEADER LAGs developed from an action research project concerned with knowledge innovation and co-creation for the purposes of rural and community development for knowledge co-creation.

Characteristics	Low (small)	Range	High (large)
SCALE	Small	medium	large
ORIGIN AND FUNCTION	market-based	pluralistic	non-market-based
DEGREE OF INTEGRATION	stand alone bodies	networks	communities
LINKS BETWEEN AKIS AND LINSA	Low	Medium	Strong
LEVEL OF LEARNING	imposed learning outsider K&I		co-learning insider K&I
LEVEL OF INNOVATION	incremental innovation		radical innovation
TEMPORALITY	Old (> 10 years)	Medium (3-10 years)	Young
GOVERNANCE	top down bodies		bottom up bodies

H2. Ormánság Foundation – agricultural networks or networks for sustainable land use

Purely agricultural networks or networks for sustainable land use

This organisation is based on fruit production through local networks and social learning achieving adaptive production through sustainable land use. It is actively involved in training, the production of local rural development plans and of the development of fruit genetics.

Characteristics	Low (small)	Range	High (large)
SCALE	Small	medium	large
ORIGIN AND FUNCTION	market-based	pluralistic	non-market-based
DEGREE OF INTEGRATION	stand alone bodies	networks	communities
LINKS BETWEEN AKIS AND LINSA	Low	Medium	Strong
LEVEL OF LEARNING	imposed learning outsider K&I		co-learning insider K&I
LEVEL OF INNOVATION	incremental innovation		radical innovation
TEMPORALITY	Old (> 10 years)	Medium (3-10 years)	Young
GOVERNANCE	top down bodies		bottom up bodies

H3. - Lili-garden – Market Co-operative - consumer oriented network

Consumer oriented network

This is an organisation concerned with the development of local products but at variance with the views of local authorities. It is based on the development of subsistence agriculture with direct marketing to consumers. Local knowledge and social learning are key components to the process.

Characteristics	Low (small)	Range	High (large)
SCALE	Small	medium	large
ORIGIN AND FUNCTION	market-based	pluralistic	non-market-based
DEGREE OF INTEGRATION	stand alone bodies	networks	communities
LINKS BETWEEN AKIS AND LINSA	Low	Medium	Strong
LEVEL OF LEARNING	imposed learning outsider K&I		co-learning insider K&I
LEVEL OF INNOVATION	incremental innovation		radical innovation
TEMPORALITY	Old (> 10 years)	Medium (3-10 years)	Young
GOVERNANCE	top down bodies		bottom up bodies

H4. Landscape management model project in the Hanyi-Tiszasüly area

Purely agricultural networks or networks for sustainable land use

This organisation is concerned with participatory planning for sustainable agri-environment measures under payment schemes, making use of local knowledge and bottom up approaches to secure rural development. The programmes are complex and the development of floodwater protection reservoirs.

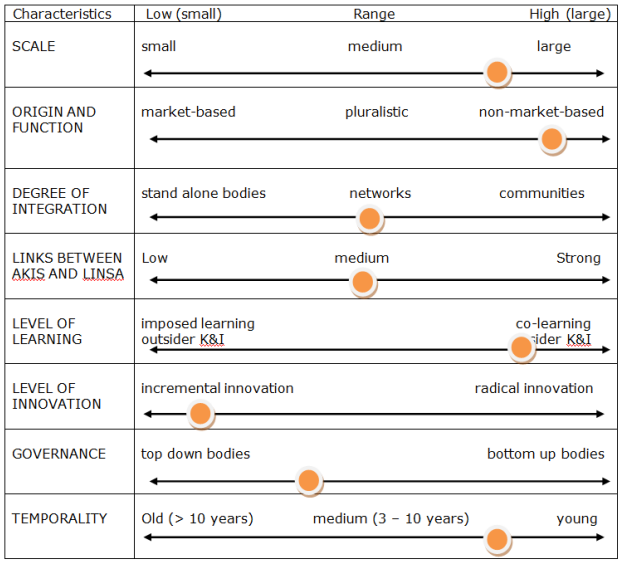
Characteristics	Low (small)	Range	High (large)
SCALE	Small	medium	large
ORIGIN AND FUNCTION	market-based	pluralistic	non-market-based
DEGREE OF INTEGRATION	stand alone bodies	networks	communities
LINKS BETWEEN AKIS AND LINSA	Low	Medium	Strong
LEVEL OF LEARNING	imposed learning outsider K&I		co-learning insider K&I
LEVEL OF INNOVATION	incremental innovation		radical innovation
TEMPORALITY	Old (> 10 years)	Medium (3-10 years)	Young
GOVERNANCE	top down bodies		bottom up bodies

NETHERLANDS

N1. Duurzaam Boer Blijven *Sustainable farming network*

Purely agricultural networks or networks for sustainable land use

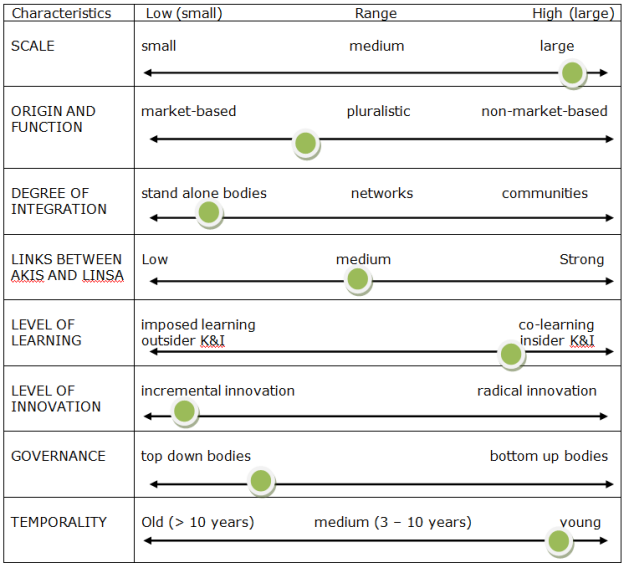
Operating outside of AKS with with knolwedge exchange for intergrated soil management for dairy farmers and also for entreprenneurial innovation. There are novel bottom up networks of learning.



N2. Networks of care farms (the Federation Zorg en landbouw - Federation agriculture and care)

non-food oriented networks

Functions as an expert centre advising (in terms of skills, specialisation, marketing, contracts with health organisations, etc.) on care farms to farmers and the public. Embedded in AKS but maintains its own identity with a strong political and policy orientation



N3. Eetbaar Rotterdam

consumer oriented networks

Edible Rotterdam is an urban food network concerned with agricultural food production within the city. Radial innovation. Populated by researchers, policy makers and local politicians

Characteristics	Low (small)	Range	High (large)
SCALE	small	medium	large
ORIGIN AND FUNCTION	market-based	pluralistic	non-market-based
DEGREE OF INTEGRATION	stand alone bodies	networks	communities
LINKS BETWEEN AKIS AND LINSA	Low	medium	Strong
LEVEL OF LEARNING	imposed learning outsider K&I		co-learning sider K&I
LEVEL OF INNOVATION	incremental innovation		radical innovation
GOVERNANCE	top down bodies		bottom up bodies
TEMPORALITY	Old (> 10 years)	medium (3 – 10 years)	young

N4. Waardewerken

Purely agricultural networks or networks for sustainable land use

Connects 19 entrepreneurs working on multifunctional agriculture. Pioneering, experiencing first hand problems with existing legislation and so on. The initiative is paid for by the Ministry of Economic Affairs, Agriculture and Innovation.

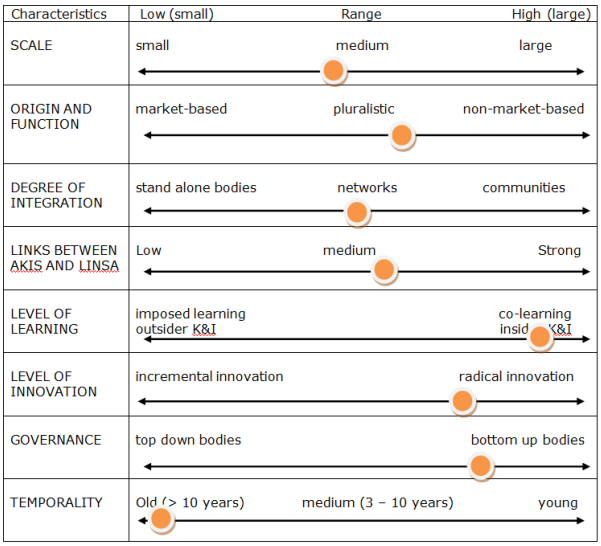
Characteristics	Low (small)	Range	High (large)
SCALE	small	medium	large
ORIGIN AND FUNCTION	market-based	pluralistic	non-market-based
DEGREE OF INTEGRATION	stand alone bodies	networks	communities
LINKS BETWEEN AKIS AND LINSA	Low	medium	Strong
LEVEL OF LEARNING	imposed learning outsider K&I		co-learning insider K&I
LEVEL OF INNOVATION	incremental innovation		radical innovation
GOVERNANCE	top down bodies		bottom up bodies
TEMPORALITY	Old (> 10 years)	medium (3 – 10 years)	young

FRANCE

F1. "Réseau Agriculture Durable": Network for a Sustainable Agriculture.

purely agricultural networks or networks for sustainable land use

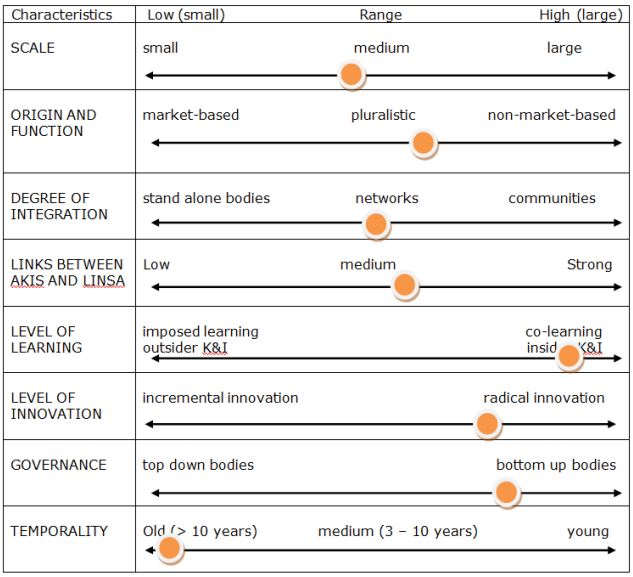
This network has worked for about 20 years. Today, 3000 farmers (2000 farms) develop new practices (soil protection, low input farming systems, direct marketing) within 29 local groups. The network is a link among the groups and promotes the innovative know-how built by the innovative farmers of the groups.



F2. Réseau "Ecophyto" (network for less pesticide use):

purely agricultural networks or networks for sustainable land use

Aims to halve pesticide use. Some 200 groups each of 15 motivated farmers and an advisers. The group produces and test innovative practices and discuss them with other groups. This network was initiated by the government, with a demanding collective objective ; but it also aims at capitalising individual or local innovation.



F3. Terres d'envies: collective farmer shops

consumer oriented networks

Based in the French Rhône-Alpes Region (near Lyon), there are now about 80 of them. The purpose of the network is to facilitate exchanges among farmers and to support new initiatives.

Characteristics	Low (small)	Range	High (large)
SCALE	small	medium	large
ORIGIN AND FUNCTION	market-based	pluralistic	non-market-based
DEGREE OF INTEGRATION	stand alone bodies	networks	communities
LINKS BETWEEN AKIS AND LINSA	Low	medium	Strong
LEVEL OF LEARNING	imposed learning outsider K&I		co-learning insid &I
LEVEL OF INNOVATION	incremental innovation		radical innovation
GOVERNANCE	top down bodies		bottom up bodies
TEMPORALITY	Old (> 10 years)	medium (3 – 10 years)	young

F4. Regional Natural Parks' Label (or trade mark)

non-food oriented networks

Managed by the network of the Regional Parks in France. It promotes local products and services (food and non food) which contribute to the local development and identity; benefit to the environment and landscape protection; and answer to social interests. Today, about 150 products, services or know-how involving more than 500 actors, beneficiate of this label. This LINSA is both food and non food oriented and is consumer oriented.

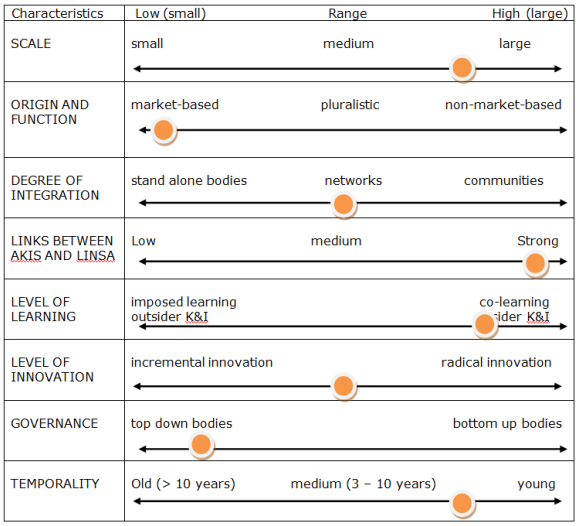
Characteristics	Low (small)	Range	High (large)
SCALE	small	medium	large
ORIGIN AND FUNCTION	market-based	pluralistic	non-market-based
DEGREE OF INTEGRATION	stand alone bodies	networks	communities
LINKS BETWEEN AKIS AND LINSA	Low	medium	Strong
LEVEL OF LEARNING	imposed learning outsider K&I		co-learning insider K&I
LEVEL OF INNOVATION	incremental innovation		radical innovation
GOVERNANCE	top down bodies		bottom up bodies
TEMPORALITY	Old (> 10 years)	medium (3 – 10 years)	young

ITALY

I1. The network for Valorization and Safeguarding of Zerasca Sheep and Lamb

purely agricultural networks or networks for sustainable land use

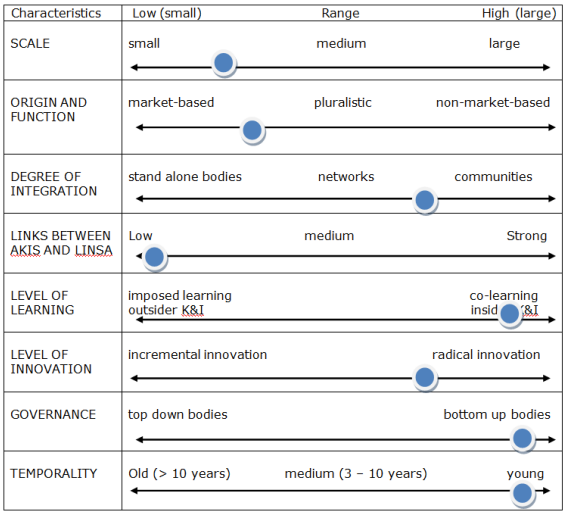
Networks of different actors that involves a community of predominantly young and female shepherds. Small rural village in the Apennine mountains, in the remotest part of Tuscany - Other local and extra-local actors include shepherds from other territories, spinnery, agronomists, farmer organizations, university, local and regional institutions, Slow Food, ARSIA, customers/consumers etc). Local sheep breeds



I2. Association for Solidal Economy Crisoperla

consumer oriented networks

Association (network) of organic farmers, fishers, agronomists, consumers' associactions, Solidary – Based Pourchase Groups (GAS) and small food artisans. Aims to promote and valorize small, organic productions and to encourage direct relationship among producers and consumers. Mainly in Tuscany. Gastronomic initiatives and conferences and workshops about the theme of sustainability.



I3. The Italian experience of GAS (Solidarity-based Purchasing Groups)

consumer oriented networks

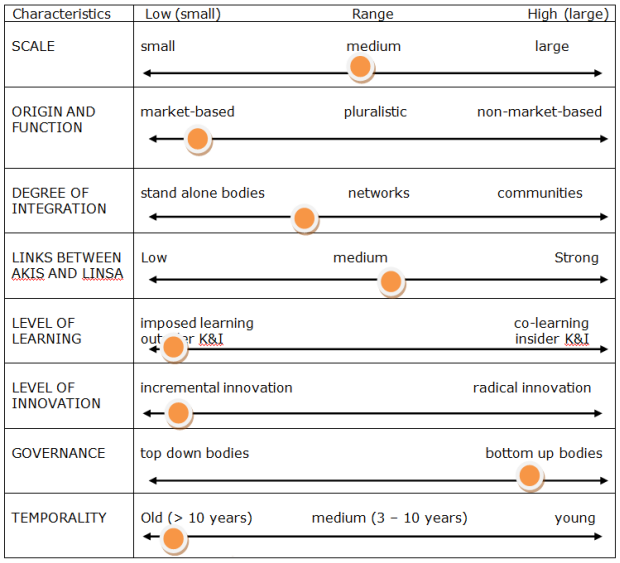
GAS are self-organized groups of consumers who collectively run direct purchasing, according to shared ethical principles of solidarity, sustainability and equity. Narrow relationships with farmers, selected on the basis of their compliance with these principles. Currently 800 registered groups. Re-gaining control over food production and consumption and re-shaping these practices according to ethical principles represent their main aim; to that end re-building knowledge and skills. Involves other fields of action.

Characteristics	Low (small)	Range	High (large)
SCALE	small	medium	large
ORIGIN AND FUNCTION	market-based	pluralistic	non-market-based
DEGREE OF INTEGRATION	stand alone bodies	networks	communities
LINKS BETWEEN AKIS AND LINSA	Low	medium	Strong
LEVEL OF LEARNING	imposed learning outsider K&I		co-learning insider K&I
LEVEL OF INNOVATION	incremental innovation		radical innovation
GOVERNANCE	top down bodies		bottom up bodies
TEMPORALITY	Old (> 10 years)	medium (3 – 10 years)	young

I4. The Consortium of Valorization Ancient Vacca Reggiana products (C.V.P.A.R.R.)

purely agricultural networks or networks for sustainable land use

Dairy farmers and dairy processors. The local farmers and processors have been able in the last years to rediscover Vacca Rossa Breed and to valorise the specific Parmigiano-Reggiano cheese produced by milk's breed.

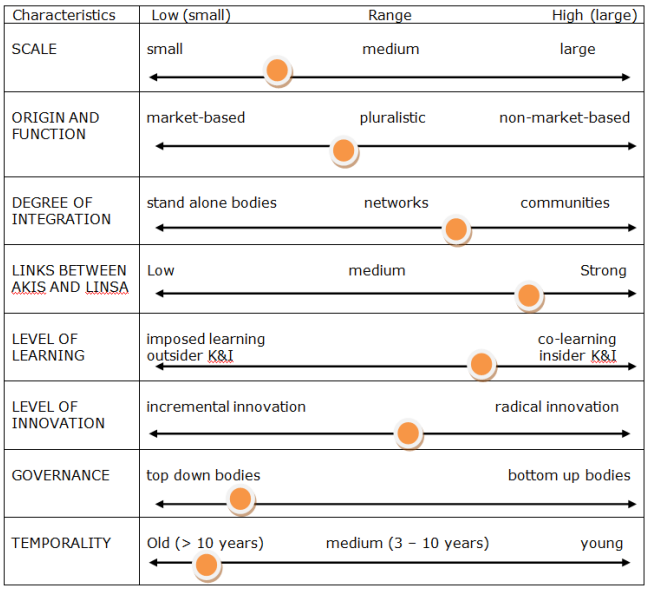


LATVIA

L1. Latvia State Institute of Fruit-Growing –

Purely agricultural networks or networks for sustainable land use

Originally purely agricultural network for sustainable land use but recently increasingly multifunctional network. It takes part in knowledge brokering, research between farmers and industry collaboration and research driven innovation.



L2 Vecauce biogas production plant - *non-food oriented network*

Non-food oriented network

This organisation is concerned with renewable energy production, technical and organizational innovation, renewable energy associations, farmers engagement, and knowledge brokering.

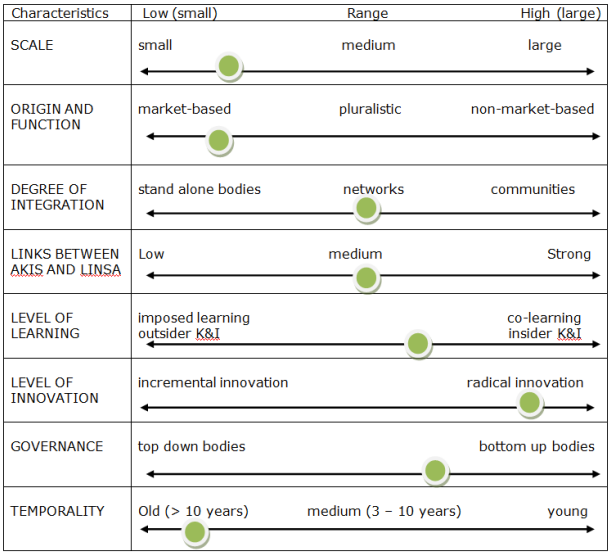
Characteristics	Low (small)	Range	High (large)
SCALE	small	medium	large
ORIGIN AND FUNCTION	market-based	pluralistic	non-market-based
DEGREE OF INTEGRATION	stand alone bodies	networks	communities
LINKS BETWEEN AKIS AND LINSA	Low	medium	Strong
LEVEL OF LEARNING	imposed learning outsider K&I		co-learning insider K&I
LEVEL OF INNOVATION	incremental innovation		radical innovation
GOVERNANCE	top down bodies		bottom up bodies
TEMPORALITY	Old (> 10 years)	medium (3 – 10 years)	young

L3 Hemp network

Non-food oriented network

Purely agricultural networks or networks for sustainable land use

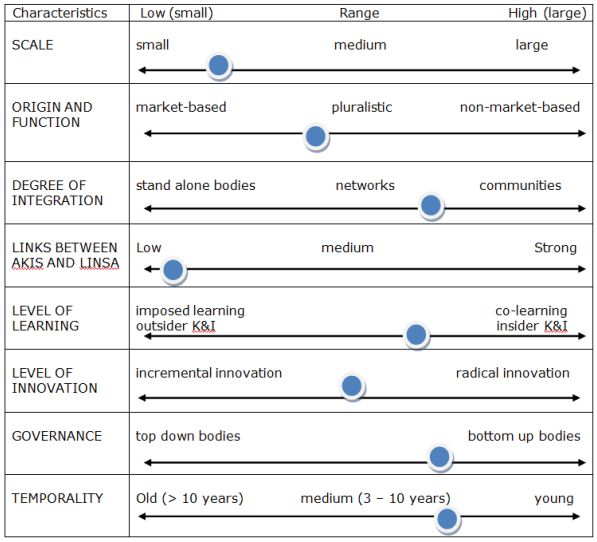
This is basically a non-food organisation, but also has elements of an agricultural network. It is concerned to develop hemp which is a traditional culture in Latvia cultivated for centuries up to 1960s when it was finally abandoned in collective farms. It develops innovative fibre culture, intensive, horizontal peer learning, close collaboration among producers, processors and researchers, experimentation and industrialization.



L4 Straupe rural goods market

Consumer oriented network

Straupe rural goods market is a collective initiative introduced by local community activists, farmers among them, in order to re-establish the link between local producers and consumers. It focuses on local products, direct marketing, producers-consumer relations, local knowledge and social learning.



GERMANY: Brief Descriptions of LINSA

G1. Bavarian rural woman´s association

purely agricultural networks or networks for sustainable land use

Farm members with 6,600 local groups. Main functions are education and training, farm-management, agricultural techniques, data processing and computing, soft skills: time-management, communication, reducing generation-conflicts. Policies on social insurance and rural infrastructure and undertakes direct marketing.

Characteristics	Low (small)	Range	High (large)
SCALE	small	medium	large
ORIGIN AND FUNCTION	market-based	pluralistic	non-market-based
DEGREE OF INTEGRATION	stand alone bodies	networks	communities
LINKS BETWEEN AKIS AND LINSA	Low	medium	Strong
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LEVEL OF INNOVATION	incremental innovation		radical innovation
GOVERNANCE	top down bodies		bottom up bodies
TEMPORALITY	Old (> 10 years)	medium (3 – 10 years)	young

G2. German Agricultural Society (Deutsche Landwirtschaftsgesellschaft, DLG)
Brief description (taken from the DLG website at http://www.dlg.org/ on June 27th, 2011):

purely agricultural networks or networks for sustainable land use

Very old but still devoted to innovation in agriculture. More than 23,000 members. Organizer of all major agricultural fairs in Germany (Agritechnica, EuroTier), neutral testing of agricultural technology and foodstuffs and provides for explicit knowledge creation and information

Characteristics	Low (small)	Range	High (large)
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SWITERLAND (GERMAN- Dominique)

S1. Züri-Natürli

Consumer oriented network

Züri-Natürli is a brand, owned by the municipalities of a mountainous region in the Canton Zurich. The milk of 100 farmers is processed in 10 different cheese dairies, which deliver the cheeses to a middle-man. This initiative market more than 10 millions liter milk / year, as niche products sold at a very high price. The initiative benefit mostly the little dairies and the producers

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GOVERNANCE	top down bodies		bottom up bodies
TEMPORALITY	Old (> 10 years)	medium (3 – 10 years)	young

S2. ACP Zürich ORTOLOCO

Consumer oriented network

Typical community based agriculture initiative, in the German part of Switzerland.

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SCALE	small	medium	large
ORIGIN AND FUNCTION	market-based	pluralistic	non-market-based
DEGREE OF INTEGRATION	stand alone bodies	networks	communities
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TEMPORALITY	Old (> 10 years)	medium (3 – 10 years)	young

S3 Profi-Crops

Purely agricultural networks or networks for sustainable land use

The objective is to contribute to improve competitiveness of the Swiss vegetable sector by increasing coordination of knowledge and information exchange. A pilot group is composed of individuals from research, professional organisations and cantonal extension services. The aim is to integrate economic studies, optimize networks and include beneficiaries

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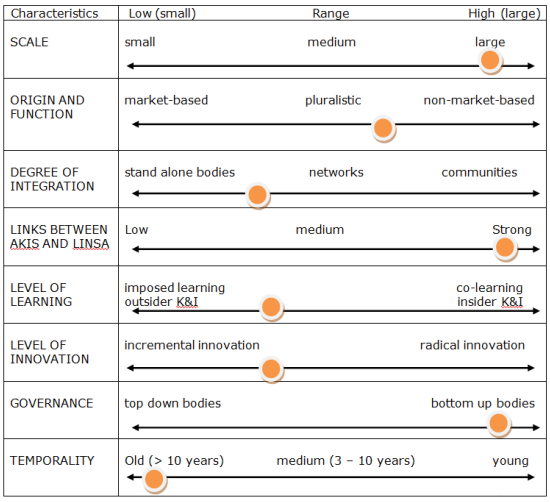
TEMPORALITY	Old (> 10 years)	medium (3 – 10 years)	young

SWITZERLAND II

S4. the network on milk and meat products produced through pastoral and pasture based systems

Purely agricultural networks or networks for sustainable land use

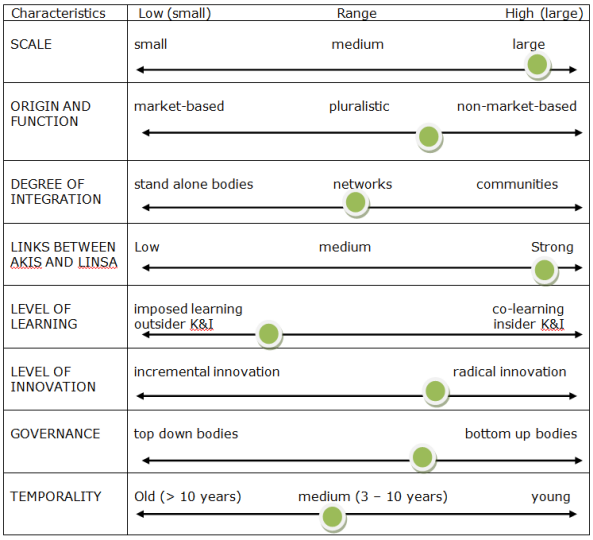
A network composed of farmers, researchers, administration, extension services concerned with pasture management. Important in shifting production towards integrated production. Two recent trends: milk value added and biodiversity. These have led to changes in the knowledge network.



S5 network on agriculture and renewable energy

Non-food oriented network

Two purposes: reduction of energy use in farms and production of renewable energy on farms. Community-based energy production within specific regulations and incentives. New collaborations and networking are developing.



UNITED KINGDOM

UK1 The Pasture-Fed Livestock Association

Consumer oriented network

The Pasture-Fed Livestock Association, a community interest company set up in 2011 by 20 farmers, is to launch pilots with farmers and butchers for the brand Pastoral. They want to promote the economic and environmental benefits of eating animals fed entirely on pasture, rather than imported grains and soya beans. Information exchange, web site and pilots.

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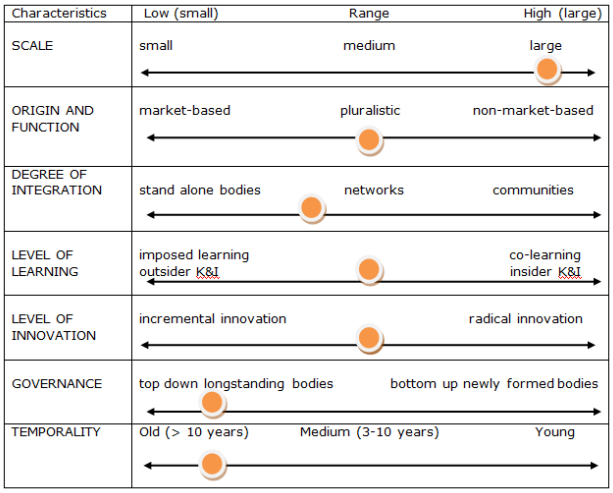
UK2 The National Trust

Purely agricultural networks or networks for sustainable land use

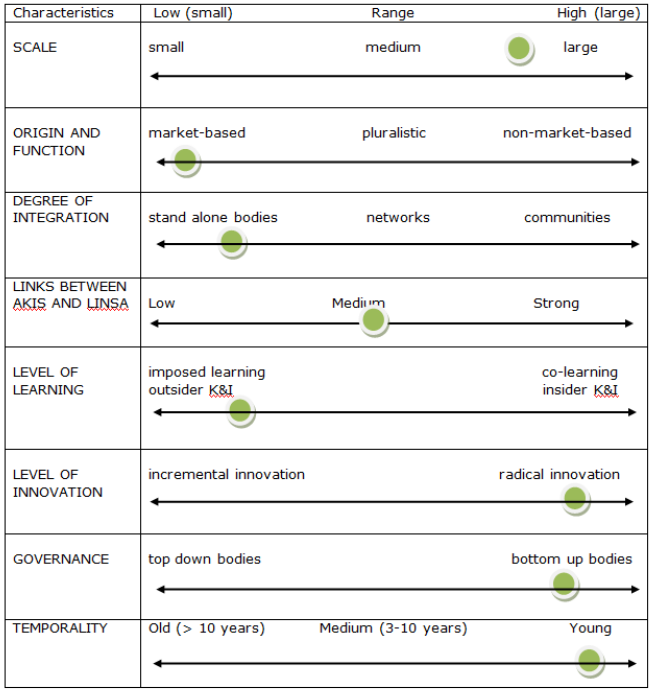
One of the UK's major landowners (http://www.nationaltrust.org.uk/main/w-index.htm). A major role in sustainable land management. Offers advice and consultancy to its own farmers. Traditionally a 'closed' network, but now changing. Innovative in internal advice and co-learning.



UK3 Farmgen – a new generation of green power

Non-food oriented network

Specialist company in anaerobic digestion set up in 2009. Offers technical, operational and financial assistance, Has a £30 million expansion plan. Supported by Defra and NFU. Possibly as many as 1000 farms could run anaerobic digestion plants, alongside a further 100 large-scale commercial plants in which farmers may also have an interest.



UK4 Permaculture LAND Project

Purely agricultural networks or networks for sustainable land use

The permaculture Learning and Network Demonstration Project (LAND) is a four-year project whose main aim is to support and enhance the food growing and land design skills and knowledge of permaculture practitioners and the general public through the development of an England-wide permaculture learning and demonstration network.

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EU LEVEL

EU1 European Learning Network on Functional AgroBiodiversity

Purely agricultural networks or networks for sustainable land use

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EU2 Sustainability Training for Organic Advisors

Purely agricultural networks or networks for sustainable land use

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