



Prospects for Farmers' Support:
Advisory Services in European AKIS

AKIS and advisory services in Latvia
Report for the AKIS inventory (WP3) of the PRO AKIS project

March 2014

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Rīga, July 2013

This project has received funding from the European Union's Seventh Framework Programme for research, technological development and demonstration under grant agreement no 311994

Please reference this report as follows:

Šūmane S., Grīviņš M., Tisenkopfs T. (2014): AKIS and advisory services in Latvia. Report for the AKIS inventory (WP3) of the PRO AKIS project. Online resource: www.proakis.eu/publicationsandevents/pubs

Executive summary

The aim of the report is to provide a comprehensive description of the Agricultural Knowledge and Information System (AKIS) in Latvia, with a particular focus on agricultural advisory services. The description includes main structural characteristics of agricultural sector, characteristics of AKIS, overview of history, policy and funding of AKIS, and outline of Farm Advisory System.

This report represents an output of the PRO AKIS project (Prospects for Farmers' Support: Advisory Services in the European Agricultural Knowledge and Information Systems'). It is one of 27 country reports that were produced in 2013 by project partners and subcontractors for compiling an inventory of Agricultural Knowledge and Information Systems. AKIS describe the exchange of knowledge and supporting services between many diverse actors from the first, second or third sector in rural areas. AKIS provide farmers with relevant knowledge and networks around innovations in agriculture. Findings from the 27 country reports were presented at three regional workshops across Europe in February and March 2014, discussed with stakeholders and experts, and feedback integrated in the reports.

Agriculture keeps a strategic position in Latvian economy and employment in rural areas. Latvian agriculture is dominated by small scale production pattern and a growing segment of large scale commercial farms which shapes also the agricultural knowledge demand. Next to traditional crops production and dairy farming, there have been new agricultural branches developing, like, organic farming, energy crops, rural tourism, processing activities coupled with farming and other.

Latvian AKIS involves the components of research, extension and educational organisations, which are structured and governed through agricultural, science and education policies. The major AKIS actors are categorized in four groups of public and private sector, farmer and societal organisations. Latvian Rural Advisory and Training Centre (LRATC) is the largest agricultural and rural advisory organisation operating an advisors' network consisting of 26 entrepreneurship consultants at regional offices and 125 rural development advisors at local municipalities. LRATC is both publicly and privately funded. National Rural Network is another major national platform for information and knowledge exchange among rural and agricultural actors. Private sector advisory includes input providers, private consulting companies, processing companies. Commercial farmers and cooperatives substantially rely on advice and technology of input providers. There are various farmers' organisations (55) and cooperatives (115) which are actively involved in providing knowledge and advice to their members.

Quite a recent trend in Latvian AKIS is the establishment of trans-sector and trans-disciplinary platforms (for instance, knowledge transfer centres, industry innovation clusters, Platform of Food technologies) where collective knowledge creation, exchange and learning are taking place. They are part of the newly forming national innovation policy aimed at facilitating knowledge exchange between scientists and practitioners. Also various less formal learning and innovation networks take up their participants' knowledge needs and are a part of a dynamic AKIS.

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List of acronyms

AKIS	Agricultural knowledge and information services
CC	Cross compliance
CCAO	Consultative Council of Agricultural Organisations
EIP	European Innovation Partnership
ESU	European Size Units
EU	European Union
FADN	Farm Accountancy Data Network
FAS	Farm advisory system
GDP	Gross domestic product
LACA	Latvian Association of Agricultural Cooperatives
LFPE	Latvian Federation of Food Enterprises
LRATC	Latvian Rural Advisory and Training Centre
LUA	Latvia University of Agriculture
MoA	Ministry of Agriculture
NGO	Non-Governmental Organisation
NRN	National Rural Network
UAA	Utilized agricultural area

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1. Main structural characteristics of agricultural sector

This introductory chapter presents the main structural characteristics of the Latvian agricultural sector that set the context in which AKIS, and in particular also the agricultural advisory services, operate.

Latvia's total population decreased to 2.1 million in 2011, which was the result of a strong out-migration and low birth rates that also affect rural areas and agriculture. Although the number of employees in agriculture is decreasing, agriculture remains an important sector in the national employment structure and especially in rural areas: it is providing jobs for 8.8% of the economically active population (2010) (World Bank). Growing GDP per capita in Latvia reached 10 900 EUR in 2012 (8600 EUR in 2010). Agriculture's contribution to GDP is increasing and represented 4.14% in 2010 (World Bank).

The rural areas (in terms of agricultural land) take up 29.5% of the total land area (World Bank). Despite concentration trends, the agricultural structure remains quite fragmented and small-scale. On the 1796.3 th ha of utilised agricultural area there are 83.4 thousand operating agricultural holdings, among which small and medium size farms dominate: 82% of the farms own up to 20 ha, and the standard output for more than half of the farms (56%) does not exceed 2,000 EUR (2010). Average utilised agricultural area per farm is 21.54 ha (2010). Most of the agricultural holdings (75346) are beneficiaries of direct payments and the total amount paid to them reached 326 291 113 EUR in 2009 (LAD). There are 22,841 FADN holdings in Latvia, and three fourths of them belong to the smallest category of < 8 ESU. Only 1.5% FADN agricultural holdings are bigger than 100 ESU.

Farmer community is ageing: almost one third (30%) of the agricultural holders are more than 65 years old and only 5.4% of the farmers are younger than 35 years. The farms employ predominantly family labour force which amounts to 84% (71.4 th AWU or 163.6 th persons) in the total directly employed farm labour force (85.2 th AWU). Regularly and occasionally employed non-family labour force amounts to respectively 15.6% and 0.6% (2010).

In the result of the modernisation and concentration of the agricultural production during the last decades, agricultural output has more than doubled in 2011 in comparison to 2000 when it made respectively 1,035 mln EUR and 460 mln EUR (contributing respectively 0,1 and 0,2% of EU). The major specialisation of farms is crop production. The total harvest of cereals in 2011 was 1412 th t, with a yield varying around 3 t per ha. The main crops are wheat (940 th t), barley (237 th t) and the comparatively new crop rape (220 th t) (2011). Potatoes are the main vegetable cultivated in Latvia: 498.6 th t in 2011. Of other vegetables were produced 168 th t in total (MoA, 2012a), among them carrots amounted to 19 th t, onions 10 th t, tomatoes 8 th t (2011). Regarding the fruit production, apples are the main product with 8 th t of total yield in 2011.

Dairy farming is the second main specialisation of Latvian farms. In 2011 662 th t of cow milk were produced. The most important milk commodities are drinking milk (65 th t), cream (33 th t), cheese (29 th t) and butter (5 th t). Regarding livestock farming, in the total amount of 474.6 th livestock, main types are cattle (298.1 th), pigs (96.6 th) and poultry (61.4 th). Also sheep (8.4 th) and goats (1.3 th) breeding are expanding (2011). Livestock density is

very low – less than 0.5 per ha. The main animal meat products are pig (23.5 th t), poultry (22.8 th t) and cattle (17.1 th t) (2011).

Next to conventional agriculture, environmentally friendly agricultural practices are expanding. After a rapid growth of organic agriculture in the first decade of the 21st century, its progress has slowed down, though. In 2010 there were 3.6 th certified organic farmers (3.45% of agricultural holdings). The certified organic area still continues to grow and has reached 166.3 th ha or 9.2% of UAA. This land also corresponds to the area under management practices that potentially support biodiversity.

The formal agricultural cooperation has been weak in Latvia during the 1990s due to the experience of forced Soviet cooperation. However, the formation of producer groups has been stimulated by both national subsidies and market pressures, and in 2011 44 agricultural cooperatives were registered (MoA, 2012a).

The agricultural production is intensifying (albeit remaining comparatively moderate), which is also reflected in the increase in pesticide use: pesticide sale has grown up to 1,052 t in 2007 (in comparison to 284 t in 2000). Nitrogen inputs have slightly increased from 61 kg N per ha of agricultural land in 2001 to 67 kg N per ha in 2008. However, ammonia emissions from agriculture have decreased by 66% during last 20 years: from 47 kilotonnes in 1990 to 16 kilotonnes in 2010. The use of fertilisers remains comparatively low, i.e., 64.88 kg per ha of arable land (World Bank).

2. Characteristics of AKIS

There is no specific singular policy for AKIS in Latvia, and it is divided between separate policies for science, education, innovation and agriculture (the latter includes also agricultural advisory services). The traditional core subsystems of AKIS – research, education and extension systems and respective AKIS agencies – are under supervision of different ministries and they are not particularly well coordinated among them.

The major national and agricultural policy documents acknowledge the importance of education, knowledge and skills in the agricultural development. Capacity development of rural people, which also includes farmers' professional knowledge and provision of agricultural advice, is stated as one of the four main priorities in the central agricultural programming document for 2007-2013 (MoA, 2011). However, in practice the implementation of this priority has been deficient: for the period 2007-2013 a comparatively small proportion of EU and national funds - 8% (30 million lats or 42.7 million Euros) from the total 1st axis' budget - is allocated to the activities aimed at "promoting knowledge and improving human capital" (MoA, 2011). Funding for improving farmers' professional knowledge has been even reduced by almost 90% (Benga, 2010).

Accordingly to the agricultural policy documents, the main mechanisms to improve farmers' knowledge and skills are linked to the development and provision of advisory services. There are very few references to research institutes and education establishments and their potential role in the agricultural development; also peer-to-peer learning and networking as knowledge creation and dissemination mechanisms are not explicitly integrated. New knowledge and innovation institutes, like knowledge transfer centres, are not mentioned in the agricultural policy documents. This shows that the agricultural development and AKIS remain weakly connected at planning level and the potential of research and education establishments may not be sufficiently stimulated and used for agricultural development.

In turn, science and education policies do not specifically address the agricultural development. However, since 2006 agriculture and food (in terms of agro-biotechnology) have been defined as one of the state research priorities; which also means the allocation of certain public funding. Finally, the innovation policy is developed in the framework of the conventional linear approach with a focus on stimulating technological innovations, and scarcely mentions rural and agricultural needs and possibilities (Tisenkopfs et al 2007). Besides the established measures of agricultural modernisation, support to agricultural research and maintenance of rural advisory and information system, innovation policy documents do not propose new measures which would address specifically rural areas and agriculture.

Despite the fact that AKIS remains fragmented, several coordinating mechanisms are set in place. At the national governance level, representatives from all the relevant ministries are taking part in the formulation of cross-cutting policies. In 2004 an agreement was made between the Ministry of Agriculture, LRATC and the Union of Local Municipalities which states the mutual exchange of information and coordination of and participation in establishment and maintenance of the Rural Advisory and Information exchange system,

facilitating transfer of knowledge, life-long learning and creating posts for local agricultural advisers at the municipality level. The National Rural Network launched in 2007 unites various rural development organisations and is aimed at exchange and dissemination of information and good practices in rural and farmer communities. Specifically in agricultural education and research, reforms have recently been initiated in order to consolidate resources and improve coordination and quality (see the chapter 2.1).

2.1 AKIS description

The Latvian AKIS involves the traditional components of research, extension and educational organisations, which to a large extent are structured and governed through agricultural, science and education policy. But there are also various formal and informal learning and innovation networks present, which often connect knowledge actors of different organisational and sector backgrounds (Tisenkopfs et al, 2011). The major AKIS actors are outlined and categorised in four main sections of public and private sector, farmer and societal organisations.

Public sector

At the national government level there are three ministries directly involved in the AKIS governance. The Ministry of Agriculture (MoA) is responsible for rural and agricultural policy, agricultural education at university level, agricultural research and extension, as well as for support to producer organisations. The Ministry of Education is responsible for the policy of science and education (however, the single agricultural university is supervised by the Ministry of Agriculture). Responsibilities for innovation and R&D policies and science links with industry are delegated to the Ministry of Economics. At the regional level, the five regional development agencies, responsible for territorial planning and coordination of regional development, also attracts and allocates funding, initiates and takes part in projects facilitating agricultural innovation and knowledge. The local governments provide facilities and co-fund the work of the local rural development advisers of LRATC.

The Latvian Rural Advisory and Training Centre (LRATC) is the largest agricultural and rural advisory organisation in Latvia. It operates an advisers' network consisting of 26 entrepreneurship consultants at regional offices and 125 rural development advisers at local municipalities. The advisers' network covers the whole country and ensures the accessibility of the agricultural advice close to clients. The centre has also developed a range of internet-based services which also allow distant learning. Although considered as public, the centre operates on the edge of public and private domain. The MoA, one of the two founders of the centre, commissions and funds a part of the LRATC services. The centre is viewed as an important agency in the implementation of the rural development policies and programmes as the MoA delegates important policy functions and programmes to it, for example – the coordination of the National Rural Network. But LRATC also has to generate its own income; paid services constitute 42% of the centre's turnover (LRATC, 2011).

The National Rural Network (NRN) is a national platform for information and knowledge exchange among rural and agricultural actors. In terms of its organisation it was established in 2008 with the aim of supporting the implementation of the Rural Development Program 2007-

2013 and facilitate rural actors' cooperation and their participation in rural development, including the formulation and implementation of the rural development policy. The network organises training and informative seminars, exchange of knowledge and experiences at local and international levels, disseminates information and initiates research and study programmes. In 2010, the NRN organised 623 seminars with 16000 participants and 213 training groups with 5000 participants. Farmers' interests are taken into account when defining training themes and the most popular topics are animal husbandry and non-traditional agriculture.

During recent years new knowledge transfer and innovation support organisations, like technology and knowledge transfer centres, business incubators and innovation centres, have been established in order to facilitate the commercialisation of research results and cooperation between science and industry. Universities or municipalities operate those centres and receive support from the Ministry of Economics and the Latvia Investment Agency. Although most of them do not target farmers, several of them, like The Centre of Technology and Knowledge Transfer of the Latvia University of Agriculture, the business incubator Valdeka BITIS of the Latvia University of Agriculture, the Jelgava Innovation Centre and its five business incubators in neighbouring rural villages also serve food companies and farmers.

Research and Education

There are more than 20 agricultural and forestry research establishments registered at the Latvian Registrar of Scientific Institutions. However, the number of organisations involved in the agricultural research exceeds 40 (LVAEI 2005). A central structure in the agricultural research is the Latvia University of Agriculture with its eight faculties, four research institutes, three scientific laboratories, a study farm, a knowledge transfer centre and Life-long learning centre, all of which act as knowledge sources to producers in form of applied research projects, paid or free expert advice, organisation of training courses and collaboration with producers' associations and individual farmers. However, agricultural research in general remains rather decentralised and fragmented, with weak communication and coordination between various disciplines and research organisations (LVAEI, 2005). The communication and coordination between researchers and farmers are also deficient and together with limited research infrastructure and human resources this leads to the problems of practical relevance and applicability of research results. The agricultural researchers consider that the main output of their scientific work is the creation of new, innovative technologies (81% of the respondents of a survey of agricultural researchers) and to a lesser extent also modelling and prognosis (67%), whereas dissemination of results, like consultations, information and recommendations, is comparatively disregarded (35%) (LVAEI, 2005).

In order to consolidate resources and improve knowledge infrastructure and coordination among research institutes and between research and practice, the State Research Centre of Agricultural Resources and Food has been created during the institutional reform of science. The centre unites research institutes working in agriculture and food. With the same coordination and consolidation purposes, a large scale collaborative research programme "Sustainable use of land, wood, food and transport resources" has been launched. However, these initiatives suffer from a scarcity of funds and a bureaucratic approach. The usual way of

doing research in which researchers come with their ideas and propositions considerably dominates compared to the coordinated and collaborative research projects with farmers' involvement in the formulation of research themes and problems.

Regarding agricultural education, there are 10 agricultural vocational schools (secondary schools and colleges) with 4,450 students (Tunte and Spunde 2011) and one agricultural university – the Latvia University of Agriculture with 9,000 students (IZM). (There are also five regional universities in Latvia which have a potential to provide advice for farmers and rural communities, but this is under-researched and unrecorded.) The declining prestige of the agricultural professions diminishes the interest of young people; whereas ageing of teaching staff and out-dated material often reduces the quality of studies. A recently established reform of vocational education aims to overcome these quality and dispersion problems through the consolidation of resources into a smaller number of schools. Some of them are to be transformed into industry supported vocational competence centres with broader training functions aimed also for regional residents (life-long training and retraining of unemployed persons). In addition to teaching, staff of educational establishments often also provides agricultural advice for producers, on a voluntary basis.

Private sector

Farmers, especially commercial farmers and cooperatives, substantially rely on the advice and technology of input providers, international business conglomerates and their distributors in Latvia, like *Baltic Agro*, *Syngenta* (agro-chemistry companies), *Vaderstad*, *Amazone*, *New Holland* (agricultural machinery companies). These companies associate advice with marketing, are proactive, organise field days and demonstrations. Education in their initiatives comes as a by-product of marketing. The numbers of input providers, which also serve as knowledge sources for farmers, are estimated to be around 10 in crop production, and 20 in cattle breeding.

Private consulting companies are vaguely developed in agro-food advice – there are few private firms, e.g. *Jelgavas kompetenču centrs*, which provide advice for producers. There are some small private research institutes, e.g. *Pure Horticultural Research Centre* offers consultations to fruit growers.

Processing companies are involved in the agricultural knowledge system both as knowledge users and knowledge support organisations. Regarding the latter, they organise or provide support for training, advice and knowledge exchange visits for farmers; some companies (for instance, Valmieras Piens) collaborate with regional agricultural advisory offices. The Latvian Federation of Food Enterprises (LFFE) brings together entrepreneurs, professional associations and research institutes with an aim of promoting the development of the food industry in Latvia, promoting Latvian products in the local market and improving their competitiveness in export markets. Recently LFFE has also engaged in setting standards for professional education and is carrying out a training project for food industry workers.

Another important source of knowledge for agricultural producers are experts and whichever organisation they are affiliated to. There is a certain opportunism of experts in terms of seeking links with farmers, and many of them provide advice on freelance or short term

individual contract base rather than through their institutional structures. Farmers often value this method of advice as more responsive to their needs and easier to access.

Farmer based organisations

There are various farmer based organisations which are actively involved in providing knowledge and advice to their members and also in lobbying agricultural education and research and relevant policies. Among the most visible farmer organisations is Consultative Council of Agricultural Organisations (CCAO) with 55 farmers', food producers' and rural development member-organisations. CCAO facilitates information exchange and discussions between farmers' organisations and the Ministry of Agriculture. Farmers' Saeima unites professional and commercially viable producers. In 2005, Farmers' Saeima endeavoured to create its own advisory service because of dissatisfaction with the existing advisory system which was perceived as inadequate for advanced producers. However, the initiative ended because the farmer organisation failed to establish consistent links with the research organisations, and farmers were reluctant to pay for the new services. Most of the other farmers' NGOs are organised on a sector basis and they serve to channel, exchange and create knowledge within specific agricultural production sectors. Regional farmer organisations (22 in total) provide information and training seminars for farmers on territorial base.

Since 2000 when state support for farmers' cooperatives was introduced, their numbers have increased to up to 115 (LLKA, 2012) and cooperatives have become important knowledge sources and advice providers for professional and economically organised farmers. Since cooperatives know farmers' specific knowledge needs well, they are also often more efficient than traditional agricultural knowledge institutions in delivering new knowledge fast and directly. The four largest agricultural cooperatives in Latvia – namely Latraps, VAKS, Trikāta, and Piena ceļš also increasingly act as input providers, and seek to operate as one-stop-shops. Some cooperatives, Latraps for instance, have a well-developed knowledge network extending abroad, where more updated knowledge is available (Šūmane and Tisenkopfs 2008). Cooperatives are involved in agricultural knowledge transfer in several ways. First, they organise training courses by themselves (either by spending their own funding or applying for project funding). Second, they serve as mediators for market actors who want to advertise their products. In this case co-ops are operating as gate keepers who hold access to organised groups of farmers. Third, co-ops communicate their interests and needs to institutions organising agricultural education. Finally, they hire consultants to advice on more complex issues. The umbrella organisation Latvian Association of Agricultural Cooperatives (LACA) facilitates information exchange amongst its member-organisations and provides them with training and advice with the help of its own experts.

Many individual farmers are engaged in AKIS also as knowledge generators and providers. They propose paid or free consultations on the basis of their experience and knowledge, establish demonstrations with or without cooperation with research institutes and organise training events on farms (often in cooperation with LRATC).

NGOs

Diverse non-farmer NGOs are involved in AKIS. Some of them intervene in AKIS in an ad hoc manner, other have more regular and structured involvement. There are NGOs who are established with the primary aim of facilitating agricultural education and research and collaboration among various AKIS actors. For instance, the main activities of “Agro Centrs” are educative and informative seminars and conferences for rural residents, research and various business advice. Fonds Latvijas lauksaimniecības attīstībai (Foundation for Latvian Agricultural Development) organises annual thematic educational events in agriculture (Harvesters, Ploughs, Golden fields, Tractors’ day) which bring together suppliers, agricultural educational establishments, state institutions and producers.

Besides these agricultural NGOs, there are others operating in the fields close to agriculture and also contributes to AKIS. Latvijas Dabas fonds, a leading environmental NGO in Latvia, is regularly implementing environmental projects related to agriculture, and which often involves information and training of farmers. For instance, recently it was a partner in DemoFarm project, implemented by LRATC and aimed at establishment of a network of demonstration farms working with environmentally friendly methods. During the project participating farmers were trained in sustainable farming methods and education materials have been prepared to disseminate the experiences of the project.

Rural women’s organisations and their umbrella organisation the Rural Women Association form a very dense and active network. It unites rural women, many of which are farmers or otherwise related to agriculture (advisers, agricultural specialists) with the aims of facilitating their education, entrepreneurship and civic participation (Tisenkopfs and Šūmane, 2003).

Local partnerships bring together various local actors, who design and implement local development projects, some of which are related to agriculture, for instance, the establishment and equipment of local advisory offices.

Consumer organisations are still weakly involved in agricultural knowledge processes. However, growing consumer demand for healthy, organic and home-grown food encourages research in the respective fields.

Table 1. Overview of organisations creating the AKIS¹

Provision of service				Source of financing ²								
Status of the organisation	Type of organisation	Number of organisations	Number of advisors	Public funds			Farmers			Private	NGO	Other (specify)
				EU funds	National funds	Regional funds	Farmers' levies	Farmers' contribution	Billing services	Other products (inputs, outputs)	foundation	
Public sector	Advisory department of the Ministry of Agriculture (The department responsible for farmer education and rural advisory is the Rural Development Support Department of the Ministry of Agriculture)	1	25 ³		Dotations: 386 325 th ⁴ ; Transfers: 623 th							Foreign financial assistance : 48 th Paid services and other own income: 6 378 th
	Local/regional agencies: Latvian Rural Advisory and Training Centre: LRATC (and its regional offices)	1 (26)	125	58% (public funds together)	58% (public funds together)				42%			
	Other (specify): Regional development agencies	5	na	X	X							Billing services
		110	~1000 ⁵	11%	21% ⁸							53% tax income, 6%

¹ The source of data presented in the table is Latvian report for PROAKIS if not referenced otherwise. The data from the survey regarding financing were not usable as the few responses were reported in agglomerated manner which did not let to identify which type of organisation has answered what. In the table's section "Provision of service" "na" is used when no information is available and it is difficult to make sound estimations; in the section "Source of financing", "X" is used in cases when it is known that corresponding source of financing is used, but there is no more precise information available about its share or amount (empty box does not obligatory mean that there is no particular source of financing used, but rather that there is no information about it – this is especially for private and farmer organisations and NGOs).

² All precise financing numbers are given in LVL (1 LVL = 1.42 EUR)

³ This is the department's staff, they are not advisors

⁴ The numbers in this line compose the total budget of the Ministry of agriculture, not of the Rural Development Support Department. Source:

http://www.zm.gov.lv/doc_upl/par_vb_ZM.pdf

	Local rural governments											billing services
	National Rural Network	1	17 ⁶	74.85% ⁷	25.15%							
	Knowledge transfer centres and business incubators	~8 relevant for agriculture	na	X	X	X			X			
Research and Education	University: Latvia University of Agriculture	1	304 ⁹	X	X							Study fees
	Regional universities	5		X	X							Study fees
	Research Institute	40	na	X	X			X		X		Other public funds
	Other education bodies (specify): Agricultural vocational schools	10	na	X	X	X (local governments)						Own income from various services
Private sector	Upstream industries	Couple of tens	na	X					X	X		
	Downstream industries	Couple of tens	na						X	X		

⁵ The number of employees at local governments whose jobs are related to local development, but not specifically or only agriculture. Source:

http://www.petnieciba.lv/templates/kasiic/files/Pasvaldibu_darbinieku_informativas_petnieciskas_vajadzibas_reg_att_joma.pdf

⁸ Source for financing data in this line: http://www.vraa.gov.lv/uploads/5-6_lv.pdf. The numbers describe the sources of local governments' total budgets.

⁶ The number of cooperative board members, whose task, among other ones, is also to facilitate information and knowledge exchange among rural and agricultural organisations, institutions and sectors; they are not advisors. The 125 consultants of LRATC are also rural development consultants within the National Rural Network.

⁷ Source for financing data in this line: http://www.laukutikls.lv/pielikumi/106_VLT%20Ricibas%20programma%202009-2013%202010%20gada%20dokuments_zd.pdf

⁹ The number of teaching and research staff; many of them offer advice to farmers, but that is rather their voluntary work, not professional obligation. Source:

<http://www.llu.lv/statistika>

	Independent consultant	na	na						X	X		
	Private agricultural advice company	na	na						X	X		
	Farmers' owned advice company	na	na						X	X		
	Other (specify)											
Farmer based organisations	Farmers' cooperative	115	na	X	X			X	X			
	Chambers of agriculture: Corresponding organisation is Consultative Council of Agricultural Organisations	1		X	X			X				
	Farmers' circles/groups: Regional farmer organisations	22	na	X	X			X				
	Sector-based farmer organisations	~40	na	X	X			X				
	Other											
NGO	Agricultural education	Couple	na	X	X						X	Other public or private funds
	Environmental	276 ¹⁰	na	X	X							Other public or private funds
	Rural women	~300 ¹¹	na	X	X					X		Other public or private funds
	Local partnerships	40 ¹²	na	X	X	X (local governments)				X		Other public or private funds

¹⁰ The number of all environmental NGOs in Latvia; only a limited part of them are involved in agricultural education. Source:

http://nvo.lv/site/uploads/vecie_faili/Parskats_par_NVO_sektoru_Lv.pdf

¹¹ The number of all rural women NGOs in Latvia; only a limited part of them are involved in agricultural education. Source: <http://act-eu.org/?id=91>,

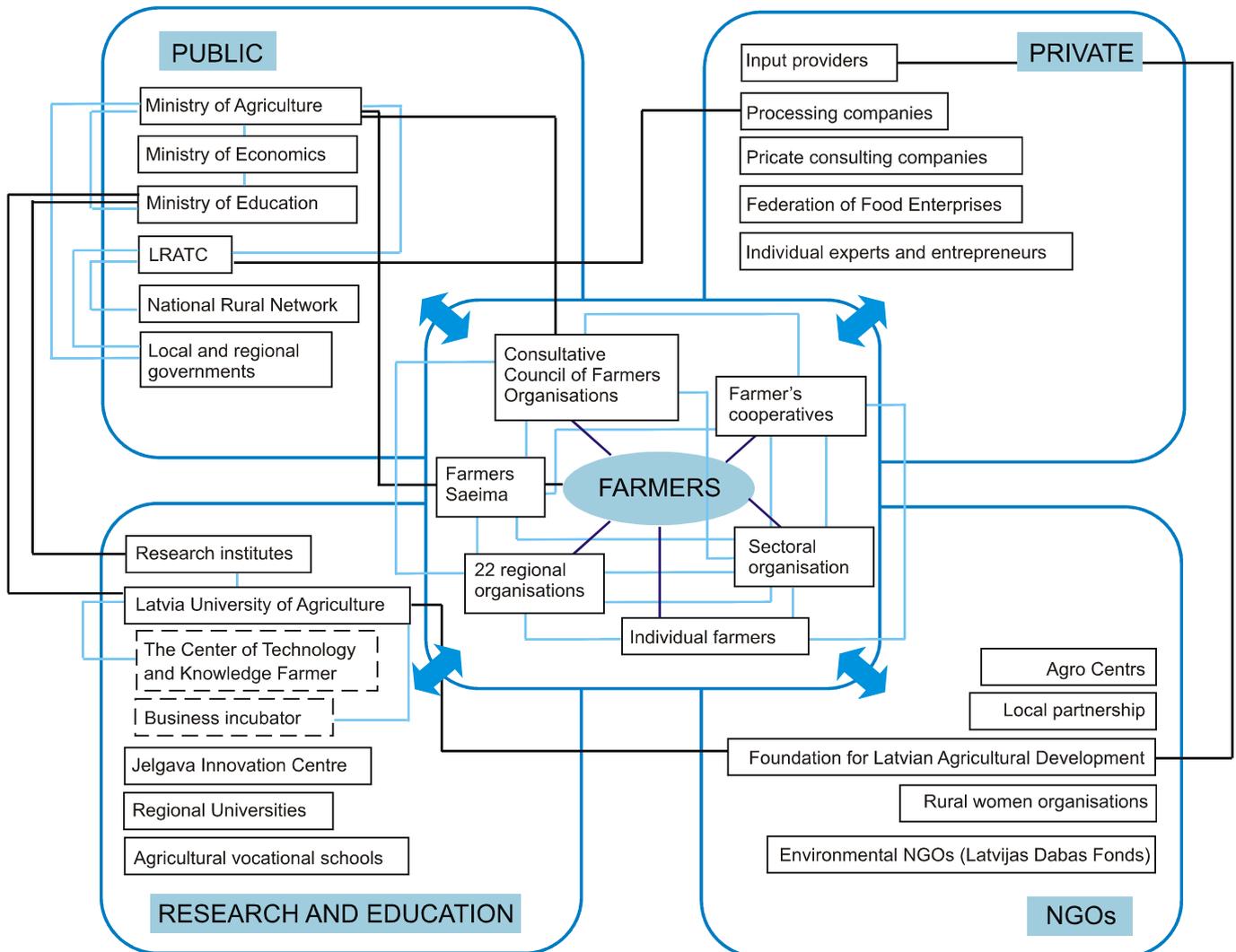
<http://www.likta.lv/LV/Aktivitates/Documents/Freimane%20Rasma.pdf>

¹² Source: http://www.laukutikls.lv/leader/vietejas_ricibas_grupas/vrq_kontaktinformacija/doc_download/49-vietejas_ricibas_grupas_latvija. Agriculture is only one of their field of activities

2.2 AKIS diagram

The AKIS actors and their relationships are depicted in the diagram below.

Figure 1. AKIS actors



3. History of the advisory system

The re-establishment of an independent Latvia in 1990 and the accompanying political, social and economic transformations set the major implications on the composition and functioning of the current Latvian AKIS. Many AKIS institutions (universities, agricultural schools, research institutes) have a long history dating back to even the 19th century and the traversing Soviet period, and there are well established research traditions, institutional relations and accumulated knowledge stock. However, the specific post-socialist conditions of privatisation, introduction of the market economy and restructuring of agricultural production also demanded reorganisation in the agricultural knowledge and information system. In order to respond to the knowledge needs of new farmers, many of whom were even without specific agricultural backgrounds, and in 1991 the Ministry of Agriculture and the Latvian Farmers' Federation established the Latvian Rural Advisory and Training Centre with an extensive advisers' network all across the country. Also new research issues were identified in both the social and natural sciences in relation to land and agrarian reform, new food production technologies, new crop varieties etc.

The EU accession process, launched in the second half of the 1990s, is another major milestone which has driven considerable transformations both in agriculture and the AKIS. In the result of the harmonisation of national and EU legislation (which often meant, though, one-sided approach "accordingly to the provisions of EU laws") agricultural legislation, priorities, regulation and support measures have significantly changed. In order to effectively transmit this new framework to agricultural producers, an active involvement of AKIS institutions was necessary. LRATC was reorganised in 2004 into a limited liability company and its self-financing part has increased. But it is retaining the strong influence of MoA, which contracts LRATC for the implementation of specific rural development programmes. In parallel to LRATC services, there has been an increasing number, and role, of various private actors in AKIS, in particular agricultural inputs from industry, professional organisations and farmers' cooperatives. Their knowledge supply is often more specific and better focused, but it involves the risks of biased knowledge as well as fragmentation and uneven access to knowledge at the system level.

A fairly recent trend in Latvian AKIS is the establishment of trans-sector and trans-disciplinary platforms (for instance, knowledge transfer centres, industry innovation clusters, platform of food technologies) where collective knowledge creation, exchange and learning are taking place. They are part of the newly formed national innovation policy aimed at facilitating knowledge exchange between scientists and practitioners. Also various less formal learning and innovation networks take up their participants' knowledge needs.

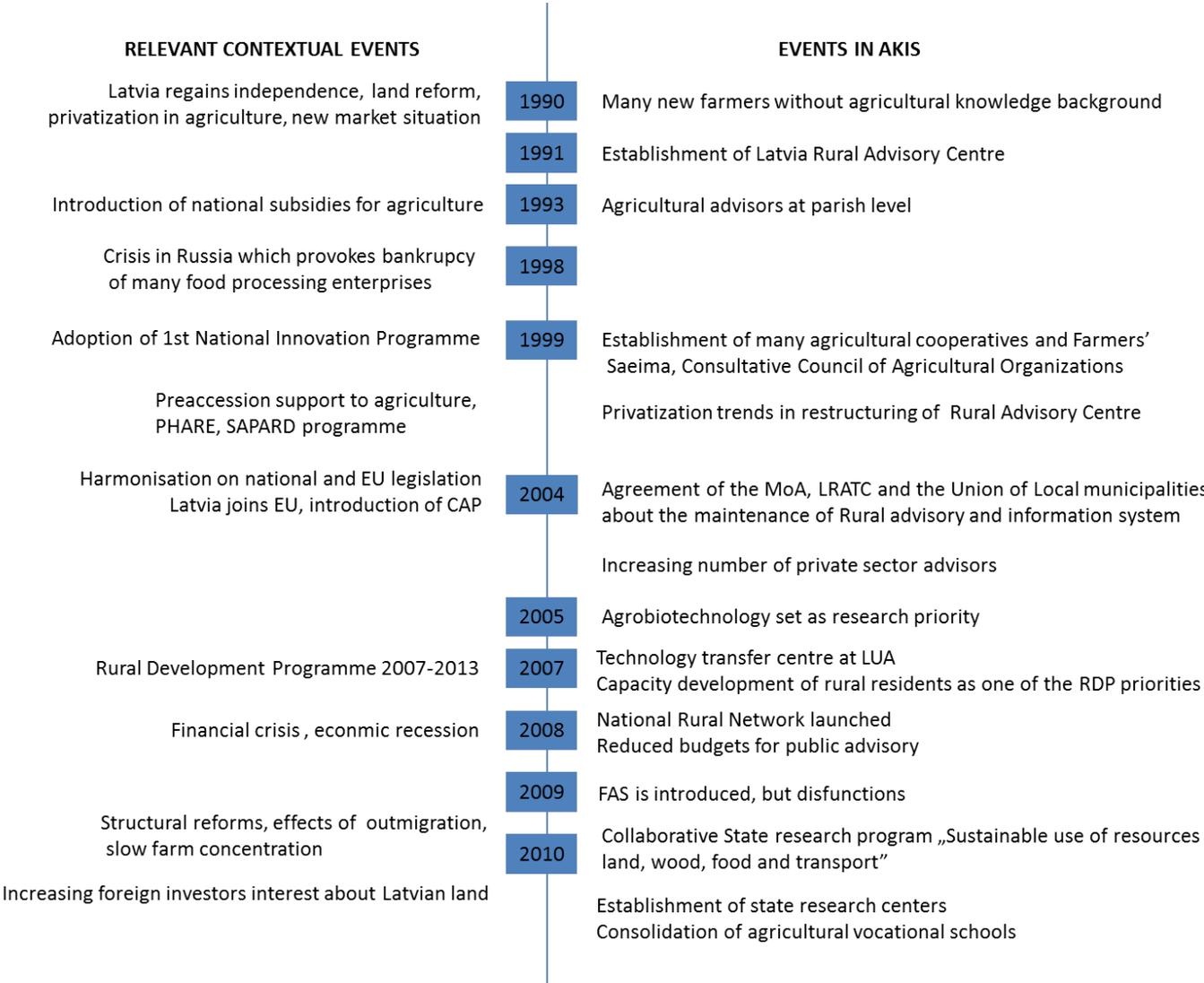
Despite the increasing interaction and cooperation among various AKIS institutions and actors, AKIS remains fragmented in the way that there is a weak coordination among them. Also very few AKIS members perceive it as a united system. Instead, there are sporadic short- or long-term networks or coalitions formed around specific interests who are pushing forward certain agricultural development patterns and respective knowledge (Tisenkopfs et al, 2011).

Finally, it has to be mentioned that the specific structural context of agriculture with the big share of small and medium farms also influence AKIS. Small farmers in particular have a low

financial capacity to pay for advice and even less for targeted research. Recently introduced public policy measures target these farms with the aim of facilitating their restructuring and stimulating production. In turn, large scale professional farmers can afford to buy education and advice elsewhere, including at knowledge organisations abroad. Agricultural experts estimate that there is a general insufficient awareness among farmers of the relevance of advice as well as that they are uncritical about the advice they accept from various sources. Farmers have to be skilled to orientate themselves in the diversity of knowledge provision services on offer.

The main events in the AKIS evolution together with the most relevant context events are depicted in Figure 2 below.

Figure 2. Context and trends in AKIS evolution 1990-2013



Source: Adopted from Tisenkopfs et al (2011)

4. An outline of the agricultural advisory service(s)

This section details agricultural advisory services touching their governance, funding, working methods, clients and interactions with other AKIS actors. It is based both on the survey carried out specifically for this purpose as well as on expert interviews and secondary information sources.

4.1 An overview of all service suppliers

Agricultural advice in Latvia is diversified and decentralised as an increasing number of public, private and third sector organisations are involved in providing advice to farmers, and there are no strong coordinating mechanisms among them. For some of those organisations agricultural advice is among one of their major occupations (like LRATC, private consultancies, also farmer organisations), for others it is only a supplementary activity to research (research institutes), business (processing companies, input suppliers), education (agricultural schools, universities), or civic activities (NGOs). To improve the quality of consultations many market actors hire their own advisers' corpus.

4.2 The main public policies, funding schemes and financing mechanisms

Public rural and agricultural policy as a set of laws, regulations and priorities forms the general framework of agricultural development, according to which agricultural advisory organisations also operate. However, there are no central coordinating mechanisms for all advisory services. Organisations providing advisory services are financed from public, private and mixed sources. Public funding is assigned for budget institutions (like educational and research institutes) and on contract and project basis for others. The actual advisory services are financed from the state budget, EU funds, and contracts with the state, local authorities and to a lesser extent with NGOs. Farmers' and entrepreneurs' fees also compose a considerable part of financing for advisory organisations. In some occasions advice is provided for free on a voluntary basis; this is the case for public, educational establishments whose functions do not formally involve advice provision.

The main national agricultural and rural policy documents (Law on Agriculture and Rural Development, Rural Development Programme and Rural Development Strategic Plan) refer to agricultural and rural advisory services in the context of broader rural development goals among which farmers' and rural residents' education has been set as a priority. Public involvement in agricultural advisory services is mainly implemented through one organisation - LRATC, which is a state co-owned advisory organisation. The centre carries out the state's commissions to provide farmers' training and to inform of national and EU policies and regulations, cross-compliance, to maintain rural advisers' network, to organise demonstration projects and field days, to collect statistical data and to make prognostics on agricultural production. However, LRATC is not fully financed by the state and has to use other public and private sources to finance its activities and fees have been introduced for a large number of its services. LRATC is delegated to supervise and operates within the framework of the National Rural Network, the EU initiated instrument which was introduced to coordinate agricultural and rural information and

knowledge activities. The training activities are defined for each year on the base of farmers' and rural dwellers' survey as well as taking into account topical events.

However, as already stated above, there is a discrepancy between the political claim towards supporting agricultural education and the actual spending priorities in 2007 – 2013. The preference has been given to farm modernisation in terms of the purchase of machinery rather than education and skills. This witnesses the domination of commercial interests in setting and implementing agricultural policy priorities. Big farmers do not see great value in the public educational system, as they can afford to buy advice from anywhere. The lobby of small farmers who are more dependent on public advisory services is weak. In an interview, the leader of the farmers' organisation suggests that small farmers lack mutual trust and a long-term view. Therefore this group is inefficient in securing itself with free high quality consultations.

4.3 Methods and Human resources

Efficiency of advisory services depends a lot on their human resources. Staff numbers vary a lot among the various advisory service organisations: they employ anywhere from a couple to several hundred advisors. The big majority (up to 94% in some organisations) of advisors are women which may reflect the general trend that lower paid occupations are mainly performed by women. In general, the number of advisors is stable or increasing, which reflects the current demand for agricultural advice. A considerable number of the advisors have university or college degrees and are more experienced than newcomers. Although, the qualification levels of advisors is not always satisfactory. Especially the representatives of commercial farmers express their discontent with the quality of public and local advisors who can inform rather than provide professional advice. In the meantime, farmer representatives as well as researchers and public advisors also warn about information and knowledge coming from private consultancies and input providers because often the information and knowledge are not verified in Latvian conditions and may be ambiguous. The quality of advisers is also difficult to estimate due to the fact that very few of them have specific certificates. This also poses the problem of accountability: as farmer representatives point out, advisors do not assume responsibility in cases of erroneous advice and it is the farmers who are penalised in a case of wrongdoings and instances of violation of rules. Some advisors use the possibility to improve their qualifications in training courses. The need to improve advisor qualifications has been discussed during the elaboration process of the Rural Development Plan for the period 2014-2020. The head of a large association stated in his interview that most commercial consultants, as well as LRATC consultants, are not competent to advise modern and specialised farmers. He explained that this is the reason why some associations assembling modern, specialised commercial farmers tend to educate and employ their own experts.

The range and quality of local experts varies between the sectors. In traditional branches of agricultural production there is a good availability of local expertise. For example, in crop production knowledge demand is met by researchers, input providers and consultants – agronomists. Expertise is mostly lacking in agricultural production sectors which undergo rapid restructuring, that are new or demand capital intensive investment and highly specialised advice, like for instance, dairy farming where knowledge demand remains unsatisfied despite it being

one of the main and historical Latvian agricultural sectors and in recently expanding cattle breeding where knowledge demand is also not fully covered.

It should be mentioned here that also the sectors' internal organisation and governance have a considerable impact on building qualitative knowledge supply as it is shown in the cases of vegetable and fruit sectors. In both sectors the knowledge demand is high and there are experts to serve them at LRATC, fruit research institutes and farmer organisations' informal knowledge networks. Although the fruit sector is fragmented across a great number of associations and cooperatives, these organisations manage to collaborate in order to ensure the required knowledge and advice is provided. The vegetable sector is split between two major players who consider themselves as competitors. This prevents them from information and knowledge exchange. The sector's representatives suggest that this difference between the two sectors is the main reason why the vegetable sector often lacks knowledge and why it is less developed than the fruit sector.

Advisory organisations combine various methods in order to provide advice to their clients. The main ones are conventional individual consultations on or outside the farm. Also telephone helpdesks, small group advice and traditional media of publications, radio and TV are quite popular. More modern ICT tools like the internet and website tools are comparatively less often applied which may reveal the situation of comparatively less internet access in rural areas (BITI, 2009) and also missing computer skills among farmers. In formal learning methods little attention is given to farmers' interactive mutual learning (however, LRATC organises farmer interest groups for farmers working in the same sector and which are aimed to facilitate their knowledge exchange and cooperation); training is mainly understood as a linear transfer of scientifically created knowledge to farmers.

LRATC representatives witness that since competition increases in the agricultural advice market, the centre tries to respond to farmers' needs and organise its educational activities on demand. The main forms of knowledge provision that it proposes are demonstrations, training seminars, exchange visits and individual consultations. There is a certain difference among those various activities. Education and training mostly concern the public interests, and they are policy driven and publicly funded. For example, environmental advice is FAS related, publicly funded and project based. LRATC experts interestingly mentioned that "environmental advice on farmers' part is much fear driven". Consultations are more market demand driven and oriented towards farmers' problem solution.

4.4 Clients and topics

Depending on the advisory organisations' profile, specialisation and capacity, they serve from ten to several thousands of clients. Various types of farmers are targeted, but, according to the survey results, most often they are small commercial and young farmers, also producer groups - commercially oriented farmers in knowledge needs. The minority of bigger commercial farms as well as semi-substance and subsistence farms are less often perceived as clients. Whereas big farmers can buy knowledge easily, subsistence farmers with limited financial resources form a risk group which is excluded from professional advice. Another group which is most often out of

the advisory services' scope are farm employees. This is probably due to the minor size of this group as only a few farms employ non-family members.

Farmers' knowledge needs are diverse covering a wide range of topics of production, legislation, regulations, farm and project management, book-keeping, marketing. Similar conclusion was given by informants during the interviews. The main topics on which farmers are seeking advice are related to plant and animal production. They equally as interested (or rather obliged) to update their knowledge about new regulations, legislations and support measures - these topics are crucial for farmers as direct payments depend on the farms' compliance with various regulations. In this regard, farmer representatives' point out that bureaucracy has become a central subject of farmers' training. Also farm management, like book-keeping and taxes and farm diversification are reported as topics of farmers' interest.

In the context of knowledge intensive rural development, innovation support becomes of foremost importance. Advice for agricultural innovations is somewhat limited though. Although new products and production branches are developing, innovations occur rather at farm level and usually start with informal exchange and learning among farmers, especially when they share knowledge across borders and learn new ideas from abroad. The advisory system is less flexible to absorb and deliver this new knowledge and new knowledge needs rapidly. Although there are many ideas for innovations at the hands of producers, there are also many limiting factors to make them into a reality: lack of resources, time constraints, and poor cooperation. An important element that is lacking is innovation management which would stimulate innovators to cooperate. Targeted innovation advice is limited, and the role of experts-advisers is not always clear as many of them merge with traders. There is a hope among the professionals within the European innovation partnerships as an instrument for structural support to agricultural innovations.

4.5 Linkages with other AKIS actors / knowledge flows

In general, advisory organisations operate rather independently from each other, but they consider other knowledge organisations both as potential knowledge sources and competitors. Regarding cooperation, there are various common formal and informal initiatives developed among them: projects, training events, seminars, consultations. For instance, LRATC organises firm days together with input providers and joint demonstration activities together with LUA and Lifelong learning centre; individual experts from various organisations are invited to their field days and demonstration events. LACA has long-lasting collaboration with research institutes to develop and disseminate new local varieties. However, farmer organisations also mention that knowledge costs are rather high and especially for smaller organisations it is problematic to pay experts.

Advisory organisations also use each other as knowledge sources to build up their capacity and improve services. Public research centres and the internet are the most popular knowledge sources. Knowledge and information provided by universities and public authorities are also of comparatively high relevance. Private companies - consultancies, input providers and processors are less often addressed with knowledge needs. Another link of cooperation among advisory

organisations is experts: they are a resource shared by all AKIS actors, especially in those fields where there are an insufficient number of them.

The interviews show that core advisory and educational institutions are well linked. They share both official and unofficial ties and information flows. For example, they may share common projects or they may share premises, outsourced lecturers, their employees may be close friends etc.

Despite those cooperation forms, advisory organisations are also competitors: they are forced to share the same experts and knowledge and compete for clients. In particular, competition is observed among LRATC, private consultancies and also farmer organisations who question the quality of each other's advice.

4.6 Programming and planning of advisory work

The planning of advisory work differs among organisations. The interviews suggest that advisory organisations adapt their development directions according to accessible public funds, priorities defined in Latvian policy documents and analysis of previous farmers' interest. However, this is different in smaller advisor companies which either tend to specialise and work with a closed circle of customers.

Some advisory organisations develop strategic annual plans. The work on them happens in quite a participatory manner as various actors collaborate to produce them - advisory organisations' staff, management, shareholders and the very service beneficiaries. Advisory services of LRATC are planned accordingly to the priorities of the Rural Development Plan. In the meantime farmers' needs are taken into account when planning yearly training activities.

Some problems in planning can be sensed in the comments of the informants during the interviews. Several of them stated that information and knowledge are accessible only about those issues which have been well developed for years. It is difficult to get other or new themes on the agenda and it would be hard to find experts who would be able to give high quality consultations in these themes. Informants state that this is an issue of planning – nobody is willing to educate experts from scratch. Yet everybody is willing to attract existing experts.

5. Characteristic of Farm Advisory System (FAS)

5.1 Organisations forming FAS

FAS became operational in Latvia in 2009; it has been designed at the national level in line with the minimum requirements of Regulation (EC)N°1782/2003, without going beyond the scope of cross-compliance (ADE, 2009). The FAS was set up as an integral part of the existing public advisory service - LRATC. During the preparatory stage of the FAS introduction, the organisational capacity and qualification of LRATC has been improved: a training course for advisers about cross-compliance was developed and training was organised for the centre's advisers.

A selection of new advisory bodies for CC advice was planned as their accreditation through open calls by the CC coordinating institution Rural Support Service. The order of accreditation has been developed in cooperation with farmer organisations and agricultural advisory organisations, and the Cabinet of Ministers accepted this project of regulations in 2008. According to the regulations, the applicants must meet various criteria to qualify for accreditation: operate at national level and be able to provide the farmer with within 10 days a full report with regard to issues related cross-compliance, have three year experience in agricultural advisory with accordingly qualified staff, and there should not be a conflict of interest (MoA, 2008). The coordination and controlling mechanism of cross compliance advisory bodies has not yet been established.

FAS had been operating in Latvia for only a short time, when soon after its introduction, in June 2009 the Supervising Committee of the Rural Development Program at the MoA decided to discontinue the activity of the Rural Development Program which was aimed at supporting farmers who wished to receive advisory services regarding CC due to the general financial crisis and economic recession in the country and because this activity was not aimed at facilitating economic performance (MoA, 2009; 2012b). These developments have led to a situation where accreditation of advisory bodies has stopped. In 2012, farmers NGOs demanded to re-launch the accreditation in order to receive qualitative advice on cross-compliance issues (LETA, 2012). The new project of accreditation of FAS operating bodies had to be prepared by December, 2012.

5.2 Evaluation of the implementation of FAS

A considerable amount of work to provide farmers with information on CC requirements has been implemented. In this regard various information materials have been produced which are accessible to all farmers. MoA has prepared 21 information sheets about the requirements that farmers have to meet. LRATC maintains and updates information about the respective regulations. It has published a brochure online which summarises and a manual which details them more precisely and provides practical advice how to implement them. The centre also publishes information on cross compliance in its monthly bulletin "Rural page" and professional magazines (AgroPols, Saimnieks.LV), as well as providing information in various training courses.

Advice on cross compliance was provided in the aforementioned Rural Development Program activity. However, its impact is estimated to be very minor as the activity's budget has been cut for 99.9%, and only 36 farmers had received advice (Benga, 2010). Moreover, most big farmers concentrated in one region were the beneficiaries. This questions the equal distribution of public funds and, more specifically regarding FAS, equal accessibility to knowledge. Informants pointed out more than once during interviews that the quality of received consultations may differ from case to case.

Since 2011, LRATC within the activity of the National Rural Network makes a call for farmers who are willing to evaluate their farm compliance. The farmers are selected in an open competition. In 2013, 260 farms could receive such evaluation together with advice on how to increase the farm's production efficiency (LRATC, 2013). The beneficiaries receive advisors on the farm where they together inspect and discuss the farm's compliance with the relevant requirements. In a case of non-compliance farmers receive advice on how to avert shortcomings. However, this service is not available for every farmer: small farmers seem to be excluded from the participation, as the conditions to qualify for the competition includes the requirement to have at least 10 cattle or 20 ha of crops (3 ha for fruit growers) (ibid). The inspection results show that there is an urgent necessity for more intensive farmer training about cross compliance. In 2012, for instance, only 11% of surveyed crop farms complied with all the requirements (Skudra, 2012). Although there are financial reasons to why farmers have not implemented all the requirements, there is also a lack of information and knowledge. LRATC reports that farmers' interests about farm advisory services *is not too big* and that they perceive advisors' visits on farm as more about controlling than advising (Arbidans, 2012). This responds to how cross compliance is generally presented, i.e., with the repressive focus on the reduction of payments.

Advice on CC within the Rural Development Program and the National Rural Network frameworks has been partly or fully subsidised. Advice that is not related to cross compliance farmers have to pay for themselves, which again questions the possibility of smaller farmers to access it. However, even if the costs are payable, the problem is the limited number of certified advisors whose advice on CC can be trusted by the farmers (up to date LRATC has 33 certified advisers on cross-compliance; 16 of them are specialised in veterinary and public and animal welfare, 17 - in plant health and environment). This situation also provoked farmer NGOs to demand the reestablishment of the accreditation of advisory organisations.

In the Rural Development Plan for 2014-2020 the importance of FAS is underlined. However, problems observed in the previous planning period and the critique which the only operating FAS advisory organisation has received from other advisory actors forces us to evaluate possible further development of FAS critically.

6. Summary and Conclusions

This final chapter summarises the information outlined in the report and provides conclusions about the situation of agricultural knowledge and advisory in Latvia. The first subchapter captures key concerns in the agricultural knowledge and information system in general. The second one focuses more specifically on the advisory services and the FAS.

6.1 Summary and conclusions on AKIS

Agriculture keeps a strategic position in the Latvian economy and employment structure, especially in rural areas. Although farm sizes and intensification of agricultural production are increasing, Latvian agriculture is dominated by small scale, low-input and low-output production pattern which also shapes the agricultural knowledge demand. Many of these farms have limited financial means to pay for professional agricultural advice and their needs have not been well addressed in the existing agricultural policy. Taking into account their large share in Latvian agriculture, they are strategically important for maintaining the vitality of rural areas and communities, rural and agricultural diversity. The Rural Development Programme for 2014-2020 initially proposed measures to better target (specifically) small farms, but they have been reduced (Hauka, 2013). In turn, financially more sound big commercial farms are in need of more technological knowledge appropriated for their scale of farming, but it happens to be unavailable in Latvia due to the lack of local experts or they are under-qualified or -equipped to provide such knowledge. It should also be added that agricultural production is diversifying: Next to traditional crops production and dairy farming, there have been new or alternative agricultural branches developing like organic farming and energy crops. Agriculture is also coupled with other rural economy activities - tourism, processing, catering etc. These new types and forms of farming also demand specific knowledge.

To serve farmers' diverse knowledge needs, there are various agricultural knowledge institutions operating in the public, private and third sectors. However, AKIS remains fragmented as there are weak single planning and coordinating mechanisms. The traditional public research, extension and educational organisations are governed through agricultural, science and education policies. These policies are developed in consultations with farmer organisations to integrate their needs better; however, they are not well coordinated and there is a lack of a strategic vision of the agricultural knowledge system. Although farmers' education has been set as a priority of rural development, it is poorly implemented in practice. The already small public funding for agricultural advisory as well as science, research and education in general have been even more reduced during the recent financial crisis. This results in enduring shortcomings in the human, organisational and technical capacity of public knowledge institutions that hinders their efficiency to create and/or provide farmers with topical knowledge. Recently the responsible ministries with the involvement of practitioners have launched various measures to improve coordination and consolidate the dispersed resources: for instance, creation of the State Research Centre of Agricultural Resources and Food, transformation of professional agricultural schools into vocational competence centres.

In parallel to traditional knowledge institutions, knowledge and innovation are created and disseminated in various formal and informal, short- and long-term multi-sector and -actor

learning and innovation networks (Tisenkopfs et al., 2013). These networks are often primary sources of knowledge and information for farmers. Involving actors from agriculture and science, but also education, business and policy communities, into interactive co-creation of new solutions for farmers' needs, these knowledge networks materialise the concept and approach of EIP well. Captured by the linear approach to knowledge transfer in farmer education, the current national policies of agriculture and science do not address well such interactive such knowledge and innovation networks. More systemic support to them may also challenge the fragmentation of agricultural knowledge resulting from the fact that many knowledge initiatives operate on a short-term project base. Although projects create valuable knowledge in the long-term, it is often poorly used as there are no follow-up activities after a project ends.

6.2 Summary and conclusions on advisory services and the FAS

Agricultural advisory services in Latvia is diversified and decentralised with various public, private and third sector organisations involved in delivering knowledge to farmers, but there are no strong coordinating mechanisms among them. This perhaps does not ease the farmers' situation when they need to choose the most appropriate knowledge provider.

The quality of advice is an issue which is often addressed by the AKIS actors. Both the public and private sector advisors have received criticism. The public sector is most often approached in lacking professional advice for commercial farmers, whereas knowledge coming from the private sector sources is considered as less reliable due to the lack of its verification in local conditions as well as due to business interests behind them. The different quality and availability of advice between various sectors can be observed. In general, in the traditional agricultural sectors there is good availability and quality of local expertise. This is lacking specifically in the new agricultural production sectors and also those which undergo rapid restructuring or demand capital intensive investment and highly specialised advice.

To a large extent, the diverse quality of advice is also a consequence of historical development and governance of sectors – in some sectors lack of collaboration, inability to lobby interests and short-term planning have led to a poor knowledge base. Moreover, the interviewed experts suggest that in some sectors long-lasting disinterest in updating knowledge has led to a situation in which it may be impossible to find the required information and knowledge at all when the situation in some cases has resulted in a poor and out-dated information and knowledge base. Yet in other sectors there are well established research traditions and actors have managed to co-operate and jointly solve information and knowledge needs.

Farmers' knowledge needs are diverse, and information and knowledge about public regulations of agricultural production and their implementation are and have become of crucial importance for farmers, their advisors and others with an interest in the sector. In Latvia a FAS developed for the purpose of helping farmers understand and implement the various requirements has been only partly set in place. There is no functioning mechanism of accreditation of farm advisory bodies, nor their coordination and control. As a result there are a limited number of advisory organisations and certified advisers to provide farmers with qualified advice on CC. The only advisory service organisation providing advice on CC is LRATC with its 33 certified advisors on CC.

There is no equal access for all farmers to the existing FAS services. The criteria set for farmers (minimum farm size in terms of cattle or cultivated cropland; priority to farmers who receive more than 15,000 Euros of direct payments per year) to access publicly-funded farm advisory services on CC do not effectively take into account the structural reality of Latvian agriculture in which small farms form such a big share. The potential and specificity of these farms should be better addressed in the future agricultural policies and their practical implementation.

7. Methodological reflections and acknowledgements

To the authors' knowledge, this report is the first attempt to capture Latvian agricultural advisory sector in its totality. No comprehensive analysis of the Latvian advisory sector has been done so far. This first-time experience complicated the drafting of this report as there are few information sources available. Although there are comparatively good records of the public advisory of LRATC, there is, in particular, little information available about the private sector advisory service.

This situation highlighted the importance of the knowledge, opinions and information provided by the respondents whom we met during the interviews and who filled in the questionnaire. We thank them for their participation!

The online survey carried out specifically for Pro-AKIS needs was not of much help for us to thoroughly fill in the knowledge gaps: a fairly low response rate and even fewer fully answered questionnaires in the online survey meant that its results cannot provide a full picture of the agricultural advisory system in Latvia. Only 17 respondents started to fill in the questionnaire. However, not all of them gave answers to all the questions and, typically, many questions had an even lower response rate. Therefore a considerable share of data has to be approached critically and should not be used to make conclusions about the advisory organisations in Latvia.

The low response rate can be explained by several factors. First of all, online surveys typically have a lower response rate. However, this was conducted in summer (from the end of June till the middle of July) when most people in Latvia are on holiday. It is unlikely that these people would fill in the online survey during their vacation. To raise the response rate we called most of the respondents after having sent the second invitation to participate. During these telephone conversations we learned that those respondents who were trying to fill in the survey felt that the questions asked were irrelevant for them and that the survey did not address Latvia's situation well.

During the research we conducted also five in-depth semi-structured interviews. We were using common interview guidelines elaborated for Pro-AKIS. However, during the interviews we came to the conclusion that we have to adapt actual guidelines. The interviews were conducted in June. This timing coincided with the development process of the next Rural Development Plan. All the respondents were deeply involved in the plan's elaboration process.

List of respondents:

- Group interviews with representatives of LRATC;
- Rural consultant from Latvian Association of Local and Regional Governments;
- Head of major farmers' co-op. The co-op has decided to educate its own consultants;
- Representative of Latvia Agriculture University, a person involved in organising professional agricultural education;
- Head of NGO concerned with rural development.

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9. Appendices

Appendix A. List of AKIS institutions

The list below provides an overview of Latvian AKIS institutions. However, it is not complete as all the institutions cannot be listed here.

Status of the organisation	Type of organisation	Organisation	Website	
Public sector	Ministries	Ministry of Agriculture, Department of Rural Development	www.zm.gov.lv	
		Ministry of Education and Science	www.izm.gov.lv	
		Ministry of Economics	www.em.gov.lv	
	Advisory	Latvian Rural Advisory and Training Centre	www.llkc.lv/	
	Local and regional governments	Latvian Association of Local and Regional Governments	http://www.lps.lv/	
		National Rural Network	www.laukutikls.lv	
Research, education and knowledge transfer	University	Latvia University of Agriculture	www.llu.lv/	
	Lifelong Learning Centre	LUA Lifelong Learning Centre	http://www.mc.llu.lv/	
	Knowledge transfer centre	LUA Innovation and Knowledge transfer centre	http://www.inovacijas.llu.lv	
	Business incubators	LUA Business and Technology Incubator	http://www2.llu.lv/homepg/bitis/	
		Jelgava Business Incubator	http://jic.lv/	
	Research institute	LUA Research Institute of Agriculture	http://www.zzi.llu.lv/	
		Plant Protection Research Centre of Latvia	http://www.laapc.lv/lat/	
		Research Institute of Agricultural Machinery	http://www.llu-ltzi.lv	
		Research Institute of Biotechnology and Veterinary Medicine "Sigra"	http://www.sigra.lv/	
		Study and Research Farm "Vecauce"	http://www.vecauce.lv	
		State Stende Cereals Breeding Institute	http://www.stendeselekcija.lv/	
		State Priekuli Plant Breeding Institute	http://www.priekuliselekcija.lv	
		Institute of Biology, University of Latvia	http://www.lubi.edu.lv/	
		Institute of Food Safety, Animal Health and Environment	http://www.bior.gov.lv	
		Latvian Academy of Agricultural and Forestry Sciences	http://llmza.lv/	
		(private)	Pure Horticulture Research Centre	http://www.puresdis.lv/
		(private)	Agriculture Science Center of Latgale	http://org.daba.lv/LLZC/
			Latvia State Institute of Fruit Growing	http://www.lvai.lv/
		Latvian State Institute of Agrarian Economics	http://www.lvaei.lv/	
		Baltic Studies Centre		
	Vocational agricultural schools	Kandava State Technical School	http://www.kandavastehnikums.lv/	
		Priekuli and Jāņmuiža State Technical School	http://www.vplt.lv/	
Bulduru Horticultural Professional School		www.bulduri.lv		

		Malnavas koledža	http://www.malnava.lv/
		Smiltene State Technical School	http://www.smiltenestehnikums.lv/
		Bebrene Professional vocational school	
		Ērgļi Professional vocational school	http://www.ergliarods.lv/
		Saulaine Professional vocational school	http://www.saulainespv.lv/
Private sector	Private agricultural advisory company	Agricon, agriculture consultation enterprise	http://www.agricon.de/lv/uznemums/preciza-laukkopiba
		SIA "Integrētās audzēšanas skola"	http://www.ias.lv/
		Agro Salmaņi, SIA	
	Private company.(input provider) (exemples)	Baltic Agro	http://www.balticagro.lv
		Syngenta	http://www.syngenta.com/country/lv
	Private company (machinery companies) (exemples)	Vaderstad	http://www.vaderstad.com/lv/Par-mums/Vesture/90-gadi/
		Amazone	http://www.amazone.lv/
	Private company (processing agricultural products) (exemples)	Valmieras Piens	http://www.vpg.lv/
		SIA Soira	
Farmer based organisations	Cooperatives (see cooperatives on the website)	Latvian Agricultural Cooperatives Association	http://www.lka.lv
	Associations (see associations on the website)	Collaboration Council of Farmers Organizations	http://www.losp.lv/
		Farmers Saeima	www.zemniekusaeima.lv
		Latvian Association of Organic Agriculture	www.lbla.lv
NGOs	Agricultural education and advice	Nodibinājums Agro Centrs	
		Fonds Latvijas lauksaimniecības attīstībai	www.flla.lv
	Environmental NGOs	Latvijas Dabas Fonds	www.ldf.lv
	Rural focused NGOs	Latvijas Lauku Forums	www.lf.partneribas.lv
	Rural women organisations	Lauku sievietes apvienība	http://www.lsa.lv/