



Prospects for Farmers' Support:  
Advisory Services in European AKIS

## **AKIS and advisory services in Austria**

### **Report for the AKIS inventory (WP3) of the PRO AKIS project**

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## Executive summary

The main aim of the report is to provide a comprehensive description of the Agricultural Knowledge and Information System (AKIS) in Austria, with a particular focus on agricultural advisory services. The description includes history, policy, funding, advisory methods and a section on how the Farm Advisory System (FAS) was implemented.

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.

Austria has a small, but highly developed agricultural sector. A small-scale structure, a high dependence on family labour and a large share of mountainous and less favoured areas are some of its main features. Apart from livestock and crops, dairy products and timber are important outputs of production. Austria is Europe's champion in organic farming and known for the high quality of its products. Hence trade of agricultural products is an important factor in Austria's economy. The linkages of agriculture with rural development, tourism and nature protection are widely recognised. The principle of multifunctionality is thus a guiding principle in Austria's agricultural policy.

The Austrian AKIS relies on strong public support, reaches out to almost all farmers in the country and covers a wide range of topics in training, research and development. It rests on 3 cornerstones: a) an education system built on vocational, secondary and adult education, b) a wide range of advisory services, and c) close cooperation between research and development with practice as well as education. Austria is unique for its agricultural vocational education building on an apprenticeship system and combining both general and specific agricultural education and practical experience. Noteworthy are the Federal Colleges and Research Institutes which unite teaching, applied and research competence under one roof.

The 9 Chambers of Agriculture are the backbone of Austria's AKIS since they provide for around 75% of all extension services and – in cooperation with their own training institute – adult training activities. The Federal Institutes and Offices cover a number of issues of public and private interest. Farmer associations and NGOs provide services on very specific topics and in niches. Private organisations play only a minor role.

The AKIS plays an important role to help the development of agriculture in Austria. In view of the evolving social, environmental and global challenges the AKIS is required to adapt. Stepping up cooperation and information flow among actors, taking on issues of social and public interest, further increasing the level of education of farmers, considering a methodological and systemic review of the AKIS, and securing its financial base are some challenges the AKIS is confronted with in Austria.

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## List of Acronyms

| Acronym  | Explanation   |
|----------|---|
| AA       | Agriculturally utilised area  |
| AKIS     | Agricultural Knowledge and Information/ Innovation Systems  |
| bfi      | Berufsförderungsinstitut (vocational training institute)  |
| CAP      | Common Agricultural Policy of the European Union  |
| EIP      | European Innovation Partnership   |
| EU       | European Union  |
| FA       | Forest area   |
| FAS      | Farm Advisory System  |
| FiBL     | Research Institute of Organic Agriculture   |
| GAEC     | Good Agricultural and Environmental Conditions  |
| GMO      | Genetically Modified Organisms  |
| LEADER   | Links Between Activities Developing the Rural Economy   |
| LFI      | Ländliches Fortbildungsinstitut (Institute for adult education operated by the Chambers of Agriculture) |
| LFZ      | Höhere Bundeslehr- und Forschungsanstalten (Federal Colleges and Research institutes)                   |
| NGO      | Non-Government Organisation   |
| ÖAG      | Austrian Federation of Grassland and Forage   |
| ÖKL      | Austrian Committee for Agricultural Engineering and Rural Development                                   |
| ÖPUL     | Austrian national agri-environment programme  |
| PFEIL 15 | Programme for Research and Development of the Ministry of Life 2011–2015                                |
| PROAKIS  | Prospects for Farmers' Support: Advisory Services in European AKIS                                      |
| R&D      | Research and development  |
| SMR      | Statutory Management Requirements   |
| WIFI     | Training institute of the economic chamber of Austria   |
| ZALF     | Leibniz-Zentrum für Agrarlandschaftsforschung   |

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# 1. Main structural characteristics of agricultural sector of the country

Austria has a small, but highly developed agricultural sector. It is characterised by a small-scale structure, a large share of mountainous and less favoured areas. Some 80% of Austria's land is used for agriculture and forestry purposes.

Agriculture plays an important role in Austria's historical and cultural tradition. It remains an indispensable contributor to the economy and enjoys generally high public sympathy. The Austrian Government pursues a socio-ecological agriculture policy and is committed to fostering its multifunctional role.

## 1.1 Structure

In total, 90% of Austria's surface area (83,871 km<sup>2</sup>) is used for agriculture and forestry, with about 43% of this area classified as agricultural land. 173,317 agricultural and forestry holdings were managed in 2010 according to the Agricultural Structure Survey 2010 on this area. On average the number of holdings decreases by 3% per year<sup>1</sup>. While this decline is primarily associated with the closure of small and medium sized farms, an increase of holdings with more 30 hectares can be observed.

Agricultural and forestry holdings cultivated a total area of 7,348,000 hectares in 2010 of which 2,880,000 hectares were agriculturally utilised area (AA) and 3,406,000 hectares were forest area (FA). Of the AA 1,441,000 hectares are permanent grassland and 1,371,000 hectares are arable land.

Small-and-medium sized and fragmented farms essentially predominate in Austria, family labour is frequent. The average Austrian farm size was 36 hectares in 2010, whereby 18.8 hectares were agriculturally utilised (AA), which lies above the EU average. In an average of all farms, the area used for forestry (FA) amounted to 23.4 hectares. In terms of agriculturally utilised (AA) land around 70% of all farms cultivate an area smaller than 30 hectares, only 14.4% work on more than 50 hectares.

In that year approximately 54% of farmers worked part-time (i.e. these farmers spent more than half of their labour hours on non-farming activities). Around 39% of all farm enterprises were classified as full-time occupations, the remaining share were operated by corporations. Most farms are family run with other family members sharing the work load. Only a few enterprises employ agricultural workers. 37% of all holdings are run by female famers.

Compared to the other EU Member States, Austrian farm sizes are larger than those found, on average, across the EU-27, but smaller than those found in the EU-15 (around 12 hectares and 21 hectares respectively). The area used for forestry (FA) amounted to 23.4 hectares in 2010 in an average of all farms.

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<sup>1</sup> Since the last exhaustive survey, carried out in 1999, the number of holdings declined by 20.3%; since Austria's accession to the European Union in 1995 a reduction of farms by 27.5% was recorded.

The share of mountain and less favoured areas is high in Austria in comparison to other EU member states. In 2011, 65,857 mountain farms were recorded in the mountain farm cadastre (by 1.1% or 701 farms less than in 2010), which are 1/3 of all Austrian farms. Farms situated in areas designated both as mountain or other disadvantaged areas account for 2/3 of all holdings. In these areas the average utilised agricultural area (not including alpine pastures and mountain meadows) per holding was 14.4 hectares. The preservation and the maintenance of these areas are of high importance for Austria as they provide both a home for a considerable part of the Austrian population and an important basis for tourism.

## **1.2 Economy and income situation**

In 2011, the total production value of agriculture and forestry rose by 13.4% to about €8.9 billion, of which agriculture accounted for €7.2 billion and forestry for €1.7 billion. The total share of agriculture and forestry (including fisheries) in the GDP was 1.6%. Around 45% of the Austrian agricultural output is derived from animals and animal products. Another 45% of the output comes from crop production. Agricultural services and subsidiary activities accounted for 10%.

Like in other mountainous countries production is relatively expensive, which puts Austria holdings at a competitive disadvantage, and income is low. In 2011 the average per-farm income from agriculture and forestry of the sample farms amounted to €30,310. The yields of €96,525 per farm represent a 15% increase compared to 2010. Overall only around one quarter of all farmers can make a living from agriculture. The other 75% rely on income from non-farming activities or operate their holding on a part-time basis. Combinations of extra-agricultural income are therefore very important factors for farmers.

Agriculture accounts for 5% of the national labour force. About 80% of domestic food requirements are provided by Austrian farmers.

Organic farming plays an important role in Austrian agriculture. It has one of the highest rates of organic farming in the EU, with 16.4% of all Austrian farms (21,575 farms) certified as organic in 2011 compared to an EU average of 1.3% in 2010. The share of agricultural area under organic management was 19.6% (excluding alpine pastures) in 2011. This makes Austria a key player in European organic farming and policy. The market share of fresh organic products (without bread and bakery products) in national food retail is thus high with approximately 6.5%.

## **1.3 Agricultural Trade**

Foreign trade in agricultural products and food increased by about the same rate in 2011 as the total external trade did over the same period. Exports saw a plus of 12.7% and reached €8.76 billion; imports increased by 11.2% and amounted to €9.65 billion. This resulted in an agricultural trade deficit of €890 million, €13 million less than in 2010. Agricultural imports accounted for 7.4% of Austria's total foreign trade; agricultural exports had a share of 7.2%. In agricultural trade the EU states were Austria's most important trading partners. 93.3% of the imports came from the EU and 75.9% of the exports went into the EU area.

## 1.4 Payments

Austria's small-scale farming is dependent upon producer subsidies. Direct payments constitute an important part of many farmers' income and amount to 50%-80% of the total revenue. The subsidies for Austria's agriculture and forestry from the EU, from federal and provincial funds totalled almost €2.3 billion in 2011, which was €66 million, or 2.8%, less than in 2010. In the coming years agricultural subsidies in Austria are expected decline due to cuts in the EU budget for agriculture in the period 2014-2020.

## 1.5 Domestic Agricultural Policy

Austria is pursuing a socio-ecological agricultural policy and supports a multifunctional system of agriculture that pro-actively serves society as a whole by fulfilling a wide range of functions. This policy favours small-scale and sustainable agriculture.

A general consensus in Austria is that its agricultural sector cannot compete on open markets in terms of volume (but not the quality) of food production. This is due to the structure of holdings and the physical environmental and climatic handicaps associated with production in the less favoured areas. The strategy of government and of the agricultural sector as a whole has thus been to focus mainly on the production of high quality and healthy food and supporting agriculture as the key activity underpinning the maintenance of rural livelihoods and landscapes, thus attracting tourism.

In April 2010 the Federal Ministry of Agriculture, Forestry, Environment and Water Management (hereinafter "the Ministry of Agriculture") initiated the strategy "Unternehmen Landwirtschaft 2020" which provided the ground for mastering the challenges agriculture is confronted with in the upcoming decade. It placed emphasis on competitiveness, safe and secure food stuff and environment and climate protection as well as renewable energy.

The Austrian Government supports and promotes the production of agricultural crops for bio-energy. A general anti-biotech attitude exists in Austrian society. National ordinances prohibit the cultivation of GMOs in Austria which enjoy widespread public support.

The Ministry of Agriculture is legally obliged by law to issue a report on the state of the agriculture and forestry (titled "Grüner Bericht") on a yearly basis.

## 1.6 Rural development

Despite its relatively small direct contribution, as a proportion of economic output<sup>2</sup>, agriculture nonetheless plays an important role in Austria's national and cultural identity and remains an indispensable contributor to the economy. 78% of Austria's population live in areas predominantly classified as rural. Agriculture is considered to be the key activity underpinning the maintenance of rural livelihoods and landscapes, thus attracting tourism. Extra-agricultural income combinations play an important role, thus expanding the job profile of farmers.

The commitment to rural development is therefore strong in Austria. Overall there is general public sympathy and political support for agricultural producers and rural and regional affairs. The Austrian national agri-environment programme ÖPUL (CAP Pillar 2) has one of the highest

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<sup>2</sup> Agriculture accounts for around 1.6% of Austria's GDP but nearly 5% of the national labour force.



participation rates for an agri-environmental scheme in the EU. In 2011 74% of all Austrian farms took part in the programme, which means that 89% of Austria's farmland is subject to some form of agri-environmental management. In 2011 €549.2 million were paid to 114,508 holdings for 2.2 million hectares (excluding pastures) under the programme. The average aid provided amounted to €4,790 per holding.

## **1.7 Outlook**

Austria's agriculture is confronted with several challenges, which concern both the operation (the requirement for increasing the farmers' share in value creation, to counteract structural change and maintain a compact farm coverage, finding alternative ways of supporting the dairy sector, the future of alpine farming, grassland and pastures) and the context of agriculture (ensuring continued food security in times of climate change, increasing environmental disasters and price volatility on global markets, increasing the production of renewable energies, addressing climate change are key challenges, finding ways to handle structural change and tackle sociological issues rural areas, as well as the need for implementing the Common Agriculture Policy as of 2015).

## 2. Characteristics of Agricultural Knowledge and Information System (AKIS)

### 2.1 AKIS description

A comprehensive and well-functioning education and extension system is viewed as highly important for the development of agriculture and rural areas in Austria. Further consent exists about the importance of research, cooperation and know-how transfer as drivers for innovation. The Austrian agricultural knowledge and innovation system (AKIS) consequently builds on a) an agricultural vocational education system through an apprenticeship system and comprehensive secondary education, b) adult education offering continued training in various forms, and c) a wide range of advisory services covering scores of topics. Cooperation between research and development with the field/practice on one side and education on the other is another cornerstone of the AKIS.

#### Structure and actors of the AKIS

The structure of the Austrian AKIS is slim, clear and, compared to other EU member states, rather small. It has continuously evolved over time and not seen any major restructuring or commercialization/privatisation compared to other EU member states. It is characterized by widespread public support and the existence of a manageable number of organisations most of them not operating on a commercial basis.

Since agriculture and the viability of rural areas are public interests, public organisations, such as the Ministry of Agriculture, the federal offices and agencies and the 9 federal regions, the 9 Chambers of Agriculture and the 78 district chambers, several research institutes and schools, and a few NGOs are part of the AKIS. Private firms hardly play a role in AKIS. Very few individuals work on a commercial basis and advise their clients on specific topics, such as horticulture, vinery, fruit and vegetable production, veterinary, accounting and legal issues.

Table 1 provides an overview which aggregates the relevant data of the AKIS actors in Austria. The diagram in chapter 2.2 on page 14, which builds on the graph published in the AAB report<sup>3</sup>, illustrates the structure and organisation of the Austrian AKIS. Chapter 4.1 will give a detailed overview of all service suppliers within the AKIS.

Responsibilities are in general clearly defined and shared between organisations on federal and regional levels. Cooperation between the actors and information flow within the AKIS is good, overlapping responsibilities and competition is scarce. Permeability of research to practice and the other way around works quite well, even though information transfer takes place at a slow speed. Only a few organisations are in direct contact with farmers, foremost the chambers of agriculture, a few farmer associations and non-profit organisations. Cooperatives, private consultants and private agro-industry only play a minor role in providing advice to farmers. The number of training institutions and organisations devoted to agricultural research is few.

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<sup>3</sup> see page 23 in: Hochschule für Agrar- und Umweltpädagogik (2012). Agrarischer Bildungs- und Beratungsbericht 2012. December 2012

**Table 1. Overview of organisations creating the AKIS**

| Provision of service       |  |                         |                    | Source of financing |                |                |                 |                       |                  |                                  |            |                 |
|----------------------------|--|-------------------------|--------------------|---------------------|----------------|----------------|-----------------|-----------------------|------------------|----------------------------------|------------|-----------------|
| Status of the organisation | Type of organisation                               | Number of organisations | Number of advisors | Public funds        |                |                | Farmers         |                       |                  | Private                          | NGO        | project funding |
|                            |  |                         |                    | 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 | 2                       |                    |                     | X              |                |                 |                       |                  |                                  |            |                 |
|                            | Public offices                                     | 2                       |                    |                     | X              |                |                 |                       |                  |                                  |            |                 |
|                            | Public institutes                                  | 4                       |                    | X                   | X              |                |                 |                       |                  |                                  |            |                 |
|                            | Public agencies                                    | 6                       |                    |                     | X              |                |                 |                       |                  |                                  |            |                 |
|                            | Local/regional agencies                            | -                       |                    |                     |                |                |                 |                       |                  |                                  |            |                 |
|                            | Other (specify)                                    | -                       |                    |                     |                |                |                 |                       |                  |                                  |            |                 |
| Research and Education     | University   | 3                       | -                  |                     | X              |                |                 |                       |                  |                                  |            |                 |
|                            | Research Institute                                 | 7                       | 20                 | X                   | X              |                |                 |                       |                  |                                  |            | X               |
|                            | Federal Colleges and Research Centres              | 4                       | 15                 |                     |                |                |                 |                       |                  |                                  |            |                 |
| Private sector             | Upstream industries                                |                         |                    |                     |                |                |                 |                       |                  |                                  |            |                 |
|                            | Downstream industries                              |                         |                    |                     |                |                |                 |                       |                  |                                  |            |                 |
|                            | Independent consultant                             |                         |                    |                     |                |                |                 |                       |                  |                                  |            |                 |
|                            | Private agricultural advice company                |                         |                    |                     |                |                |                 |                       |                  |                                  |            |                 |
|                            | Farmers' owned advice company                      |                         |                    |                     |                |                |                 |                       |                  |                                  |            |                 |
|                            | Other (specify)                                    |                         |                    |                     |                |                |                 |                       |                  |                                  |            |                 |
| Farmer based organisations | Farmers' cooperatives                              | approx. 40              |                    |                     |                |                |                 | X                     |                  |                                  |            |                 |
|                            | 9 Chambers of agricultures                         | 9                       | 600                |                     | X              | X              | X               |                       |                  |                                  |            |                 |
|                            | Farmers' circles/groups                            | 284                     |                    |                     |                |                |                 |                       |                  |                                  |            |                 |
|                            | Chamber's training institute                       | 1                       |                    |                     | X              | X              | X               |                       |                  |                                  |            |                 |
|                            | Breeder and producer associations                  | approx. 60              |                    |                     |                |                |                 | X                     |                  |                                  |            |                 |
| NGO                        | a large number                                     | 20                      | 60                 |                     | X              |                |                 |                       |                  |                                  | X          |                 |

Public research, education and extension bodies are well connected and in some cases even integrated. Education and extension often go hand in hand in practice. Institutes often offer both training and advice and many services and activities build on and integrate both approaches. Thus the border between education and training and advice is fluent.

While the Austrian AKIS is characterized by a close linkage of vocational<sup>4</sup> and adult education, and advisory services, the link to public research is less frequent, although very pronounced such as in the case of the Federal Colleges and Research institutes (Höhere Bundeslehr- und Forschungsanstalten – LFZ). The four LFZ unite education, training and/or research under one single roof and form centres of competence and have developed into outstanding institutions with specializations in selected fields. Several other agricultural technical colleges (secondary vocational schools) co-operate with research institutions and also reach out to farmers in the field. The Chambers of Agriculture operate an institute for adult education in rural areas (LFI) which manages adult education programmes.

### **Policy framework**

Several public policies exist in Austria with relevance for the AKIS, namely in the field of agriculture, education, science, research and innovation. A consistent AKIS policy is however absent. However, with regards to agricultural research, education and advisory services Austria follows the European and national agricultural policy priorities and focuses on both modernisation and multi-functionality.

The extension and advisory system is intended to provide customized solutions and strategies for individual farms with a view to enhancing the competitiveness of farms and creating an attractive and vital rural area. The Ministry of Agriculture has therefore defined several themes<sup>5</sup> that ought to contribute to the strategic objectives in the agriculture sector: farm and business development, sustainable area-wide agricultural production and sustainable natural resource management.

In cooperation with other stakeholders the Ministry has also formulated a vision and a set of qualitative and quantitative goals for the further development of agricultural education and extension<sup>6</sup>. Furthermore it has launched the initiative “Unternehmen Landwirtschaft 2020” with 8 thematic modules to prepare agriculture and stakeholders for the challenges of the next decade. The module “Businessplan – Bildungsplan” focuses on developing holdings and the entrepreneurship of farmers through a range of training and advisory measures and is a good example for the ongoing development and reform of the extension system.

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<sup>4</sup> Professional vocational training and agricultural education is offered in several ways. Vocational training is possible in apprenticeship 14 trades. Secondary education is offered at approximately 100 agricultural technical colleges (secondary vocational schools) which fall within the competence of the federal regions and a number of federal colleges and research institutes. Tertiary education is offered at the University of Life Science and University of Agro and Environmental Pedagogy.

<sup>5</sup> Improving competitiveness, utilisation of new products, markets and services, business development and income diversification, preparation of business plans, support to the implementation of agro-political requirements, environmentally sound production (cross-compliance), organic farming and the development of entrepreneurship and personal skills

<sup>6</sup> see Hochschule für Agrar- und Umweltpädagogik (2012). Agrarischer Bildungs- und Beratungsbericht 2012. December 2012.

The Ministry of Agriculture supports advisory services through the production of training material and the continued training of advisors in cooperation with the University of Agro and Environmental Pedagogy. It furthermore supports the work of the 268 agricultural advisors of the Chamber of Agriculture with around € 8 million per year in the framework of the “Beratervertrag” 2008-2013. In addition the Ministry finances the work of several other organisations, for example Bio Austria, the Austrian Committee for Agricultural Engineering and Rural Development (ÖKL), various other associations and producer organisations, the machinery pools, the biomass association and environmental organisations.

The Ministry is in charge for strategic orientation, monitoring and control of advisory services it finances. In addition it coordinates actors and ensures orientation and alignment of activities. The Chambers of Agriculture report on the activities executed in the framework of the “Beratervertrag”. The Ministry of Agriculture issued a comprehensive report on agricultural education and advisory services in 2012. The Chambers of Agriculture prepare performance reports on a yearly basis.

For the second time since 2008 a report on education and advisory in agriculture was published by the University of Agro and Environmental Pedagogy in cooperation with a number of other institutions in December 2012. This report contains the first findings on an assessment on the effect, impact and sustainability of agricultural education<sup>7</sup>.

Agricultural research<sup>8</sup> is mainly funded by the Ministry of Agriculture within the programme PFEIL 15 (Programme for Research and Development of the Ministry of Life 2011–2015). The research and innovation activities are managed by its federal offices and research institutions, implemented by external research institutions or channelled through the Austrian climate research programme.

Research and innovation is primarily pursued in public, semi-public and private institutions. Activities are oriented by programmes and tenders and organised within clusters, projects or networks of organisations from research and extension. Interaction with research and innovation in the private sector therefore takes place to some extent.

The Ministry of Agriculture and the Ministry of Education and Science cooperate with regard to vocational and secondary agricultural education. Beside these interactions no other specific coordinating mechanism exists.

### **Rural development and networks**

The Austrian Programme for Rural Development 2007–2013 sets out the strategic objectives for rural development. Activities are mainly organised around territory projects, at a local level, with regional, national and European funding. Agriculture plays an important role in rural development activities in Austria.

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<sup>7</sup> „Wirkungsforschung für die agrarische Bildung und Beratung” carried out by the Österreichisches Institut für Erwachsenenbildung (2012). First findings of an impact assessment.

<sup>8</sup> Other ministries and institutions (Federal Ministry of Science and Research (BMWF), Federal Ministry of Transport, Innovation and Technology (BMVIT), the Austrian Research Promotion Agency (FFG) and the Austrian Science Fund (FWF)) occasionally fund research activities relating to agriculture.

There are also several systemic actors whose task is to stimulate knowledge interactions among AKIS actors, such as regional development agencies and associations of communes (“Regionalentwicklungsverbände”) and the projects “Netzwerkland” and “Lernende Regionen”.

### **Outlook**

The “Beratervertrag” concluded between the Ministry of Agriculture and the Chamber of Agriculture ended in 2013. In general public support for extension will decrease in the future. Services providers will therefore have to find alternative ways of financing. Charging for cost contributions of advice will gain importance.

## 2.2 AKIS diagram

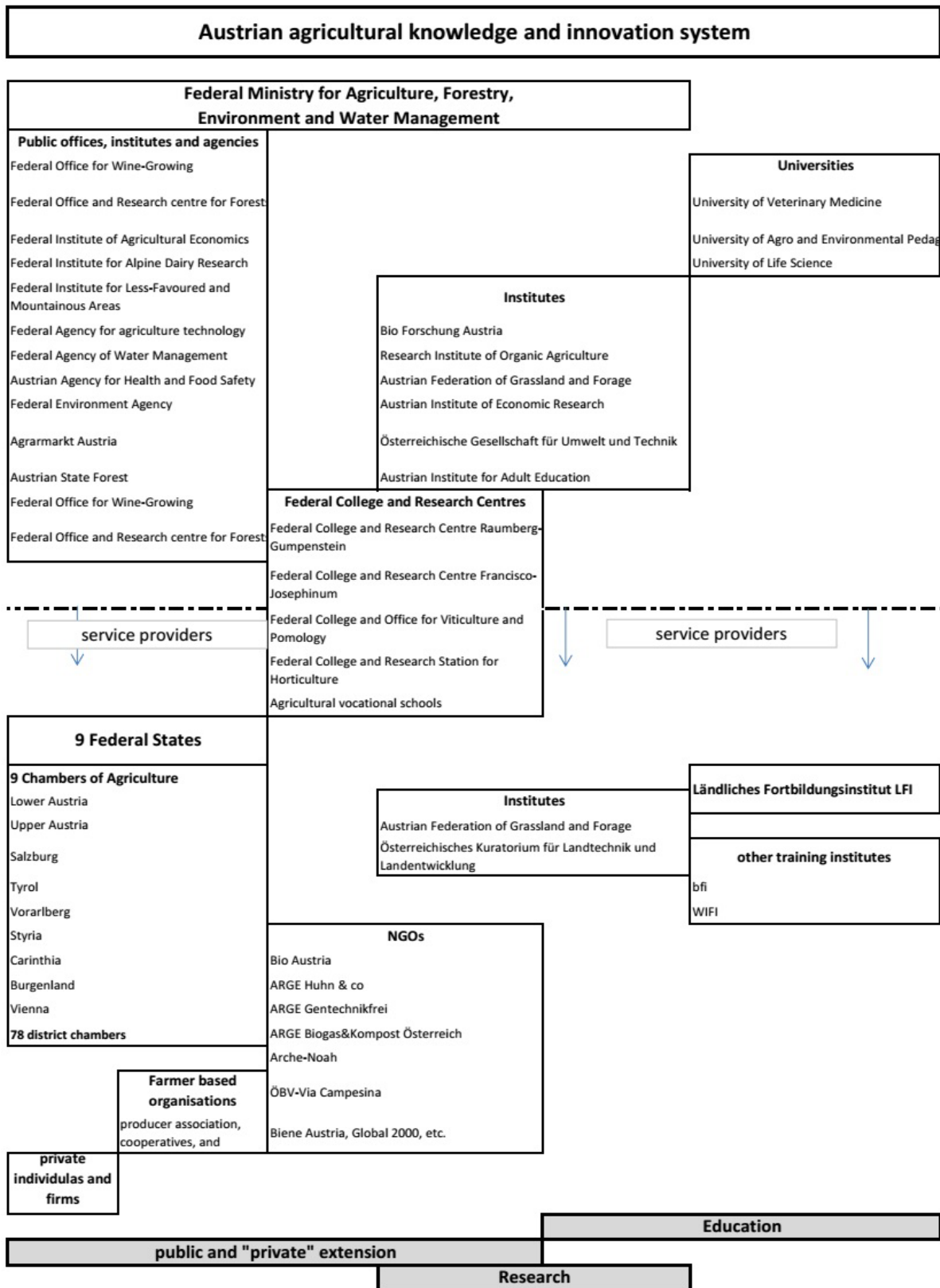


Figure 1. Overview of AKIS actors in Austria (AKIS diagram)

### 3. History of Advisory System

The advisory system in Austria is well established and closely connected, in general, to the emergence of farmers' interest representation and the development of agricultural chambers in particular.

Attempts to represent the interests of the farming community go back to the first half of the 18<sup>th</sup> century. In almost all regions of Austria, existing arable production societies ("Ackerbaugesellschaften") were replaced by agricultural societies in that period. The agricultural societies devoted themselves to the preservation of rural culture and to interest representation. In the second half of that century the agricultural societies were transformed into regional cultural councils ("Landeskulturräten") with a view to model farmer representations following pursuant to the emerged chambers of industry and commerce.

After the First World War a system of autonomous professional interest representation was created and the first chamber of agriculture established in the federal region of Lower Austria in 1922. Within a decade, chambers were also founded in the other federal regions. According to the federal constitution, professional representation of the agricultural and forestry sector falls under the jurisdiction of the regional governments. Therefore the regional chambers established a common federal organization in 1923. In 1953 the Austrian Chamber of Agriculture became a legally-recognized body.

Ever since their establishment regional chambers of agriculture play an important role in offering extension and advisory services to members in legal, economic, technical and social-political matters<sup>9</sup>. Since membership of an agricultural chamber is obligatory, pursuant to law all farmers are entitled to these services. According to an impact analysis carried out in 2012<sup>10</sup> the regional chambers of agriculture provide around 75% of all rendered advisory activities.

The idea of cooperatives reached Austria in the end of the 19<sup>th</sup> century and the first agricultural cooperative societies were established. Warehouse and dairy cooperatives have prevailed ever since in Austria. Due to mergers in the past 20 years the number of cooperatives declined rapidly. Offering advice is an important part of their service portfolio. This is however limited to the specific sector and product groups on offer.

The first machinery pools (rings)<sup>11</sup> were founded in the 70s.

While in the first years after the Second World War advisory services were financed in the framework of the Marshal Plan, the state gradually took over in the subsequent years. Over the years the Austrian advisory structure and strategic orientation has continuously developed further and thereby responded to political and economic developments and the appearance of new thematic trends.

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<sup>9</sup> Additional tasks are interest representation, regional cultural promotion and agricultural subsidies. Regional chambers of agriculture play also a role in the administration of some Common Agricultural Policy of the European Union (CAP) and other agricultural issues which have been transferred by the federal government of Austria to the regional chambers.

<sup>10</sup> Kernaussagen des Projekts Wirkungsforschung für die agrarische Bildung und Beratung. Österreichisches Institut für Erwachsenenbildung. 2012.

<sup>11</sup> In 2011, 91 machinery pools (rings) with 76,490 members were registered in Austria.



National research institutes, federal institutes and agencies and independent scientific organisations play a minor role in advice activities offering assistance and information on only a few selected topics. However, some schools and training institutes have evolved to known information and knowledge providers and drivers for innovation. In particular the Federal Colleges and Research Centres, which combine education and research under a single roof, have advised farmers on a number of specific issues since the 1950s. The approach of applied education and research combined with the proximity to practise proves very successful when passing on knowledge and recent discoveries to farm level and applying innovation in practice.

The Rural Training Institute (“Ländliches Fortbildungsinstitut”, LFI), which was founded in 1972, is the education and training institution of the Chamber of Agriculture. It is one of the largest adult education institutions in rural areas and provides training on a wide range of topics to people in rural areas. Through the close linkage of education, training and advice in Austria, the LFI is a major player in Austria’s advisory system.

Several changes in the political and economic system around 1990 had a great impact on agriculture and in turn on extension and advisory services. The accession to the EU brought about new political and legal guidelines which called for increased privatisation, commercialisation and cost reduction of services. Austria’s agricultural sector was substantially reformed under the EU's common agricultural policy (CAP). Global cooperation increased both competition and price erosion. Advisory and extension services were therefore mainly focused on supporting farmers to cope with the new economic conditions and to adjust the system of agricultural subsidies to the EU’s stipulations. The importance of the chamber of agriculture further grew in this period, and public support for extension services began to decline.

Breeders and producers of livestock, crop, fruits and vegetables are organized in several dozen associations in Austria. Further associations, but smaller in number, exist in forestry, biomass, apiculture and fishery. Several groups with special needs, such as the rural youth and rural women's associations, are organised in specific associations.

With the emergence of organic food, an increasing awareness for environmental concerns and importance of regional production cycle in food production in the beginning of the 90s, new organisations, services and labels appeared. A large number of associations were founded promoting organic farming and regional economies offering a wide range of services, i.e. information, education and raising awareness, labelling and certification, counselling and advisory services. In 2005 16 organisations merged under one umbrella organisation “Bio-Austria” representing organic farmers in Austria. Other organisations, i.e. Forschungsinstitut für biologischen Landbau (Research Institute of Organic Agriculture (FiBL)) and Bio-Forschung, focus on research.

In the wake of the appearance of themes such as food safety, consumer and environment protection and the designation of origin the number non-profit organisations (consumer, animal health and environment protection) grew, which provide, to some extent, information and advice on selected topics to farmers.

The Farm Advisory System (FAS), which is mandatory following EC Regulation 1782/2003, was implemented as of January 2007 in Austria. The Federal Government designated the 9

regional chambers of agriculture with the management of the FAS and the day-to-day implementation of the corresponding activities. The Ministry of Agriculture remains in charge of the coordination and monitoring of the FAS.

For the clients, the farmers, the introduction of the FAS meant only a few improvements were needed since environmental and safety related issues were already exhaustively covered in existing advisory activities provided by the chambers and the standards of the national agri-environmental programme ÖPUL often exceeded cross-compliance standards. On the other hand the administrative requirements of cross-compliance standards strained many farmers.

## 4. The Agricultural Advisory Service(s)

### 4.1 Overview of all service suppliers

The diagram in chapter 2.2 illustrates the structure and organisation of the Austrian AKIS. In the following section the most important service providers are discussed.

The Ministry of Agriculture, Forestry, Environment and Water Management gives strategic orientation, finances and monitors advisory services. It has neither a representation on regional or local level nor advisors that work directly with farmers.

It operates a number of federal institutes and offices which are in charge of numerous tasks. Only in very few cases do they directly provide advice to farmers. The federal offices and research institutions within the responsibility of the Ministry are: Federal Office for Wine-Growing, Federal Office and Research centre for Forests, Federal Institute of Agricultural Economics, Federal Institute for Alpine Dairy Research, Federal Institute for Less-Favoured and Mountainous Areas, Federal Agency of Water Management, Austrian Agency for Health and Food Safety, Federal Environment Agency, Federal College and Research Centre Raumberg-Gumpenstein, Federal College and Research Centre Francisco-Josephinum, Federal College and Office for Viticulture and Pomology, and Federal College and Research Station for Horticulture.

The results and outputs that research institutions produce is in most cases disseminated through the chambers and other advisory organisations which facilitate information transfer.

The Chambers of Agriculture are the first point of contact for most farmers seeking support. According to an impact analysis<sup>12</sup> carried out in 2012 the chamber accounted for 78% of all contact that farmers had with advisory organisations. 9% of advice was provided by professionals, such as veterinarians, accountants or lawyers, and 6% by agricultural input providers. Farmer organisations, breeder and producer associations, organic farming organisations and research institutes accounted for the remaining 7% of all contact.

The chambers of agriculture are the interest representation of Austrian farmers and established according to federal law. They are semi-publically financed as they receive financial support from Federal and Provincial Governments and compulsory membership fees from the farmers. The chamber of agriculture is structured around one federal chamber, 9 regional chambers and 78 local chambers, mobilising a total of ± 2000 persons and approximately 300 advisors.

The chambers have two major functions: (i) lobbying to represent and defend their members' interests and (ii) provision of specialised services to the farmers, which include advisory services and facilitating the preparation of farmers' request for subsidies and their subsequent handling. These functions are subcontracted to the chambers by the various federal governments and organised through a specific devolution contract from the federal government ("Beratervertrag"). Farmers receive general advice free of charge (directly subsidised by the Government). Specialised advice is personalised and is available at full cost to the farmers.

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<sup>12</sup> The Ministry commissioned the Austrian Institute for Adult Education to conduct an assessment on the impact of education and advisory services on agriculture. In concrete information on education and advisory measures was collected, trends assessed and impact of basic education, training and advisory measures analysed.

With around 1,136,000 hours of support and advice in 833,000 cases in 2011, and a broad portfolio of services and topics, the chambers are the backbone of the Austrian AKIS.

Under the umbrella of the chambers of agriculture several sub-organisations operate: the rural youth and rural women's associations, the project and business support unit (LK Projekt GmbH) and the Institute for Further Training in Rural Areas (Ländliches Fortbildungsinstitut, LFI). The LFI is the biggest adult training centre in rural areas. It carries out around 14,000 courses with over 300,000 attendees every year, cooperates with European projects and is involved in regional development activities. The LFI and the Chambers cooperate in the development and organisation of trainings, curricula and material.

The work of the Austrian Federation of Grassland and Forage (ÖAG) and the Österreichische Kuratorium für Landtechnik und Landentwicklung (ÖKL) rests mainly on the publication of information and fact sheets on a number of issues and the participation in, and organisation of, training.

All four Federal Colleges and Research institutes in Raumberg-Gumpenstein, Francisco Josephinum, Klosterneuburg and Schönbrunn are considered to be centres of excellence in the German speaking area. They have specialized in few selected fields, namely alpine farming, machinery, renewable energy, vinery and horticulture and work in research, education and advisory.

Bio-Austria is the biggest non-profit organisation which has specialized in organic farming. It operates in all 9 regions and mobilises around 25 advisors. It advises existing and future organic farmers, publishes advisory material, fact sheets and a bi-monthly magazine, develops several training programmes and organises events for farmers and exchange meetings for advisors. In this field Bio-Austria cooperates with the Chamber of Agriculture and the LFI, universities and agricultural research institutes, agricultural associations and other research institutions specialized on organic farming (Bio Forschung Austria, Research Institute of Organic Agriculture (FiBL) and ÖAG) and other NGOs (such as Arche Noah, ARGE Huhn & Co and Arche Austria).

A number of associations and NGO cooperate with farmers in the area of their specialisation. ARGE Biogas & Kompost Österreich promotes energy and biogas production from biomass, ÖBV-Via Campesina's target group are small and smallest farmers, Biene Austria supports beekeepers, and Global 2000 collaborates with producers to reduce herbicides in agriculture.

Famer based organisations, such as breeder and producer associations, cooperatives and producer groups, represent and support their members and clients in their area of responsibility. Their number is vast and an inventory or comprehensive overview does not exist.

Private firms hardly play a role in AKIS. Very few individuals work on a commercial basis and advice their clients on specific topics, such as horticulture, vinery, fruit and vegetable production, veterinary, accounting and legal issues. Up- and downstream industry cooperates and advises farmers on issues concerning product quality and logistics.

The majority of the service providers are active nationwide and reach down to the clients on local level. Some have a thematic focus. Very few organisations operate regional branch offices.

Regional farmer associations and cooperatives for example are active in their field of expertise only.

## 4.2 Public policy, funding schemes, financing mechanisms

Enabling access to education, training and advisory services to all farmers is a **political goal**.

The **guiding principles** of AKIS are: a country-wide coverage of services, the affordable provision of independent advice which cover a wide range of topics and support diversity.

The public character of the extension and advisory services makes it possible that services are offered nationwide and independent from private interest. Extension and advisory services should be available and affordable to all farmers. Extension and advisory services should furthermore cover a wide range of topics and all branches of production. Thereby also “exotic” topics are covered and the smallest agricultural enterprises can access services.

Basic services are generally free of charge. Private companies play only a minor role. Individual advice, directly paid for by the farmers, is called upon only in a few specific fields (such as veterinary, fruit and vegetable growing, vinery, accounting, and legal advice).

Extension is financed by various sources, while public funding constitutes the largest share followed by membership contributions and fees. Mixed-funding of advisory services prevails in Austria with both federal and regional governments providing financial assistance. Most organisations depend on several sources of income: public subsidies, membership fees and chamber contributions, EU funding and income from the sale of services and products.

The Ministry supports the work of the chambers of agriculture, farmer associations, breeder organisations, machinery pools and several other NGOs, and transfers subsidies which are administered by yearly fixed packages and accompanied by activity reports. The “Beratervertrag” and other agreements form the basis for the funding of advisory services. The federal regions primarily support the work of their agricultural chambers. Cooperation between the Ministry and its federal offices, which are in charge for i.e. the publication of official reports and analysis, is based on law and organised along yearly plans.

Research activities take place in the framework of programmes or projects. Contracts form the basis for projects, contracted work or are compensated for specific tasks between universities, federal offices and public and no-profit research institutes. The relevance of project funding as an income source increases slowly. Funds from the European Union and private sources are of minor importance only.

Farmers receive general advice free of charge (directly subsidised by the Governments and with member contributions), for some more specific services a cost contribution is charged. Few organisations charge on an hourly basis. Private advisors operating on a commercial basis provide specialised and personalised advice at full cost to the farmers.

### 4.3 Methods and Human resources

There are no statistics with regards to agriculture advisors in Austria. Their number can only be roughly estimated and accounts at around 700 for the purpose of this survey. The majority of advisors (642 full-time equivalents in 2012) are employed by the 9 Chambers of Agriculture. In addition, there is a vast number of organisations, who represent farmers' interests, provide valuable support and advice to their members in various issues, or take over coordinating and marketing functions. Occasionally also teachers of vocational schools assist farmers in questions related to breeding and pasture management. The definition and identification of advisory organisations and advisors respectively is therefore difficult.

The number of extension staff has been shrinking continuously over the years, which is most probably linked to decreasing public support. Globally women make up a little less than half of all advisory staff. The attraction and formation of new extension staff is generally a challenge and a precondition for the functioning of the AKIS.

In general the degree of experience and level of education among advisors in Austria is high. Many advisors run a farm themselves. A large part of all advisors have graduated from university and participated in trainings at least once per year. Some have also attended an adult education or agricultural teacher training at the University of Agro and Environmental Pedagogy which offers basic education courses for agriculture advisors as well as agricultural teacher training. A training course at the University of Agro and Environmental Pedagogy in particular is compulsory for those 268 agricultural advisors of the Chambers of Agriculture whose work is financed by the Ministry of Agriculture in the framework of the "Beratervertrag" 2008-2013. In this regard the graduation from either the Bachelor Study in Agro and Environmental Pedagogy (180 ECTS) or the part-time degree programme in Advisory and Adult Education (60 ECTS) is accepted as a proof of competence. As a result many advisors are certified in a specific field, i.e. cross-compliance and other agri-environment topics, or quality manager. Training courses organised by public research institute, universities and the LFI are most popular. Programmes of private training institutions (bfi, WIFI) are demanded to a minor extent. NGOs or agricultural input providers or output processors are barely seen as relevant training providers.

With regards to the topics and subjects of consultation two trends are visible: on the one hand trainings on technical and factual issues are frequently attended (i.e. fruit and vegetable production, rare species, organic farming, renewable energies, plant and animal production, pasture management, IT). On the other hand "soft" skills and social and methodological issues are increasingly demanded (i.e. methodology and didactics, coaching, time management, personal skill development, management of difficult situations in advisory work, general advisory techniques, communication, project management).

Advisors generally work for a very long time with their organisation. More than half of all extension staff stays with their organisation for more than 10 years. Around 1/3 of all extension staff has more than 12 years of professional experience. This rather low staff turnover rate can be regarded as conducive for knowledge management within an organisation.

Cooperation between the different organisations and their staff is good. Advisors and specialists are frequently invited to attend and speak at trainings and thematic working groups. Extension

staff have also formed various networks and meet regularly for the purpose of exchange and strategic orientation.

Most of the available time in advisory organisations is spent on advisory services, which ranges from consultations on production, technical and business related matters to the provision of guidance and assistance on aspects of participation in public support schemes. Drafting publications, articles and other material, organising trainings events, attending seminars for personal training purposes and lobbying are further activities. Administration accounts for a considerable share of the day-to-day activities. To a minor extent organisations are involved in research activities.

Individual contact accounts for the largest share of all interactions with clients. Advice is primarily provided through telephone conversations and the electronic reply of requests, followed by direct contact with the farmer outside the farm. Visits to the farm with a view to providing special advice, carrying out on-the-spot checks or helping the development of a new strategy or the diversification of income and products are less frequent due to the limitation of resources and associated high costs. Group advice is a very popular method (mainly outside the farm) to reach out to a large number of clients with an emphasis on the process of generating learning and innovation through interactions between the involved actors. Professional journal and specialist literature are other very relevant sources of information for farmers.

Additionally advisors function as transmitters for innovation and for formulating and conveying knowledge demands and problems from the field to advisors and researchers. They also act as translators of legislative and administrative rules and spend considerable time assisting farmers to meet administrative requirements.

Various forms of approach are used in extension work in Austria. Next to the widely applied standard methods<sup>13</sup> the following approaches deserve a closer look, because of the important role they play in knowledge generation and dissemination.

Thematically-focused learning networks and circles (“Arbeitskreise”)<sup>14</sup> are made up of different actors, within and outside the formal, institutionalized AKIS. They are a very powerful format to discuss practical issues, allow mutual learning and the exchange and dissemination of know-how and best-practises. “Arbeitskreise” are crucial for knowledge generation and innovation within the Austrian AKIS. The assessment and discussion of the various branches (“Betriebszweigauswertung”) of holdings is a central topic. “Betriebszweigauswertung” provide a country-wide overview of a sector/branch and thereby immediate insights and serve as benchmarks for farmers. On-site visits checking potential and identifying opportunities (“Betriebscheck”) help farmers to develop their holding. With regard to cross-compliance the

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<sup>13</sup> such as personal individual and group assistance and other farm advisory tools (checklists, manuals and training material, fact and information sheets, booklets, brochures and standardised PowerPoint presentation, software model/computer tool/ web-based information systems, help lines and call centres, newspapers/periodical news/newsletters)

<sup>14</sup> Members usually include farmers and extension workers. Occasionally researchers or representatives of other stakeholders join on a temporary basis. “Arbeitskreise” have around 12-15 members. They are facilitated by extension workers of the Chambers of Agriculture, convene regularly, usually exist for a number of years and are a very popular, effective and efficient format for the discussion of practical issues, for mutual learning and the exchange of know-how. In 2012 “284 Arbeitskreise” with 4500 members were active all over the country.

“Betriebscheck” did not stand the test, since it was conceived strongly as a check-and-control measure.

Experienced farmers function as multipliers and disseminate information and good-practices themselves in learning circles or direct contacts with colleagues (e.g. in dairy farming “Arbeitskreise” this is already practised). Female farmers tend to focus on organic farming and rural development and interact with consumers to increase awareness, understanding and interest for agricultural concerns. Thematic working groups and stable schools (structured group advice) are other innovative methods which have to be mentioned in this context.

Participation in fairs and events (“Bauerntage”) and excursions to model and demonstration farms are further relatively new methods for learning and knowledge exchange. Publications increasingly bring best-practise examples and portraits of farms.

There is a strong trend towards providing specific and tailor-made advice using electronic means in extension, but the application of advisory tools and IT-applications in order to facilitate advisory work and manage knowledge could be intensified.

Also the development of niche products and projects should be promoted, new test farms established and the area for field research increased.

#### **4.4 Clients and topics / contents**

Compared with EU average the level of education of Austrian farmers remains low. 75% of all farmers have pursued primary or secondary education only. As regards training and advice they are very active however. Nearly one out of two farmers has either attended training in the past year or was in contact with an advisory organisation.

Medium and small commercial farms are the primary target group for most advisory organisations. Young farmers and start-up farms and women in agriculture followed by large holdings and subsistence farms are further important clients. Producer organisations and cooperatives are rarely advised. Farm employees are not served at all and are represented by the chamber of agricultural workers (“Landarbeiterkammer”).

Extension services financed with public funds cover a very wide range of topics, from production related and business development and management, to environmental and safety issues to personal skill development. The Chamber of Agriculture as the biggest service provider covers most of these topics in various extents. Other organisations, such as the federal colleges and research institutes, Bio-Austria and producer associations, assist farmers in issues specific to their specialisation and working field. All organisations provide advice to varying extents and depth however. As specialisation of farms and complexity of problems increase, other actors (non-profit and private businesses) may step in and offer the advice needed, often for market rates. In a few cases, output processors advise and support farmers with regards to EurepGAP and GlobalGAP.

This survey shows that plant and animal production are the most relevant topics for farmers in terms of seeking advice. A focus lies on the optimisation of the operation, efficiency gains and reduction of inputs. Due to the economic situation, smaller and part-time farmers show particular interest in the diversification of business and alternative ways of income generation, innovation,



marketing and processing. With regard to rural development issues such as local and rural production cycles, supply chains and ways on how to collaborate with other regional actors as well as on how to include the public shall be discussed. Stable design, environment, agri-environmental programmes and sustainability issues including the management of natural resources are also often subjects of consultations. The demand for specific advice with regards to cross-compliance and machinery is however poor. The last topic is increasingly covered by suppliers. Advice on stable construction is also often provided by respective firms. Training and advice on management, entrepreneurship, organisational development, and personal skill development are generally now requested far more often than in the past. Increased emphasis is given towards gender issues, too. Within these thematic categories several trends can be observed which are summarized in appendix 5. These findings largely correspond with the results of the impact assessment presented in appendix 6, which has analysed the importance of topics among farmers.

(Financial) resources of in particular smaller holdings, which constitute the majority of Austrian farms, are limited. Therefore they run risk of falling out of support mechanisms and not receiving the attention and support they need. Small holdings and farmers find it hard to comply with rules and standards (i.e. cross-compliance or food and market quality systems) and are dependent on several sources of income which puts them at a disadvantage compared to bigger competitors and further increases the gap. Extension should therefore need specially tailored advisory services.

In addition a change of focus in more general discussions is observed which impacts on advisory services. Following an emphasis on environment related issues in recent years, new subjects that now seem to attract attention are: climate change, food security and consumer protection, rural development and the social dimension of agriculture. The latter comprises themes such as living quality in rural areas, burn-out of farmers, farm succession, conflicts between generations, ageing in rural areas, unemployment of youth and also ethical issues. A telephone hotline (“Bäuerliche Sorgentelefon”), a subdivision for women in agriculture, and a Rural Youth division operated by the Chamber of Agriculture are some existing measures within this context. Agriculture is very important for successful and sustainable rural and regional development. As a driver for rural development agriculture should be considered as a part of local and regional supply chains. Thus farmers need to collaborate with other actors; the links and interfaces between them often give room for innovations. All of these topics will turn into a challenge for all actors in the future; covering them requires the development of new products by advisory organisations and the collaboration with other service providers, organisations and facilitators.

If an organisation needs to acquire new knowledge, in most cases they turn to public and private research institutions, universities, public agencies and office, consult the internet or study specific literature. Participation in seminars and trainings, exchange of experience through interactions with practitioners (in thematic-working groups, trials and experiments on the farm) are further popular ways for gathering information. Private companies, both input suppliers and output processors, are sometimes contacted.

The reform of the CAP 2014-2020 involves challenges for the Austrian AKIS and creates a specific demand for information in several fields, i.e. diversification of and non-agricultural

activities, climate change, biodiversity, rural development, renewable energies and energy efficiency, risk management, knowledge management and managing the conversion of the payment regimes.

#### **4.5 Linkages with other AKIS actors / knowledge flows**

Since the AKIS is clear and the number of actors is small, relations between different actors are (historically) tight and close, making it easy to reach each other. Secondly, cooperation and learning are also well developed in the Austrian agricultural sector. Interaction and cooperation among all players is quite intensive and works along formal and informal routes. Resources are therefore used in an efficient manner and overlaps are rare. Competition is scarce and limited to those areas where both private firms and advisory organisations are active.

There is cooperation during the formulation of programmes and strategies, the conduction of surveys, the production of public reports, statistics and analysis, and the subsequent sharing with trainers, students and practitioners. Research and education are in some cases united under one roof which eases the dissemination of scientific results in those cases. Organisations devise and organise programmes and courses jointly. Individual experts frequently speak at training courses and attend thematic working circles.

The Chambers of Agriculture who have a broad basis and network, play an important role in the coordination of actors and balancing different interests. The cooperation between agricultural chambers and some farmer organisations is close and in many cases facilitated due to the fact that directors and chairmen of organisations also assume functions within chambers. This creates synergies and helps the marketing of products.

Austria has been intensifying collaboration between the different players in agricultural extension and research. Farmers and farmer organisations seem to be effective in formulating knowledge demand to advisors and researchers. Agricultural advisory mechanisms are comparatively more receptive to farmers' needs than research and education institutes. Advisory organisations facilitate the transfer of innovations to the user- the farmer- which seems to work quite well. However, the uptake of innovations into formal education takes longer.

Cooperation can still be intensified. In particular alignment of activities to strategic guidelines and information exchange and knowhow transfer can be improved. For these purposes AKIS actors should intensify cooperation in education and advice between and among them through a) the exchange of good-practices, approaches and material, b) the establishment of (regional) centres / offices of competence / the specialization of experts on specific topics and problems, c) the sharing of advisors, and d) the joint organisation of events. Research must be more open and base its work more on practical problems, and be better linked with education to make use of scientific results in vocational and adult education. Cooperation should begin when drawing up research projects. An instrument or platform in charge of the dissemination of R&D results and other tasks does not exist yet, but is required. One actor of the AKIS could be designated with the role of a coordination or platform manager to ensure better alignment of strategic guidelines, to coordinate and steer activities, to increase practice orientation of research and to improve information flow and dissemination within AKIS.

The European Innovation Partnership (EIP) for agricultural productivity and sustainability may be an instrument which can help to bridge the gap between research and the field, and fostering innovation by promoting know-how transfer in both directions.

#### **4.6 Programming and Planning of advisory work**

Monitoring and evaluation of advisory services and strategic planning are important to many advisory organisations.

Many organisations record activities and keep books. Timesheets for advisors are the most popular tool. In some cases generated turnover of advisory services or technical indicators, such as the performance of farms, is pulled up to assess the advisor's work. Incentives to stimulate and reward advisors are rare.

Nearly all organisations work on the basis of strategic or annual plans. In most cases they are elaborated in cooperation of members of the organisation (management and staff) and with representatives of the service beneficiaries and / or public. In a few cases plans are devised by a board of executives which is mostly composed of advisors and farmers and to a smaller extent of scientists and representatives of the public.

The Chambers of Agriculture are currently in the process of implementing a quality management system.

## 5. Characteristics of Farm Advisory System (EC Reg)

### 5.1 Organisations forming FAS

Pursuant EC Regulation 1782/2003 the Farm Advisory System (FAS) was introduced in January 2007 in Austria. The Ministry of Agriculture designated the 9 regional chambers of agriculture with the management of the FAS and the day-to-day follow-up of its activities. The obligation to provide farmers with FAS services was included in the devolution contract on extension/advice (“Beratervertrag”) between the Ministry and the chambers of agriculture. FAS services are thus based on the pre-existent extension system of the chambers and intimately interwoven with their structures and services. The Ministry remained in charge of the coordination and monitoring of the FAS. Other than these standard interactions within and between the various levels of the chambers and the regular interactions with the Ministry no further specific coordination and inter-linkages with other bodies or services exist.

The FAS is financed from national funds and does not receive funding from the EU (i.e. via the Rural Development Programme 2007 to 2013). FAS services are equally addressed to all farmers in Austria and are free of charge. In cases where farm specific problems are discussed a small fee or flat rate (usually between € 10 and 20) is charged for cost compensation. Participation by farmers is voluntary. No specific target group was identified but holdings with a share of direct payments higher than average were specifically informed in the period of the system’s introduction.

The designated operating bodies are responsible for ensuring the qualification and continued formation of the FAS advisors. For the selection of advisers no formal accreditation procedure is followed. They have to prove their qualification by means of certain criteria. In cooperation with the market regulating agency Agrarmarkt Austria they are continuously trained.

A large number of the Chambers’ advisors cover FAS related topics. In terms of full time equivalents a total number of 24 FAS advisors was employed in Austria in 2009. The adviser to operating body ratio was 3. In that year Austria had a ratio of around 5000 farm holdings per FAS advisor, which was the highest of all EU member states. Since 2009 the number of FAS advisors has decreased by 2 and accounts for 22 (in terms of full time equivalents) at the time of writing this report.

Advice is geared towards cross compliance matters, i.e. the delivery of support in relation to the SMR and GAEC15 as defined in Regulation EC 1782/2003. Other issues are not covered under the FAS in Austria, since they are already discussed within the framework of general advisory services.

In this regard it is important to mention that the Chambers of Agriculture had already been informing their clients about environmental, health and safety issues comprehensively in the course of their regular extension to farmers for many years. The idea was always to support farmers wanting to comply with the standards of environmental care and public/animal/plant health and animal welfare. As of 2005, services also covered specific cross-compliance issues in order to contribute to preventing violations of legal provisions of cross-compliance eventually

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<sup>15</sup> Statutory Management Requirements (SMR) and Good Agricultural and Environmental Conditions (GAEC)

leading to the refunding of received payments. Advice now covers issues as set out in Regulation EC 1782/2003. It also goes beyond this scope and alludes to other important environmental, health and safety topics since the standards of the national agri-environmental programme ÖPUL often exceed those of cross-compliance. From 2007 onwards the Chambers organised events and presentations, and prepared a number of tools such as folders, articles and other (Internet) publications, manuals and check-lists to inform their clients specifically on the FAS and cross-compliance.

Different ways are chosen for rendering support. Advice is delivered on a one-to-one basis, on a one-to-group or one-to-all basis. Under these categories individual one-to-one consulting on the farm and thematic advice, and specialised workshops in small groups at the advisory institutions are the most common approaches. Group advice taking place at the farm is also popular, but less frequently when compared to other EU member states. The provision of specific and more general information is ensured through the internet and various publications and printed documents. The compulsory continued formal training of farmers stipulated in the regulation is organised by the chambers in cooperation with the LFIs.

Performance and effectiveness is assessed by checks performed by Agrarmarkt Austria in the course of regular monitoring, the evaluation of various reports and through client surveys. A handbook with check-lists for the control staff was prepared as a tool for checking of compliance during on-the-spot checks. It contains instructions and the indicators to be verified for each of the Annex III SMRs and the Annex IV GAEC standards.

## **5.2 Evaluation of implementation of FAS**

The FAS is integrated in the Chamber of Agriculture's extension system and thus operating within a wider framework for delivering advice to farmers.

The Chamber of Agriculture had already advised its clients on issues regarding environmental standards, public/animal/plant health and animal welfare far before the introduction of the FAS in 2007 in the course of its regular extension. The introduction of the FAS was rather understood as an administrative burden since farmers could not see any additional benefits. Following on from this the demand for explicit cross-compliance advice declined swiftly after the initial activities at the beginning and continues to remain low. As a consequence advice on cross-compliance is now delivered to a great extent through integration into training measures and consultations on other farm related technical matters.

This set-up has proven most effective and productive for the Austrian context, because it links a matter of public interest, such as cross-compliance, with other advisory fields important to the farmer, i.e. technical and economic issues. This is also documented by the very low number of claims as a consequence of cross-compliance violations. Experience shows that advice which integrates public and private matters is more likely to successfully reach the farmer in contrast to advice geared primarily to serve public interest with "little" importance to the client.

Based on this experience it is suggested that advice on cross-compliance is better embedded in advisory activities and linked with other issues instead of pursuing it on its own. If the bigger picture is presented and understood then the understanding of the cross-compliance standards idea and commitment for their application are expected to be higher.

With regard to the legal framework of the FAS the following problems were articulated. Comprehending and applying the existing FAS regulation (EC 73/2009) poses problems to some groups because the wording of the regulation and accompanying documents is difficult to understand and the issues are numerous and complex. This makes it difficult for both advisors and farmers to comprehend the single issues, their relation to the context and to draw conclusions for their application on their farms. Farmers seem to lack understanding for these issues. It is therefore suggested to revise and shorten the regulation so to reduce complexity. Comprehensibility could be improved by means of accompanying documentation which makes it easier to read.

The proposals for amending the FAS include the following. It should be expanded and the range of issues extended to i.e. overall farm advice, technical or business (economic and accounting) farm advice, organic farming, farm diversity, biodiversity, etc. with a view to develop a holistic service for the farmer. Due to the integration of FAS into the Chambers system this is already achieved in practice.

There is a risk that the compulsive character of the FAS drives some farmers out of business. In particular small farmers may find understanding and complying with the regulation especially hard. It is important to note that in many cases the application of cross-compliance provisions involve costly investments which farmers may not be able to afford.

Due to the complexity of SMR and GAEC standards and number of topics it is nearly impossible for a single advisor to possess the knowledge to cover all topics. In most cases several advisors (for plant and animal production and other questions) need to be called upon. This demand for human resources hampers the application of SMR and GAEC issues and raises costs. The incurring costs have been repeatedly voiced as a major problem of implementing the FAS.

## 6. Summary and conclusions

This chapter gives an overview of the key characteristics of the agricultural sector and the AKIS in Austria. It then presents selected strengths of the AKIS, mentions the challenges it is confronted with and proposes measures for further development.

### 6.1 Summary and conclusions on section 1-3

Austrian holdings are naturally operating in an arduous context. A tough natural environment, global competition and dependency on the market, increasing and swiftly changing demands and expectations towards agriculture are some of the challenges that farmers face. A high number of small and family-run holdings find it therefore hard to compete and stay in business and depend on public payments to a great extent. Education and advisory work plays an important role in helping to cope with these challenges.

In support of the objectives of multi-functional agriculture, the AKIS is organised based on the following principles: a country-wide coverage, independent and affordable provision of advice and a large outreach to clients. AKIS consists of several public institutions, the chamber of agriculture and a number of research institutions, farmer associations and NGOs.

The feeling in general is that the Austrian AKIS, which has evolved over a long time and has a predominantly public character, is doing quite well in terms of facilities and cooperation. Funding for advisory and agricultural research is limited. The client's needs seem to be well addressed. Actors are few and responsibilities clear, and relations between the different players good. Cooperation and learning are also historically well developed in the Austrian agricultural sector and competition hardly exists. AKIS is characterized by quite a strong integration of education, advisory and research with a reasonable exchange of information and experiences among all actors. Ongoing training and adult education especially are tightly interwoven within advisory organisations. Nevertheless cooperation can be enhanced with a view to improving information flow, to augmenting the relevance of research to actual practice and to enhancing strategic alignment. The reduction of public funding demands new and alternative ways of service provision and sources of finance.

The Farm Advisory System is implemented by the Chambers of Agriculture and builds on existing structures. In 2011 the Chambers employed in total 22 certified cross-compliance advisors (in terms of full-time equivalents). Advice on cross-compliance standards is integrated into existing education and extension measures and primarily conveyed to farmers through training and technical assistance.

The reform of the CAP requires stakeholders to adapt. New rules and regulations can cause stress for farmers and advisors. Organisations have voiced demand for support on a number of topics, i.e. income diversification and non-agricultural activities, risk and knowledge management, as well as issues related to environment, climate change and rural development. The introduction of a single farm payment scheme can lead to a reallocation of funding. This may cause discontent on the side of the farmers which needs to be addressed.

## 6.2 Summary and conclusions on section 4+5

The Austrian AKIS is comprised of public organisations, the Chambers of Agriculture, a number of research institutes and NGOs characterized by several **outstanding features**. The public character of the AKIS involves widespread political support and public funding and enables a wide coverage. Education and advisory are tightly integrated, and applied research and education often closely connected and united under one roof as in the case of the federal colleges and research centres. The institutes in Raumberg-Gumpenstein, Francisco Josephinum, Klosterneuburg and Schönbrunn focusing on alpine farming, machinery, renewable energy, vinery and horticulture can be regarded as centres of excellence in the German speaking area.

The chambers of agriculture form the backbone of the AKIS. Around 600 advisors cover a wide range of topics and services. This is complemented by activities of a number of other organisations (research institutes and schools, farmer associations and NGOs) in specific fields. In cooperation with the LFI the chambers are in the position to deliver training on a vast number of topics.

Agricultural advisors graduate from the University of Agro and Environmental Pedagogy. This education involves methodological and didactical subjects next to standard technical subjects. Furthermore advisors are continuously trained during employment. Networks of advisors foster cooperation and exchange.

A number of methods and approaches can be considered as best-practice, such as the “Arbeitskreisberatung” and other thematic working-groups, the promotion of multipliers in agriculture, the support to specific target groups (women in agriculture, the Rural Youth), and the fact that social issues are tackled.

The path that Austria has chosen to promote organic farming and rural and regional development can also be considered as successful.

The AKIS and concerned actors are confronted with **challenges** which request **action** in a number of fields.

- **Commitment to the public character of the Austrian AKIS and provision of adequate funding.** The public character and the AKIS in its present form should therefore be reinforced in order to continue contributing to the political and public objectives in agriculture. This would require mid and long-term public funding strategies and corresponding commitments as well as the reinforcement of the role of the Ministry for coordination and steering of advisory services.
- **Provision of affordable, independent and broad coverage of advisory services.** In view of practically declining public funding, organisations need to develop new strategies for securing their operation and attract alternative sources of finance in order to maintain the provision of services in the present form. At the same time ever-increasing administrative requirements seem to gulp valuable resources.

Individual organisations and the system could pursue several paths. Charging for certain specific services in the future without discriminating farmers with little means is a possibility for organisations. Funding through projects is another option, in particular when networks and consortia of various organisations are formed. This can increase the



chance to participate in different thematic programmes. Funding from programme for rural development 2014-2020 and the European Innovation Partnerships may be options that systemic actors can pursue.

In this context it is worthwhile to point out to the differences in the understanding of training and advisory services between Austria and the EU. Concepts, meanings and understanding vary between both sides which renders the utilization of EU funds for training measures in Austria difficult.

- **Continuing and safeguarding the formation of existing and new advisory staff to prepare for the challenges of the future.** The complexity of problems steadily increases, the number of regulations and standards rises too. So do client's demand and the specialisation of farms. This burdens advisors who are called to provide even more specific and tailored advice. Eventually this requires higher qualifications on their side and boosts costs for the organisation. Failing to do so could impair cooperation and trust with clients.
- **Increasing the level of education of farmers.** The level of education of full-time farmers lies below average compared with other EU member states. According to the impact assessment high education levels are directly correlated with higher productivity and levels of satisfaction.
- **Intensifying collaboration of advisory and training with research institutions** to step up the transfer between the field and research. Research should in particular increase the practical relevance of its work. Results and outcomes of research should find their way quicker into (formal) education and training.
- **Enhancing information flow and exchange.** The AKIS is fit to meet the challenges ahead, the establishment of new structures is not necessary. Coordination and information flow within AKIS is so far mediocre. Cooperation between organisations and regions should therefore be increased to enhance the exchange of information, to share experts and expertise, tools and products, to divide work and jointly draw up programmes, and to step up collaboration in projects. Cooperation should be improved between organisations and across regions. Specialization of advisors and organisations/branch offices should be increased with a view to establishing regional competence centres.
- **Development of methods, tools and products.** Specific services and products for the small and smallest holdings should be developed. New niche products and projects, new test farms established and the area for field research increased in order to further develop the AKIS. In general AKIS has to develop new tailor-made products for specific target groups, and to discuss the relevance and dimension of liability claims.
- **Stepping up consulting in business and organisation related matters,** with the help of coaching and process management.
- **Agriculture and rural development.** Agriculture plays an important part in rural development. When devising rural and regional development strategies the focus should be enlarged to the entire local and regional production cycles and supply chains. Other actors, sectors and issues should also be considered because innovation often takes place at links and cutting points. AKIS activities should be better linked with LEADER projects.

- **Establishing a systemic framework for advisory work.** The need to invest some time into achieving a common understanding of relevant terms and methodologies which form the conceptual framework of advisory work was articulated. Clarity and consent with regards to the systemic framework are indispensable for establishing a common ground for planning, implementing and evaluating education and advisory measures.
- **Improve marketing of advisory measures.** To promote advisory measures and communicate success stories with a view to increasing understanding and awareness of the importance of training and education among clients and agricultural matters among the wider public.
- **Reaching out to the wider public.** Advisory organisations should expand their target groups and reach out to the wider public in the future. With a view to promoting the development of responsible citizens and consumers, and to raise their interest and awareness in rural issues, and to improve the image of agriculture, a set of activities on agricultural, forestry and rural issues should be targeted at the public.
- **Evaluation of extension and advisory service,** i.e. assess impact, effectiveness, efficiency and sustainability of activities and programmes.

More **general and global challenges** to the AKIS are:

- Shrinking funds also put policy makers in a difficult situation. They have to manage an increasing number of topics and requirements but are confronted with actually decreasing financial means. Balancing priorities and achieving a compromise will therefore gain importance and receive attention.
- Expectations and demand of society steadily grow and change. Combined with increased global competition this exerts pressure to farmers and in turn to support systems, making advisory work more difficult. In many cases issues of public interest are implemented often with great effort. Impact and sustainability however is low when the background is not understood. Conveying the purpose of these issues, communicating the underlying ideas and context, and raising awareness during consultations is therefore an important task of advisors. This can also be achieved through a better integration of environmental standards into education activities.
- Advisory systems need to balance various and potentially contradictory goals enshrined in policies and to manage conflicts between different interests and ideologies/paradigms, i.e. between the public/consumers, who ask for healthy and safe food, and producers/input suppliers, who have an economic interest, the divergence of cheap versus organic production or the trend towards an intensification of agriculture versus environmental standards, biodiversity and organic agriculture. Farmers, who naturally have an interest in advice on certain topics, see themselves confronted with an increased number of topics and interests, which they understand as public (i.e. biodiversity, environment, animal and climate protection) only.
- The advisory system and ultimately all stakeholders are required to find solutions for a number of social and public issues, such as maintaining the image of agriculture and coping with image attacks, the poor image of food marked by the squandering of food at all stages of production, the ageing population, migration, unemployment of the rural youth and to avoid overworking and burn out of farmers. Finally AKIS must continuously promote and market

their work and advocate for the importance of education, training and lifelong learning. This involves also the evaluation of advisory and training measures.

## 7. Acknowledgement of partners, information sources, gaps etc, reflection on methodology

This report is based on the results of a desk study, the evaluation of 18 interviews and the analysis of feedback received from 14 organisations who responded to an online questionnaire. The desk study involved the screening and study of reports, websites and scientific publications and was carried in May 2013. The questionnaires were sent out to organisations which provide advice or are in direct contact with farmers in the period of mid May until mid June. Interviews were held in June with representatives of strategically important institutions. The report was written throughout the course of July.

The following sources were used for the compilation of this report:

- The feedback received from 14 organisations on the questionnaires
- The memos of 18 interviews
- A number of documents and publications (see chapter 8. References)
- An impact analysis conducted by the Austrian Institute of Adult Education titled “Kernaussagen des Projekts Wirkungsforschung für die agrarische Bildung und Beratung“
- The response of the Ministry of Agriculture to the questionnaire in the framework of the FAS evaluation in 2009
- Websites of a number of organisations

In total 18 interviews were held which were overall very informative and gave valuable insights into the matter. The interviews were not only used to gather new information, but also to verify previously received data or information.

The questionnaire (long and short versions) was sent out to 63 organisations. The response rate was however low, only 18 organisations returned the questionnaire. 4 of these responses were not significant and did not provide relevant information useful for further processing.

Interest in this work among recipients of the questionnaire and interview partners was overall good. However, several limitations and obstacles were encountered during its conduction.

The survey was carried out based on a predefined questionnaire. The scope and coverage of the contained questions brought about several limitations. Some organisations found it hard to respond to questions for the information was not available. Other questions were not applicable. Some reported that categories and terms were not clear or consistent. Many organisations stated that responding to the questions was time consuming. In some cases short telephone interviews were made to specify or confirm certain information.

As we understood, the survey should also go beyond advisory systems and look at issues such as knowledge management, rural development and networking in rural areas. The questionnaire was mainly built to target advisory organisations and not just to gather information e.g. organisations in the field of R&D. Furthermore, the title of the project also does not suggest that other issues apart from advisory services are of interest.

Forestry plays an important role in Austria and is closely connected to agriculture. This topic was however not covered in depth by this survey.

The definition of an advisory organisation is difficult in the Austrian context. Apart from the Chambers of Agriculture, several farmer based organisations, a few education and research institutions and NGOs who are in direct contact with farmers, there are a vast number of other organisations who represent farmers, provide services or assume tasks on their behalf. This makes the classification of an advisory organisation difficult.

This project was met in general with considerable interest amongst the contacted people and institutions. A long list of individuals showed interest in this work and provided valuable information, shared their insights during the course of their interviews and took the time to respond to the questionnaire. Writing this report would have not been possible without their contribution.

I therefore wish to thank in particular the representatives of the following institutions who were available for an interview or provided feedback to the questionnaires:

Ministry of Agriculture, Forestry, Environment and Water Management, the Chambers of Agriculture of Upper Austria, Styria, Burgenland, Lower Austria, Salzburg and Vienna, the LFI Austria and LFI Upper Austria, the Federal Institute of Agricultural Economics, the Federal Institute for Alpine Farming and the Federal Institute for Less Favoured and Mountainous areas, the Austrian Agency for Health and Food Safety, the University of Life Science and the University of Agro and Environmental Pedagogy, the Austrian Institute for Adult Education, the Österreichische Kuratorium für Landtechnik und Landentwicklung, the Arbeitsgemeinschaft Österreichische Bäuerinnen, Maschinenring Tyrol, ARGE Biogas & Kompost Österreich, Bio Austria, Arche-Noah, Global 2000, the Austrian Institute of Economic Research, the Landwirtschaftliche Koordinationsstelle des Landes Niederösterreich, the Österreichischer Biomasseverband and the Landesmaschinenring Styria.

The support and contribution of the following is also indispensable for this work as they provided guidance, suggestions and feedback: Prof. Stefan Vogel and Mag. Agnes Neid. I also wish to thank the Caroline Paul from the Leibniz-Zentrum für Agrarlandschaftsforschung (ZALF) for her support throughout the process of conducting the study and drafting this report.

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Hochschule für Agrar- und Umweltpädagogik (2012). Agrarischer Bildungs- und Beratungsbericht 2012. December 2012.

Österreichisches Institut für Erwachsenenbildung (2012). First findings of an impact assessment. Kernaussagen des Projekts Wirkungsforschung für die agrarische Bildung und Beratung.

Statistik Austria (2013). Agricultural Structure Survey 2010. [www.statistik.gv.at](http://www.statistik.gv.at). Vienna.

World Bank (2010). Strengthening Agricultural Extension and Advisory Systems: Procedures for Assessing, Transforming, and Evaluating Extension Systems. Agriculture and Rural Development. World Bank Discussion Paper 45.

## 9. Appendices

### 9.1 List and contact of organisations forming AKIS

| Name of organisation  | Address             | Website   | Status (public/R&E/private/FBO/NGO) |
|---|---------------------|---|-------------------------------------|
| Ministry of Agriculture, Forestry, Environment and Water            | 1010                | <a href="http://www.lebensministerium.at">www.lebensministerium.at</a>                              | Public                              |
| 9 Federal Regions   |                     |   | Public                              |
| Agrarmarkt Austria  | 1200                | <a href="http://www.ama.at">www.ama.at</a>  | Public                              |
| Federal Institute of Agricultural Economics                         | 1030                | <a href="http://www.awi.bmlfuw.gv.at">www.awi.bmlfuw.gv.at</a>                                      | Public                              |
| Federal Institute for Less Favoured and Mountainous areas           | 1030                | <a href="http://www.berggebiete.at">www.berggebiete.at</a>  | Public                              |
| Federal Institute for Alpine Farming                                | 8952 Irdning        | <a href="http://www.raumberg-gumpenstein.at">www.raumberg-gumpenstein.at</a>                        | Public                              |
| Federal Institute for Alpine Dairy Research                         | 6200 Jenbach        | <a href="http://www.bam-rotholz.at">www.bam-rotholz.at</a>  | Public                              |
| Federal Agency for Agriculture Technology                           | 3250 Wieselburg     | <a href="http://www.josephinum.at">www.josephinum.at</a>  | Public                              |
| Federal Office for Wine-Growing                                     | 7000                | <a href="http://www.bawb.bmlfuw.gv.at">www.bawb.bmlfuw.gv.at</a>                                    | Public                              |
| Federal Office and Research centre for Forests                      | 1131                | <a href="http://www.bfw.ac.at">www.bfw.ac.at</a>  | Public                              |
| Federal Agency of Water Management                                  | 1220                | <a href="http://www.baw.at">www.baw.at</a>  | Public                              |
| Austrian Agency for Health and Food Safety                          | 1220                | <a href="http://www.ages.at">www.ages.at</a>  | Public                              |
| Austrian Environment Agency   | 1090                | <a href="http://www.umweltbundesamt.at">www.umweltbundesamt.at</a>                                  | Public                              |
| Austrian State Forest   | Purkersdorf         | <a href="http://www.bundesforste.at">www.bundesforste.at</a>  | Public                              |
| Federal College and Research Centre Raumberg-Gumpenstein            | 8952                | <a href="http://www.raumberg-gumpenstein.at">www.raumberg-gumpenstein.at</a>                        | R&E                                 |
| Federal College and Research Centre Francisco-Josephinum            | 3250 Wieselburg     | <a href="http://www.josephinum.at">www.josephinum.at</a>  | R&E                                 |
| Federal College and Office for Viticulture and Pomology             | 3400 Klosterneuburg | <a href="http://bundesamt.weinobstklosterneuburg.at">http://bundesamt.weinobstklosterneuburg.at</a> | R&E                                 |
| Federal College and Research Station for Horticulture               | 1130                | <a href="http://www.gartenbau.at">www.gartenbau.at</a>  | R&E                                 |
| University of Life Science  | 1180                | <a href="http://www.boku.ac.at">www.boku.ac.at</a>  | R&E                                 |
| University of Agro and Environmental Pedagogy                       | 1130                | <a href="http://www.agrarumweltpaedagogik.ac.at">www.agrarumweltpaedagogik.ac.at</a>                | R&E                                 |
| University of Veterinary Medicine                                   | 1220                | <a href="http://www.vetmeduni.ac.at">www.vetmeduni.ac.at</a>  | R&E                                 |
| Bio Forschung Austria - der Drehscheibe für Wissen über Bio-Landbau | 1220                | <a href="http://www.bioforschung.at">www.bioforschung.at</a>  | R&E                                 |



|   |                  |  |         |
|---|------------------|--|---------|
| Research Institute of Organic Agriculture                       | 1010             | <a href="http://www.fibl.org/de/oesterreich/">www.fibl.org/de/oesterreich/</a> | R&E     |
| Austrian Federation of Grassland and Forage                     | 8952 Irdning     | <a href="http://www.oeag-gruenland.at">www.oeag-gruenland.at</a>               | R&E     |
| Austrian Institute of Economic Research                         | 1030             | <a href="http://www.wifo.ac.at">www.wifo.ac.at</a>                             | R&E     |
| Österreichisches Kuratorium für Landtechnik und Landentwicklung | 1040             | <a href="http://www.oekl.at">www.oekl.at</a>                                   | R&E     |
| Österreichische Gesellschaft für Umwelt und Technik             | 1020             | <a href="http://www.oegut.at">www.oegut.at</a>                                 | R&E     |
| Austrian Institute for Adult Education                          | 1030             | <a href="http://www.oieb.at">www.oieb.at</a>                                   | R&E     |
| Austrian Chamber of Agriculture                                 | 1010             | <a href="http://www.agrarnet.info">www.agrarnet.info</a>                       | FBO     |
| Chamber of Agriculture of Vienna                                |                  | <a href="http://www.lk-wien.at">www.lk-wien.at</a>                             | FBO     |
| Chamber of Agriculture of Lower Austria                         |                  | <a href="http://www.lk-noe.at">www.lk-noe.at</a>                               | FBO     |
| Chamber of Agriculture of Styria                                |                  | <a href="http://www.lk-stmk.at">www.lk-stmk.at</a>                             | FBO     |
| Chamber of Agriculture of Upper Austria                         |                  | <a href="http://www.lk-noe.at">www.lk-noe.at</a>                               | FBO     |
| Chamber of Agriculture of Vorarlberg                            |                  | <a href="http://www.lk-vlbg.at">www.lk-vlbg.at</a>                             | FBO     |
| Chamber of Agriculture of Tyrol                                 |                  | <a href="http://www.lk-tirol.at">www.lk-tirol.at</a>                           | FBO     |
| Chamber of Agriculture of Salzburg                              |                  | <a href="http://www.lk-slbq.at">www.lk-slbq.at</a>                             | FBO     |
| Chamber of Agriculture of Carinthia                             |                  | <a href="http://www.lk-kaernten.at">www.lk-kaernten.at</a>                     | FBO     |
| Chamber of Agriculture of Burgenland                            |                  | <a href="http://www.lk-bglld.at">www.lk-bglld.at</a>                           | FBO     |
| 78 district chambers  |                  |  | FBO     |
| Ländliches Fortbildungsinstitut Österreich                      | 1010             | <a href="http://www.lfi.at">www.lfi.at</a>                                     | FBO     |
| ARGE Biogas & Kompost Österreich                                |                  | <a href="http://www.kompost-biogas.info">www.kompost-biogas.info</a>           | NGO     |
| ARGE Huhn & co  | 4553 Schlierbach | <a href="http://www.huhn.igv.at">www.huhn.igv.at</a>                           | NGO     |
| ARGE Gentechnikfrei   | 1060             | <a href="http://www.gentechnikfrei.at">www.gentechnikfrei.at</a>               | NGO     |
| ARGE Biofisch   |                  | <a href="http://www.biofisch.at">www.biofisch.at</a>                           | NGO     |
| Bio Austria   | 1040 und 4020    | <a href="http://www.bio-austria.at">www.bio-austria.at</a>                     | NGO     |
| Arche-Noah  | 3553 Schiltern   | <a href="http://www.arche-noah.at">www.arche-noah.at</a>                       | NGO     |
| ÖBV-Via Campesina   | 1090             | <a href="http://www.viacampesina.at">www.viacampesina.at</a>                   | NGO     |
| Biene Austria   |                  | <a href="http://www.biene-oesterreich.at">www.biene-oesterreich.at</a>         | NGO     |
| Global 2000   | 1070             | <a href="http://www.global2000.at">www.global2000.at</a>                       | NGO     |
| bfi   |                  | <a href="http://www.bfi.at">www.bfi.at</a>                                     | Private |
| WIFI  |                  | <a href="http://www.wifi.at">www.wifi.at</a>                                   | Private |

## 9.2 List of interview partners

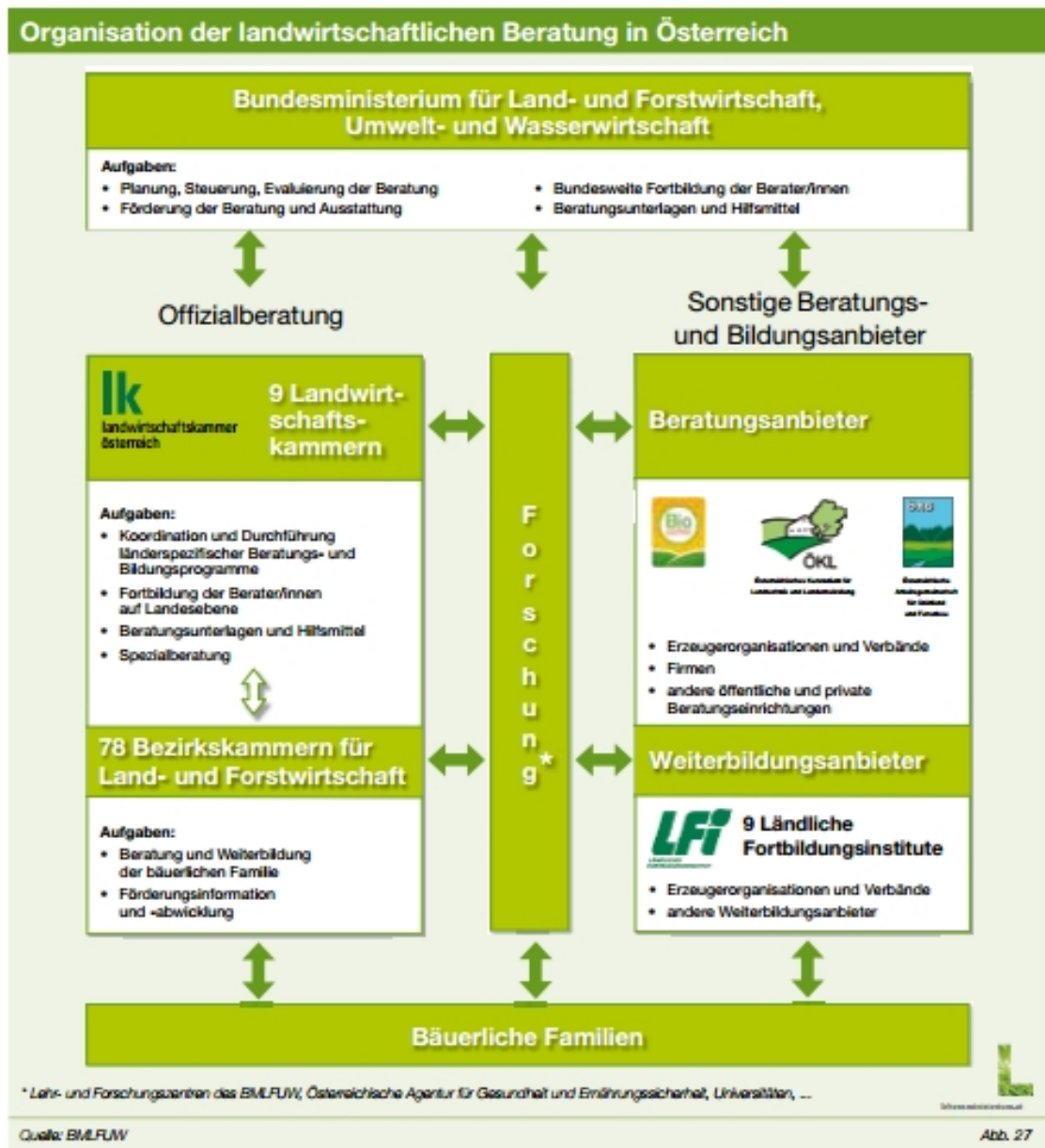
| Name of organisation (D)   | Name of organisation (E)                                  | Website  | spoken with                   | Email  |
|--|---|--|-------------------------------|--|
| Bundesministerium für Land- und Forstwirtschaft, Umwelt und Wasserwirtschaft | Ministry of Agriculture, Forestry, Environment and Water  | <a href="http://www.lebensministerium.at">www.lebensministerium.at</a>               | DI Franz Paller               | <a href="mailto:franz.paller@lebensministerium.at">franz.paller@lebensministerium.at</a>               |
| Bundesanstalt für Agrarwirtschaft  | Federal Institute of Agricultural Economics               | <a href="http://www.awi.bmlfuw.gv.at">www.awi.bmlfuw.gv.at</a>                       | DI Sophie Pfusterschmid       | <a href="mailto:sophie.pfusterschmid@awi.bmlfuw.gv.at">sophie.pfusterschmid@awi.bmlfuw.gv.at</a>       |
| Bundesanstalt für Agrarwirtschaft  | Federal Institute of Agricultural Economics               | <a href="http://www.awi.bmlfuw.gv.at">www.awi.bmlfuw.gv.at</a>                       | DI Klaus Wagner               | <a href="mailto:klaus.wagner@awi.bmlfuw.gv.at">klaus.wagner@awi.bmlfuw.gv.at</a>                       |
| Bundesanstalt für Bergbauernfragen   | Federal Institute for Less Favoured and Mountainous areas | <a href="http://www.berggebiete.at">www.berggebiete.at</a>                           | DI Thomas Dax                 | <a href="mailto:thomas.dax@berggebiete.at">thomas.dax@berggebiete.at</a>                               |
| Österreichische Agentur für Gesundheit und Ernährungssicherheit              | Austrian Agency for Health and Food Safety                | <a href="http://www.ages.at">www.ages.at</a>   | Dr.Dr. Alois Leidwein         | <a href="mailto:alois.leidwein@ages.at">alois.leidwein@ages.at</a>                                     |
| Universität für Bodenkultur  | University of Life Science                                | <a href="http://www.boku.ac.at">www.boku.ac.at</a>                                   | Prof. Dr. Gottfried Holzer    | <a href="mailto:gottfried.holzer@chello.at">gottfried.holzer@chello.at</a>                             |
| Universität für Bodenkultur  | University of Life Science                                | <a href="http://www.boku.ac.at">www.boku.ac.at</a>                                   | Prof. Dr. Stefan Vogel        | <a href="mailto:stefan.vogel@boku.ac.at">stefan.vogel@boku.ac.at</a>                                   |
| Zentrum für Agrarwissenschaften der Universität für Bodenkultur              |   | <a href="http://www.boku.ac.at/cas.html">www.boku.ac.at/cas.html</a>                 | Prof.Dr. Herbert Weingartmann | <a href="mailto:cas@boku.ac.at">cas@boku.ac.at</a>   |
| Hochschule für Agrar- und Umweltpädagogik                                    | University of Agro and Environmental Pedagogy             | <a href="http://www.agrarumweltpaedagogik.ac.at">www.agrarumweltpaedagogik.ac.at</a> | Dipl.-Ing. Liane Kaipel       | <a href="mailto:liane.kaipel@agrarumweltpaedagogik.ac.at">liane.kaipel@agrarumweltpaedagogik.ac.at</a> |
| Österreichisches Kuratorium für Landtechnik und Landentwicklung              |   | <a href="http://www.oekl.at">www.oekl.at</a>   | DI Gebhard Aschenbrenner      | <a href="mailto:g.aschenbrenner@oekl.at">g.aschenbrenner@oekl.at</a>                                   |
| Österreichisches Institut für Erwachsenenbildung                             | Austrian Institute for Adult Education                    | <a href="http://www.oieb.at">www.oieb.at</a>   | Mag. Michael Fischer          | <a href="mailto:fischer@oear.at">fischer@oear.at</a>   |
| Landwirtschaftskammer Niederösterreich                                       | Chamber of Agriculture of Lower Austria                   | <a href="http://www.lk-noe.at">www.lk-noe.at</a>                                     | DI Johann Schlöglhofer        | <a href="mailto:johann.schloegelhofer@lk-noe.at">johann.schloegelhofer@lk-noe.at</a>                   |
| Landwirtschaftskammer Steiermark   | Chamber of Agriculture of Styria                          | <a href="http://www.lk-stmk.at">www.lk-stmk.at</a>                                   | Ing. Fritz Stocker            | <a href="mailto:fritz.stocker@lk-stmk.at">fritz.stocker@lk-stmk.at</a>                                 |
| Landwirtschaftskammer Oberösterreich   | Chamber of Agriculture of Upper Austria                   | <a href="http://www.lk-ooe.at">www.lk-ooe.at</a>                                     | DI Franz Forstner             | <a href="mailto:franz.forstner@lk-ooe.at">franz.forstner@lk-ooe.at</a>                                 |
| Ländliches Fortbildungsinstitut Österreich                                   |   | <a href="http://www.lfi.at">www.lfi.at</a>   | DI Bernhard Keiler            | <a href="mailto:b.keiler@lk-oe.at">b.keiler@lk-oe.at</a>   |
| Ländliches Fortbildungsinstitut Oberösterreich                               |   | <a href="http://www.lfi.at/ooe/">www.lfi.at/ooe/</a>                                 | Ing. Manuela Jachs-Wagner     | <a href="mailto:manuela.jachs-wagner@lk-ooe.at">manuela.jachs-wagner@lk-ooe.at</a>                     |
| Arbeitsgemeinschaft Österreichische Bäuerinnen                               |   | <a href="http://www.baeuerinnen.at">www.baeuerinnen.at</a>                           | DI Michaela Glatzl, M.A.      | <a href="mailto:m.glatzl@lk-oe.at">m.glatzl@lk-oe.at</a>   |
| Bio Austria  | Bioverband Österreich, Dachorganisation                   | <a href="http://www.bio-austria.at">www.bio-austria.at</a>                           | DI Christa Größ               | <a href="mailto:christa.groess@bio-austria.at">christa.groess@bio-austria.at</a>                       |

### 9.3 List of received questionnaires

| Name of organisation (D)   | Name of organisation (E)                | Website                     | questionnaire returned by       | Email  |
|--|---|-----------------------------|---------------------------------|--|
| Bundesanstalt für alpenländische Landwirtschaft (Raumberg-Gumpenstein) | Federal Institute for Alpine Farming    | www.raumberg-gumpenstein.at | Dr. Karl Buchgraber             | <a href="mailto:karl.buchgraber@raumberg-gumpenstein.at">karl.buchgraber@raumberg-gumpenstein.at</a> |
| Österreichisches Kuratorium für Landtechnik und Landentwicklung        |   | www.oekl.at                 | DI Gebhard Aschenbrenner        | <a href="mailto:g.aschenbrenner@oekl.at">g.aschenbrenner@oekl.at</a>                                 |
| Landwirtschaftskammer Wien   | Chamber of Agriculture of Vienna        | www.lk-w.at                 | Ing. Robert Fitzthum            | <a href="mailto:robert.fitzthum@lk-wien.at">robert.fitzthum@lk-wien.at</a>                           |
| Landwirtschaftskammer Niederösterreich                                 | Chamber of Agriculture of Lower Austria | www.lk-noe.at               | DI Franz Raab                   | <a href="mailto:franz.raab@lk-noe.at">franz.raab@lk-noe.at</a>                                       |
| Landwirtschaftskammer Steiermark                                       | Chamber of Agriculture of Styria        | www.lk-stmk.at              | Ing. Fritz Stocker              | <a href="mailto:fritz.stocker@lk-stmk.at">fritz.stocker@lk-stmk.at</a>                               |
| Landwirtschaftskammer Oberösterreich                                   | Chamber of Agriculture of Upper Austria | www.lk-ooe.at               | DI Franz Forstner               | <a href="mailto:franz.forstner@lk-ooe.at">franz.forstner@lk-ooe.at</a>                               |
| Landwirtschaftskammer Salzburg   | Chamber of Agriculture of Salzburg      | www.lk-bgld.at              | DI Johann Brunauer              | <a href="mailto:johann.brunauer@lk-salzburg.at">johann.brunauer@lk-salzburg.at</a>                   |
| Landwirtschaftskammer Burgenland                                       | Chamber of Agriculture of Burgenland    | www.lk-salzburg.at          | DI Otto Prieler                 | <a href="mailto:otto.prieler@lk-bgld.at">otto.prieler@lk-bgld.at</a>                                 |
| Arbeitsgemeinschaft Österreichische Bäuerinnen                         |   | www.baeuerinnen.at          | DI Michaela Glatzl, M.A.        | <a href="mailto:m.glatzl@lk-oe.at">m.glatzl@lk-oe.at</a>   |
| Maschinenring Tirol  |   | www.maschinenring.at        | Mag. Hannes Ziegler             | <a href="mailto:hannes.ziegler@maschinenring.at">hannes.ziegler@maschinenring.at</a>                 |
| ARGE Biogas&Kompost Österreich   |   | www.kompost-biogas.info     | Hubert Seiringer                | <a href="mailto:seiringer@kompost-biogas.info">seiringer@kompost-biogas.info</a>                     |
| Bio Austria  |   | www.bio-austria.at          | DI Christa Größ                 | <a href="mailto:christa.groess@bio-austria.at">christa.groess@bio-austria.at</a>                     |
| Arche-Noah   |   | www.arche-noah.at           | Mag. Beate Koller               | <a href="mailto:office@arche-noah.at">office@arche-noah.at</a>                                       |
| Global 2000  |   | www.global2000.at           | Dr. Waltraud Nowak              | <a href="mailto:waltraud.nowak@global2000.at">waltraud.nowak@global2000.at</a>                       |
| Landwirtschaftliche Koordinationsstelle des Landes Niederösterreich    |   | www.lako.at                 |                                 | <a href="mailto:office@lako.at">office@lako.at</a>   |
| Österreichisches Institut für Wirtschaftsforschung                     | Austrian Institute of Economic Research | www.wifo.ac.at              | DI Dr. Franz Sinabell           | <a href="mailto:Franz.Sinabell@wifo.ac.at">Franz.Sinabell@wifo.ac.at</a>                             |
| Österreichischer Biomasseverband                                       |   | www.biomasseverband.at      | Dipl.-Ing. Dr. Horst Jauschnegg | <a href="mailto:office@biomasseverband.at">office@biomasseverband.at</a>                             |
| Landesmaschinenring Stmk   |   | www.maschinenring.at        | Mario Hütter                    | <a href="mailto:mario.huetter@maschinenring.at">mario.huetter@maschinenring.at</a>                   |

## 9.4 Graph of the Austrian AKIS

published in the Agro and Environmental Pedagogy in the Agrarischer Bildungs- und Beratungsbericht 2012



## 9.5 Thematic trends

Several trends can be observed in the following categories:

### **Plan production**

Application, management and reduction of pesticides, alternative plant protection methods, cultivation of land in line with environmental standards, biodiversity, organic farming, management of nutrients, alternative cultures, development and marketing of new and rare species, accumulation of weeds of grassland, intensive versus extensive production, soil fertility

### **Animal production**

animal health, animal food, grazing, production of high-quality and alternative products

### **Stable design**

(re)construction of stables to improve animal friendly stabling, new designs reducing work and increasing animal wellbeing, stable design and construction in populated areas (nuisance management)

### **Machinery**

Cost management and new ways of ground / soil treatment

### **Cross-compliance**

Nitrate issue and legal framework

### **Rural development**

National agri-environmental programme ÖPUL, green care, strategies to maintain rural areas via specific trade-mark programmes, future of agricultural and social agriculture, social care on the farm, funding possibilities.

### **Diversification of business**

Direct marketing, farm holiday, green care, innovations, labelling and quality programmes, farm and wine taverns

### **Renewable energy**

Energy saving measures and energy checks, increase of energy efficiency, heating of greenhouses, renewable energies (solar, bio gas, biomass heating, renewable sources, construction of micro-networks)

### **Agri-environmental topics and programmes**

National agri-environmental programme ÖPUL, projects for water and nature protection, sustainable resource management, nature reserves and national parks

## 9.6 Importance of topics in consultations

taken from the impact assessment carried out by the Austrian Institute of Adult Education and published in the Agrarischer Bildungs- und Beratungsbericht 2012

