



Prospects for Farmers' Support:
Advisory Services in European AKIS

AKIS and advisory services in the United Kingdom

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 the United Kingdom, with a particular focus on agricultural advisory services. The description includes history, policy, funding, advisory methods and a section on how the Farm Advisory System (FAS) was implemented.

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

The agricultural sector in the United Kingdom is diverse, with about a third of the utilisable agricultural area arable, a third grassland and the remainder rough grazing in the uplands. The main arable crop is cereal; and the livestock sector includes sheep, cattle, poultry and pigs. The number of agricultural holdings (average size in 2012 was 77 ha) and agricultural labour input are decreasing.

The UK comprises four "countries": England, Wales, Scotland and Northern Ireland. Each of the last three have separate administrations, e.g. for agriculture and substantial "devolved" powers. This has consequences for the current AKIS and advisory system in the UK which is characterised by diverse arrangements and increasingly separate knowledge systems in each country. Each country is governed by a discrete set of policy, government departments and agencies, and to a large degree also by discrete sets of NGOs, farmer organisations and private commercial actors. The four systems have in common that they involve a mix of public, private commercial and non-governmental actors, with stronger governmental intervention in the provision of advice in Scotland and Northern Ireland.

Public policy on agricultural advice is fragmented, with no overarching national policy. Advice on the agri-environment and public goods is subsidised or fully funded by government, while general business advice, marketing and agronomic advice is paid for by farmers.

Evaluations of advisory services have typically been carried out for individual UK countries. These evaluations consistently find that different sources of advice are available and coverage is fairly good, providing reasonable support to farmers. However, there is also a share of farmers who are perceived to be in greatest need of advice who do not access advice. Some evaluations identify a lack of coherence between advisory activities, leading to 'advice silos' (where specific advisors provide advice only on specific topics), inefficiencies and duplication. In particular, public and private sector advice is seen to need more joining-up.

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List of Acronyms

Acronym	Explanation
ADAS	Agricultural Development and Advisory Services
ADE	Analysis for Economic Decisions
AHDB	Agriculture and Development Board
AIC	Agricultural Industries Confederation
AICC	Association of Independent Crop Consultants
AKIS	Agricultural Knowledge and Information/ Innovation Systems
AKS	Agricultural Knowledge Systems
AWU(s)	Annual Work Unit(s)
BBC	British Broadcasting Corporation
BBRO	British Beet Research Organisation
BBSRC	Biotechnology and Biological Sciences Research Council
BCPC	British Crop Production Council
BIAC	The British Institute of Agricultural Consultants
BIS	Department for Business, Innovation and Skills
CAAV	Central Association of Agricultural Valuers
CAFRE	College of Agriculture, Food and Rural Enterprise
CAP	Common Agricultural Policy
DARDNI	Department of Agriculture and Rural Development Northern Ireland
DECC	Department of Energy & Climate Change
DEFRA	Department of Environment, Food and Rural Affairs
E	England
FAS	Farming Advisory System
FBAASS	Farm Business Advisor Accreditation Scheme for Scotland
FCS	Forestry Commission Scotland
FWAG	Farming and Wildlife Advisory Group
GAEC	good agricultural and environmental condition
GHG	Green House Gases
GVA	Gross Value Added
HFCF	“the Helping Farmers Comply Forum”
IBERS	Aberystwyth University
ICF	Institute of Chartered Foresters
JHI	James Hutton Institute
KT	Knowledge Transfer
KTN	Knowledge Transfer Networks
LEADER	Links Between Activities Developing the Rural Economy
LEAF	Linking Environment and Farming
MAFF	Ministry of Agriculture, Fisheries and Food
NGO	Non-Governmental Organisation
NI	Northern Ireland
NIAB-TAG	National Institute of Agricultural Botany
NIACA	Northern Ireland Agricultural Consultants Association
OB	Operating Body
QMS	Quality Meat Scotland
R&D	Research & Development
RDPE	Rural Development Programme for England
RICS	The Royal Institution of Chartered Surveyors
RSPB	Royal Society for Protection of Birds
S	Scotland
SAAVA	Scottish Agricultural Arbiters & Valuers Association
SAC	Scottish Agricultural College

Acronym	Explanation
SAOS	Scottish Agricultural Organisation Society
SEARS	Scottish Enterprise
SEPA	Scottish Environment Protection Agency
SMRs	Statutory Management Requirements
SNRN	Scottish National Rural Network
SRDP	Scotland Rural Development Program
SRUC	Scotland's Rural College (consultancy arm of SAC)
TSB	Technology Strategy Boards
UAA	Utilisable Agricultural Area
VAS	Veterinary and Advisory Services
W	Wales

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1. Main structural characteristics of agricultural sector

The UK has a total UK area of 24.4 million hectares (Mha) and a total population of 63.2M (2011 census), and comprises four “countries”: England (with 54% of the total area, and 84% of its population), Wales (9%, 5%), Scotland (32%, 8%) and Northern Ireland (6%, 3%). Each of the last three have separate administrations, e.g. for agriculture and substantial “devolved” powers.

By European standards, the share of utilisable agricultural area (UAA) in the UK, at about 70%, is high, but has slowly decreased for many years to 17.2 Mha in 2012, mainly due to urbanisation in the lowlands and afforestation in the uplands. Moreover, only 36% of the UAA is arable (crops and temporary grass), while 34% is permanent grassland, and most of the rest is rough grazing in the north and west uplands. In 2012, there were 9.9M cattle (down 2M from its peak in 1994), 32.3M sheep (44.5M in 1992), 4.5M pigs (8.1M in 1998), and 160M poultry (182M in 2003)¹.

The dominant crop is cereals (21.5Mt in 2011, a “normal” year), with average yields of 7.7 t/ha (wheat) and 5.7 t/ha (barley). Other crops include oilseeds, sugar beet, potatoes, other vegetables and fruit. In 2011, the livestock sector produced 931Kt (dressed carcass weight), 301Kt of sheep meat, 759Kt of pig meat, and 1559Kt of poultry meat². Cows’ milk production was 13.7 Mt in 2011, at an average yield of 7,500 l/cow³. Production is supported by the use of about 240 kg of artificial fertilizer per hectare of arable land (2009)⁴, about half the peak figure in 1984⁵. Ammonia (NH₃) emissions reduced by almost 25% from 1990 to 253Kt in 2010⁶, and the gross nitrogen balance decreased by 12% from 2001 to 203 kg N per ha agricultural land in 2008⁷.

The number of agricultural holdings is decreasing (from 248,000 in 2005 to 222,000 in 2012); the average size was 77 ha in 2012 (106 ha in Scotland, and about 40 ha in Wales and in Northern Ireland). The number of farm businesses is smaller than those of holdings, due to joint management. Owner-occupation has increased while tenancy (renting) has decreased, but new forms of tenure (e.g. partnerships, family companies) obscure the picture.

Agricultural labour input has steadily decreased, to 282,000 AWUs in 2011, or about 1.5% of national employment. About three quarters of the farm work force are family labour, and a quarter is regular non-family labour. The majority (56%) of agricultural holding managers are

¹ <https://www.gov.uk/government/statistical-data-sets/agriculture-in-the-united-kingdom>, Table 2

² DEFRA *et al.* 2012: Agriculture in the UK. <https://www.gov.uk/government/publications/agriculture-in-the-united-kingdom-2012>, Tables 8.1 to 8.4.

³ DEFRA *et al.* 2012: Agriculture in the UK. <https://www.gov.uk/government/publications/agriculture-in-the-united-kingdom-2012>, Table 8.5.

⁴ <http://data.worldbank.org/indicator/AG.CON.FERT.ZS/countries?display=default>

⁵ DEFRA *et al.* 2012: Agriculture in the UK. <https://www.gov.uk/government/publications/agriculture-in-the-united-kingdom-2012>, Chart 9.5.

⁶ http://epp.eurostat.ec.europa.eu/statistics_explained/index.php/Agri-environmental_indicator_-_ammonia_emissions.

http://epp.eurostat.ec.europa.eu/statistics_explained/index.php?title=File:Ammonia_emissions_from_agriculture_%28kilotonnes,_%25%29,_1990_and_2010,_EU_27.png&filetimestamp=20130115162014

⁷ http://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=aei_pr_gnb&lang=en

55 years and older, with 28% being older than 65 years. Only 4% of holdings are managed by someone younger than 35 years.⁸

Agriculture's contribution to UK GVA is low (0.65% in 2011), at about £25,000 (€9,400) per AWU^{9 10}.

In 2012¹¹, UK farmers received subsidies of £3,250M (€3,824M¹², (15% up from 2005, largely due to movements in the €£ exchange rate), of which 80% were single farm payments, or approximately £15,000 (€7,650) per farm.¹³ Payments under agri-environment schemes were £520M (€612M, 81% up from 2005) and payments under the less favoured area support schemes were £122M (€144M), mostly in Scotland, Wales and Northern Ireland.

There were about 7,000 organic producers in 2011, with about 700,000 ha (about 2.9% of total UAA)¹⁴, although this has fallen recently. The area under management practices potentially supporting biodiversity rose from 3.5% in 2005 to 4.1% in 2010¹⁵.

⁸ EUROSTAT: Key farm variables: area, livestock (LSU), labour force and standard output (SO) by agricultural size of farm (UAA) and age of manager [ef_kvage]

http://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=ef_kvage&lang=en

⁹ DEFRA *et al.* 2012: Agriculture in the UK. <https://www.gov.uk/government/publications/agriculture-in-the-united-kingdom-2012>, Chart 3.1.

¹⁰ http://epp.eurostat.ec.europa.eu/portal/page/portal/product_details/publication?p_product_code=KS-FK-12-001, p. 98.

¹¹ DEFRA *et al.* 2012: Agriculture in the UK. <https://www.gov.uk/government/publications/agriculture-in-the-united-kingdom-2012>, Table 10.1.

¹² Converted at €1 = £0.85 (June 2013), as elsewhere in this paper.

¹³ <http://farmsubsidy.org/GB/>

¹⁴ DEFRA *et al.* 2012: Agriculture in the UK. <https://www.gov.uk/government/publications/agriculture-in-the-united-kingdom-2012>, Chapter 12.

¹⁵ <http://www.reseau-biodiversite-abeilles.com/wp-content/uploads/2012/06/Biala.pdf>

2. AKIS Characteristics

2.1 AKIS description

Agricultural Knowledge and Information Systems (AKIS) describe the exchange of knowledge and supporting services between many diverse actors from the first, second or third sector in rural areas. AKIS provide farmers with relevant knowledge and networks around innovations in agriculture. More recently, it has also been referred to as Agricultural Knowledge and *Innovation* System.

The UK AKIS has been characterised as a complex open system (Winter, 1997) that follows the laissez-faire model (Curry et al., 2012). It involves *“a wide range of influences and organisations with plurality and diversity at all levels. The organisations include private, voluntary and public bodies, the latter not necessarily all tied into a single central government department. There is no recent literature documenting the current status of the whole AKS in terms of overall numbers of actors, organisations or trends within the AKS”* (Ingram et al., 2011 p8).

A review by DEFRA (2013b) found that in England there are a minimum of 80 sources of advice and incentives to farmers and land managers from government, industry and other providers (see Annex 1 of the review document). Farmers and other agricultural producers¹⁶ are integral to the AKIS, as are the landowners of “estates” which often contain farm holdings (owned or rented) as well as forestry, recreational facilities, visitor accommodation, etc. Curry et al. (2012) find that in the English AKIS alone there are at least 14 different types of actors. Attempts to rationalize government services provided for agriculture (including some AKIS) and rural administrations (Haskins, 2003) have not succeeded in making it less complex.

The different types of actors do not neatly map onto the ‘Public-Research-Private-Farmer organisation-NGO’ classification (Table 1). The possible overlap between categories and roles of actors makes the representation according to a clear-cut typology difficult. For example, there are research and education providers spanning the public, private and NGO (e.g. charities) spheres. In addition, there are parastatal actors and hybrids that are partially state-funded but which also operate a commercial arm. There are Technology Strategy Boards (TSB) that fund a range of Knowledge Transfer Networks (e.g. Biosciences and Environment KTN are most active in AKIS area) which aim to link the research and industry sector, i.e. to make research more relevant and applicable. The Department for Business, Innovation and Skills (BIS) has responsibility for the Biotechnology and Biological Sciences Research Council (BBSRC). TSB, DEFRA, BBSRC and Scottish Government sponsor the Sustainable Agriculture and Food Innovation Platform. There are (university-based) Advanced Technology Partnerships funded by BBSRC and Knowledge Technology Partnerships (helping industry access research) funded by TSB.

¹⁶ E.g. “crofters” (with special land tenure in the Scottish Highlands and Islands), specialist horticulturalists, vineyard managers, agricultural contractors, etc.

Table 1: Overview of AKIS actors in the UK

Status	Type	Organisation (with relevant UK country – E, W, S, NI – where this is not obvious)
Public sector	Government departments	Department of Environment, Food and Rural Affairs (DEFRA) (E, some UK) and Rural Payments Agency Scottish Government (SG) Agriculture, Food and Rural Communities Directorate, and Rural Payments and Inspections Directorate (SGRPID) Farming Advisory Service (Farming Connect) (Wales) Department of Agriculture and Rural Development Northern Ireland (DARDNI) <i>NB: UK local governments (councils) have few agricultural/AKIS roles</i>
	Government agencies	Animal Health and Veterinary Laboratories Agency (E, S, W) and Veterinary Service (NI) Natural England (NE), Environment Agency (EA) (E only from 2013) Scottish Natural Heritage (SNH), Scottish Environment Protection Agency (SEPA) Natural Resources Wales (NRW, combining Countryside Council for Wales, Environment Agency Wales and Forestry Commission Wales from 2013) Forestry Commission (FC) and FC Scotland (FCS) Food Standards Agency (FSA); Food & Environment Research Agency (FERA)
	Local/regional agencies	National Park Authorities (not NI) Scottish Enterprise (SE), Local Enterprise Councils, Highlands and Islands Enterprise (HIE), Crofting Commission Health and Safety Executive (HSE)
	<i>Parastatal organisations</i>	Scotland's Rural College (SRUC/SAC) Lantra ¹⁷ (the Sector Skills Council for land-based and environmental industries) Agri-Food and Biosciences Institute (AFBI) (NI) Technology Strategy Boards; Research Councils (e.g. BBSRC)
Research and Education	Universities (Higher Education Institutes)	Universities Land based/ technical/agricultural colleges (e.g. Norfolk, Suffolk, Somerset) National rural exchange centres
	Research Institutes (mostly or partly state-funded, e.g. by research councils)	Rothamsted, Pirbright, John Innes Centre, East Malling Research, James Hutton Institute (JHI), Moredun, Scotland's Rural College (SRUC) Agri-Food & Biosciences Institute (NI) Organic Research Centre ¹⁸ , Organic Garden (was HDRA), Stockbridge House NIAB-TAG National Institute of Agricultural Botany ¹⁹ College of Agriculture, Food and Rural Enterprise (CAFRE)

¹⁷ Sector Skills Councils (SSCs) are state-sponsored, employer-led organisations that cover specific economic sectors in the UK. Their goals are to reduce skills gaps and shortages, to improve productivity, to boost the skills of their sector workforces, and to improve learning supply.

¹⁸ Registered charity. The Institute of Organic Training and Advice (IOTA) merged with the Organic Research Centre at Elm Farm (ORC) in April 2012 after eight years operating as an independent organisation.

¹⁹ National Institute of Agricultural Botany merged with The Arable Group, independent membership organisation

Status	Type	Organisation (with relevant UK country – E, W, S, NI – where this is not obvious)
Private sector	Food chain actors (upstream/downstream industries)	Merchants, processors, manufacturers, buyers and retailers, accreditation organisations, multi-national companies ²⁰ (e.g. supermarkets, processors ²¹ , animal feed, machinery, fertiliser, Mart) CampdenBri (industry R&D organisation)
	Independent consultants / Private agricultural advice companies/ Commercial companies	= consultancies and service providers Veterinarians Consultants – agriculture, technical, crop, livestock, energy, land, agribusiness, both individual and companies, e.g. ADAS ²² , Ricardo-AEA (formerly Momenta) Land agents – agribusiness/ management/ financial Quality Meat Scotland (QMS) Scottish Agricultural College (SAC, the consultancy arm of SRUC; see above)
	Levy bodies Trade Associations	Agriculture and Horticulture Development Boards (AHDB) with six sector operating divisions: BPEX, DairyCo, EBLEX, HDC, HGCA, Potato Council British Beet Research Organisation (BBRO), Processors and Growers Research Organisation (PGRO) Agrisearch (NI) Agricultural Industries Confederation (AIC) Association of Independent Crop Consultants (AICC)
Farmer based organisations	Farmers' cooperative	Scottish Agricultural Organisation Society ²³ Ringlink and other machinery rings
	Producer organisations	Horticultural Producer Organisations
	Farmers' circles/groups	Monitor farms (run by SAC, HGCA/ SAOS, QMS) Pilot catchments LEADER Local Action Groups (wider than farmers)
	Land manager representative bodies	National Farmers Union (NFU) (E&W), NFU of Scotland (NFUS), Farmers Union Wales (FUW), Ulster Farmers Union (UFU) Scottish Association of Young Farmers Clubs (SAYFC) Federation of Young Farmers Tenant Farmers Association/ Tenants Association Scottish Organic Producers Association (SOPA) Soil Association/ Soil Association Scotland Country Land and Business Association (E&W) (CLBA, formerly CLA) Scottish Land and Estates (SLE, formerly SRPBA, SLF) Scottish Crofters Federation (SCF)

²⁰ Random examples are Agrovista, Frontier, Agrii, Hutchinsons, Pro-Cam, McCains, Pepsico, ABS/British Sugar

²¹ 6900 food processing companies UK wide (Ingram *et al.* 2011)

²² ADAS (formerly Agricultural Development Advisory Service) was originally formed in 1946 as the National Agricultural Advisory Service (NAAS) advising the Ministry of Agriculture, Fisheries and Food (MAFF) before becoming ADAS in 1971. It became an executive agency of MAFF in 1992 and was privatised in 1997, since when the company has been just known as ADAS. ADAS operates from a network of 18 offices and research sites in England and Wales.

²³ develops co-operations and joint ventures among farmers, growers and rural businesses + regional offices

Status	Type	Organisation (with relevant UK country – E, W, S, NI – where this is not obvious)
NGOs	Charitable trusts, foundations, NGOs	Farming and Wildlife Advisory Group (FWAG) Linking Environment and Farming (LEAF) Royal Society for Protection of Birds(RSPB) Wildlife Trusts (e.g. Scottish WT) Royal Highland Show and Agricultural Society Royal Agricultural Society of England (RASE) Various agricultural societies, e.g. breeding (UK) National Trust (NT) (E, W), National Trust for Scotland (NT/NTS) Rural Support (NI)

The Department of Energy & Climate Change (DECC) plays a role in AKIS with regards to bioenergy. There are no Chambers of Agriculture in the UK.

The levy sector is crucially important in the AKIS. There is one statutory levy body (officially a DEFRA-sponsored non-departmental public body), The Agriculture and Development Board (AHDB). This includes the 6 (sector) operating divisions (see Table 1). Although more of an information-provision service than on-farm advice, tailored to the specific situation, the AHDB with its six section bodies organises a large and varied range of knowledge transfer activities. The research and development levy sectors' support underpins their knowledge transfer activities. These sector bodies are the most significant provider of independent practical information for the farmer and used by commercial advisors (including trade distributors).

There are also (separate and voluntary funded) levy bodies such as the British Beet Research Organisation (BBRO) and Processors and Growers Research Organisation (PGRO). Agrisearch carries out farmer-funded production-orientated research in the beef, dairy and sheep sectors in Northern Ireland.

There are numerous trade associations, some of which might also be considered as consultants. Examples include AICC, AIC as a supply trade association, a Crop Protection Association for the agrochemical industry, and the British Crop Production Council (BCPC) who has some commercial activity but has charity status for main activities.

The UK has a large and diverse agricultural research base. The UK Agri-Food Science Directory (2008) lists 280 organisations: university departments, government agencies, and other public bodies, research institutes and commercial organisation. There are around 15 university faculties or university-linked colleges with varying degrees of involvement in production agriculture, veterinary courses, farm Business Management and other agriculture-related courses. Among the better-known are University of Reading, University of Nottingham, Newcastle University, Cranfield University, Harper Adams University, Queen's University of Belfast, De Montford University, Royal Agricultural University, University of Exeter, Warwick University Crop Centre, University of Leeds, Aberystwyth University (IBERS), Bangor University, as well as colleges such as Myerscough College, Writtle College, Hadlow College, SRUC (Scotland's Rural College), Bishop Burton College, Loughborough College, Plumpton College, Easton College (see <http://www.farminguk.net/colleges.htm>).

Only examples can be listed from the many research institutes. They are typically known for one or several areas of expertise but often research other areas as well. Examples are Rothamsted (crops), Pirbright (animal health), John Innes Centre (plant science/genetics), James Hutton Institute (JHI) (land use, plant science), and Moredun (livestock disease).

Lantra is the Skills Sector Council body for the UK, which supports land-based and environmental industries and businesses. According to Lantra (2013), there are 500+ training providers who are approved by Lantra in UK throughout all the land-based and environmental industries. Lantra manages the RDPE-funded Landskills programme which includes vocational training at local colleges, as well as a variety of short courses for farmers, food processors and foresters. Courses are offered through organisations like ADAS, the Farming and Wildlife Advisory Group and the English Beef and Lamb Executive. For Scotland, agricultural advisors can be registered with Lantra under the The Farm Business Advisor Accreditation Scheme for Scotland (FBAASS). Under the FBAASS scheme, advisors are allowed to deliver Whole Farm Reviews on behalf of the Scottish Government. At the moment, 89 advisors are qualified (FBAASS 2013).

Regarding the governance of the AKIS, a complex delivery network includes government departments (DEFRA, SGRAD), executive agencies, non-departmental public bodies (Environment Agency, Natural England and Levy Boards) and public corporations, as well as other bodies such as the Forestry Commission and the National Parks Authorities.

2.2 AKIS diagram

Figure 1 presents an overview of actors in the UK AKIS and the category of actors they belong to (public, private, research & education, NGO and farmer-based organisation). Note that there is overlap between categories. Another way of representing the UK AKIS is as a 'pipeline' of how knowledge, information and innovation travel from one type of actor to another. There are interactive feedback loops between some of them (Figure 2).

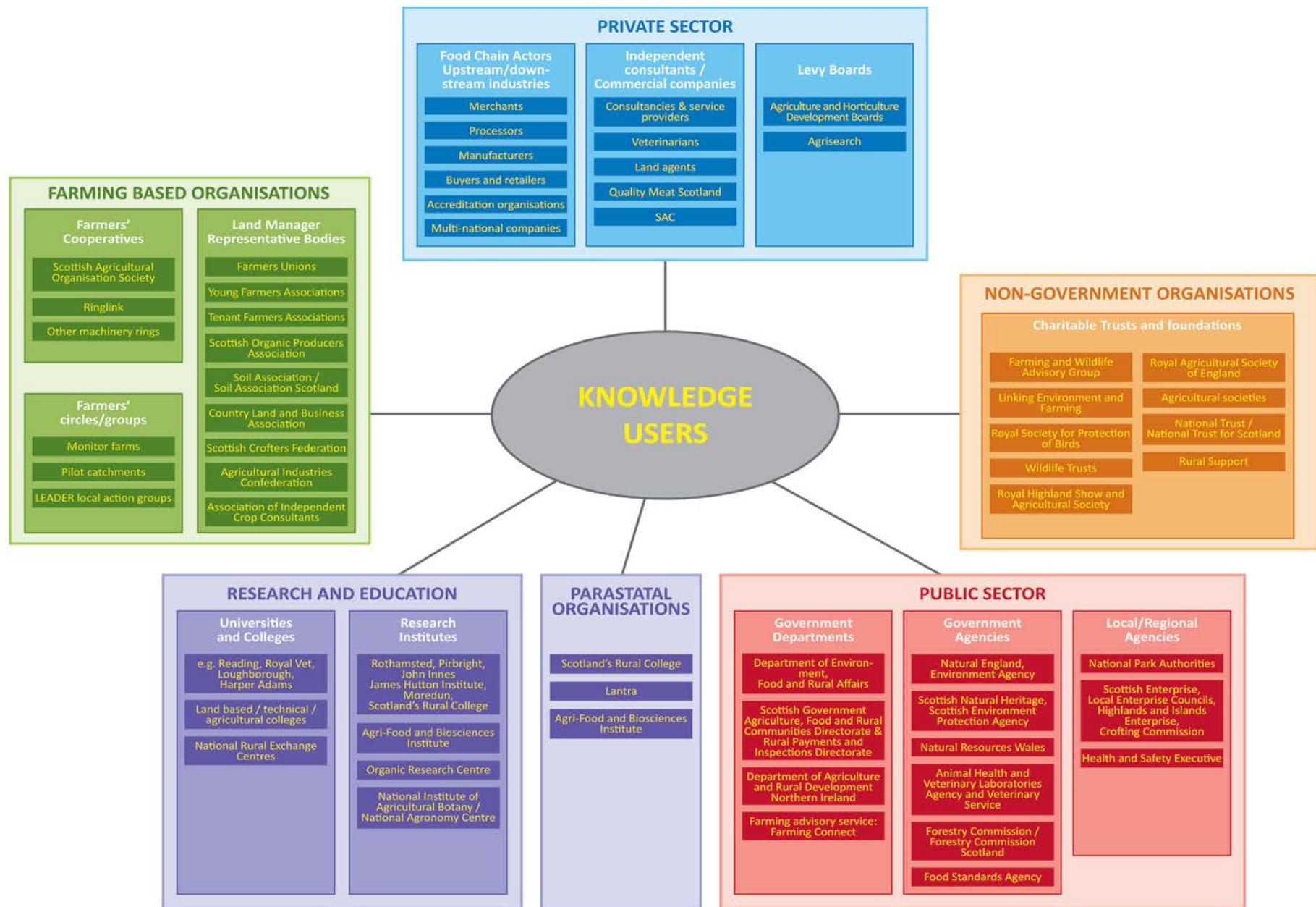


Figure 1: AKIS in the UK

THE AKIS 'PIPELINE' IN THE UK

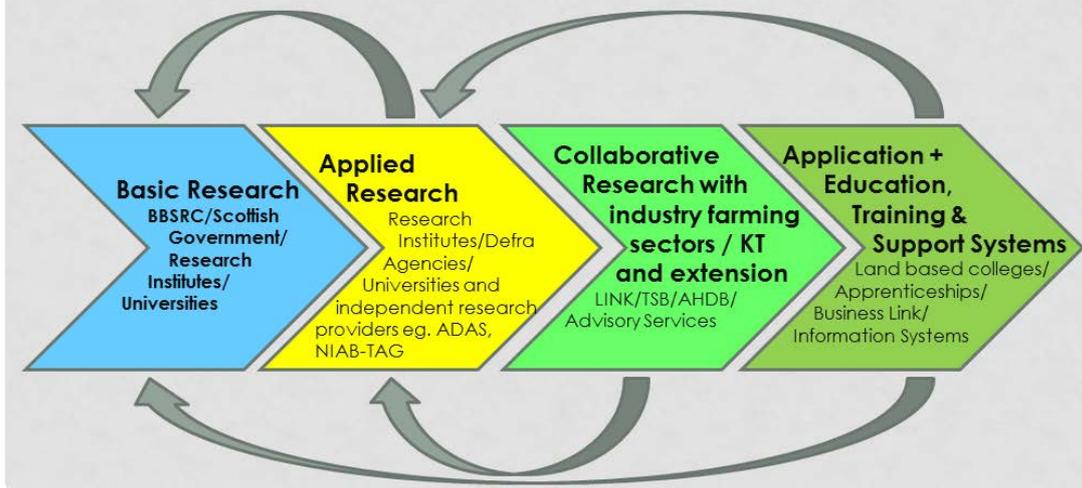


Figure 2: The AKIS 'pipeline' in the UK” (source: presentation by David Cooper)

3. History of the advisory system

Until the late 1980s, a state-funded extension service had the primary purpose of increasing UK food production. Research stations and university faculties/departments fed new knowledge to universities and colleges (delivering education and training) as well as to the state advisory organisation (ADAS in England). According to Curry et al. (2012) the privatisation of ADAS in 1997 “*was probably the most prominent event for many in the dismantling of this system as the AKIS became laissez-faire.*” They find that near-market (rather than nonmarket) research became dominant, funded by the private sector (often agricultural suppliers) and the levy boards.

Looking in more detail, the state-funded extension service passed through a stage of commercialisation on to privatisation. As a first change, cuts to near-market research were observed in the late 1980s when more strategic, public good work became dominant for Government, leaving near-market applied work for industry. At the same time, levy bodies expanded their activities to take up some of this work but they were not ‘dominant’ overall at this stage. At a second stage, ADAS (since 1992 an executive agency of MAFF²⁴) became increasingly commercial and ultimately privatised (in 1997) and withdrew from activities and research centre sites (which included Experimental Husbandry Farms and Experimental Horticultural Stations) that were not commercially viable. A third change came about when, in 2001, MAFF became part of a new DEFRA²⁵, a step which was coupled with the concentration on environmental sustainability objectives rather than food production. As a fourth change, for similar reasons, BBSRC²⁶ reduced the number of their Research Institutes – more recently some remaining ones have been merged with Universities. The Agricultural Training Board was disbanded. Trust between farmers and government diminished as a result (MacDonald, 2011), and social networks between farmers and (usually state) advisors were lost (Hall and Pretty, 2008). A reduction of the number of ‘players’ has also occurred in the agricultural media (magazines, BBC programmes).

The retreat of government from agricultural research and extension has resulted in a diversification in providers from the private and NGO sectors. Research institutes began to receive much more funding from private as well as public sources. “*The research priorities also changed with a substantial shift in publicly funded R&D away from production-oriented science and technology towards science designed to deal with environmental concerns, animal welfare and food safety. Vertically the AKS became fragmented as the change in the status of ADAS meant that the government has struggled to find the mechanisms to connect research on environmental protection and sustainable agriculture to farmers, as the traditional research-extension links and advisory practices become less relevant to end users*” (Ingram et al., 2011 p6f).

²⁴ Ministry of Agriculture, Fisheries and Food

²⁵ In June 2001, the Ministry of Agriculture, Fisheries and Food (MAFF) was merged with part of the Department of Environment, Transport and the Regions (DETR) and a small part of the Home Office to become DEFRA.

²⁶ The Biotechnology and Biological Sciences Research Council (BBSRC) was created in 1994, merging the former Agricultural and Food Research Council (AFRC) and taking over the biological science activities of the former Science and Engineering Research Council (SERC)

Partnerships and coalitions have become more important, and privately owned demonstration and monitor farms have replaced state-owned experimental husbandry farms. Agricultural shows, organised through voluntary and charitable societies, are still AKIS-relevant, although many have lost their central importance (not all, cereals is still premier arable event, and shows with a fruit focus similarly). Other actors such as supermarkets are in a strong position to drive innovation and changes, probably more so than in other Member States. For example, the supermarket chain Morrison's run their own demonstration farm, by which the company accepts the risk for innovations that can then be taken up by their supplier farmers (House of Lords, 2011).

The current advisory system in the UK is characterised by diverse (and increasingly separated) arrangements in the four UK countries, e.g. for setting SMRs and GAEC, education and training, rural development, and much research. Overall, and especially in England, there has been an organisational evolution towards the privatisation and commercialisation of knowledge production and transfer. NGOs, public and private actors compete for the provision of agricultural advice.

4. Agricultural advisory services

4.1 Overview of all service suppliers

There is considerable diversity within the UK regarding the way advisory services are delivered and to what extent the state is involved. “*England has a fully privately-driven extension approach, whereas Wales uses a strong publicly-driven approach supported by various private advisory networks, while Scotland and Northern Ireland operate through a fully publicly-managed system, even though some of their services are outsourced to advisers accredited according to subject*” (ADE (Analysis for Economic Decisions) Consultancy, 2009 p26).

The current strategy in relation to advisory services is to “hand it to the market”, with the exception of advice relating to public-good provision, e.g. for the agri-environment. Even here, UK governments favour a market-led approach, e.g. by awarding time-defined and specific contracts under competitive tendering to private companies or parastatal agencies. Indeed, Cook *et al.* (2008) observe (for North-East Scotland, but equally true elsewhere): “*there is no true market in training... organisations just follow the subsidy*”, and accordingly tend to focus on compliance with regulation rather than on business improvement.

Technical (crop, livestock, soil) and business advice on farming is offered by private consultants (individuals and small companies, usually regional) as well as by some college and institute staff. NGOs (FWAG, Wildlife Trusts, RSPB) are involved in providing agri-environmental advice or advice related to conservation, species and habitat management on farms. Hobby (lifestyle) farmers use different routes to commercial farmers; they tend to approach organisations such as Scottish Land and Estates or crop consultants for advice. Broader innovation is supported by rural networks that exist across the country (e.g. Scottish National Rural Network SNRN, Rural Network for Northern Ireland).

Other actors involved in providing advice are e.g. Quality Meat Scotland (QMS) who are the principal funder of the livestock Monitor Farms Programme which currently has 11 farms in Scotland (also financially supported by Scottish Government and Scottish Enterprise). SAOS run a similar programme for Arable Monitor Farms, and the Cairngorms Monitor farm attracts further support from the Cairngorms National Park Authority.

Box 1: An example illustrating the caveats of capturing the number of advisors

According to a report prepared by the Advisory Services Working Group (Scotland) (2012), there are:

- FBAASS accredited consultants: 86 fully accredited; 17 associates
- Members of RICS²⁷ in Scotland with rural specialism: 245
- Members of SAAVA²⁸/CAAV²⁹: >200
- Members of Institute of Chartered Foresters (ICF): 404 (chartered foresters: 285).

²⁷ The Royal Institution of Chartered Surveyors

²⁸ Scottish Agricultural Arbiters & Valuers Association

²⁹ Central Association of Agricultural Valuers

Caveats of these figures include:

- One sole trader suggested that “less than 1/3 of consultants would be FBAASS accredited”. This may or may not be the case, but highlights the wider market.
- Rural specialists in RICS could easily be working in the rural field but not providing advice (e.g. property sales or general estate management).
- Approximately, 20% of the ICF membership is made up of staff in government/agencies. But also there will be many working in forestry that are not members of the ICF.
- Memberships of RICS and SAAVA will overlap.

SRDP agent authorisations could be a way of assessing the numbers of consultants/advisors that actually steered SRDP applications. However, the pool of advisors is much larger as agronomy consultants or similar would not be captured as SRDP advisors.

4.2 State involvement in advisory services: public policy, funding schemes, financing mechanisms

Public policy on agricultural advice is fragmented: *“There is no clear national policy, but different ministries apply different instruments. New rural networks originate from both public and private organisations and operate on all scales from local to international and even virtual. A partnership approach is being increasingly used by governments to initiate change with stakeholders from the public sector, academics, NGOs and industry”* (Hermans et al., 2010). The four UK-countries have different ways of organising the provision and funding of advice (Table 2).

In England, the advice delivered under pillar 1 of the CAP is organised through the FAS contracting independent commercial advisors. Advice delivered under pillar 2 (Rural Development) is divided between DEFRA (Axis 1,3 and 4) and Natural England (Axis 2). Natural England administers the RDPE-funded Environmental Stewardship Scheme and the Energy Crops Scheme (while the Forestry Commission administers the RDPE-funded English Woodland Grant Scheme). Natural England also contracts out specific packages of work related to the England Catchment Sensitive Farming Delivery Initiative. This initiative is a joint-agency venture, managed on the ground by DEFRA, with advisors (also called Catchment Officers) being drawn from Natural England and the Environment Agency (due to its focus on diffuse water pollution in fifty priority catchments in England). Overall, most advice is provided by contractors who report to Natural England and Defra and voluntary agreements/ partnerships (Ingram et al., 2011). Defra pursues a Whole Farm Approach where one point of access (an information hub) is provided for regulatory information and forms in order to reduce the regulatory burden and number of duplicate requests for information. This is primarily an online service.

In Wales, Farming Connect subsidises 80% of the cost of advice. This applies to the Whole Farm Plan, Farm advisory service and skills development programme. Fully funded services include Demonstration farm events, open meetings, discussion groups, business clubs, workshops and clinics, the Agri-Academy, planning advice and Agrisgôp (discussion groups under the management development programme). Study tours are funded up to £250. In addition to local

advisors, there are designated regional coordinators for the Farming Connect scheme (Welsh Assembly Government, 2010; Welsh Government, 2012).

Table 2: Overview of state involvement in advisory services in the 4 countries in the UK

	England ³⁰	Scotland ³¹	Wales ³²	Northern Ireland
State finances agricultural advisory services	Partially	Partially	Yes	Yes
At which level*	Region*	Region*	Region*	Region*
Procedure (subsidy/ competitive calls)	Co-funding of advice and contracting agencies or private consultancies	Subsidy, funding the VAS programme through the SAC	Fully funded or 80% funding for subsidised services	Delivered through CAFRE and 'Helping Farmers Comply Forum'
Themes covered	Cross compliance; Competitiveness; Nutrient management; Climate change adaptation; Climate change mitigation	Animal and zoonotic disease; biodiversity and conservation (SRDP & GAEC); climate change; woodland management; crop health; economic information; food marketing; organic farming; pollution prevention; rural diversification, non-food crop & renewable energy; support to disadvantaged areas ³³	Environment; Effective use of ICT; Young entrants; Climate change; Health and safety; Animal health and welfare; Women in agriculture; renewable energy; succession planning; business improvement; Whole Farm Planning	Certificate to Degree courses available in a range of subjects; Industry training programmes; Technology transfer programme; Benchmarking programme; Field Boundary Management; Cross Compliance; Farm Waste; Nitrates; Nutrient Management Planning
Target groups of farms	All	All	All; young entrants and women highlighted	All
Target groups of FAS	Farmers in Nitrogen Vulnerable Zones (NVZ) or with phytosanitary emergency plans; sheep and goat producing farmers	Changing priorities. 2012/13: New Entrants into Farming	No target group	Farmers receiving more than 15000 Euros direct support and specific target group (Farmers in Nitrogen Vulnerable Zones (NVZ) or with phytosanitary emergency plans)

* 'Region' meaning the respective country within the UK

³⁰ <http://www.defra.gov.uk/farming-advice/>; <http://www.crosscompliance.org.uk/>; <http://www.ricardo-aea.com/cms/>

³¹ Links to info on VAS: http://www.sruc.ac.uk/info/120416/about_the_programme;
http://www.sruc.ac.uk/downloads/download/393/the_scottish_government%E2%80%99s_veterinary_and_advisory_services_programme_2011_12 <http://www.scotland.gov.uk/Topics/farmingrural/Rural/business/veterinary>

³² Farming Connect:

<http://wales.gov.uk/topics/environmentcountryside/farmingconnect/farmadvisoryservice/?lang=en>;

<http://wales.gov.uk/docs/drah/publications/100714fcfarmadvisoryleaflet.pdf>

³³ http://www.sruc.ac.uk/info/120417/advisory_activities

In Scotland, the Scotland's Environment and Rural Services (SEARS) was launched in 2008. It is a partnership between eight public bodies aiming to improve the experience among land managers by working together to provide an efficient and effective service. The eight bodies are: the Animal Health and Veterinary Laboratories Agency, the Cairngorms National Park Authority, the Crofting Commission, Forestry Commission Scotland, the Loch Lomond and the Trossachs National Park Authority, the Scottish Environment Protection Agency (SEPA), the Scottish Government Rural Payments and Inspections Directorate, and Scottish Natural Heritage. They are pursuing a "one door any door principle" with the aim of reducing inspections and simplifying the forms and surveys that land managers need to complete (www.sears.scotland.gov.uk). SEARS covers a broad range of farming-related topics.

The Scottish Government provides a wide range of advice through its Public Good and Veterinary Advisory Services (VAS). These are delivered by the Scottish Agricultural College (SAC) on a generic free basis. This service has been in place since the 1990s but has been adjusted to meet EU requirements, i.e. this service now also delivers the EU farm advisory service. The contracts for advice delivery between Scottish Government and SAC follow government policy objectives (e.g. "more competitive and dynamic agricultural sector that contributes to the long term viability of rural communities while maintaining high standards of animal health and welfare and environmental management").

In Northern Ireland, the Department of Agriculture and Rural Development (DARD) is the designated authority to ensure that a Farm Advisory System is provided. The farm advisory service is wholly funded by DARD through CAFRE which is an integral part of DARD. For example, DARD business development programmes are delivered through CAFRE and promote sustainable development of farm businesses. The Farm advisory system is centrally co-ordinated by a group called 'Helping Farmers Comply Forum'. There are not many private sector advisors within NI. The Northern Ireland Agricultural Consultants Association (NIACA) was set up in 2006 primarily to complete Single Farm Payment forms for farmers rather than to provide advice.

4.3 Funding

Limited data was available on the costs of advisory services. A recent DEFRA report found that in England £20 million per year is spent on administering and delivering government advice schemes and initiatives (DEFRA, 2013b).

The Scottish Government funding of the Veterinary and Advisory Services (VAS) programme was £6.84 million in 2012/13 (SRUC, 2013). The cost for the Public Good Advisory Services for Scotland is estimated at £2.8 million per year (Advisory Services Working Group, 2012). The service has 2 elements, the generic advice on a wide range of public good issues and a remote area allowance. The Scottish Government also funds the Whole Farm Review Scheme, up to £550K per annum.

4.4 Methods and Human resources

Advisory methods used range from one-to-one or group advice both on and off farm, to online portals and newsletters. Farm walks/ visits, demonstration farms and monitor farms (see also

sections 4.1 and 4.5) are continuing to be popular advisory methods. A review by DEFRA (2013b) compiled a wide variety of formats through which advice is delivered: individual farm visits by government and independent advisors, at organised events, clinics, workshops and 'drop ins' (such as those organised by the Farming Advice Service, for example), website information, guideline documents, information sheets, online fora, e-mail and telephone helplines.

It is not possible to comment on the total number of advisors in advisory organisations due to the specific structure of how advice is provided in the UK. For small consultancies, the 1-3 advisors will all carry out advisory activities (more than half of the respondents in the survey fell into this category, see Section 7). For larger organisations, a number of staff have mainly advisory functions but others will also carry the title 'advisor' (e.g. policy advisor), making it difficult to determine the share of advisors (of the total staff in an organisation) exactly and correctly. There are no strong gender issues in UK farming, with female leaders and participants in most sectors, whether production, advice, training and research.

A rough idea on recent developments with regards to advisors and staffing in organisations offering agricultural advice can be gained from the online survey (please note limitations in the survey detailed in Section 7). For the majority of respondents (about 60%), the number of staff and the number of advisors has stayed the same in recent years. In few organisations (about 10%) has the number of staff and/or advisors decreased. The remainder of the responding organisations have seen an increase either in staff, in advisors or both.

For Wales, the following numbers were made available (Douch 2013, pers. comm.): six consultancies provide Whole Farm Plan and farm advisory service, and another four consultancies provide Whole Farm Plan advice only (see Annex 1).

4.5 Clients and topics

The demand for agricultural knowledge is constrained by farmer demand, much of which is interested in income and profit, rather than in the environment or social objectives. However, Hermans et al. (2010) found that large farmers and landowners, with more, and more varied, land under their management are likely to be more interested in these latter aspects, and some small-scale "lifestyle" farmers with other income and capital sources have strong landscape and biodiversity interests. Nevertheless, funding for agri-environmental knowledge is often short-term, and impermanence is a problem.

Hermans et al. (2010) also claim that there are a number of farmers that are 'hard to reach' because they fall outside of the established organisations of unions and levy boards. Advice to small-scale farmers is available, although organised differently in each UK-country. In Scotland, for example, the government funds SAC Consulting to deliver services to all areas and farmers, including crofters and farmers in remote areas. SAC have 27 offices across the whole of Scotland. They operate a subscriber system by which farmers can sign up for various packages that cost the same across the country with public good advice being provided for free. In England, advice might be somewhat harder to access and afford for small-scale farmers due to the fully privatised nature of the extension system.

Broadly speaking, two kinds of advice can be distinguished: market-oriented advice concerning increased production (and to some extent improved marketing for higher prices and added value) and greater efficiency (cost savings), and environment-oriented advice concerning public goods, such as anti-pollution methods, landscape and wildlife (biodiversity). The diverse advisory community which has emerged to fill the gap left by the retreat of public advisory organisations contains an expanding number of advisors within NGOs involved in conservation and environmentally responsible farming (e.g. LEAF, Wildlife Trust).

Within the environment-oriented advice, topics cover all four areas of environmental priority for the (English) Government, namely soil/land use, water, biodiversity and air (as well as animal health). The most comprehensively covered areas are soil/land, water and biodiversity. Government schemes cover all three ‘drivers’ of advice (legal/financial incentives/best practice) with most activity being on financial incentives and best practice. The majority of schemes and initiatives are led either by government or farming industry organisations (DEFRA, 2013b).

According to the DEFRA National Statistics report (2013a), 95% of commercial farm businesses access business management advice. Smaller farms and older farmers are less likely to access business management advice. The most common sources of advice on business management and technical issues are the farming media, advice supplied freely and talking to other farmers (DEFRA, 2013a).

From the results of the online survey of advisory organisations (please note limitations in the survey detailed in Section 7) it was notable that advice on agri-environmental programmes and on environmental issues ranked highest (around 80% of respondents stated that they routinely or very frequently deliver advice on these topics). More than 70% of respondent routinely or very frequently deliver advice on cross compliance. Advice on renewable energy and machinery was a less common topic (Table 3).

Table 3: Advisory topics in order of delivery among survey respondents

Advisory topics
Agri-environmental programmes
Environment (water, biodiversity, climate change, soil)
Cross-compliance
Livestock production
Rural development
Crop production
Bookkeeping, taxes etc.
Business diversification / processing / new products
Agricultural building design (stable, silo, etc.)
Renewable energies (bio-energy production, energy efficiency, wind, solar)
Machinery

This does not, however, indicate how much of this particular advice is delivered overall because the survey counts a one man consultancy in the same way as a public organisation with between 80-150 advisory staff. Indeed, the figures rather indicate that agricultural consultancies have specialised to deliver the advisory topics listed at the top whereas few have the topics at the bottom in their portfolio. Among the respondents were also a number of (environmental) NGOs which would place their focus on environmental and conservation issues.

4.6 Linkages with other AKIS actors / knowledge flows

Earlier publications on AKIS in England emphasise that privatisation resulted in horizontal fragmentation with the proliferation of advisors and the development of diverse and complex advice landscape (Ingram et al., 2011). This disjuncture and the unregulated nature of the AKIS have been frustrating for many in the agricultural community (Curry et al., 2012). In particular the vertical relationships between the different levels in the English AKS became weak and fragmented after privatisation of the state advisory service ADAS, with inadequate mechanisms for the delivery of research outputs (either as new knowledge or new technologies) to farmers through demonstration or via advisors, trainers and educationalists. There is a sense that this fragmentation has detrimentally affected the flow of knowledge in both sustainable agriculture and commercial contexts (Ingram et al., 2011).

As described above, there are now many “partnerships” between various AKIS actors in the UK. Some of these are “vertical”, i.e. designed to improve the flow of new knowledge to farmers, while others are “horizontal”, i.e. aimed at broadening the scope (geographical, technical, etc.) of the joint effort – often in order to maximise the chances of obtaining state funding, but also to achieve scale economies amongst personnel and facilities.

Some commentators assess the link and knowledge flow between research and the private sector as weak. Knowledge is created within the scientific community but not transferred and translated to be applied by farmers or actors in the wider food chain. In part, this may be due to the fact that much cutting edge science is not immediately commercially applicable (Islam et al., 2013). Conversely, agribusinesses and food companies are not able to articulate what kind of knowledge they demand in order to adopt an innovation.

A diverse range of linkage mechanisms are used to connect the AKIS vertically. Online portals enable widespread dissemination, for example for national coverage DEFRA uses online services, the Whole Farm Approach is an online resource helping farmers access information on regulation and other areas of advice (e.g. SEARS). The farming press is also used by public and private AKIS actors to reach a wide audience. FAS contractors use group events, the private sector offer farm visits from consultants and agronomists which farmers pay for, while charities and trusts offer farm walks, demonstration farms and farm visits with a range of payment options. The levy sectors, each of which has a KT team, use a number of mechanisms including demonstration farms, publications, newsletters, websites and in some cases (e.g. DairyCo) extension officers (Ingram et al., 2011).

4.7 Programming and Planning of advisory work

State-sponsored advice is driven primarily by policy requirements, i.e. sector competitiveness (and recently renewable energy supplies) and a number of environmental objectives, including landscape, biodiversity and (recently) net GHG emission reductions (AEA, 2010). However, crisis situations (flooding, animal disease outbreaks, etc.) sometimes lead to new (but temporary) efforts.

Each of the Departments of agriculture (DEFRA, DARDNI) and governments (Welsh and Scottish) make policy and legislation, and work with others to deliver policies in areas concerning the natural environment, biodiversity, sustainable development and green economy, food, farming and fisheries, animal health and welfare, environmental protection and pollution control, and rural communities.

Priorities are to support British farming and encourage sustainable food production; to enhance the competitiveness and resilience of the whole food chain, with improved standards of animal welfare; to enhance the environment and biodiversity to improve quality of life; to enhance and protect the natural environment by reducing pollution, mitigating greenhouse gas emissions, and preventing habitat loss and degradation; to support a strong and sustainable green economy, to help to create the conditions in which businesses can innovate, invest and grow.

Underpinning rural delivery are two explicit strands in UK government policy, firstly, not to provide support where it is more appropriate for it to come from the private sector and, secondly, to keep regulation to a minimum.

5. Characteristic of Farm Advisory System (EC regulation)

5.1 Organisations forming the FAS

This section focuses on the delivery of advisory services through the Farming Advisory System (FAS), its coordination, certification and control.

The UK belongs to the group of EU Member States where the advisory activities organised under the mandatory FAS have tended to focus strictly on the statutory management requirements (SMRs) and the good agricultural and environmental conditions (GAECs) included in the scope of cross-compliance (ADE (Analysis for Economic Decisions) Consultancy, 2009). The objective of implementing the FAS in the UK was to “be compliant with Pillar one as defined in Regulation (EC) N°1782/2003, i.e. emphasising the close link between the FAS and cross-compliance” (ibid, p9). However, in England, the FAS has recently (April 2013) been broadened (and its name altered to “FAS” from the “Cross-Compliance Advice Programme”) to include “*nutrient management, competitiveness and climate adaptation and mitigation*” (www.defra.gov.uk/farming-advice).

In Wales and Scotland, there has been a longer-term drive to widen advice beyond cross-compliance – often linked to Rural Development Plan priorities. This is reflected in the comprehensive Farming Connect scheme in Wales and the joint SEARS system in Scotland.

Regional entities in the four countries are the major stakeholders and implementers of the FAS because the responsibilities for setting SMR & GAEC obligations and implementing the FAS are devolved. In Scotland and Wales, agriculture is a competence of the respective government (the Scottish Government, the Welsh Government). In Northern Ireland and England, SMR & GAEC obligations are set by the respective Department of Agriculture. The actual implementation and agricultural extension services are either managed by government, or devolved to a government agency or to an agricultural college. Table 4 shows the FAS coordinating bodies in each of the countries and the day-to-day implementation bodies.

The responsibility to oversee the implementation of the FAS is typically left to the relevant agriculture departments. Exceptions are England and Northern Ireland. In England, Natural England has been designated as contract manager and entrusted with the overall coordination between the Operating Body (Ricardo-AEA, previously the Momenta consortium), public agencies and other bodies; this is done through regular steering meetings to decide on the workload and priorities for the coming months. In Northern Ireland, a specific internal committee “the Helping Farmers Comply Forum” (HFCF) streamlines activities and inputs of all the public services involved in providing FAS services (ADE (Analysis for Economic Decisions) Consultancy, 2009).

The Operating Bodies in the UK are mainly private (profit-making and non-profit-making) bodies; only few are public bodies. In this regard, the situation in the UK is typical for the other EU member states: 90% of the Operating Bodies in the EU member states are privately driven. There are no agricultural chambers (classed as public operating bodies). ADE (2009) lists 8 private profit and 6 public operating bodies for the UK, but the ‘regions’ operate differently (operating bodies are mainly public bodies in Northern Ireland and Scotland, private in England and mixed private-public in Wales).

Table 4: Coordinating bodies and implementation bodies in the four UK countries

	Coordinating bodies	Implementation bodies
England	Defra (Department of Environment, Food and Rural Affairs)	Natural England
Scotland	The Scottish Government	Scottish Agricultural College (now part of SRUC)
Wales	Welsh Government	Welsh Government
Northern Ireland	Department of Agricultural and Rural Development (DARD) through a central committee entitled the 'Helping Farmers Comply Forum' (HFCF)	College of Agriculture, Food and Rural Enterprise (CAFRE)

A mixed set-up co-exists in the UK because the UK countries have followed different paths in terms of the FAS organisation and links with pre-existing system and extension services. In England and Wales, a specific new facility was set up to cater for cross-compliance advice, while in Scotland and Northern Ireland the FAS is an integral part of the existing advisory framework. In terms of linkages and interactions with other services, the specific coordination and interaction³⁴ between services goes through Natural England (England) and the Farming Connect programme (Wales) in addition to standard interaction between DEFRA providing backstopping and info-research data to advisers. The FAS in Wales is considered part of Farming Connect. In Scotland and Northern Ireland, there is no specific coordination or interactions other than the standard interaction between the agriculture department providing backstopping and info-research data to advisers.

5.2 Accreditation

The selection process for advisors differs between UK countries. For England and Wales, accreditation of advisers within selected Operating Bodies (i.e. a kind of double selection-accreditation system) was carried out, whereby, within the selected OB staff or associates, only a limited number of advisers can provide the services after they have been officially endorsed by the government. Natural England is in charge of overall coordination between the OB, public agencies and other bodies in England; this is done through regular steering meetings to decide on the workload and priorities for the coming months.

For England, DEFRA describes that the Farming Advice Service replaces the previous Cross Compliance Advice Programme. The overall aim of this service is “to help improve the

³⁴ In **England**, regular (at least biannual) meetings are organised through a special panel between the key bodies involved to report on progress and discuss priorities. This Panel includes Ricardo-AEA (the consortium contractor), Defra, Natural England and the inspection bodies. Ricardo-AEA is tasked with ensuring there is coordination with the events of other agencies and within its members.

In **Wales**, the Farming Connect programme has four Development Centres (Dairy, Red Meat, Organic and Land Management). These centres have Knowledge Transfer (KT) officers. The interaction is that each region has monthly meetings between Welsh Assembly Government (WAG) Farming Connect staff, KT officers and FLS staff to share information and ideas on delivery and promotion of Farming Connect services, including FAS.

Northern Ireland has set up a central committee entitled the ‘Helping Farmers Comply Forum (HFCF)’ which coordinates the delivery of FAS and brings together staff involved in all aspects of Department of Agricultural and Rural Development’s (DARD) work on cross-compliance and ensures that the advisory message addresses issues that arise from control (inspection) activities.

environmental and economic performance of farming in England. The main provider is AEA Technology plc but advice from FAS will be delivered in active partnership with industry-related bodies and other stakeholders” such as ADAS and a consortium of advisers, as well as input from key stakeholders.” The Service will provide “*free expert advice in the form of farm workshops, walks, drop in clinics, newsletters, text messages and a comprehensive helpline where you can speak to experts in the field.*” (www.defra.gov.uk/farming-advice)

In Northern Ireland and Scotland, individuals accredited as independent operators are then mobilised through the extension services directly to provide the FAS services. This only seems to operate in these two countries (across the EU) where extension services operate on specific issues through existing networks of independent advisers. In delivering FAS services, the Operating Bodies can call on these advisers, but there does not seem to be formal accreditation of FAS these advisers *per se* (ADE (Analysis for Economic Decisions) Consultancy, 2009).

5.3 Methods of advice

Both one-to-one and one-to-group advice approaches are utilised. Small groups have been organised mostly as a complementary approach to one-to-one advice. England is an exception in that it operates FAS only through small groups. There, on-farm small group advice is delivered by creating specific FAS advice related events (such as special farm walks to illustrate good practices and enhance exchange between farmers, or to focus on specific problematic SMRs). These small groups mobilise up to 40 farmers each (ADE (Analysis for Economic Decisions) Consultancy, 2009). In England (where extension is completely privatised), the FAS is outsourced to private consultancy firms, and farmers are encouraged to make use of these advisory services via a voucher system (Hermans et al., 2010).

5.4 Evaluation of implementation of FAS

Monitoring of farmers with regard to FAS implementation has been carried out in the UK (except for Northern Ireland) by means of feedback surveys by independent parties on a yearly basis. In addition, feedback forms are gathered and reviewed following each event. Monitoring of the Ricardo-AEA contract in England is done via monthly, quarterly and yearly reports direct to Natural England.

The small group approach has been criticised for the lower possibility of addressing the specific concerns of each participant (if groups are larger than 10), problems of accessibility (of individual farmers trying to enter a group), and possible reluctance by some farmers to participate in such events. Used as a stand-alone approach, it may provide insufficient capacity to deal with individual problems at farm level, but it is more cost-effective than the one-to-one approach.

Outreach is measured as the percentage of the farm holdings that receive EU direct farm payments. In Scotland, outreach is between less than 1% up to 20% (ADE 2009).

According to the recent DEFRA review (2013b), there is “some concern around the way FAS is delivered in England. The present FAS only supports advice delivered through organised group events and a telephone helpline. Many consider the absence of 1:1 on-farm/ in situ advice provision, and its’ obvious benefits, to be a weakness”.

6. Summary and Conclusions

The current AKIS and advisory system in the UK is characterised by diverse and increasingly separated arrangements in the four UK countries, e.g. for setting SMRs and GAEC, education and training, rural development, and much research. Only in theory is there a UK AKIS as depicted in Figure 1. In practice, there are four quite separate knowledge systems, governed by discrete sets of policy, government departments and agencies, and to a large degree also discrete sets of NGOs, farmer organisations and private commercial actors (Figure 3). The links between the individual AKIS have not been measured but based on similarities in set up of advisory services, activity range of providers, evolution of advisory services and current political links we assume stronger links between the AKIS in Scotland and Northern Ireland, as well as between the English and Welsh AKIS.

There are only a limited number of organisations which link across two or more UK-countries in terms of their work and subsequently their knowledge flows. Among them are the levy boards; NGOs such as LEAF and RSPB; the National Farmers Union to some extent; larger consultancies such as ADAS; Lantra as the sector skills council for the UK; the Science and Technology Boards; as well as food chain actors such as supermarkets or large agricultural input suppliers. Both governmental and private advisory actors are likely to develop their knowledge and skills based on the regional context they work in, specialising e.g. in the respective rural development programmes and legislation, the markets and networks, and various formal and informal rules that apply only to ‘their’ UK-country. The devolved responsibility for agriculture and subsequently the separate policy frameworks and agency competencies go some way in explaining the separate AKIS. There are high transaction costs in transferring knowledge due to organisational and institutional boundaries.



Figure 3: Links between the four AKIS in the UK

Hence, reviews and evaluations advisory services are typically carried out for individual countries. For example, a report by the Rural Advisory Service Working Group (2012) detailed the strengths and weaknesses of the advisory services provided in Scotland. Note that this is an overall assessment, rather than of the FAS in particular because FAS in Scotland is integrated into the existing advisory services.

- **Strengths:** Different sources of advice are available and the coverage is generally fairly good. There are advisors around which are trusted and have the right skills for the job, in particular providing generalist farm business advice (SAC advisors). There is particular

support for the FBAASS system and the current whole farm review scheme. It is also acknowledged that there currently is separation from the Scottish Government in relation to advice.

- **Weaknesses:** There is too little advice and it is too fragmented. There are not enough trained advisors and specialist/ technical advisors. Silo advice tended to be given on such things as nutrition and renewables. 20% of farmers are perceived to be in greatest need of advice but they are the group who do not access advice. The demise of the Farming Wildlife Advisory Group is perceived as a loss. There are not enough skills providers. There is no real 'advisory service' in forestry as this sort of service tends to be covered by a combination of engagement with FCS and forestry companies/ woodland NGOs. There is a risk of one dominant player establishing a monopolistic competitive advantage and a resultant potential loss of trust. Public and private sector advice should be more joined up, with better cohesion and integration.

As another example, a DEFRA review (2013b) of the environmental advice provision in England finds that the current advice delivery landscape is providing reasonable support to farmers. However, the "lack of coherence between activities, as well as the absence of a shared view of 'the customer' both at national and local levels all account for the observed inefficiencies and duplication that consequently impacts on its effectiveness". Partnership approaches between DEFRA and industry and as well as partnerships between government agencies are assessed to have made significant contributions on the provision of environmental and best practice advice to farmers and land managers (ibid.).

These two examples of evaluations of agricultural advice highlight similarities which may apply to some extent to the advisory services in Wales and Northern Ireland as well. Overall, and especially in England, there has been an organisational evolution towards the commercialisation and privatisation of knowledge production and transfer. NGOs, public and private actors compete for the provision of agricultural advice.

Many of the current problems are recognised and ways to address them were foremost in the development of the cross-Government Agri-Tech Strategy. This strategy takes continually reducing public funding/resources into account, suggesting to offset these through better industry engagement. Launched in July 2013, the strategy is seen as potentially the most significant development in the UK AKIS in recent years (Cooper, pers. comm.).

While some authors criticise the fragmentation of the UK AKIS and claim that the disjuncture and the unregulated nature of the AKIS have been frustrating for many in the agricultural community (Curry et al., 2012) other authors urge that the integration of advisory services should not be at the expense of diversity (Garforth et al., 2003). Garforth et al. also argue that growing a public sector capability for delivering advice is less likely to achieve cost-effectiveness and flexibility compared to contracting private sector organisations to deliver services with well-defined goals and appropriate delivery methods within agreed timeframes. The DEFRA review (2013b) however, highlighted the value of employing an integrated approach in the development and delivery of targeted (sector specific and locally focused) advice that balances farm business needs with environmental priorities (referring to findings from the

Integrated Advice Pilot study³⁵). The authors of the review argue that this approach has the potential to help tackle perceived tensions between competing priorities and the conflicting messages.

³⁵ http://randd.defra.gov.uk/Document.aspx?Document=9918_FF0204-Finalreport-v3.pdf

7. Acknowledgement of partners, information sources and reflection on methodology

Describing the AKIS in the UK overall proved a difficult task due to the different models that currently exist in England, Scotland, Wales and Northern Ireland. In keeping with the template of the country reports and page limits the individual systems in each of the UK countries could only be described cursorily. Therefore, reference has been made to individual UK-countries where differences were noted. Care should be taken not to confuse the publications on the English AKIS (Curry et al., 2012; Hermans et al., 2010; Ingram et al., 2011) with the UK AKIS. Conclusions for England are valid for the other UK-countries only to a limited extent. Another difficulty in investigating the AKIS and advisory services lies in their dynamic nature, being influenced by policy changes (e.g. the new programming period for EU Rural Development Policy starting in 2014) and restructuring and/or renaming of government departments and agencies.

Survey of advisory organisations

An online questionnaire was distributed through a broad range of channels aiming to capture different kinds of advisors (agronomists, agri-environmental advisors, advisors within particular government programmes, advisors working for NGOs). All types of organisations listed in Table 1 were contacted to invite them to take part in the survey. In addition, professional organisations and registration schemes such as LANTRA, FBAASS and CAAV were contacted and asked to distribute the survey to their members. The questionnaire was emailed to all BIAC members, with the exception of those listed as retired, those working outside of the UK, those already contacted or those whose companies had multiple entries. Out of a total of around 230 BIAC members, around 175 were contacted. For England, a google search for ‘agriculture consultants’ (the more common term in the UK) was carried out which brought up 6 additional listings (not included in BIAC). A yellow pages search for Scotland yielded 37 results (filtered from those contacted via BIAC and agricultural engineers).

Due to this mixed approach it is impossible to calculate the return rate. In total, 342 potential respondents were contacted directly, and an unknown number through organisations forwarding the invitation to participate.

The number of fully completed questionnaires returned by 30 August 2013 was 70, with an additional 11 being partially completed (total 81 responses). The share of respondents by UK-country and by type of organisation is shown in Table 5

Table 5: Survey respondents by UK-country and type of organisation

Type of organisation	England	Scotland	Wales	N. Ireland	Several UK-countries
Private	34	14	3		4
NGO	2	3			1
Farmer-based	1	2	1		2
Public	4	6	2	1	1
Total	41	25	6	1	8

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LANTRA (2013): Email correspondence 14 June 2013.

FBAASS (2013): Email correspondence 13 June 2013.

9. Appendices

Appendix 9.1: List of list of interview partners

The following people contributed to the report by providing information either by phone or email.

- Alan Renwick, University College Dublin (former Scottish Agricultural College), phone conversation on 9 August 2013
- Martin McKendry, CAFRE Northern Ireland, email, August 2013
- Gary Douch, Head of Farming Connect, Wales, email, August 2013
- David Cooper, DEFRA, England, personal communication June 2013 and email, August 2013
- Michael Woodhouse, Natural England, email August 2013
- Kate Russell, Central Association of Agricultural Valuers, email August 2013
- Phil Belden, South Downs National Park Authority, email August 2013

Appendix 9.2: List of selected AKIS organisations including private consultant and land agencies

Name of organisation	Website	Status (public/R&E/ private/FBO/NGO) and explanation
ADAS	www.adas.co.uk	Former state advisory organisation, now private consultancy with regional offices, incl. Whole Farm Plan and farm advisory service in Wales
Agri Design	www.agri-design.co.uk	private
Agricultural Industries Confederation	www.agindustries.org.uk/	AIC is the Scheme Manager of UFAS, TASCC, FEMAS& FIAS providing assurance in the feed, food and fertiliser supply chains.
Agri-Food Charities Partnership	www.afcp.co.uk	links a wide range of independent agricultural charities and provides a means of communication/ coordination for their activities; gives single point of contact for levy bodies
AgriplanCymru	www.agriplancymru.com	Agricultural Consultants, Whole Farm Plan and farm advisory service in Wales
AJ Marshall	n/a	private
Allathan Associates	www.allathanassociates.co.uk	private
Andersons	www.andersons.co.uk	private
Andrew Dyer	N/A	private
Association of Independent Crop Consultants	www.aicc.org.uk	professional organisation for crop consultants providing highly technical advice
Basil Bosomworth	n/a	private
Bateman-North	www.bateman-north.co.uk	private
Berrys	www.berrybros.com	private
BPEX (a division of AHDB)	www.bpex.org.uk	Public

Name of organisation	Website	Status (public/R&E/ private/FBO/NGO) and explanation
Brown & Co	www.brown-co.com	private
C P W Daniell	www.cpwdaniell.co.uk	private
Cara Consultants Ltd	www.cara.co.uk	private
Central Association of Agricultural Valuers	www.caav.org.uk	private
Chandler Watson Consultancy	chandlerwatson consultancy	private
CLA	www.cla.org.uk	FBO
Clare Lukehurst	www.iea-biogas.net	private
Craig Murray	N/A	private
Cymru Agricultural & Rural Advice Ltd (CARA)	www.carawales.co.uk	Private, Whole Farm Plan and farm advisory service in Wales
D Missen	www.larking-gowen.co.uk	private
David Hughes	n/a	private
DEFRA	www.defra.gov.uk	Public
Department of Agriculture and Rural Development (DARD) - CAFRE (College of Agriculture, Food and Rural Enterprise)	dard.co.uk	Public
Donald Rural Consultancy	N/A	private
Eblex	www.eblex.org.uk	Public
Estate Life Ltd.	www.estate-life.com	private
Farm Ideas	www.farmideas.co.uk/	Agricultural magazine
Farmers' Union of Wales	www.fuw.org.uk	FBO
Farmex Ltd	www.farmex.co.uk/	Farmex was born out of research into ventilation for pig buildings at Reading University in 1979. Since then the company has become the leading specialist supplier of temperature control, alarm and monitoring equipment for agriculture
FWAG East	www.fwageast.org.uk	private
Giles Dadd Associates	n/a	private
Heather Trust	www.heathertrust.co.uk	NGO
Henry H Bletsoe & Son LLP	www.bletsoes.co.uk	private
Horticultural Development Company	www.hdc.org.uk	Public
Iain Kirkpatrick Associates	WWW.IainkaI.co.uk	private
Increment Ltd	www.increment.co.uk	private
John Clegg & Co	www.johnclegg.co.uk	private
John Easterbrooke and Partners	n/a	private
Kingshay Farming & Conservation	www.kingshay.com	private
Kite Consulting	www.kiteconsulting.com	Private, Whole Farm Plan and farm advisory service in Wales and England
Kite Consulting	kiteconsulting.com	private
KN Consulting	www.knconsulting.co.uk	private
Landsker Business Consultancy Ltd	www.landsker.co.uk	Private, Whole Farm Plan service in Wales; private business, financial management and HR consultancy, based in West Wales

Name of organisation	Website	Status (public/R&E/ private/FBO/NGO) and explanation
Lawrence Gould	www.laurencegould.com/farm-consultancy.asp	Private consultancy
LEAF	www.leafuk.org	NGO
Lines Mitchell	www.linesmitchell.co.uk	private
Livestockwise Ltd	www.livestockwise.co.uk	private
Loch Lomond & The Trossachs National Park Authority	www.lochlomond-trossachs.org	Public
Lockett Agri-Environmental	www.agri-environmental.co.uk	private
LuscombeMaye	www.luscombemaye.co.uk	private
McIlmoyle	www.mcilmoyleassociates.co.uk	Private, Northern Ireland
Meston Reid & Co	www.mestonreid.com	private
Natural England	www.naturalengland.org.uk	Public
NFU Scotland	www.nfus.org.uk	FBO
NNFCC	www.nnfcc.co.uk	private
Northumberland National Park Authority	Northumberland National Park	Public
NWA Professional	www.nwauctions.co.uk	private
Pembrokeshire Coast National Park Authority	www.pembrokeshirecoast.org.uk	Public
Peter Hall	www.laurencegould.com	private
Philip Uglow and Associates	N/A	private
Promar International	www.promar-international.com	Private, Whole Farm Plan and farm advisory service in Wales; e.g. Farm Business Accounts, Farm Consulting
Quality Meat Scotland (QMS)	www.qmscotland.co.uk/	Public
Reading Agricultural Consultants	www.readingagricultural.co.uk	private
Richard Bellamy	www.bellamy rural.co.uk	private
Robert H Hicks	n/a	private
Robertson Crop Services	procam.co.uk	private
Ron Duncan llp	n/a	private
Royal Society for the Protection of Birds	www.rspb.org.uk/farming	NGO
SAC	www.sac.ac.uk/consulting	Public, The consultancy arm of Scottish Agricultural College, former state college/service
Savills Agribusiness	www.savills.co.uk	Private, Whole Farm Plan and farm advisory service in Wales; estate agents and agribusiness consultancy
Scottish Enterprise Rural Group	www.scottish-enterprise.com	Scotland-wide
Scottish Wildlife Trust	http://scottishwildlifetrust.org.uk/	NGO
SEPA	www.sepa.org.uk	Public

Name of organisation	Website	Status (public/R&E/ private/FBO/NGO) and explanation
SGRPID	www.scotland.gov.uk/Topics/farmirural/Agriculture/grants/Inspections	Public, Scottish Government's Rural Payments and Inspections Directorate (SGRPID) has the most direct dealings with Scotland's land managers, including processing grant applications and payments, carrying out inspections, plant health visits and estate management
Sian Bushell Associates	www.sianbushellassociates.co.uk	private
Simon Haley	n/a	private
Smiths Gore	www.smithsgore.co.uk	Private, Land agents
Scottish Natural Heritage	www.snh.gov.uk	Public
Snowdonia National Park Authority	http://www.eryri-npa.gov.uk/	public
Soil Association Scotland	https://www.soilassociation.org/scotland	NGO
SOPA	www.sopa.org.uk	FBO
Steve Humphris	www.countrysidesolutions.co.uk	private
Strutt and Parker	www.struttandparker.com	Private , Land agents
Sue White	http://uradalefarm.blogspot.co.uk	private
Suffolk FWAG	www.suffolkfwag.co.uk	FBO
Syngenta AG	www.syngenta.com/	Private, Large global Swiss specialized chemicals company which markets seeds and pesticides; agri-business
Tayler and Fletcher LLP	www.taylerandfletcher.co.uk	private
The Andersons Centre	www.theandersonscentre.co.uk	Private, Whole Farm Plan service in Wales
The Farm Environment	www.farmenvironment.co.uk	private
The Morley Agricultural Foundation	http://www.tmaf.co.uk/index	NGO, Charity set up to support farming in the East of England by funding research and education projects.
Timothy Garratt	n/a	private
Velcourt	www.velcourt.co.uk/	Private Consultancy
WebbPaton	www.webbpaton.co.uk	private
Welsh Lamb & Beef Producers Ltd	www.wlbp.co.uk	Private, Whole Farm Plan service in Wales, farmer-controlled agricultural cooperative society
Wern Veterinary Surgeons	www.wernvets.co.uk	Private, Whole Farm Plan service in Wales, operate in North Wales
Westcountry Rivers Trust	www.wrt.org.uk	NGO
Wright Manley	WWW.wrightmanley.co.uk	FBO
Yorkshire Farming and Wildlife Partnership	www.farmingandwildlife.net	private