



Prospects for Farmers' Support:
Advisory Services in European AKIS

AKIS and advisory services in Germany

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 Germany, 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 describes the exchange of knowledge and supporting services between many diverse actors from the first, second or third sector in rural areas. AKIS provides 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, where they were discussed with stakeholders and experts, and this feedback was subsequently integrated into the reports.

The situation of the agricultural sector in Germany is characterized by very low economic importance and a heterogeneous agricultural structure. A particularly strong distinction is observed with regard to farm size between the former Eastern and Western German states (*Länder*). There is a noticeable reduction in intensification of land use from the North to the South of the country.

The German AKIS is composed of a huge variety of organisations and institutions with mostly long-standing traditions and well-established roles. All organisational categories (public administration, public and private research and education, private sector, farmer-based organisations and non-governmental organisations) are represented. A dominant characteristic of the German AKIS are the variety of advisory systems at state level which are institutionally very different, a fact that creates considerable obstacles for the horizontal knowledge flows. According to literature and experts, the linkages within the AKIS therefore cannot be classified as well-functioning, especially from the national perspective.

The German advisory system is – historically – a very heterogeneous one and this trend has even increased in recent decades. Nowadays, the classical tripartite situation with official, chamber and private entities still exists, however there is an additional diversity of private and third sector organisations offering mostly specialized services. Since 2007, the FAS was established at *Länder* level and although the institutional diversity was reproduced, there was a common feature in the form of 'farm management systems'. However, the diffusion of the farm management system was mostly unsuccessful – in only 2 out of the 16 states did more than 10% of the farmers adopt the instrument. The survey of advisory services revealed that many active advisors have good educational backgrounds and frequently make use of training opportunities. The dominant target groups are medium to large scale farms. The cooperation between public and private advisory services is well regarded by many of the respondents. The needs and challenges perceived comprise better linkages with research, especially applied research, more training opportunities, networking and acquisition of competent staff.

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Units

ha = hectare = 10 000 m²

kg = kilogramme

m = million

t = tonne

Abbreviations

ABL – Arbeitsgemeinschaft Bäuerliche Landwirtschaft (Syndicate of Traditional Agriculture)

AHA – Andreas-Hermes-Akademie (Andreas Hermes Academy)

AWU – Annual work unit

BLE – Bundesanstalt für Landwirtschaft und Ernährung (German Federal Agency for Agriculture and Food)

BMEL – Bundesministerium für Ernährung und Landwirtschaft (Federal Ministry for Food and Agriculture)

BÖLN – Bundesprogramm Ökologischer Landbau (Framework Program for Ecological Agriculture)

CAP – Common Agricultural Policy

CC – Cross Compliance
CECRA – Certificate for European Consultants in Rural Areas
DAFA – Deutsche Agrarforschungsallianz (German Alliance of Agrarian Research)
DBV – Deutscher Bauernverband (German Farmer´s Federation)
DIP – Deutsche Innovationspartnerschaft (Agricultural Innovation Partnership)
DLG – Deutsche Landwirtschaftsgesellschaft (German Agricultural Society)
DLV – Deutscher LandFrauenverband (German Rural Women´s Association)
DVS – Deutsche Vernetzungsstelle (German Networking Agency for Rural Areas)
EAA – Economic accounts for agriculture
EAFRD – European Agricultural Fund for Rural Development
EIP – European Innovation Partnership
ESU – European size units
FAS – Farm Advisory System
FBO – Farmer-based Organisation
FMS – Farm Management System
GAK – Gemeinschaftsaufgabe zur Verbesserung der Agrarstruktur und des Küstenschutzes
(Federal Fund for Agriculture and Coastal Protection)
GDP – Gross Domestic Product
GQS – Gesamtbetriebliches Qualitätssicherungs-System (Quality Management System)
IALB – Internationale Akademie Land-und hauswirtschaftlicher Beraterinnen und Berater
(International Academy of Rural Advisors)
KKL – Kriterien-Kompendium Landwirtschaft
LSU – Livestock unit
NGO – Non-governmental organisation
UAA – Utilised agricultural area
VLK – Verband der Landwirtschaftskammern (Federation of Agricultural Chambers)

1 Main structural characteristics of the agricultural sector

With its 81.8 m inhabitants (Eurostat 2013a), Germany has the largest population of all the EU member states. Situated in central Europe, it expands from the Baltic Sea in the North to the Alps in the South. It is a federal republic which comprises of 16 states, so called *Länder*, of which 13 are considered territorial states and 3 are city states (Berlin, Hamburg and Bremen).

1.1 Agrarian structure and holdings

The agrarian structure reveals a typical dichotomy in terms of the number of farm holdings and farm sizes. 90% of all of the 288,200 farm holdings in Germany are situated in the old states (Länder). As a consequence, only 24,000 farms (roughly 8% of all German farm holdings) of the 5 eastern states (former GDR) cultivate more than 30% of the total area used for agriculture (utilized area for agriculture - UAA). Of the total German territory (35.7 ha), the UAA totals 16.7 ha (47%). Roughly 33% of the German territory is made up of arable land and 13% of permanent grassland (Statistisches Bundesamt 2013b, Eurostat 2013a).

Organic agriculture was carried out on 990,700 ha and in 5% of all farm holdings in 2010. This area corresponds to a share of 5.9% of the UAA (Eurostat 2012, pp. 54, 126).

Holdings with an agricultural area above 100ha cultivate up to 56% of the UAA. 21% of the agriculturally used area are allocated to holdings with farm sizes of 10-100ha. Only 2% of the UAA are cultivated by small farms with a farm size of less than 10ha (Eurostat 2012, pg. 41). The average farm size in 2012 was 58 ha increasing from 56 ha in 2011. This confirms the long-term trend towards a decrease in terms of absolute numbers of farms but an increase in the average size of farms (Statistisches Bundesamt 2013b).

1.2 Economy and income situation

Over the last three years the country's **gross domestic product** (GDP) per capita has witnessed an increase, e.g. in 2010, the GDP per capita stood at €30,500. This was followed by €31,700 in 2011 and €32,299 in 2012. With a share of 0.6%, the agricultural sector makes up only a marginal part of the German gross domestic product (Eurostat 2013a).

The total **standard output** in the year 2010 stood at €1,494.1 m (Eurostat 2012, pg. 26). When classifying agricultural holdings into standard output classes, 5% of holdings produce outputs of less than €14,999 and 47% of holdings produce outputs ranging from €15,000 to €49,999. On the other hand 4.4 % of the holdings show a standard output of more than €500,000 (Eurostat 2012, pg. 41).

The **output value at producer prices** of the agricultural industry rose from €39,203m in 2000 to €52,277m in 2011. This corresponds to 13.3% of the overall output at producer prices of the agricultural industry (i.e. for EU-27) in 2000 and to 13.6% in 2011 (Eurostat 2012, pg. 68).

In 2011, 41.9 m t cereals were harvested. In terms of **harvested production** of the main crops, sugar beet with 25 m t and common wheat with 22 m t are the most important ones (Eurostat 2012, pg. 84, 88). The cereal yields in t per ha experienced a slight decline from 7.2 in 2009 to 6.5 in 2011. The three most important fruits and vegetables in terms of production in 2011 were apples (898,000 t), carrots (534,000 t) and onions (506,000 t) (Eurostat 2012, pg. 93, 95). Germany features a total **Livestock Unit** (LSU) of 17,8 m LSU, of which 9 m cattle, 6.4 m pigs and 1.7 m poultry make up the largest shares (Eurostat 2012, pg. 37).

1.3 Employment and age structure

The share of **persons employed in agriculture** represents 2% of the overall labour force (Worldbank 2013). In 2010, about 1.1 m people (Statistisches Bundesamt 2013b) were employed in the agricultural sector which relates to an annual work unit (AWU) of 545,500 (Eurostat 2012, pg. 26). Of the total AWU, the family labour force represents a share of 64% (approx. 580,000 people), the regular non-family labour represents a share of 26% (approx. 170,000 people) and the non-family non-regular labour force represents a 10% share (Eurostat 2012, pg 49). From 2000-2011 the agricultural labour input has gradually decreased - from 685 000 AWU in 2000, to over 583,000 AWU in 2005 and down to 525 000 AWU in 2011.

A closer look at the **age structure** of farm managers in Germany reveals that 7% of farms are managed by farmers that are 35 or younger, 25% by farmers between 35 and 44 years old, 37% by farmers between the ages of 45 and 54, 26% by farmers between 55 and 64 and 5% by farmers of 65 or older (Eurostat 2013b).

1.4 Use of chemicals in soil improvement

The use of **fertilisers** averaged 181.4 kg per ha on arable land in 2009 (Worldbank 2013), for pesticides it amounted to 2.5 kg per ha of cropland in 2000 (NationMaster 2013). **Ammonia** emissions from agricultural sources decreased from 663 kt in 1990 to 513 kt in 2013 (Eurostat 2013b) which is equal to a reduction of 22.5% mainly deriving from the decrease of livestock after 1990 in the eastern German states. The gross **nitrogen balance** gradually dropped from 228 kg N per ha in 2001 to 225 kg in 2004 and decreased further until 2008 when the figure stood at 208 kg N per ha (Eurostat 2013a).

1.5 Summary conclusion

To summarize, the German agricultural sector is considered to be of low (although it is slightly increasing) economic importance, and to have a heterogeneous structure. A particularly strong distinction with regard to farm size is observed especially between the former Eastern and Western German states (*Länder*). A certain degree of a reduction in intensification can be witnessed from the North to the South of the Country.

2 Characteristics of AKIS

2.1 AKIS description

With regard to the German AKIS in general, the decentralized governance structure of the federal nation is a key determining factor: State organisations such as ministries and public research bodies exist at both the national and at the 16 *Länder* levels. Most educational and cultural issues, e.g. the organisation of advisory services, are under the states' mandates (see Hoffmann 2002 and Thomas 2007). As a result, as we present the German AKIS below from a predominantly national perspective, as we are unable to comprehensively highlight the institutional diversity that exists within the federal states. The data collection and methods of assessment are explained in chapter 7.

2.1.1 AKIS actors and knowledge flows

The **public sector** of the German AKIS includes the national ministry of agriculture and its subordinate agencies. In the federal republic of Germany, the Ministry for food and agriculture (BMEL¹) is responsible for all superior matters in the agricultural sector.

The German federal Agency for Agriculture and Food (BLE²) acts as an executing body of BMEL (see policy and coordination structures in this chapter). It is based at BLE and is the German Networking Agency for rural areas (DVS) which acts as a networking platform on a national and, partly, EU-level. The DVS was set up to support cooperation and exchange between administrative, scientific and practitioners in agriculture and rural areas, e.g. via thematic networking events, a topical newsletter as well as a regular journal. The DVS therefore functions as a public organisation with the mandate to transport and transform knowledge to a wide spectrum of AKIS-actors.

Further to this, the agricultural state ministries at state level govern the provision and organisation of advisory services, agricultural education or professional training in the agricultural sector (see chapter 4.1. and 4.2). In some states (Bavaria, Baden-Württemberg and with a decreasing extent also Saxony) agricultural advisory services are (still) provided by agricultural authorities at district level which are directly integrated in the administrative structure from an institutional perspective (Thomas 2007).

Four public **agricultural research** facilities are directly subordinate to BMEL³. In addition, six non-university research institutions of the Gottfried Wilhelm Leibniz-association and 10 other research institutions are overseen and financially supported by BMEL. These institutions produce and provide knowledge for decision-makers, practitioners, research communities in general and for actors in agricultural education (BMELV 2008a). The ministry thus interacts with a large pool of public research institutions. The interviewees explained that within the ministry, research results are processed with the aim of sharpening the direction of Germany's agricultural research, to set new trends and opportunities for excellent research or innovation transfer (e.g. the German innovation partnership, see

¹ *Bundesministerium für Ernährung und Landwirtschaft (BMEL)*, former *Bundesministerium für Ernährung, Landwirtschaft und Verbraucherschutz (BMELV)*

² *Bundesanstalt für Landwirtschaft und Ernährung*

³ So called *Ressortforschung*

policy framework) and in turn identifying new knowledge and research needs. While in many research projects farmers and researchers jointly work together on generating knowledge, advisory service provision to farmers is clearly not a goal of publically funded research institutes.

The responsibilities for regulating advisory services, agricultural research and education are located at the state level (see chapter 4.1. and 4.2). Historically grown, the states are also responsible for conducting research and demonstration projects in research and experimental stations⁴. These were identified by several interview partners as the most important facilities bridging research and practice. It was confirmed by interview partners and advisory organisations that these organisations produce topical and relevant knowledge which is frequently used by farmers and agricultural advisors.

Of all the (public) academic institutions, 10 universities and 14 universities of applied sciences offer agricultural study programmes. Universities of Applied Sciences have a special focus on applied research questions and frequently practice business partnerships. Apart from these publically funded universities, private universities also offer agricultural. Several interviewees expressed concerns over the increasing destruction of the German public agricultural research sector.

The states are responsible for **public agricultural education** in Germany. In total, in 2012, there were 216 vocational training schools which operate at the district level (BMELV 2012c). In all states agricultural vocational schools are integrated into the administrative structures and thus are subordinate to the *States* ministries (Thomas 2007).

In addition, some organisations offer a broad range of educational training for farmers, mostly privately financed e.g. the German Agricultural Society *DLG-Akademie* and *Andreas-Hermes Akademie* which are two well-known national level centres. There are also numerous associations with a more specific educational function for agricultural and rural actors, such as the German Farmers Association, the German Rural Women's Association or associations with an (agro-) ecological working focus.

In Germany, members of staff from research and education facilities do not usually act as agricultural advisors for farmers, however informal linkages do exist.

Other public actors in the field of communication and public relations as the Agricultural documentation and information service (ZADI), and German agricultural marketing organisation (CMA) have recently been dissolved. New actors active in the research domain include: the German alliance for agricultural research (DAFA) and BioEconomyCouncil (Bioökonomerrat) amongst others (Hoffman et al. 2013).

Chambers of agriculture exist in seven states and are described as self-governing bodies of the farmers, as well as of the state governments, thus acting as a kind of hybrid organisation between the public sector and FBOs. They are responsible for educational and training tasks and provide advisory services to farmers. State duties include tasks which in other states are provided by provincial agricultural authorities (e.g. control issues). In states

⁴ *Landesforschungs- und Versuchsanstalten (LUFAs)*

with an agricultural chamber, fees are mandatory for all farmers who in turn receive agricultural advisory services. Nevertheless, due to a reduction of public financing of the chambers, increasingly the chambers are charging for specific advisory services (Thomas 2007).

Analysing the **private sector** within the German AKIS remains a big challenge. In a market-driven agricultural economy, private advisory services can be accessed by any farmer at any time and in all states. Therefore, numerous private companies - ranging from individual freelancers to companies with a wide range of clients - provide advisory services to farmers. While agricultural advisory companies play an important role in those states with privatized agricultural advisory systems (which particularly applies to the eastern German states), also in states with public advisory services or chambers, the number of private advisors contracted by farmer's own finances may be rather high⁵.

Some states have a completely privatised advisory system which means that there is no public support from state institutions in terms of funding or advisory service provision (see chapter 4.2 and the policy section of this chapter). In these states, opportunities to receive information on utilization, content or financing issues of advisory services are very limited⁶. Moreover, it is known that upstream and downstream companies, e.g. companies providing agricultural inputs or processing agricultural products, engage in providing agricultural advisory for farmers. But the degree of this engagement remains unknown due to the lack of data. In addition, private agro-environmental advisory companies exist, which e.g. offer advisory services on energy efficiency, renewable energies, issues of nature conservation and water protection (in line with the EU water framework directive). It is therefore impossible to provide any numbers for all of the private advisory companies operating in Germany.

As there is a large range of actors who belong to **farmer-based organisations** (FBO), as with the private sector presenting numbers on the FBO is impossible for the German context. Also the boundaries between private organisations and FBO are often fluent which makes it hard to separate one from another. E.g. an advisory circle may work as a non-profit association or as a partly or fully commercialized advisory company – which often makes a classification of organisational types difficult. Some relevant players on a national level which are partly also involved in providing advisory services are highlighted below, such as the German farmer's association (DBV⁷) or national associations representing small-holder and organic farmers interests, e.g. the Syndicate for traditional agriculture (ABL). In addition, advisory circles are mentioned briefly even though their sphere of influence is primarily at regional or state level.

The DBV represents the most dominant lobby group of farmers in Germany. It has traditionally played an important role in the agricultural sector, is well connected with other

⁵ E.g. in Bavaria, advisory services on specified topics have recently been outsourced to 5 private companies (so called *Verbundberatung*) while public advisory services exist in parallel. In Lower Saxony, more than 100 private advisory companies, advisors and advisory circles offer advisory services to farmers besides the agricultural chamber.

⁶ The Farm Advisory System is an exception (cf. Chapter 5) because it acts on the interface of the private and public sector as it is concerned about topics of public interest.

⁷ *Deutscher Bauernverband*

lobby organisations as well as the public sector. The ministry representatives highlighted the decisive role of the DBV for farmers in Germany and as an important group for cooperation and knowledge exchange (formal and informal). Nevertheless it should be noted, that not all farmers, in particular small-holder and ecologically oriented farmers, feel their interests represented by DBV, as highlighted in the interview with the Syndicate of Traditional Agriculture (ABL).

The Syndicate for Traditional Agriculture (ABL⁸) is one of many interest-led organisations in the agricultural sector which represents small-holder and organic farming interests and engages in knowledge exchange on ecological, agro-policy and development related topics. Due to the diverging agricultural structure in Germany, the majority of ABL members are concentrated in the “old” *Länder* and ABL has supported small-holder and organic farmers’ interests since 1970s. It was mentioned that farmer-to farmer diffusion is regarded as an effective and successful knowledge exchange tool which is actively facilitated by ABL.

Nevertheless it should be mentioned, that apart from ABL, other FBOs and NGOs, e.g. the *Deutscher Bauernbund* which focuses its work in the eastern German states, also represent “small-holder”, part-time and organic farmers’ interests. In addition, a number of organic farmers associations are involved in the provision of agricultural advisory services according to their respective organic farming guidelines, such as *Bioland*, *Demeter*, *Naturland* or many more (see Figure 1.).

Advisory circles form another relevant type of FBO which has emerged from farmers demands to unite and receive group advice. Advisory circles are of regional importance in some states, e.g. Lower Saxony or Baden-Württemberg while they are absent in others (e.g. Brandenburg).

The number of NGOs representing agricultural interests at national and regional levels in Germany is plentiful. Therefore, we will only mention initiatives and associations at national level whom we interviewed and refrain from making generalised statements about the role of NGOs in the German AKIS.

There are overarching, networking organisations which represent professions of the agricultural sector and act as lobby groups and knowledge exchange platforms. Examples are:

- The Federation of agricultural chambers (VLK⁹): the VLK primarily acts as an overarching association representing the interests of the 7 agricultural chambers in Germany. It may be seen as a connecting agent between agricultural ministry and the chambers, engaged in communication and exchange on agricultural policies. Additionally, a significant number of advisory organisations from the public and private sectors are members of working groups and committee meetings. Regular committee meetings function as a widely recognized platform of knowledge exchange, as noted by several interviewees when they were asked where they receive topical knowledge.

⁸ *Arbeitsgemeinschaft bäuerliche Landwirtschaft*

⁹ *Verband der Landwirtschaftskammern*

- IALB¹⁰: the Federation of Rural Advisors plays an important role in German (and partly international) advisory services. It represents a majority of (particularly) public agricultural advisory organisations in Germany as well as a number of private advisory companies. As membership of the IALB is voluntary, not all German private advisory companies become members. IALB generally emphasises the support of rural and agricultural advisory services, particularly via professional training of advisors. With its well-established annual conferences on topical advisory issues IALB offers its members an important networking platform and acts as a source of knowledge.

The German Agricultural Society¹¹ (DLG) is another powerful actor with more than 24000 members (DLG 2013). Of those members, roughly two thirds are farmers while the remaining share is composed of upstream and downstream companies, agricultural advisors or scientists. The DLG regards itself as a professional organisation with intensive cooperation towards up- and downstream industries. It operates a whole range of activities in the agricultural sector (mainly on a commercial base), of which the testing centre, the exhibition department and the DLG academy are particularly noteworthy in this context. Knowledge is produced and disseminated within the organisation and beyond, e.g. in the form of online-published bulletins. Farmers, advisors and other agricultural actors pay membership fees to participate in professional events which function as sources of knowledge exchange and networking platforms for farmers, advisors, scientists and up- and downstream enterprises. Through the intensive activities in thematic committees with members and external experts topical knowledge exchange is guaranteed.

The DLV¹² (German Rural Women's association) represents female farmers and other kinds of female professionals in rural areas. Given that female farmers equate to only about a third of DLV-members it can be regarded more broadly as a lobby group of rural and agricultural female actors, instead of being merely farmer-based. The DLV recognizes itself as the most important educational actor for rural women. Roughly half a million rural women are members of local DLV unions (DLV 2013). Within the educational programme topics like coaching, conflict management and personality development are emphasized. The target group is female.

2.1.2 Policy framework at national level

In the federalized republic of Germany, the national ministry *BMEL* is responsible for providing a frame and guiding principles for the agricultural sector, e.g. by setting policies and positive incentives through funding programs. The 16 states each have their own ministries and subordinate authorities. Competences for agricultural and educational issues are therefore executed on state level, a trend which has been consolidated further by the latest federalism reform in 2006.

Several **national policies** set the frame and guide the overall direction of the German agricultural sector and the development of rural areas. The following policies are particularly noteworthy:

¹⁰ *Internationale Akademie land- und hauswirtschaftlicher Beraterinnen und Berater*

¹¹ *Deutsche Landwirtschafts-Gesellschaft*

¹² *Deutscher Landfrauenverband*

- Joint Task for the Improvement of Agricultural Structures and Coastal Protection¹³ (abbreviated with *GAK*, see Chapter 4.2 and BMELV 2010a)
- National strategy plan for rural development 2007-2013 (according to European Agricultural Fund for Rural Development EAFRD), the national strategy plan for the upcoming funding period and as well as the programs for rural development on state level (see chapter 4.2)
- Program to support innovation¹⁴ (BMELV 2012a)
- German Agricultural Innovation Partnership¹⁵ (*DIP*)
- Research framework plan of 2008 (BMELV 2008c)
- Framework program for ecological agriculture¹⁶.

The programme to support innovation in agriculture and consumer protection was launched in 2012. It fosters (1) research, development and demonstration projects, which aim to make innovative technical, and non-technical, products marketable, (2) projects which increase the capacity for innovation, including knowledge transfer and (3) studies on the social and legal framework for innovation and the identification of future areas of innovation (BMELV 2012a).

The Agricultural Innovation Partnership (*DIP*) is a spin-off of the program to support innovation. It receives €38m of annual funding from BMEL (BMELV 2012a). The aim of the *DIP* is to develop the research that already exists to foster transfer into practice and onto the market. With the introduction of the *DIP* the federal ministry responded to the results of a cross-sectorial study on the German innovation system in which deficits of transferring promising research results into practice were highlighted (Bokelmann et al. 2012)¹⁷.

2.1.3 Coordination structures

A central coordinating instrument in the federalized system can be seen in the thematic working panels¹⁸ which coordinate exchange between the national and state ministries. Initiated by the national ministry, these thematic working panels act as important exchange platforms between state and national level and they exist for numerous topics, e.g. the working panel of the agricultural extension speakers or the speakers for agricultural research. They usually meet several times per year.

Generally, the German federal agency for agriculture and food (*BLE*) can be regarded as an important coordinating body in the field of agricultural research which acts as the executive agency for the national agricultural ministry. *BLE* also coordinates the steering committee of the *DIP* – a consortium of ten national agricultural federations and associations in the

¹³ *Gemeinschaftsaufgabe zur Verbesserung der Agrarstruktur und des Küstenschutzes*

¹⁴ *Programm zur Innovationsförderung*

¹⁵ *Deutsche Innovationspartnerschaft - DIP*

¹⁶ *Bundesprogramm Ökologischer Landbau, BÖLN*

¹⁷ Main reasons for this were seen in a lack of capital for market introduction, insufficient funding periods and delivery times and missing demonstration opportunities under practical conditions. Furthermore, inadequate networking and cooperation between research institutions, industry and agriculture were mentioned in the study (Bokelmann et al. 2012).

¹⁸ *Bund-LänderArbeitsgruppen*

agricultural sector¹⁹. The DIP steering committee makes decisions regarding the continuation of funding for individual innovative projects.

Furthermore, the **German Networking Agency for Rural Areas** (DVS - affiliated to BLE) is designed as a coordination and networking body (see AKIS actors). At DVS, a monitoring committee officially legitimizes the annual work of the *DVS* and sharpens the themes of the annual program to which members of the monitoring committee agree upon. The committee includes all decisive lobby groups, ministerial actors and some environmental lobby organisations. It is also the *DVS*, which will host the national bureau for the European Innovation Partnership “Agricultural Production and Sustainability” in the future.

Other important coordination structures that were mentioned in the interviews have been (partly) described as follows:

- Federation of Agricultural Chambers (VLK) working groups and committee meetings
- German alliance of agrarian research (DAFA)
- IALB annual conferences.

However Hoffmann et al (2013), in the SOLINSA report, state that there is more competition than communication between the German advisory organisations. They also regard the level of coordination among ministries to be low.

2.1.4 Conclusion

The German AKIS is composed of a huge variety of organisations and institutions with mostly long-standing traditions and well-established roles. All organisational categories (public administration, public and private research and education, private sector, farmer-based organisations and non-governmental organisations) are represented. A dominant characteristic of the German AKIS are advisory systems at the state level which are institutionally different, a fact that creates considerable obstacles for the horizontal knowledge flows. According to literature and experts, the linkages within the AKIS therefore cannot be classified as well-functioning, especially when taking the national perspective. Nevertheless, among the organisations of the same category, communication and cooperation is frequently considered to be good. Integrative national policies mainly exist with regard to rural development topics and for research and innovation processes. Coordinating structures and activities are provided by both public bodies (e.g. the thematic working panels) and non-governmental bodies (e.g. the federation of agricultural chambers VLK).

2.2 AKIS diagram

The AKIS diagram (see Figure 1.) displays the main organisational types and some examples of organisations of national importance. The diagram acted as a discussion tool for the semi-structured interviews, to help to visualize the perspectives of each interviewee from the German AKIS, linkages and knowledge flows of the respective organisations to the other AKIS- actors.

¹⁹ Amongst the previously mentioned organisations, including e.g. the German Farmers association (DBV), German Agricultural Society (DLG), the Federation of agricultural chambers (VLK), BLE itself as well as one representative of working panel for agricultural research.

Nevertheless, during the analysis it became clear that displaying knowledge flows in the diagram at this level is not possible in a more generalized way for the majority of the displayed organisations. In particular the knowledge flows of the FBOs and private companies were revealed to be complex and varied for each of the individual organisations.

In the diagram we refrained from charting linkages and knowledge flows as they currently lie and preferred to present the AKIS diagram as an institutional-organisational landscape of the German AKIS actors.

Figure 1: Diagram of AKIS actors in Germany

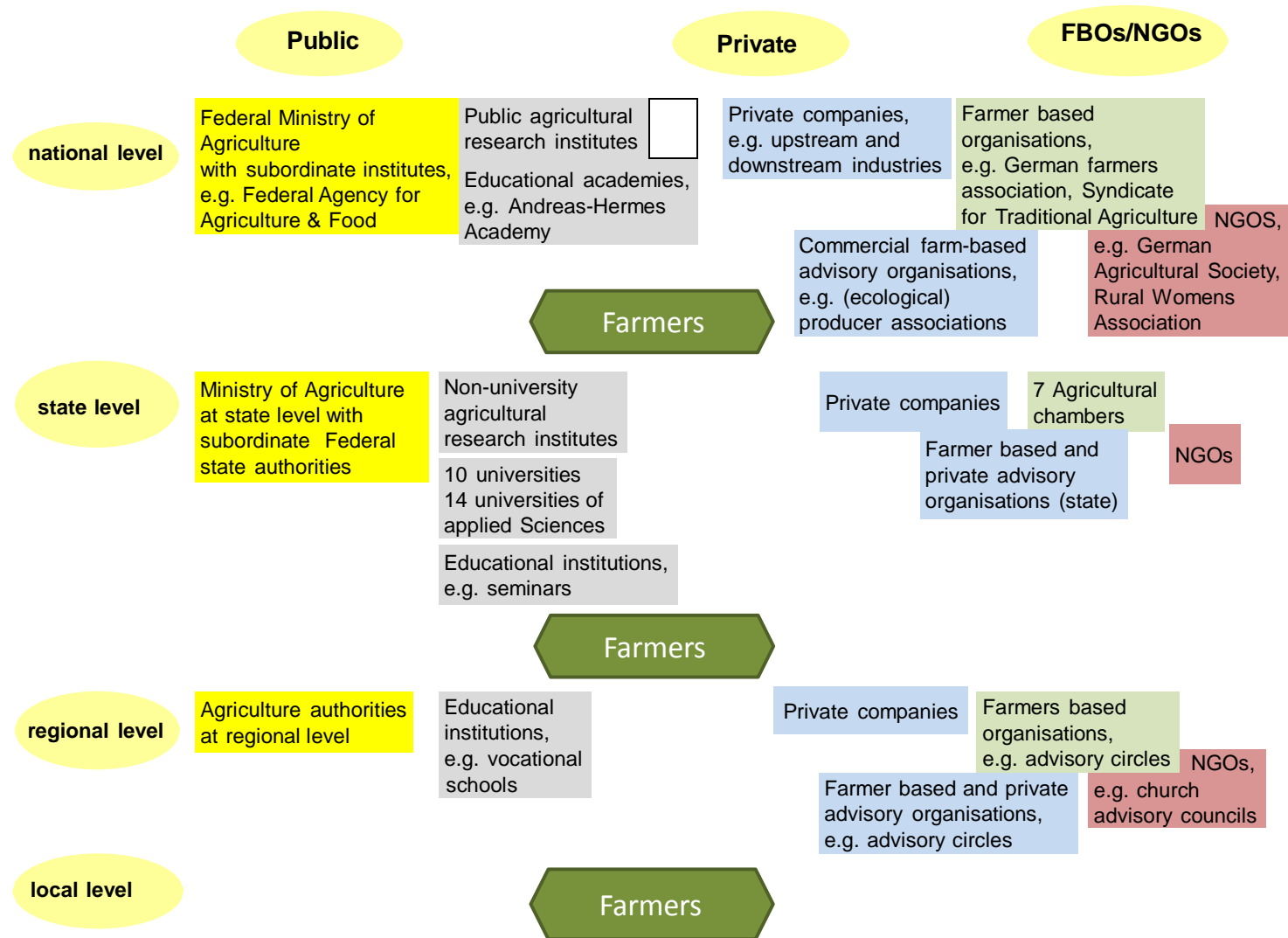


Table 1: Overview of the AKIS organisations

Provision of service				Source of financing								
Status of the organisation	Type of organisation	No of organisations	Number of advisors	Public funds			Farmers			Private	NGO	Other (specify)
				EU funds	National funds	Regional funds (states)	Farmers' levies	Farmers' contribution	Billing services	Other products (inputs, outputs)	foundati on	
Public sector	Advisory department of the Ministry of agriculture	-	-		X	-	-	-	-	-	-	
	Advisory service authorities and agencies on national level (including public services centers and state-owned advisory company)	6	n.a.	?	?	X						
Research and Education	Universities with agricultural faculties	10	-	-	X	X	-	-	-			
	Universities of applied sciences	14	-	-	x	X	-	-	-			
	Public agricultural research institutes (national level)	4	-	n.a.	X	n.a.	-	-	-			
	Non-university research institutes with agricultural focus from Leibniz Association	6	-	-	x	X	-	-	-			
	Non-university research centres											
	Education academies on national level	> 2	-	n.a.	n.a.	n.a.		X	-			
Private sector	Upstream industries	Numerous and no data available						X	X	X		
	Downstream industries							X	X			
	Independent consultant							X	X			
	Private agricultural advice company						X	X	X			
	Farmers' owned advice company						x	X	X			
Farmer based organisations	Farmers' cooperative	numerous					x	x	x			
	Chambers of agriculture	7	n.a.	-	-	x	x	X	(x)	-	-	
	Farmers' circles/groups	Numerous					X	X	X			
NGO	Numerous											

3 History of advisory services

The German advisory services have a long tradition dating back to the ‘itinerant teachers’ in rural areas of Rhine-Prussia and other German-speaking countries of the second half of the 19th century. More institutionalised forms of advisory service provision were e.g. advisory circles that were installed from 1920 onwards in central Germany, connecting a group of farmers with one advisor (Hoffmann et al. 2009:15f). Generally, organized extension has always been decentralized and therefore true pluralism in German agricultural extension is the reality. The three main organisational forms for agricultural advisory services in the western part of Germany before the reunification were:

- Chambers of Agriculture (esp. in the Northwest)
- Official extension by the public agricultural office (esp. in the Southwest)
- Advice circles and farmers’ working groups as an additional offer in several states.

All organisational forms were strongly supported by public financing or were fully fledged public services. Until reunification in 1990 advisory services in the eastern part of Germany (the former German Democratic Republic) *“was an integral part of an overall system promoting socialist agricultural development under the direction of party and state officials. However, within this framework activities adapted to the individual needs of cooperatives and state farms were frequently possible, including direct contacts between farms and universities, research contracting, and hiring of specialists. The quality of extension advice received from various organisations until 1989 is still regarded as excellent by today’s farm managers. Extension was, of course, free of charge”* (Nagel & v. d. Heiden 2004:30).

The reunification of the two German states in 1990 and the following recreation of federal states in eastern Germany led to the existing extension organisations in the East becoming obsolete, regardless of their effectiveness and acceptance by farmers. There was a strong impulse for a fourth organisational form for agricultural advice – private consulting companies (Nagel and v. d. Heiden 2004). Three of the five states (Brandenburg, Saxony-Anhalt and Mecklenburg-Pomerania) established a privatized system subsidized by the state (partly supported by EU funds). Mecklenburg-Pomerania established a private consulting company owned by the state. Thuringia and Saxony adopted the South-western system and provided advisory services through public authorities on a district level.

Nevertheless, systems changed as they were affected by the trend of diminishing state budgets for agricultural advisory services as well as worldwide privatization in the 1990s. Thus, Thuringia switched to a privatized system in 1998 and Saxony in 2008.

In the western part of Germany the main organisational forms went through a similar privatization and commercialization process in the past two decades due to rising problems and complaints by the farmers related to quality in the official extension provision (role conflicts: control and advice). But the main systems in each state still prevail, now complemented by private advisory companies.

Due to new challenges in agriculture as well as diminishing state budgets, services were to be separated into services of private and public interest. Increasingly private interest advisory

services were charged by public advice providers such as the chambers or the state agricultural office. Ideally services of public interest are still offered free of charge or are reimbursed by public extension programs. Nevertheless there are exceptions such as Brandenburg, where there is no public support for advisory services demanded by the farmers.

The commercialization and privatization trend slowed down a little bit with the EU regulation 1783/2003 introducing the 'Farm Advisory System' obligatory in 2007 (see chapter 5).

4 The agricultural advisory services

The following chapter is mainly based on the results of the questionnaire survey of German advisory service providers, as well as on a review of policy documents and grey literature. In the first two subsections, an introduction to the German advisory system in terms of regulatory issues, organisation, financing and funding is provided. It is crucial to understand the general structure of the advisory system in order to correctly assess the results of the survey correctly. It should be noted that the survey is not representative for the multitude of potential advisory service organisations in Germany.

4.1 Overview of all service suppliers

The provision of advisory services lies within the responsibility of each federal state. The advisory services of every state features individual characteristics and have evolved historically so that 16 different advisory systems exist in parallel with each other.

The three city states have either transferred competences for advisory services to the surrounding states (e.g. Berlin-Brandenburg) or possess their own agricultural chambers (Hamburg and Bremen) while the integration of politics into the competences of Lower Saxony takes place.

According to the terminology defined in the PRO AKIS conceptual approach (Labarthe et al. 2013), five major advisory systems can be identified:

1. **Public advisory services** exist in the states of Baden-Württemberg and Bavaria in form of public authorities, particularly agricultural district authorities which also comprise of agricultural advisors. Hessen and Rhineland-Palatine offer advisory services through public service centres which combine the tasks of agricultural advice provision, education, research and experimental stations under one roof. Saxony is still transforming its advisory services into a private system.
2. **Agricultural chambers** prevail in Rhineland-Palatine, Saarland, North Rhine-Westphalia, Lower Saxony, Hamburg, Bremen and Schleswig-Holstein. In these states, membership and the payment of fees to the chamber is mandatory for every farmer. In return, farmers have access to advisory services, information from research and experimental stations and agricultural education from the chamber. Moreover, the chambers execute state duties that are provided by provincial agricultural authorities in other states.
3. Advisory services by **private advisory companies** are the main type of extension system in Mecklenburg-Vorpommern, Brandenburg, Saxony-Anhalt, Thuringia and Saxony. The concentration of private service provision in the eastern German states is a result of historic developments (see chapter 3) while privatization tendencies and hiring of private advisors by farmers is common in all other states as well.
4. Apart from this, advisory services through **FBOs** exist (see chapter 2.1). E.g. the German Farmers Association offers advice on selected topics on wide-scale regional level. Advisory circles are another established form of FBO which are specifically set up for advisory service provision to groups of farmers. In Lower Saxony and Schleswig-Holstein they have a long tradition but they exist in numerous other states as well.

5. Advisory services offered by **NGOs** tend to be fragmented. In our study, NGOs only include ecclesial institutions which offer social and family counselling for farmers.

It is important to keep in mind, however, that despite the description of responsibilities for the operation of advisory services in each state (which is determined by each state’s agricultural ministry), the reality of advisory services appears to be much more pluralistic. So, every state features a very diverse set of actors involved in agricultural advisory services which comprises a selection of the mentioned organisational categories.

The distributions of the various forms of organisations that were obtained from the results of the online survey are presented in Table 2. Out of the total 95 respondents, 42 confirmed that their organisation is recognized by the state as cross compliance certified.

Table 2: Distribution of organisational classes and cross compliance certification

Organisation type	Organisations contacted	Number of Respondents	Response rate	CC certified organisations
Public authorities	13	7	54%	4
Chamber of Agriculture	7	4	57%	1
Farmer-based organisation	104	30	29%	16
Private advisory company	174	42	24%	20
Research/ educational institute	-	3		-
Non-governmental organisation	12	8	67%	-
Others	-	1		1
Total	310	95	31%	42

It should be noted that the survey is not representative for the whole of Germany’s advisory services, simply because the total number of organisational forms, apart from the publically funded organisations (public administration and agricultural chambers), is unknown. Nevertheless, the survey gives a good impression of the rough distribution of advisory services in Germany – i.e. there are few public advisory services institutions (with a relatively large sphere of influence in the states), numerous private advisory companies and FBO offer advisory services to farmers.

4.2 Public policy, funding schemes, financing mechanisms

Due to federalism, every state features its own policies and regulations which determine the organisation of the advisory services in terms of their provision and funding.

4.2.1 Current and forthcoming policies

The states also act as the co-financier for **EU funds**. The processing of EU funds is decentralized in the 16 states. The states are obliged to prepare regional planning documents, or so-called "development programs for rural areas". These rural development plans set the base for the funding of measures for agricultural advice provision. The state ministries either enable (“program”) or neglect eligible measures of the European Agricultural Fund for Rural Development (EAFRD). Within the current funding period, the following measures were adopted in the rural development programs within the German states (BLE 2010):

- Within the scope of priority 1 of EAFRD 2 concise advisory measures are offered, focussing on “strengthening human capacities”. The first measure – the “Use of advisory services by farmers and forest owners” is adopted in the rural development programs of 6 states (Baden-Württemberg, Lower Saxony, North Rhine-Westphalia, Saarland, Schleswig-Holstein and Thuringia). The second measure of “installation of farm management services and advisory services” is not adopted by any state.
- In contrast, in the second priority of EAFRD, agricultural advisory services do not form an explicit measure, but rather are an indirect part of some agro-environmental measures which support farmers to receive additional information to implement measures.
- Similarly, in the third priority agricultural advisory indirectly forms a part of e.g. the measures on “diversification to non-farm employment opportunities” and “rural heritage” – both measures are adopted in all German states.

It is noticeable that the states make use of the funding possibilities in various ways. Previous studies (Knierim et al. 2012, Knierim et al. 2011) and several interviewees noted the high administrative effort, together with the lack of own state funds to co-finance, as the major burden for not adopting measures, e.g. on advisory services.

In addition to EU support, the **national legislation** enables the funding of advisory services. Since the implementation of the FAS in 2007, the **federal fund for agriculture and coastal protection (GAK)** offers reimbursement for specific advisory services of public interest, if the federal states co-finance and implement it in their rural development plan. Topics such as Cross Compliance advice on the basis of Farm Management Systems and, more recently, advice on energy topics and advice related to the ‘new challenges’²⁰ are eligible for reimbursement. In the current funding period, only 2 states make use of this measure (Lower Saxony and Baden-Württemberg) on topics of the new challenges.

During the interviews, a preliminary version of the funding rule of the prospective policy document (BMELV 2012b) was mentioned by members of public authorities. The rule is supposed to be enacted in 2015 (BMELV 2013a) and will contain alterations for eligibility of public and private advisory systems by national funds:

- Advisory services will be one of 9 funding rules in the GAK.
- For the first time, agricultural producer groups are eligible as well.
- The new rules on financial procedures will also allow reimbursement of advisory service providers (previously only farmers were beneficiaries)
- The states may raise rates for advisory measures on agro-environmental topics up to 100% or €2000 maximum.

Nevertheless, it should be kept in mind that the states do not necessarily have to codify these measures into their rural development programs. In accordance with the EU timeframe, the states are currently creating their rural development programs (as of end of 2013). However, the interviewees stated that there is a significant interest as well as a demand for discussion and information among all states in terms of funding possibilities of EU and the

²⁰ This refers to topics of climate change, water management and biodiversity.

national fund GAK. States and the federal government are in close contact, via the thematic working group on agricultural extension, to which the state extension referees are frequently invited by the agricultural ministry (see chapter 2.1).

4.2.2 Funding schemes and financial mechanisms

Figure 2 shows a classification of the five organisational forms offering agricultural advisory services in Germany. The scheme is based on Rivera et al. (2001) and differentiates provision and financing of the service.

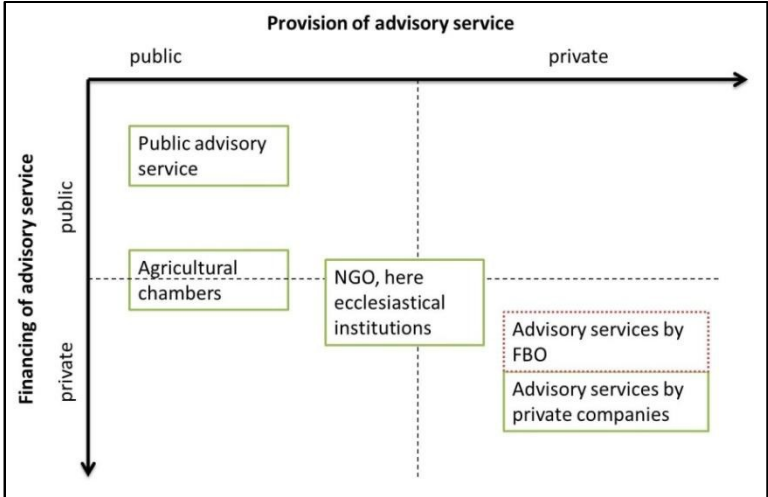


Figure 2: Provision versus financing of advisory services in Germany

In the survey, advisory services were asked about the major **funding source** of their organisation. The responses are displayed in Figure 3. More than half of the respondents charge their clients private fees. In the mixed financing category, the mixed funding refers to public and private funding in almost two thirds of the cases.

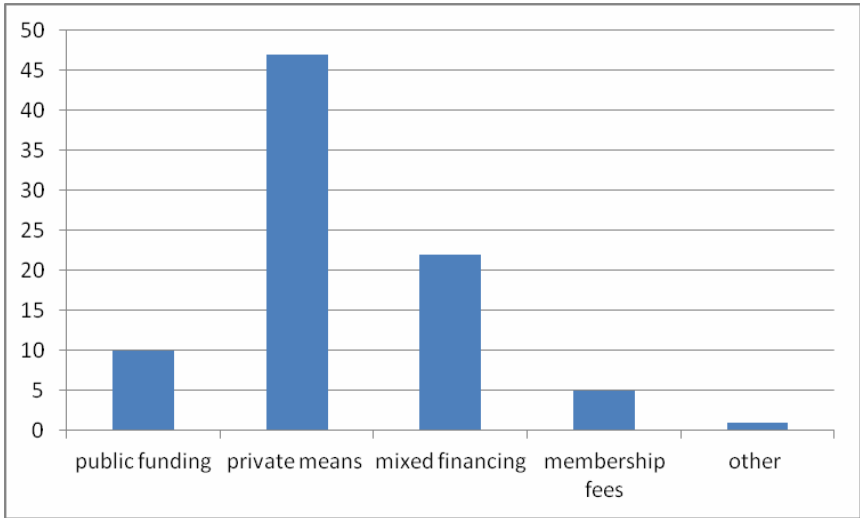


Figure 3: Financing of advisory service

Billing of advisory services is based on hourly rates in 55% of cases and on fixed rates for a certain timeframe in 40% of cases. Advisory packets are used in 38% of cases whilst

payment “according to specific advisory topics” was relevant in 29% of cases. Another 29% of the respondents indicated other payment details, such as membership fees and daily rates. In the case of service provision by public authorities and ecclesial services (NGOs) no costs arise for clients (category “other”).

4.3 Methods and human resources

In the survey, participants were asked to provide the **total staff numbers**, the **number of advisors** plus the **share of women** for each of these questions. The results of these questions are compiled in Figure 4. It is noticeable that public advisory services, chambers and FBOs have the highest absolute numbers of staff and advisors. The impressive amount of total staff of public institutions however stems from one institution only, which creates a bias in the diagram (e.g. another public advisory institution possesses only 8 staff members). Less than half of both the public advisory institutions and the chambers provided any data for this question. The amount of staff is completely detached from the numbers of responding organisations (indicated as n). Additionally, this diagram is not representative for the diverse landscape of advisory organisations in Germany. In (the 3 considered) public organisations, only 12% of the staff are advisors, in chambers it is 21% and in private advisory organisations it is 41%. The quota of female advisors ranges from 70% in NGOs to over 40% in chambers and public organisations and to just 15% for FBOs. The fact that the number of advisors in NGOs is higher than the staff numbers is likely to be linked to the honorary engagement of counsellors as it was confirmed in one case.

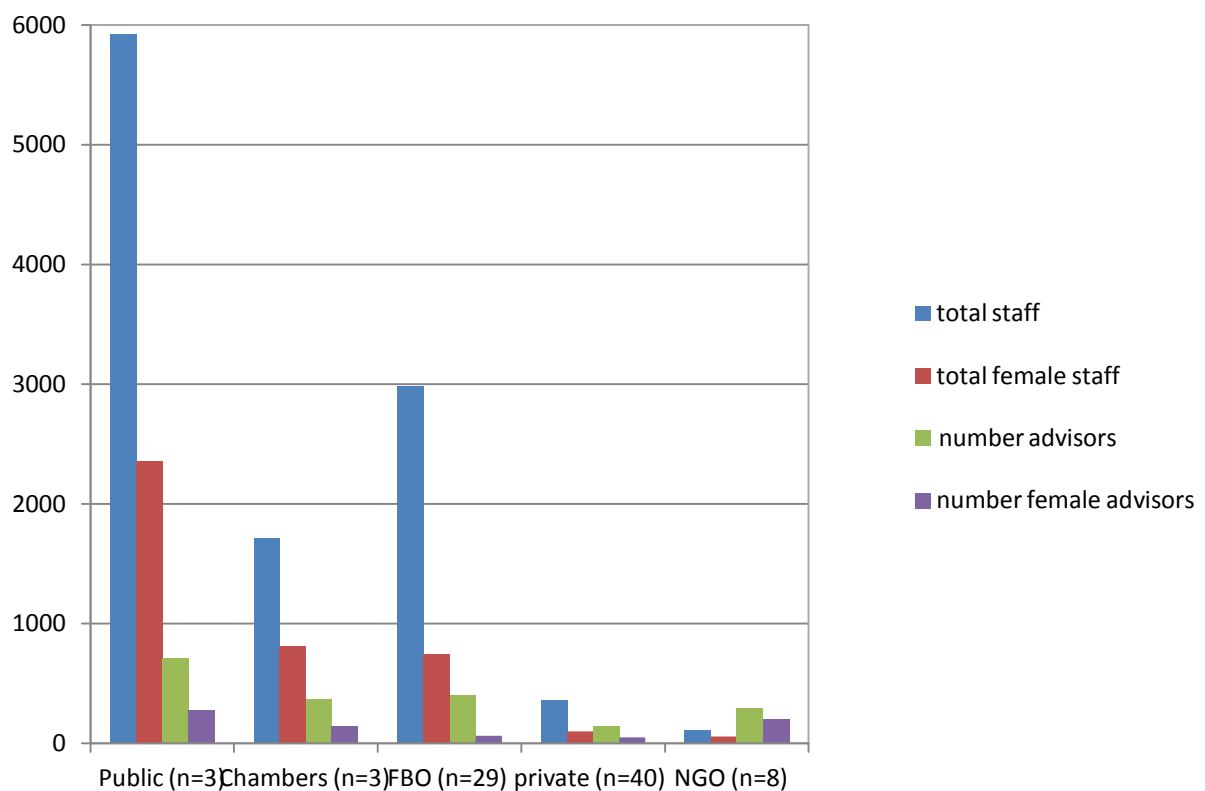


Figure 4: Staff numbers and distribution of advisors and women

No clear trends can be observed concerning the **staff number development** in recent years. The number of advisors in advisory organisations stayed the same in 61% of the responses, increased in 26% and decreased in 13% of answers. The numbers for the general staff of the organisations are 60% indicating no changes, 23% highlighting an increase and 17% a decrease in staff numbers. 78% of respondents confirmed that all of their staff have an **academic degree**.

When asked about **training of advisors**, 70% of the organisations stated that 100% of their advisors received training in 2012, while in 8% of the cases none of their advisors carried out training in 2012. The training topics included a range of issues such as, funding measures, agro-environmental topics, taxes, CC, livestock husbandry, coaching or soft skills, to name just a few. The organisations which provided the training for the advisors can be viewed in Table 3. The majority of advisors receive training from FBO and public authorities while upstream and downstream industries, NGOs and universities are considered to be less important by the respondents for training.

Table 3: Training providing organisations

n=93	Univer- sities	Public research institutes	FBO	Author- ities	Private education centres	NGO	Up- stream	Down- stream	Other
All	13%	25%	53%	49%	35%	8%	4%	5%	22%

When asked about types of certification (apart from CC-certification, cf. Table 2), CECRA (Certificate for European Consultants in Rural Areas, offered by IALB) and systemic coaching were mentioned several times.

Concerning **advisory methods**, some trends could be identified on which methods tend to be more or less frequently used by the respondents. The distribution of individual advice, group advice and mass media shows a strong weighting towards individual methods. In particular on-farm and telephone advisory methods are, proportionately, used 4 to 5 times more than group methods and mass media tools. Group advisory services outside the farm tend to be slightly more common than on farm group advice while the internet and specialist press are utilized more than advice via web site tools.

4.4 Clients, topics and content

Figure 5 shows the total number clients according to the five main organisational types of advisory services in our survey. The boxplot provides minimum and maximum numbers of clients as specified by line endings above and beneath the boxes. The 25 and 75-percentiles are indicated by the green and purple columns. The median of client numbers separates those two columns. In the case of chambers, only 3 datasets were available for plotting. Here, the median, minimum value and the 25% percentile overlap at the point of 750 clients, which results in a lack of the 25% percentile in this specific case. The maximum client number of one of the three chambers which provided numbers for this questions lies at 12,000 clients (see ending of the narrow line above purple box). Almost all organisational types feature a

large range of client numbers reaching from less than 20 up to more than 10,000 clients, which can also be seen in the logarithmic ordinate. The boxplot therefore shows the diversity of client structures of the German advisory organisations.

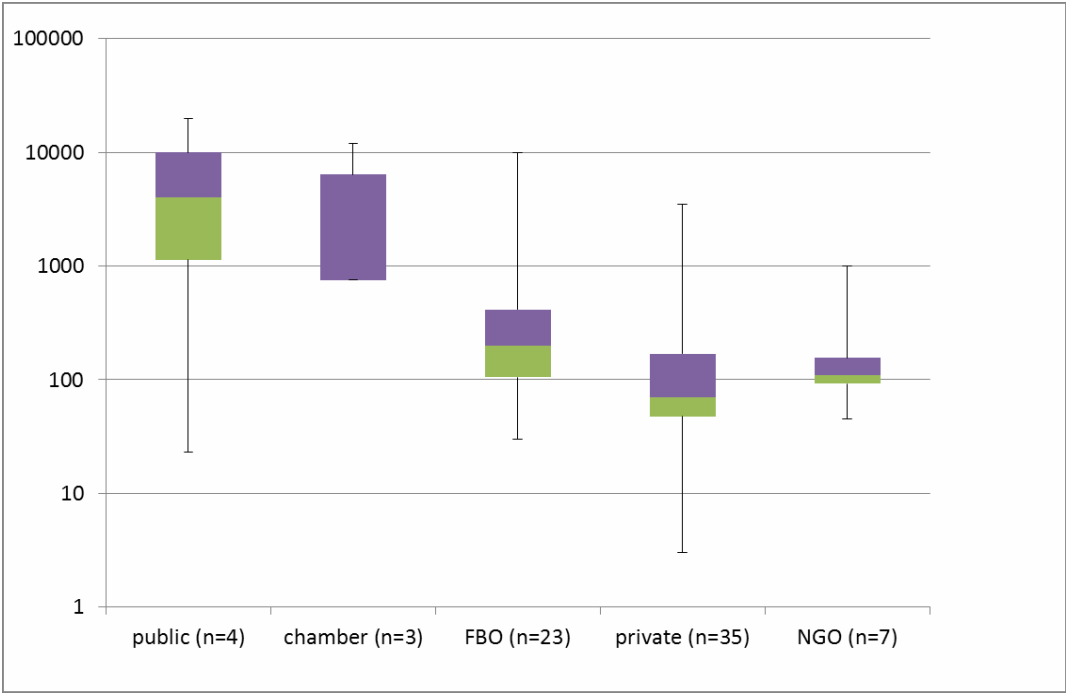


Figure 5: Number of clients per advisory organisation

In Figure 6, the average number of clients per advisor in each of the five organisational categories is shown. The overall mean of how many clients one advisor provides advice to is **87 clients per advisor** (n=63). The average farm size of the clients is 326 ha in our survey (n=56 respondents; excluding 2 entries that indicated that their clients specialised on crops such as wine and horticultural crops). Thus, the data highlights that, the average farm size per client in our survey is significantly higher than the overall average 58 ha farm size in Germany (see chapter 1).

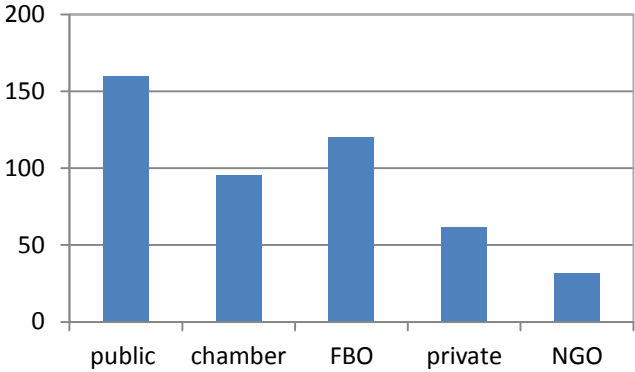


Figure 6: Number of clients per advisor

Table 4 highlights the frequencies regarding the importance of each target group. N indicates the total frequencies (the gap that exists up to 95 respondents is made up of missing values). Amongst all organisations, there is a tendency towards providing advisory services

particularly to large and medium farm type farmers²¹. This particularly applies to private advisory companies and FBOs. In contrast, subsistence farmers and farm staff play a minor role as a target group.

Table 4: Number of nomination of primary target groups according to organisation

	large-size farms (n=69)	Medium size farms (n=67)	small farms (n=62)	Subsistence farms (n=52)	producer groups (n=57)	young farmers (n=57)	female farmers (n=55)	part-time farmers (n=58)	farm staff member (n=56)
Frequency*	50	50	24	4	12	20	9	12	6
Public	2	5	4	1	1	2	2	2	1
Chamber	1	2	1	0	0	1	0	0	0
FBO	16	15	7	2	5	7	2	4	1
Private	28	26	10	0	6	9	3	5	4
NGO	2	2	2	1	0	1	2	1	0

With regard to the **advisory contents**, no clear trends can be seen when comparing the suggested topics of all advisory organisations. Figure 7 shows the frequencies of the rates at which advisory topics are “often” and “very often” delivered to clients.

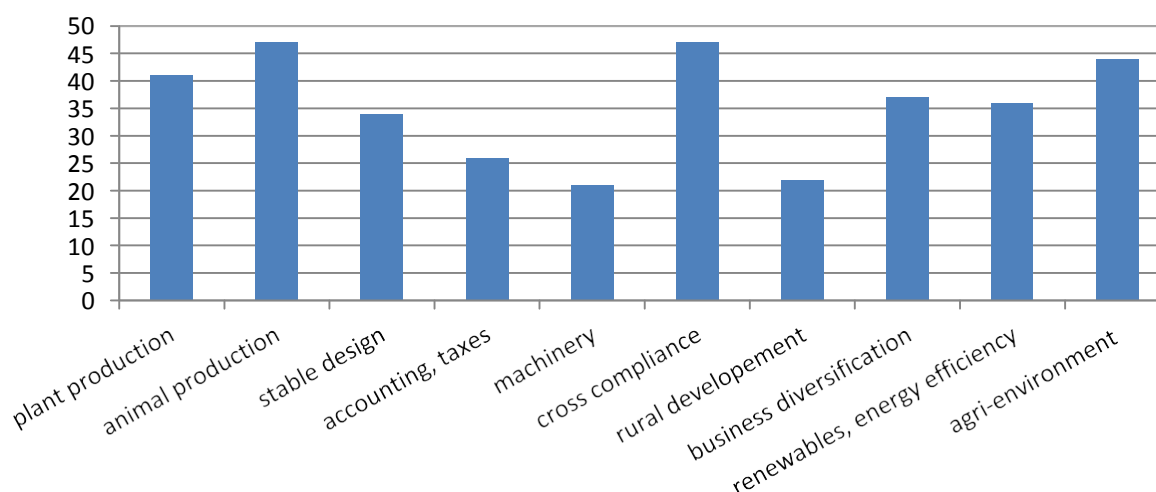


Figure 7: Contents of advisory services

A similar heterogeneous picture can be seen with regards to the **trends of advisory topics**, as shown in Figure 8. When asked about topics that are being increasingly demanded by clients, no clear trend can be derived from the respondents’ answers.

²¹ Farm sizes categories base upon European Size Units (ESU) of gross margins (EUROSTAT 2013): large-size corresponds to gross margin larger than 48,000€, small farms to a gross margin smaller than 19,200€

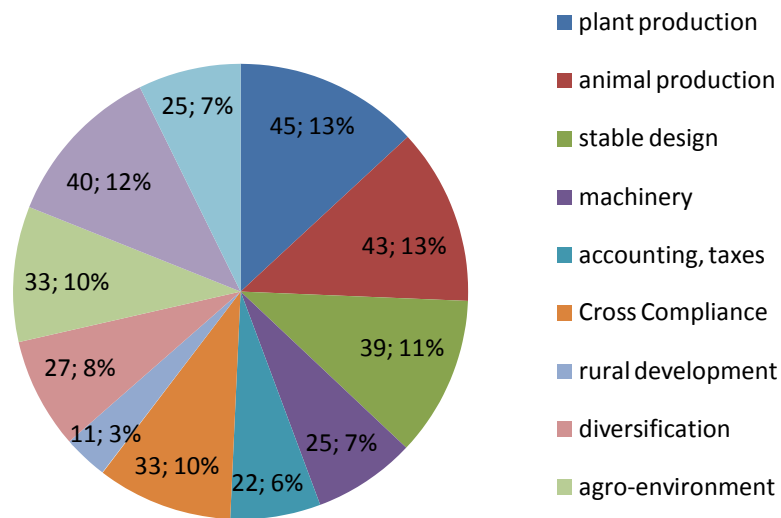


Figure 8: Trends of advisory topics

4.5 Linkages with other AKIS actors and knowledge flows

Respondents were asked about the relevance of **knowledge sources** from the public and private sector and media. Most of the respondents consistently agreed on the internet being a very relevant tool from which to receive knowledge. It is interesting to note that one group of respondents considered private companies- from both up- and downstream industries as a (very) relevant source of knowledge, whilst many others regarded private companies as an irrelevant source of knowledge (cf. Figure 9). The high numbers of public research institutions and universities classed as important knowledge sources is in contrast to the content of the expert interviews. Within these, several interviewees questioned the relevance of many public research centres in their daily work.

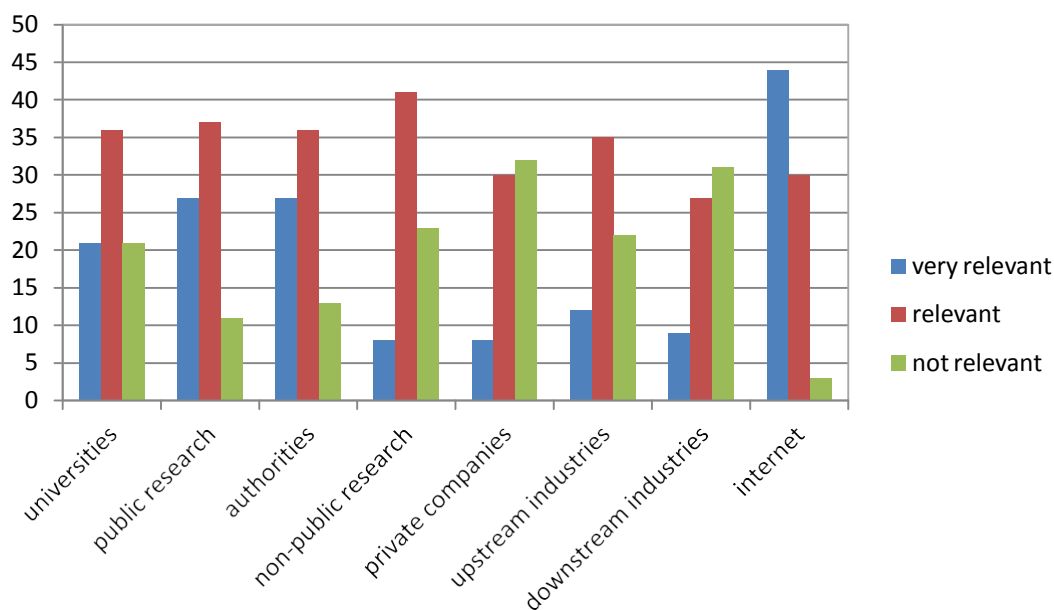


Figure 9: Relevance of different knowledge sources

In addition, respondents were allowed to note simply **other sources of knowledge** for their advisory work. In order of frequency, colleagues/ other advisory organisations, specialist literature, their own research and experimental facilities, agricultural associations (e.g. *DLG*) and farmers were mentioned.

Knowledge needs, with respect to the reformed Common Agricultural Policy, are identified in Figure 10 (n=87, as multiple answers were allowed). Optional entries in which respondents were asked to mention other knowledge needs were related to funding possibilities by rural development programs of the states which are linked to the CAP, environmental protection in agriculture and counselling/ coaching methods.

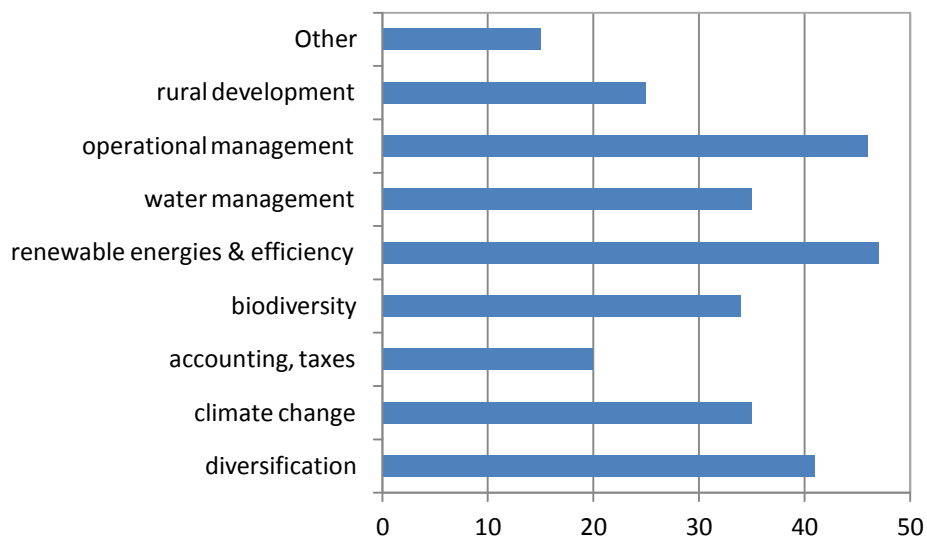


Figure 10: Knowledge needs with respect to the CAP

In addition, the interviewees were asked to comment further on the knowledge needs within their organisations, of farmers and among agricultural advisors and with respect to the reformed CAP.

Knowledge needs amongst advisors included the following issues:

- Improvement of methodological skills and knowledge of advisory methods were perceived to be necessary and important for advisors particularly by interviewees from advisory associations and education institutions. Coaching of farmers and rural actors, personal development and conflict management were considered to be increasingly relevant. One interviewee stated that as farmers specialise in their specific areas, advisors increasingly take on the role of dialogue partners with whom farmers ascertain and consolidate decisions. The advisor in turn should be capable of asking the right questions which will guide farmers to the best decisions for their farm.
- The need for a more holistic advisory approach, which takes into account the entire farm throughout the provision of advice was mentioned in two interviews. One suggested example was to find a niche for farmers to sell their products, e.g. by (re-) establishing local regional market structures and intensifying contact with consumers on a regional basis. This stands in contrast to the ideas of optimising funding measures,

which should be taken into account by advisors and farmers along with the interviewee

- Subsequently, two interviewees noted their concerns on the need to increase growth on agricultural farms, particularly with regard to environmental problems which arise from intensive mass animal farming. It was regarded as a skill of the advisors to be able to critically discuss and assess key topics and their environmental consequences with their clients.
- In addition, one interviewee highlighted the need for increased specialisation among advisors in the future.
- Utilisation of modern communication technologies and WEB 2.0, e.g. smart phone apps for farming purposes or Facebook appear to be increasingly demanded by both farmers and advisors as modern advisory and communication tools.
- Additional specific knowledge needs among farmers that were mentioned included business diversification in rural areas and social issues for farmers and rural population in general, e.g. social insurance, retirement, prevention of accidents, farm succession.

Furthermore, respondents were asked with whom they cooperate and compete from a predefined list of seven potential **co-operators and competitors**. The following qualitative trends were observed:

- an intensive cooperation of organisations within the public sector,
- an intensive cooperation between public authorities and private advisors (as confirmed by both types of organisations),
- a noteworthy cooperation between private advisory companies and upstream with respect to downstream industries
- no cooperation between up-/ downstream industries and public authorities, and
- competition among private advisory companies and between FBO and private advisory companies.

Majority (72%) of the respondents used the opportunity to specify their **need to remain efficient and competitive in the AKIS**. From the answers to the open-ended questions qualitative entries, the following trends were noticed:

- 15 organisations stated that relevant information, e.g. results from research and experimental stations, insights from practice-oriented research as well as the bundling of this knowledge, was necessary.
- The importance of the training of advisors was mentioned in 13 responses. Training topics that were suggested included communication methods, problems and challenges in agriculture and rural areas in general, supervision of advisors and knowledge of psychosocial issues.
- Networks, specifically (more) effective networking and cooperation e.g. among private companies, research centres, clients and public authorities was mentioned in 12 responses.

- 11 organisations highlighted the need for sufficient and competent advisory staff.
- General finances and substantiated funding programs, co-funding of states, sufficient advisory assignments and the financial involvement of clients in specific were mentioned by 9 respondents.
- 2 organisations regarded the strengthening of the private sector as necessary.

The following citations highlight the needs and challenges of the advisory organisations in the pluralistic German advisory system in more detail:

- *“Necessary information (e.g. literature, seminars) needs to be retrieved on our own with a high effort. Here, private companies carry a higher burden than chambers or public authorities.”*
- *“a central service which translates knowledge into practice and provides knowledge to advisory organisations, in other words to translate knowledge from science to practice. Another important issue would be practice-relevant research, since university-research is not really practice-oriented.”*
- *“Supplementary scientific work on practice-oriented problems, not only based on models. Accompanying research and experimental facilities of the states in order to support farmers with neutral results.”*
- *“Financial means: due to the agro-structural change few large farms have to finance advisory services [...] but they are less inclined to pay for it. Public funding was reduced drastically.”*
- *“3 years ago we were still able to finance one advisor with public support, now it amounts to only 20% of the costs. Thus, an efficient advisory service is disabled. We are considering closing down our advisory circle entirely.”*
- *“a solid financial structure, in order to provide a secure job to advisors on the long-term, otherwise they increasingly turn to free economy”.*

From the survey of advisory services, in which respondents were asked about the **challenges of German advisory services** for the future, 79% of the respondents provided individual answers in form of 68 qualitative entries. This high rate of participation, and the often detailed entries, emphasises the high interest of survey participants to express their opinions. Ten different thematic categories were identified in which at least 3 organisations expressed the same issue, as shown in Figure 11.

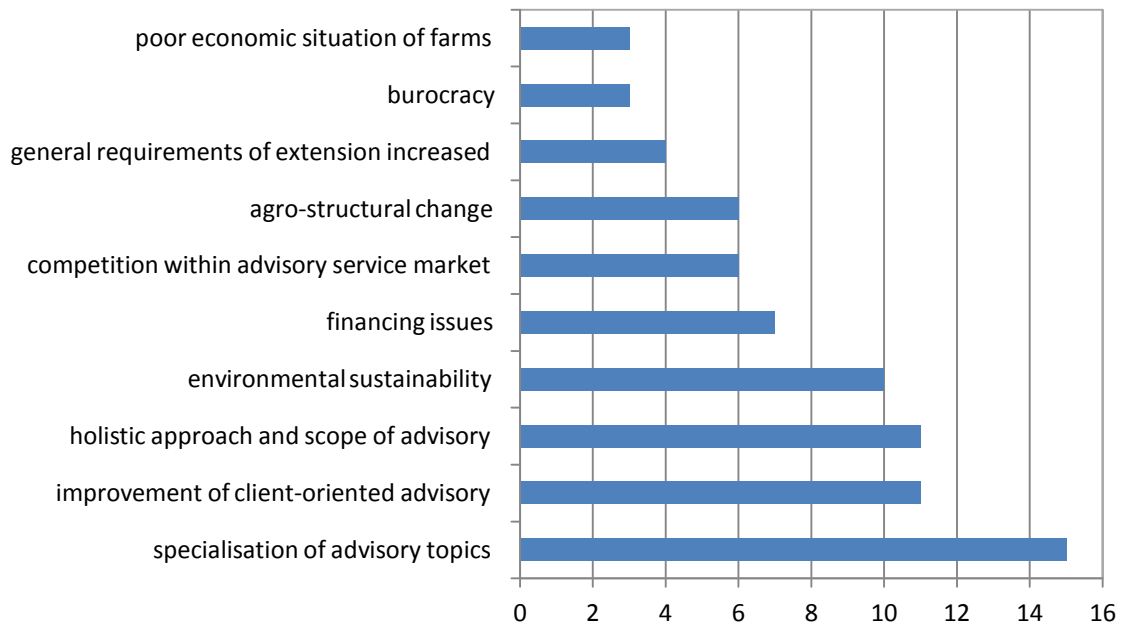


Figure 11: Challenges of advisory services in the future

The figure shows parts of the topical discussions on advisory services in more general terms. For example, respondents' answers reveal the on-going dispute between specialization of advisory services (15 responses) versus the need for a more holistic approach, taking into account the entire farm throughout the provision of advice (11 responses). Those survey respondents who perceive a need for increased specialization often connected it to the high educational background of their clients. Areas in which specialized knowledge is particularly needed relate to legal backgrounds (good agricultural practice, building law, etc.), advisory and communication methods, financing and psychosocial counselling. In contrast to the specialization trend, the 11 responses emphasising the holistic and integrated approach of advisory explain that the scope of advisory topics has increased in recent years, which should be reflected in advisory services.

Furthermore, the majority of entries deal with improving client-oriented advisory services qualitatively. Individual responses in this category specify the goal of (the economic) growth of the client, the need for capacitating farm managers to improve their own business management, a continuous improvement of the portfolio of advisory services e.g. in order to attract new client groups (such as farming families).

The third most common response refers to a group of environmental topics. Among them suggestions such as the appropriate application of manure, issues of animal protection, solving conflict between nature conservation and agriculture as well as taking into account world nutrition and the societal demands towards agriculture are mentioned.

Financing issues include moves towards privatization and the withdrawal of public advisory services.

The agro-structural change was perceived to be disadvantageous by advisory companies as it entails that less farms (in total numbers) will make use of advisory services.

4.6 Programming and planning of advisory work

60% of the respondents stated that they have an **annual plan** for their advisory work (n=86). We also asked who was involved in the creation of the annual plan. Of those advisory organisations who work with an annual plan, this plan is enacted with the help of:

- a management board, specifically a steering committee in 88% of the cases,
- members of the organisation (e.g. staff, advisors) in 69% of the cases,
- clients (specifically recipients of advisory services) in 19% of the cases and
- representatives of the public in 4% of the cases.

None of the organisations identified shareholders as participants in the elaboration of annual plans.

21 advisory organisations (of those 13 private advisory companies, 7 FBOs and 1 NGO) offer **incentives** for advisory work to their advisors. This corresponds to 28% of all responses (n=76). 15 organisations further specified the kind of incentives they offer. Among these, turnover-dependent gratuities are most common (4 entries). Premiums, commission and membership in (national) panels, specifically associations, were each mentioned twice.

5 Characteristics of Farm Advisory System

5.1 Organisations forming the German FAS²²

The legal demands and margins of the European FAS and the related national regulation (*GAK*) for the organisation and financing of farm advisory services, linked to Cross Compliance, are implemented and applied differently in each federal state of Germany. They are closely related to the particular organisational forms of state-level advisory services in general (private consulting, chamber consulting, state authorities). A German-specific characteristic of the FAS is its combination with the introduction of a ‘farm management system’.

The objectives and tasks of FMS advice are mentioned in the *GAK*-guidelines and the recommendations of the federal ministry BMELV. By promoting the usage of FMS on “Cross compliance advice” the ministry pursues the advancement of the general management in the agricultural business by supporting the documentation of the operational processes and evaluation of data. The main goal of the ministry at federal level is to support farmers’ understanding of general requirements through CC-advisory service.

Depending on how the advisory system is organized in each federal state, the FMS advice was developed by governmental institutions (e. g. in Baden-Wuerttemberg or Bavaria) or private consultancy firms (e. g. in Mecklenburg Pomerania, Brandenburg und Saxony-Anhalt). The content of FMS advice comes from EU regulation, where it is a minimum requirement for FAS to cover all CC-requirements. i.e. if subsidies were provided by EU- or public German funds at state level, occupational safety would have to be included in the advisory service package. The public financial support of energy related advisory services within FAS developed after the GAP Health Check in 2008.

In 2009, subsidies for FMS advice were provided in 5 states (Baden-Wuerttemberg, Rhineland-Palatinate, Lower Saxony, Saxony-Anhalt and Thuringia). Currently only two federal states (Lower Saxony and Baden-Wuerttemberg) offer subsidized CC-advice. Concerning the target group of subsidies for FMS advice Thuringia as the only German state has included the principle in his regulation, that 75% of the farms who used subsidies for FMS advice should receive more than €15,000 in direct payments. Up until 2009 this goal was achieved without having to reject individual applications. The applied methods and instruments are the same as in other EU member states in principle: brochures, instructions by public authorities, information on the internet, helpline/hotlines and on farm individual advice. FMS advice is a specific German way of implementing the FAS.

Most of the federal states published a list of recommended or certified CC – advisors and certified FMS. Decisive for the recognition is that the system is tailored to the specific CC-requirements of each federal state. One outstanding FMS is for example the *GQS* system which translates to „whole farm approach quality assurance“. It was developed by the public agricultural authority in Baden-Wuerttemberg and is now used within a cooperation of 5 other federal states and Luxemburg. Most FMS consist of the following parts (using the example of *GQS*):

²² Based on Knierim et al. 2011

- A self-check list (which can be adopted to individual holdings in the electronic version).
- An archive/ registry with forms for documentation.
- Leaflets and additional information for background knowledge.

The diffusion of the farm management system was mostly unsuccessful – only in two out of the 16 states did more than 10% of the farmers adopted the instrument (Knierim et al. 2011).

5.2 Evaluation of implementation of FAS

After the GAP Health check some German states used the FAS regulation to publicly support advice, which not only includes CC, but also other topics related to the “new challenges” (e.g. energy, nature protection). One successful example for CC-advice seems to be the group training approach in Bavaria (Knierim et al. 2011).

The draft regulation for the implementation of the new GAP on the federal level (GAK) indicates that FMS advice clearly decreases in importance and is not explicitly subsidized anymore. FMS are no longer the obligatory instrument to give CC advice to farmers in the case of public financial support.

Results from Knierim et al. (2011) are generally confirmed in the quantitative survey of advisory organisations in this study. 16 advisory organisations provided qualitative statements about problems encountered during the management of FAS related to their organisation, advisors and farmers. Multiple responses refer to the following issues:

- Decreasing interest in CC-advisory services was mentioned 3 times; this was partly explained by the fact that other (non-certified) advisory services already provide advice on CC-topics as well as (at a lower rate) on e.g. topics such as climate change.
- Lacking motivation by farmers (e.g. to document economic parameters of the holding) and advisors for CC-advisory services.
- Bureaucratic obstacles.
- A lack of (extensive) FMS material in some states.

Additionally, respondents were asked to provide suggestions about the legislative framework of FAS at EU and national level for the future. This was used by 15 respondents who provided qualitative entries. Of those, a decrease of bureaucracy, e.g. through standardised FMS for all German states was mentioned by 7 advisory organisations. Three responses highlighted concise suggestions about organisational and financial changes of CC-advisory services: one respondent proposed to extend the maximum funding period to up to 5 years, one suggested billing procedures to be resumed by the advisory organisations (instead of farmers) and one comment noted that funding rates of CC advisory services were insufficient – either the rates should be increased substantially or the entire advisory services on CC-topics should be ceased. Another three respondents wished to prolong the deadlines of billing and execution of CC-advisory services.

6 Conclusions

In this section we first discuss findings and provide general conclusions with regard to the overall German AKIS. In the second part a specific focus is given to the advisory systems as they can be addressed from the empirical findings. However, we would like to underline that these conclusions, as well as the general AKIS appraisal, are still under discussion within and after the PRO AKIS regional workshops.

6.1 Summary and conclusion on the AKIS

6.1.1 Conclusions on AKIS

- The German AKIS is composed of a huge variety of organisations and institutions, most with long-standing traditions and well-established roles. All organisational categories (public administration, public and private research and education, private sector, farmer-based organisations and non-governmental organisations) are represented. A dominant characteristic of the German AKIS are advisory systems at state level which differ institutionally, a fact that creates considerable obstacles for the horizontal knowledge flows. According to literature and expert interviews, the linkages within the AKIS cannot therefore be classified as well-functioning, especially when looking at it from the national perspective. Nevertheless, among the organisations of the same category, communication and cooperation is frequently considered as good.
- Integrating national policies mainly exist with regard to rural development topics and for research and innovation processes. Coordinating structures and activities are provided by both public bodies (e.g. the thematic working panels) and non-governmental bodies (e.g. the federation of agricultural chambers VLK). In this regard, good bases for a functioning AKIS are given.
- However, the actual agency of the federal institutions is insofar restricted as the responsibility for the design and the funding of agricultural research and education belongs mostly to state ministries as well as the design of rural development policies. Selected incentives, e.g. set in the field of research through national programmes, may not suffice to counterbalance state-level reduction of e.g. research capacities or co-funding means. Hence, coordination of, and exchange on, agricultural research at the different levels (national, state etc.) and in the different spheres (public, private etc.) is very limited amongst the actors in the German AKIS.
- While the Federal ministry can set favourable framework conditions for policy instruments through the GAK, it is ultimately the state level which is in charge of the implementation and where priorities are set for rural and agricultural development policies. This decentralised approach can be considered to be a strength in so far as regional specificities can be taken into account and regionally adjusted measures can be developed. On the other hand, this institutional fragmentation prolongs the exchange and mutual learning among the different state-level actors and might even contribute to competitive attitudes. In this regard the German AKIS reveals a distinct weakness – knowledge flows cannot easily be organised and supported.

- From the interviews the picture of a divided AKIS emerged: on the one side there is a “mainstream”, conventional-market oriented AKIS which is represented by e.g. the interest organisation DLG and other professional organisations as well as private and public research bodies. On the other side, there is a distinctively smaller AKIS that comprises various small(er)-scale farm organisations from organic, traditional and regional forms of agriculture which we might call the “alternative” AKIS. Cautiously, due to the restricted empirical bases of this study, we propose to study further the German AKIS with the hypothesis of an ‘ideological divide’ that considerably hinders its overall performance.

6.1.2 Conclusions on policy and coordination structures

- There is a continuing tendency towards cutting public funds for public advisory services which is manifested by increased privatization and commercialization even in states with a chamber system or public advisory institutions. Similarly, funding of the relevant research and experimental stations (which are funded by each state) are being significantly cut, or increasingly privatized.
- Recent policy approaches, which impact on the German AKIS, are the DIP and the EIP “agricultural productivity and sustainability”. From a design point of view they do not seem to have many similarities: while the idea of the EIP is to support bottom-up approaches of actor groups along the agricultural value chain, the DIP builds upon the initiatives and existing research groups already funded in the innovation support program. Here, innovative research projects are selected from the steering group which means that the funding of the DIP is not open to all kinds of initiatives. While the DIP is a national policy initiative, the EIP will be implemented through state-level policies. Hence, vertical coordination and well- functioning knowledge flows are necessary in order to make both policy approaches effective and efficient.

6.2 Summary and conclusions on advisory services

The German advisory system is – historically – a very heterogeneous one, a trend which has increased in recent decades. Nowadays, the classical tripartite situation with official, chamber and private entities still exist, however there is an additional range of private and third sector organisations offering mostly specialized services. This diversity makes it impossible to give an adequate picture of German advisory services in the frame of the PRO AKIS study. In addition the restrictions of the survey played a role e.g. the results do not equally cover all German states (see section 7). This further re-enforces the observations made by authors of the SOLINSA report (Hoffmann et al 2013). They state that in addition to the multifaceted nature of Germany, the agricultural innovation system is largely driven by outside agriculture trends, and because of globalisation - innovation circulates around the globe, as information does. This alone makes it impossible to give a complete and correct overview on the country level.

Nevertheless, there are a number of findings in the survey that provide interesting insights into the current situation:

- Obviously, the active advisors have good educational backgrounds and frequently make use of training opportunities. A rather surprising figure is the low representation of women among advisors which would merit further research.
- The target groups of advisory services are predominantly medium to large scale farms. While this finding is not surprising and coincides with many other studies, it reignites the questions of a functioning AKIS and especially the integration of small-scale farmers' knowledge needs.
- The cooperation between public and private advisory services has been well appreciated by the survey respondents. This is an encouraging finding with regard to the future of the pluralistic systems as e.g. with the implementation of the EIP's instruments at state level, good cooperation between different actors in the sector will be a prerequisite.
- The needs and challenges as expressed by the advisory organisations are: better link with research, especially applied research, more training opportunities, networking and acquisition of competent staff.

We conclude by recommending that public authorities willing to back up advisory services should address these issues.

7 Methodological acknowledgement and reflection

For this report guide-line based expert interviews and a questionnaire-based survey were conducted. During the preparation for the expert interviews with AKIS actors in Germany, it became clear that there are countless organisations involved in the German AKIS. In particular there are a huge number of farmer-based organisations, NGOs and private companies playing an active role in the German AKIS-but it is impossible to assess the role of all players involved. Nine national organisations (see Table 5) were contacted for semi-structured interviews. Each of these organisations possesses a significant function in the German AKIS, but it should be noted that this selection cannot provide a complete picture of the German AKIS.

Table 5: List of interview partners in semi-structured interviews

Organisation (German)	Organisation (English)	Interviewee	Date
BMELV, Referate 414 und 225, Bundesministerium für Ernährung, Landwirtschaft und Verbraucherschutz	Federal Ministry of Food, Agriculture and Consumer Protection	Dr. Binzel Ms Camp Dr. Hornung	11/07/2013
IALB Internationale Akademie Land-und hauswirtschaftlicher Beraterinnen und Berater	International Academy of Rural Advisors	Ms. Albers	06/06/2013
VLK Verband der Landwirtschaftskammern	Federation of Agricultural Chambers	Dr. Assmann	06/06/2013
DBV Deutscher Bauernverband	German Farmer's Association	Mr. Lambers	10/06/2013
BLE/DVS Deutsche Vernetzungsstelle	German Networking Agency for Rural Areas	Ms. Rocha	19/06/2013
AHA Andreas-Hermes-Akademie	Andreas Hermes academy	Dr. Quiring	18/06/2013
ABL Arbeitsgemeinschaft Bäuerliche Landwirtschaft	Syndicate of Traditional Agriculture	Ms. Gafus	01/07/2013
DLG Deutsche Landwirtschaftsgesellschaft	German Agricultural Society	Mr. von Plate-Stralenheim	12/07/2013
DLV Deutscher LandFrauenverband	German Rural Women's Association	Ms. Dangel-Vornbäumen	03/07/2013

In preparation for the questionnaire-based survey, the biggest challenge was to firstly obtain an overview of the prevailing advisory system in each state. Therefore, telephone calls with 12 advisory service experts at state level were undertaken in order to explore the general advisory system and obtain data, in particular the contacts and email addresses of all services, organisations and private companies involved in agricultural advisory services. In two states we could not get in touch with the responsible experts in the given time. In five states, contact lists with certified advisory providers were available either publically in the internet or from the responsible state agencies. In these five cases, the contact lists served as a valid entry point to send the survey to private advisory companies and advisory circles. As the contact lists only contain advisory services which have been CC-certified, our survey shows a bias towards CC-certified organisations. Data on uncertified advisory organisations is not available.

For the quantitative survey, a total of 335 advisory organisations were contacted to participate in an online survey, out of which 310 emails were properly delivered (see Table 2). From the survey, we received 163 responses but not all of them contained complete or useful information. Questionnaires without an indication of the organisational type were neglected since this in the German context impeded further interpretation of the data. In the end, 95 online survey data sets proved to be valid for further interpretation. This corresponds to a response rate of 31 % of all survey recipients.

We observed a significant interest in the survey in general, evident from the numerous reactions in the form of emails and phone contacts. Nevertheless, the following challenges and study limitations need to be taken into account while reading this report:

- The main limitation of the survey is the limited time frame in which it was conducted. The federalized system with 16 German states added significant complexity to the survey procedure and extended the preparation period substantially. This made it necessary to refrain from intensive validation of the raw data received from the survey – not all inconsistencies in the data sets could be considered at that point. It should therefore be noted that backing up the survey qualitatively will require further refinements of the obtained data.
- Not included in the survey are advisory services from upstream and downstream industries such as agricultural input providers, as it is at this point impossible to obtain an overview of these such companies providing advisory services to farmers.
- Similarly, for some states, it was not possible to provide contact lists of private advisory companies as public agencies either did not possess an overview of all private advisors in the state or were unable to provide the list.
- Only some of the agro-environmental advisory service providers were contacted. Reasons for this were, again, that it was impossible to obtain an overview of all agro-environmental advisory companies working in single states.
- A number of private advisory companies claimed that they were not willing to participate in the survey due to privacy reasons of their customers; similarly many did not see any advantage to being listed in an online platform of advisory organisations in Europe.
- One methodological issue of the questionnaire survey refers to the specific question on advisory methods. In the online survey, respondents were asked to suggest a percentage to indicate how much time they spend on eight advisory methods (e.g. individual or group advice on or outside the farm, etc.). In theory, the partial percentages should have added up to 100% of total advisory time. The majority of respondents however, provided figures of between 15 and 30% of their total time used on specific methods and in no cases was 100% reached. This led to difficulties surrounding a quantitative interpretation of this specific case.

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9 Appendix

Below a selective list of AKIS actors is presented, which cannot represent the diversified and multi-level German AKIS and instead gives just a flavour.

Public organisations	
BMELV (before 2014)	Ministry of nutrition, agriculture and consumer protection
16 federal state ministries for agriculture	
LEL	LEL Baden-Württemberg
LfL	LfL Bayern
FüAk	Staatliche Führungsakademie für Ernährung, Landwirtschaft und Forsten in Bayern
LELF	LELF Brandenburg
LLH	LLH Hessen
Research and Education	
FLI	Federal Research Centre for Cultivated plants
JKI	Federal Research Institute for animal health
MRI	Research Institute of Nutrition and Food
TI	Federal research Institute for rural areas, forestry and fisheries
ATB	Leibniz-Institute for Agricultural Engineering
ZALF	Leibniz Institute for Agricultural Landscape Research
Humboldt-Universität zu Berlin	
Universität Hohenheim	
Friedrich-Wilhelms-Universität Bonn	
Christian-Albrechts Universität Kiel	
Justus-Liebig-Universität Gießen	
AHA	Andreas Hermes Akademie
DLG	DLG Akademie
Private Organisations	
Monsanto	
Bayer Crop Science	
Syngenta	
Claas	
Deutz	
Farmer-based Organisations	
IALB	
VLK	Association of the German Agricultural Chambers
DBV Deutscher Bauernverband	Farmers association (national level)
DBB Bauernbund	
DLG	German Agricultural Society
DLV	Rural women association
LWK SH	Chamber of Agriculture
LWK Niedersachsen	Chamber of Agriculture
Non-governmental Organisations	
aid - Auswertungs- und Informationsdienst für Ernährung, Landwirtschaft und Forsten	
BDP - Bundesverband Deutscher Pflanzenzüchter e.V.	
BFT - Bundesverband für Tiergesundheit	
Bioland	
BMR - Bundesverband der Maschinenringe	
Bund der Deutschen Landjugend	
Bundesverband Landwirtschaftlicher Fachbildung e.V.	