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ASSESSMENT OF THE HUMAN CAPACITY DEVELOPMENT NEEDS FOR, AND GAPS IN, THE AGRICULTURAL ADVISORY SERVICES IN WESTERN BALKANS

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Assessment of the human capacity development needs for, and gaps in, the Agricultural Advisory Services in Western Balkans

Final Report FAO technical cooperation programme facility project

“Technical Support for Human Resources Development of Agricultural Advisory Services in Albania, Bosnia and Herzegovina, Bulgaria, FYR Macedonia, Montenegro, Serbia and UNMIK Kosovo”

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Abbreviations

AE	Agricultural Extension
AKIS	Agricultural Knowledge and Information System
ATTC	Agricultural Technology Transfer Centre
CAP	Common Agricultural Policy (of EU)
EED	Evangelischer Entwicklungsdienst (Development Organisation of German Protestant Church)
EU	European Union
FACE	Foundation Agro Centre for Education
Global G.A.P.	Global Good Agricultural Practices (standardization body)
HACCP	Hazard Analysis and Critical Control Points
IADK	(UNMIK Kosovo NGO)
IFAD	International Fund for Agricultural Development
INP	Serbian Acronym for ISAA (s.b.)
ISAA	Institute for Science Application in Agriculture
LEA	Livestock Entrepreneurs Association (Albanian NGO)
LSS	Livestock Selection Service (Montenegro)
MAASP	(FYR of)Macedonian Agricultural Advisory Support Project
MoAF	Ministry of Agriculture and Forest
MES	Ministry of Education and Science
NAAS	National Agricultural Advisory Service (Bulgaria)
NEA	National Extension Agency of FYR of Macedonia
NGO	Non governmental organisation
NRDP	National Rural Development Program (Bulgaria)
OFR	On-Farm-Research
USA	United States of America
WB	World Bank

1. Executive summary

Background to the project and the present project framework

1. This study was initiated in 2007 at a sub-regional workshop in FYR of Macedonia, dealing with the opportunities for joint efforts for the development of the agriculture sector in the Western Balkans region. Human capacity development in the agriculture sector was determined as one of the key issues, and this study is a result of the research on the current status of human capacity development in the agriculture sector in Albania, Bosnia and Herzegovina, Bulgaria, UNMIK Kosovo, The Former Yugoslav Republic of Macedonia, Montenegro and Serbia.
2. National consultants interviewed the stakeholders of the agricultural knowledge and information systems in the countries, determining the structure of the system, the linkages between the organisations and the effectiveness of the stakeholder organisations (in terms of how they elaborate, share and spread information and knowledge within the system). This concluding report summarizes these national reports, provides an overview of common traits in the given systems and provides conclusions, and recommendations for the further development of human resources in the agriculture sector in the Western Balkans region.

The Agricultural Knowledge and Information Systems in the Western Balkans Countries

3. The Agricultural Knowledge and Information System (AKIS) model is used to describe how knowledge generation functions, and how it is disseminated and applied. This is to provide an understandable order and a clear structure to a complex state of affairs, even if the seemingly clear delineations between the levels of knowledge policy, knowledge generation, knowledge dissemination and knowledge application tend to over-simplify the real life situation.
4. The actors at the knowledge policy level are the Ministry of Agriculture and the Ministries of Science and Education. Policy in the agriculture sector is undergoing a rigorous process of adaptation towards being in line with the European Union's Common Agricultural Policy (CAP).
5. The knowledge generation level encompasses research institutes and institutes of higher education. As part of a reform process that has been ongoing over the last two decades, the systems of research and education have been merged, thus coming into line with international structures. However, this process of uniting research and higher education institutions has not come to an efficient and productive end in most of the countries; rather it has resulted in lower standards of research and education.
6. Current agricultural extension structures have been developed mainly within the last two decades with the help of international donor projects. In all of the countries public structures of extension exist. Private extension providers such as NGOs and individual veterinarians are also in operation as are commercial extension agents, although these are only available to the better off farming enterprises.
7. Public extension services work either with (a) regional offices or stations for applied research, with extension being clearly focused on the task of agricultural advisory work and support, or (b) within the municipal administration structures with field advisors usually also having to cover a bundle of administrative tasks. Most of the countries consider agricultural extension also as a tool for the implementation of agricultural policy and have thus integrated it into the Ministry of Agriculture. Only a minority of countries decided to provide agricultural extension with relative independence from day to day politics, establishing state owned agencies that are not directly integrated into the ministry.
8. No common methodological procedure can be observed in the region. However, in most of the countries a more or less clearly defined individual contact farmer approach has been implemented, focussing the advisory contacts on 40-50 example farms per extension agent. Public extension rarely uses group approaches and does not work systematically with farmers' associations, although this is needed, particularly for marketing. There is usually cooperation between the mass media and the public extension systems although in most cases this cooperation does not consist of strategically planned and implemented information campaigns.

9. In Albania On-Farm-Research, which is systematically planned and implemented, provides close cooperation between the stations for applied research (ATTC) and extension, and helps to bring forward the orientation of research and extension based on the farmers' problems. In all other countries there is no such defined procedure for identifying and prioritising extension topics.

Farmers' knowledge and information needs

10. Farming in the Western Balkans countries is more of a way of living than a method of doing business. Only 3-5% of the farms in the region can be called enterprises in the sense that they are fully market integrated and run the specialized commercial production of a selected range of agricultural raw-products. Between 80 and 85 percent of the farms are rural households, living from a range of activities, comprising mainly farming for food subsistence. Only 10-15% of farm households dedicate a large amount of resources to farming activities with the aim of selling a portion of their produce to the market.
11. Linkages between the actors in the AKIS are generally weak and unsystematic. This is especially true for the communication and cooperation links between the public, semi-public and private actors in the agricultural extension system. Where cooperation between the public extension systems, NGOs, commercial advisors and input suppliers does exist, it is more based on the efforts of individuals and rather at the field work level.
12. Farmers' knowledge and skills requirements encompass issues of production, farm management, marketing and rural development issues. In the area of production and processing this especially means the integration of advice on modern technology into a specific and whole farm perspective. As for farm management, most farmers still lack basic knowledge on calculation and data recording. The same applies for marketing, and for most of the farmers the path to individual or joint strategic marketing is still very long.

Present responses to these needs from the extension system

13. Public extension can only partly provide answers to these needs. Even though they are production specialists, most advisors have difficulties in embedding their technical view into a perspective that encompasses the farm and all its processes as a whole. Also, the advisors are only able to thinly cover the areas of farm economy and farm development planning. Here, commercial advisors (if present) find the space to work for the very limited number of better off farms. Regional rural development is not systematically supported by the public advisory systems. This is due to an overload of work in the other sectors, and to the general lack of knowledge (on projects and programs) and skills (on group facilitation and group management). This potential area for rural advisory work is currently served by NGOs and donor projects.

Possible reasons for the shortcomings of the extension systems

14. Deficiencies in the functioning of the AKIS can be mainly attributed to factors in two areas. The first one is the political vision behind, and institutional setup of agricultural extension. Here it is definitely the system perspective that is missing; that is, stakeholders would rather develop their own institution than making use of the advantages of partnering up and distributing tasks and responsibilities. The second area is that of management, especially of the public systems. Here the problems are caused by unclear definition of desired results, tasks, and target groups needed in order to work efficiently with scarce resources. The same applies for the missing definition of a methodological approach, which should not, given the scarcity of resources, be based on individual contacts, but on group approaches. The lack of active capacity development, including selection and integration of new staff and continuous and focused training of existing personnel can be seen as another challenge for extension management.

Training needs and training capacities in the agriculture sector in the Western Balkans region

15. Education and training in and for the agriculture sector is offered by vocational secondary schools, vocational adult education, and agricultural universities. Formal offers (secondary school and

university) are potentially available in all countries. Both of these types of institutions suffer from the agriculture sector being seen as an unattractive basis for making a livelihood; this results in fewer candidates applying to these institutions. A second drawback of most of the formal vocational institutions is their distance from practice, be it actual farming practice or the practice of research or laboratory work. This leaves students and graduates unprepared for an immediate take-off in their professional careers. Non-formal education for practitioners is only partially available (Bulgaria).

16. Systematic ongoing training for agricultural advisors is only provided in Bulgaria. Albania has a less systematic approach for advisor training through its Agricultural Technology Transfer Centres (ATTC). The other countries essentially acknowledge the necessity of training, but cannot afford to provide it to their advisors on a regular basis. Overall, it is visible that following the phasing out of donor projects, systematic training for advisors and extension managers has lost its importance.

Recommendations for Human Capacity Development and regional networking

17. Human capacity development in the extension system is a partially neglected area of training that is of pivotal importance. It is recommended that trainings are offered on a regional level and they should comprise of:
 - a. Regular trainings for managers, helping them to design training programmes, to develop outlines and objectives for specific trainings, to find and contract suitable trainers and to prepare training budgets etc.
 - b. Regular trainings for trainers. As trainers are usually subject matter specialists a specific focus should be on methodological issues like outlining and planning trainings, adult learning, facilitation and group dynamics etc.
 - c. A database or platform for regional or regionally experienced trainers to serve as a basis for requests from national advisory organisations.
18. Materials on extension (extension packages, brochures and leaflets) and on training (background material and training programs) are spread all over the region. In many cases, these precious materials are lost or forgotten after the responsible person left has left their duty station or project. In order to avoid these losses and the doubling of efforts, there should be a repository in which these materials can be (at least partially) collected, systematized and made disposable to interested parties all over the region. The repository should be made available on a web platform accessible to everyone involved in extension training activities, with a content management system that allows easy uploading of any new materials that have been prepared or updated.
19. The same applies to a multitude of good examples in approach, organisation, techniques and procedure all over the region. A best practice inventory, linked to the platform mentioned above would also serve as an important basis of the next recommendation.
20. Good communication and exchange of professional experiences within the republics in the former Yugoslavia declined dramatically when Yugoslavia fell apart, and the previous state of affairs is still far from being revived. As a consequence of this an exchange program can be justified because – especially within the small countries like Montenegro – there is a strong desire to exchange experiences and learn from others. This makes sense as the countries are all at a slightly different stage in their development and there are best practices of different kinds to see in each of them. In order for this to not merely be a program for travel, any supported cross-border move should have a specific professional reason, this usually being the transfer of best practice examples from one of the neighbouring countries which could be applied back home.
21. Training modules could and should be improved and developed at the regional level (if they do not exist already). On demand trainings on a number of issues that are of a more general concern (not directly production technique oriented) and of immediate importance should also be developed at regional level. Training programs could be developed with national training institutions or programs that have already been developed could be provided to national training institutions. Small countries like Montenegro, UNMIK Kosovo and FYR of Macedonia should also consider continuously working together with the establishment; they should also consider running joint agricultural training programmes.

22. With the systematic involvement of input suppliers, the deficit of a small number of public agricultural advisors to cover the huge amount of farmer households could at least be partially mitigated. Individual input suppliers are located in almost every village and most of them are not too knowledgeable about the mechanisms, the limitations and the dangers of the produce they sell. This usually translates into farmers using fertilizer, pesticides and feed carelessly. Developing a program of training modules for input suppliers that could be offered to them on a national basis could be a worthwhile task at the regional level.
23. In developing national capacities for training the relative excellence of individual countries in specific areas of production such as processing and marketing could be utilized. Backed by a regional agreement, the individual countries could focus the development of their training institutions on their specific area of competence, knowing that the advisory systems in neighbouring countries would regularly train their advisors in the respective topics through region-wide training. This would mean developing specialized national training institutions with regional mandates.
24. Public extension organisations throughout the region have not developed a managerial concept for recruiting and integrating newcomers, making them prepared to do a good job as advisors. A defined trainee program for young graduates could help to attract more young experts. Any such trainee program should include hands-on experience, and young people becoming familiar – through contact with mentors – with the work that extensionists do, and with methodological training, the research-extension organisation and training on relevant rules and regulations. As one of the bigger countries, and thanks to the current support it receives from a World Bank project in the agricultural sector, Serbia could go a step ahead in developing such an integration and training program, sharing its experiences on a regular basis with the responsible colleagues working in neighbouring countries in the region.

2. Background to the project and the present project framework

In June 2007 a sub-regional workshop was jointly organized and conducted by the FAO and the University of Skopje in the Former Yugoslav Republic of Macedonia. This workshop dealt with the current status and functioning of advisory services provided by extension services, universities, research institutes and private stakeholders. The participants were experts on agricultural advisory services and representatives of the Ministries of Agriculture from Albania, Bosnia and Herzegovina, Bulgaria, UNMIK Kosovo, FYR of Macedonia, Montenegro, Romania and Serbia. The objectives of the workshop were to

- Share experiences on the status of rural and agricultural advisory structures and advisory work in the participants' respective home countries.
- Detect and describe fields in which further development of human resources in rural areas and the agricultural sector is necessary.
- Outline regional initiatives – involving the countries that are represented – for further upgrading and improving rural and agricultural advisory services.

The regional initiatives that were outlined embraced five issues:

1. The establishment of a regional accreditation system for advisory services
2. Human Resource Development to strengthen advisory services
3. Study on the rejuvenation of rural communities
4. The construction of a regional virtual exchange platform
5. The initiation of a farmer to farmer exchange network.

For point 2 the countries requested that a more detailed research in all interested countries be carried out that would describe the present functioning of the Agricultural Knowledge and Information System. It would assess the strengths and weaknesses and recommend activities in the field of human capacity development on a regional level that could effectively address the detected deficiencies in agricultural advisory provision.

2.1 Project procedure

Following this assignment, in spring 2009 FAO launched the TCP/RER/3206 project in order to promote the outlined initiative and to lay the foundations for a regional project on experience sharing and joint learning in agricultural advisory work (all the countries from the sub-region that were represented at the 2007 workshop participated, except Romania).

During the project, seven national consultants interviewed the stakeholders of the agricultural knowledge and information systems in their countries in order to determine the structure of the system, the linkages between the organisations and the effectiveness of the methods used by the stakeholder organisations for elaborating, sharing and spreading information and knowledge within the system. Each of the consultants prepared a report that drew attention to requirements for improving the system and with a special emphasis on the needs in human capacity development. In each of the countries, a workshop was held with important stakeholders in order to evaluate, refine and validate the findings of the national consultants.

These refined final reports now constitute the basis for this concluding report, prepared by the international consultant, who accompanied and back-stopped the national colleagues throughout their work. The intention of this report is to:

- Give an overview of existing structures of advisory work in the region
- Provide insights into common strengths and weaknesses
- Highlight specific strengths of individual national advisory organisations (public and private) and training institutions
- Suggest initiatives and activities on a regional level that can help to overcome the weaknesses that have been identified, building both on external support and on specific well developed features of individual national systems.

In this concluding report certain features from individual countries are given less emphasis with more focus on identifying the general problem. To the informed reader it may seem that important characteristics have not been given enough consideration; however, in order to create a picture of the region as a whole it is necessary to start by looking at the similarities rather than the differences. Differences need to be looked at when identifying training and other capacities which can be built on for strengthening human capacities in advisory services (see Annex 1-7). This applies for the Agricultural Knowledge and Information System (AKIS) model, which is used as a reference. The AKIS is different from country to country, yet similar characteristics can be seen in all the countries and these allow for some summarizing and generalization.

3. The Agricultural Knowledge and Information Systems in the Western Balkan Countries

The AKIS model helps to give an overview of the stakeholders and institutions relevant for human capacity development in the agriculture sector as a whole. It makes it easier to understand the specific roles of the advisory systems, their specific potential for enhancing the flow of knowledge and information in the sector, as well their limitations within the system as a whole. The AKIS for the Western Balkans countries is shown in figure 1.

3.1 The knowledge policy level

As can be seen in the overview, the Ministry of Agriculture (MoAF) and the Ministry of Education and Science (MES) are the major players in the field of knowledge policy. In the case of the Ministries of Agriculture, this status translates to defining the political framework for the development of the agricultural sector – and of rural areas – in collaboration with the relevant actors. In practice, all of the countries have either joined the EU already (Bulgaria) or are aiming to join in the near future. Therefore, agricultural policy in all of the countries is in the process of adapting to the European Union's

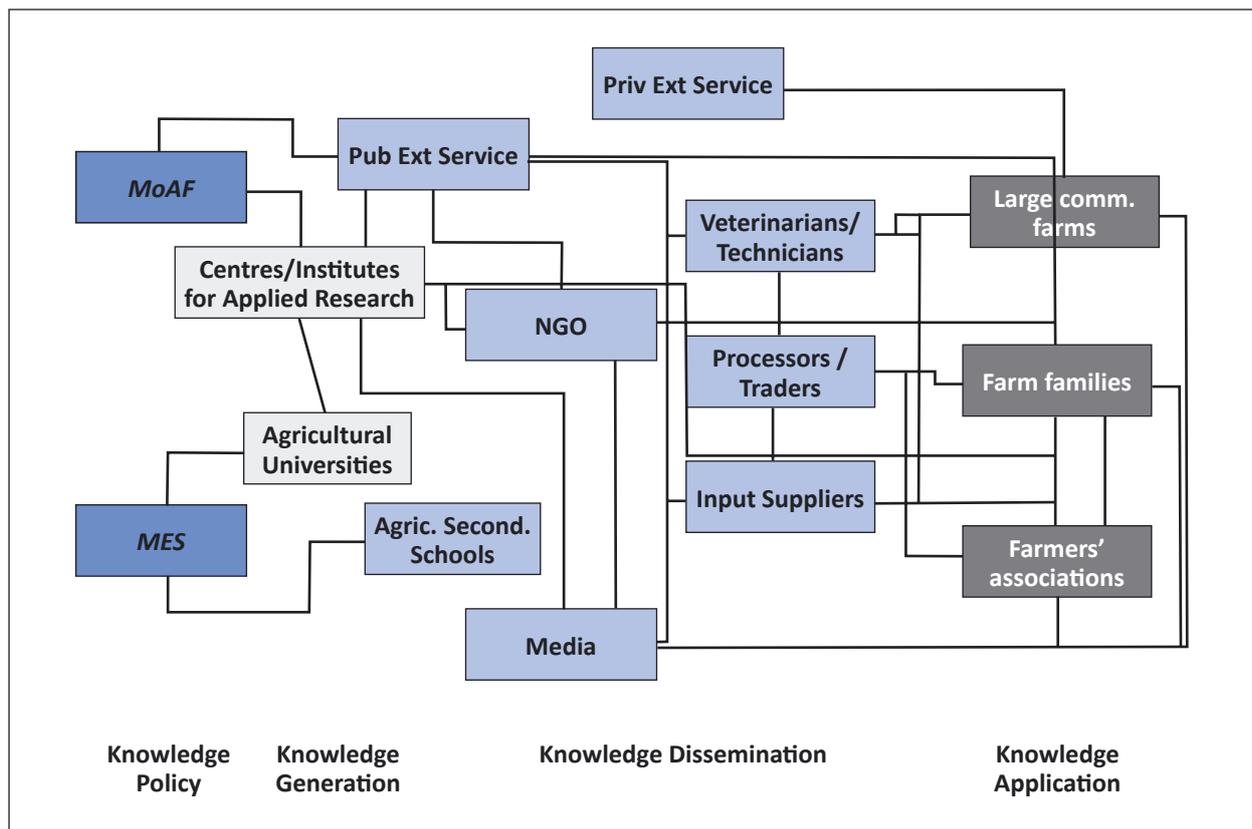


Figure 1: The Agricultural Knowledge and Information System in the West-Balkan countries

CAP. This implies legislation being harmonized with the EU Aquis communautaire, the introduction and implementation of the instruments of CAP (e.g. support programs, steering subsidies) and the establishment or strengthening of the competent institutions in order to allow them to implement these instruments (paying agency). Within this reform process, agriculture advisory services are also seen as an important tool for the implementation of agriculture and rural development policy; this is one reason why the governments in all of the countries should stick to the idea of a public extension system.

The Ministries of Science and Education are the most relevant stakeholders in the definition of knowledge policy, as they define the framework for vocational and higher education as well as the policy lines for research at university/faculty level (and in some cases at the applied research level in the agricultural research centres or institutes).

3.2 The knowledge generation level

The national institutes that are to transform and generate knowledge at the agricultural level are Universities/Faculties and the Institutes/Centres for Applied Research in Agriculture (see Annex 7). In all the countries, academic education and research were divided during the socialist times, so that faculties or universities merely had the task of educating students, whereas research institutes were dedicated to carrying out academic research in their fields of expertise. Attempts to overcome the separation of research and education have been undertaken in all of the countries, either by merging institutes and faculties or by only redefining tasks for the various institutions. In many cases the institutes/centres have been nominally assigned to carry out applied research, whereas the universities are tasked with doing basic research in the field of agriculture. In most of the countries the centres/institutes for agricultural research are part of the Ministry of Agriculture, whereas the Universities/Faculties are steered by the Ministry of Science and Education. Two examples may show the different methods of development that the former research and education system took during the reform processes (see Box 1)

Box 1: Higher education reform in Montenegro and Albania

Montenegro, the Biotechnical Institute.

The Biotechnical Institute in Podgorica was a typical centre for agricultural research during the Yugoslav times and did not have an obligation to provide education and training until 2005. It is still under the management of the Ministry of Education and Science, which, after the final division of the former Yugoslavia has decided to extend the Institute's duties, by integrating it with the University of Montenegro as an agricultural faculty. Based on solid research experience and equipped with the necessary facilities for research, the Institute started teaching in 2006. Since then about 400 students have graduated, all of whom had the chance to do practical work in all areas of research, as well as laboratory work.

Albania, the Agricultural University of Tirana and the Agriculture Technology Transfer Centres

In 2006, the separation of research and higher education was abolished in Albania and the Agricultural University of Tirana, part of the Ministry of Science and Education was charged with the additional task of carrying out basic research in agriculture. Since then, with the help of international donors (as funds were scarce) the University has slowly built up its research facilities. However, in reality very little research is taking place, leaving the graduates with very few opportunities to experience research work in practice and so enrich their very theoretical studies. Meanwhile the 18 agricultural research institutes were merged together to form five, and then transferred to the Ministry of Agriculture and charged with the task of carrying out research and training extensionists and farmers. As there is very little formal cooperation between the University and the Centres, practically no joint projects are taking place. Existing research facilities and the skills of experienced researchers cannot be taken advantage of by students and their teachers.

As these examples show, some solutions exist that are already working well. In most cases, however, this reform has not yet been successfully concluded; this is due to a number of factors:

1. Universities/faculties neither have the means nor the experience to develop research facilities in a timely manner (unless they merge with the research institutes or through receiving serious funding and training).
2. There is no clear differentiation between basic and applied research and it is questionable whether basic research is a realistic option for mostly small and usually underfunded universities and faculties.
3. There are practically no linkages, or exchange of communication and activities between research centres/institutes and universities/faculties, especially if they are parts of different administrative systems.

The opportunity for laying a basic foundation of vocational knowledge and skills lies in school education. This is why vocational secondary schools with a focus on agriculture exist in all of the Western Balkans countries. However, education in most of the vocational schools is not very focused (if at all) on the experience needed for practical farm work. A high percentage of pupils enrolled in these vocational schools (86% for UNMIK Kosovo, personal communication.) do not see their future in practical agriculture but rather in continued academic studies. This means that basic formal preparation for young people becoming skilled and knowledgeable farmers is almost non-existent.

3.3 The Knowledge Dissemination level

Extension structures in all the countries in the region were reconstructed or reformed (in some of them this is still going on) after the political turnover in the nineties and after the wars in the former republics of Yugoslavia. This was achieved with the support of international projects from the World Bank, the EU, and bilateral donors. Most projects were supporting organisational development as well as the training of field staff.

In spite of the concerted efforts of the donors to make agricultural extension amenable to privatisation, none of the state structures have really been privatised. In Bulgaria, FYR of Macedonia and the Republika Srpska, the extension service is managed by a state agency and in Montenegro the public extension organisation is part of the agricultural faculty. These are the furthest developments towards a more independent organisational setup, even though in these examples 100% of funding is still provided by the Ministry of Agriculture. In all the other countries extension is managed directly by a department of the Ministry of Agriculture. No significant private structure has developed that could be of any importance, especially for small and medium farmers (s. Box 2).

Reasons for this are:

- The majority of farms are small semi-subsistence holdings and only 10-20% are middle sized holdings that are partially market integrated.

These farm-families do not have the financial resources to pay for commercial advisory services.

- Governments did not want to lose their influence on agricultural development and consider AE partially as a tool for transferring agricultural policy

Private and commercial advisory work did develop in the following very limited field:

- Large holdings with specialised production pay for their own advisory support that is provided by national and international experts.
- Small independent consultancy firms and individual advisors support better off middle sized farmers with specific questions related to the financial issues in farm development like investment planning, elaborating business plans for credit or state grant applications. (see Box 2)
- NGOs also work on restricted regional and thematic areas, like organic production. The work that these NGOs do is highly professional and they have motivated and well trained staff and a network of good connections to Western-Europe and the USA. However, most of them are still very donor dependant, meaning that they would hardly be able to sustain their services to the rural people if project money from outside were to become scarce. (see Box 3)

In most countries support projects for the establishment of advisory institutions ended two to three years ago (exceptions: Serbia, Bosnia, FYR of Macedonia), leaving the structures and a staff of trained experts to the national governments for further development. However, in most cases the further development of the services stopped with

Box 2: FYR of Macedonia: Network of private agricultural advisors.

In Macedonia an IFAD program for farm credit provision aimed at the preparation of private advisors for economic farm advice. Forty young agronomists were selected and underwent an intensive two year training program, which included receiving technical and methodological knowledge as well as extended accompanied practice exposure. At the end of the project 11 of these 40 well trained advisors decided to work independently. Presently, they are successfully working in the fields of business planning, budgeting, introduction of international certification systems (GlobalGAP, HACCP), and farm financing. Their clients are the better off semi-commercial farmers and bigger farming companies.

Box 3: UNMIK Kosovo: IADK, a regional NGO for rural development

IADK is a small NGO with seven staff that specializes in various areas of agricultural production and rural development. This NGO works in the Mitrovica region in UNMIK Kosovo, where it provides technical and organisational support to farm families. Over the last four years IADK has launched a series of development projects in the region. Some examples are: providing improved fruit-tree varieties and the training necessary for their successful cultivation; the formation of local processing associations (milk, fruit and vegetable) and training in technical and organisational skills; as well as regular and free group advisory sessions on specific areas of production that are open for everyone. Lately IADK has been supporting the formation of a national farmers' federation, which is the result of cooperation between a number of regional farmers' associations. IADK is supported by the German Protestant Church development cooperation (EED).

the withdrawal of donor money. The exceptions to this are Bulgaria, where project money for NAAS was replaced by EU money to support to specific rural development programs; and Montenegro, where a well functioning extension service at national level has been further developed (see Box 4).

Box 4: Montenegro: Development of the Livestock Selection Service (LSS)

The LSS was initiated in 2000, when several hundred high yielding cows were donated to form the basis of high yielding cattle population in Montenegro. The LSS had to select the heifers in Germany and Austria and the farms to which they would be sent in Montenegro. Once the livestock had arrived the LSS started giving advice to the farmers on feeding, cattle housing, milk production and hygiene, as well as on how to execute a program for breeding more quality animals (milk recording, breeding selection, provision of semen for artificial insemination and the organisation of breeding fairs). The LSS started with eight staff in 2000 but now has 24. It is located in six regional centres and has its headquarters at the Biotechnical Institute in Podgorica. LSS services are financed from the state budget and two more tasks are now on the agenda of LSS:

1. The implementation of a state subsidy program for livestock farming.
2. Gathering and processing data and information on prices, and the numbers and quality of cattle that are bred and slaughtered in order to form the basis of a well functioning market information system.

3.3.1 Characteristics of advisory services in the region (Annex 1).

There are basically two different types of institutional setup for public extension in the region:

1. **National structures with direct field branches at regional level** (Bulgaria, Montenegro, Serbia, Republika Srpska, FYR of Macedonia). These cover a number of municipalities. In Serbia, the Republika Srpska and FYR of Macedonia these organisations emerged from the former extension systems for state owned and individual farms. The majority of the regional field staff within the system are the agricultural experts from the former system. This strengthens two biases that often occur in advisory systems: The first is the strong focus that is still directed towards production techniques, and the second is that relative preference is given to large farms while advisory support for small and medium holdings is neglected.
2. **National structures without direct field branches.** Field advisors are part of the municipal or district level administration (Albania, UNMIK Kosovo, Federation of Bosnia and Herzegovina). With this organisational setup extension superiors in the ministries usually have little say when it comes to the selection of extensionists that are paid by the municipality, the organisation of their work of the facilities they use for doing their advisory work. The relative advantage of having advisors who are close to the field and its actors, as well as the apparently positive ratio of farmers to advisors, is quite often counteracted by a deficiency of funds for transport and a great burden of administrative tasks, minimizing the time available to carry out advisory work. In the Federation of Bosnia this has led to a total asphyxiation of advisory work since the end of the last EU- funded project on advisory services.

All services provided by the public advisory systems in the region are free; the work of the advisors is considered to be a public task and thus paid for with state money.

However, looking at the organisational structure, there are differences in the extent of state influence on the system. Whereas in most countries extension is a department of the agriculture ministry, in Bulgaria, the Republika Srpska and in FYR of Macedonia extension is managed by a state agency, thus providing some more space for extension management and maintaining a distance from day to day political decisions. The same is true for Montenegro, where the extension services (animal and plant) are managed by the agricultural faculty, which means that it has a very close relationship with agricultural research.

The majority of countries in the region have either just started the systematic monitoring of advisory work or do not yet have a well developed system of data collection and interpretation. Monitoring of advisory work is fairly advanced in Serbia, Bulgaria and Albania with Albania having a considerable

database on advisors' activities, farmers' needs and the results of on-farm-research. However, even in these cases monitoring is more about examining the activities of advisors than documenting the impacts of advisory work. Moreover, the data that is collected is not used to its full potential for supporting the advisory system management. For example, even though there are clear indications of farmers needs in the case of the Albanian monitoring system, the decisions on the topics of "On-farm-research", met by a ministry decision body, quite often do not match the documented needs.

As mentioned above, private advisors (who use advisory work to make money) have not yet been able to establish themselves on a bigger scale as the majority of farmers are either not able or not willing to pay for services unless they receive an immediate financial return. Therefore, the only really visible development in private service that are paid for is in FYR of Macedonia, where well trained private advisors offer their services for the application of farm investment credits (business plans, risk assessments) for larger semi-commercial and commercial farms.

In all public systems that aim to address rural farm households (at least the semi-commercial ones) the ratio between farming households and public advisors is between 1000 and 5000 per advisor; more in the case of small-holding and less in case of larger farms. However, no matter how many farmers they serve; without a clear targeting strategy, advisory services tend to be ineffective for a large number of potential client households. As none of the present organisations have such a client targeting strategy, the better off and more active farmers are leaving behind the families who are more difficult to reach, but who are in much greater need of information and support.

Box 5: On farm research (OFR) as a method of joint learning

A systematic feedback and monitoring system in the Albanian Research and Extension System helps to define typical farmers' problems on certain production issues. During regional level meetings extension agents bring up the problems they have found out about from farmers in their day to day work. Once a year a selection board, consisting of ministry superiors and researchers, selects the most important of these problems and feeds them back to the Agricultural Technology Transfer Centres (ATTC), who in turn have the obligation to design and conduct, together with advisors and farmers, a research procedure on the farms, which can help to find solutions for the problem. These on-farm-research procedures are usually used locally by extension workers to bring interested farmers together from time to time to assess the status of the experiments. OFR results are also published and spread to a broader number of farmers with videos, leaflets and brochures, produced by the extension service's media department.

3.3.2 Methodological procedure and cooperation within the research-extension system (Annex 2)

Information that is necessary for farm families is spread across the entire region via the mass media. All extension services produce leaflets and brochures on relevant topics and distribute them, usually free of charge, to farm families that are interested. Albania is very effective in this respect because it has an extra department at extension headquarters that is responsible for working out and publishing printed materials. Leaflets and brochures are usually developed in a process that is shared between researchers at the ATTCs and the publishing department.

Radio and TV programs are also used to inform farmers. In Montenegro this is very systematic and up-to-date market information is provided to the national radio station to be broadcast in a weekly program. Most of the other extension services also cooperate with radio and TV programs in order to reach a high number of farmers. However, the media is not being used to its full extent, as broadcasts are not usually part of systematically designed information and communication campaigns that bring together a number of communication channels (radio, newspaper, leaflets and direct contact between advisors and farmers) in order to elaborate on one issue from a number of perspectives.

Advisors throughout the region are working on specific topics (subsidy programs, new laws on agriculture etc.) through meetings and presentations, field demonstrations in spring and summer and farm visits and individual talks throughout the year.

The overwhelming majority of direct contact takes place when farmers visit the advisors' offices or call them on the phone. In most countries a so-called sample farmer approach is being followed. This means that an advisor works intensively with 40-50 individual farmers, assuming that the knowledge, skills and innovations that these farmers will apply, will be spread throughout the farming population. However, there are no clear written guidelines for selecting these "sample farmers" ("interested", "not too big, not too small", "open-minded" are some of the selection criteria, individual advisors have quoted) and a clear communication strategy that would support the process of information and knowledge exchange beyond this restricted group of clients is also missing. None of the public extension systems in the region has a strategic group approach to work with farmers (farmer groups, gathering around specific production and marketing issues and related problems like horticulture, fruit growing and dairy farming) or farmer-to-farmer approach. These less advisor-centred approaches (that expose the advisors to public scrutiny) may be practiced occasionally by NGOs but they do not exist as countrywide methodological approach in the region.

As stated above, public agricultural research has not yet recovered its former importance. In practically all of the countries, organisational reform has not yet come to a satisfying end and (partially resulting from this), the sector is seriously under financed. This problem is mirrored in the deficient linkage between research and extension in most countries (Albania and Montenegro excluded), where, at the beginning of the reform, these two institutions were envisaged as a coherent system. For Montenegro placing higher education, research and extension under one roof provides the coherence and coordination between the participating organisations.

In Albania it is On-Farm-Research (OFR) that binds the spheres of applied research and extension systematically together (see Box 5). This is also the only example in the region, where farmers play a systematic role in the definition of advisory topics. In no other country is there a defined involvement of farmers in the description and prioritisation of extension contents. In many cases topics mirror the interests of agricultural policy, and are thus defined and prioritised by politicians, researchers and administrators. The decision process is often not transparent.

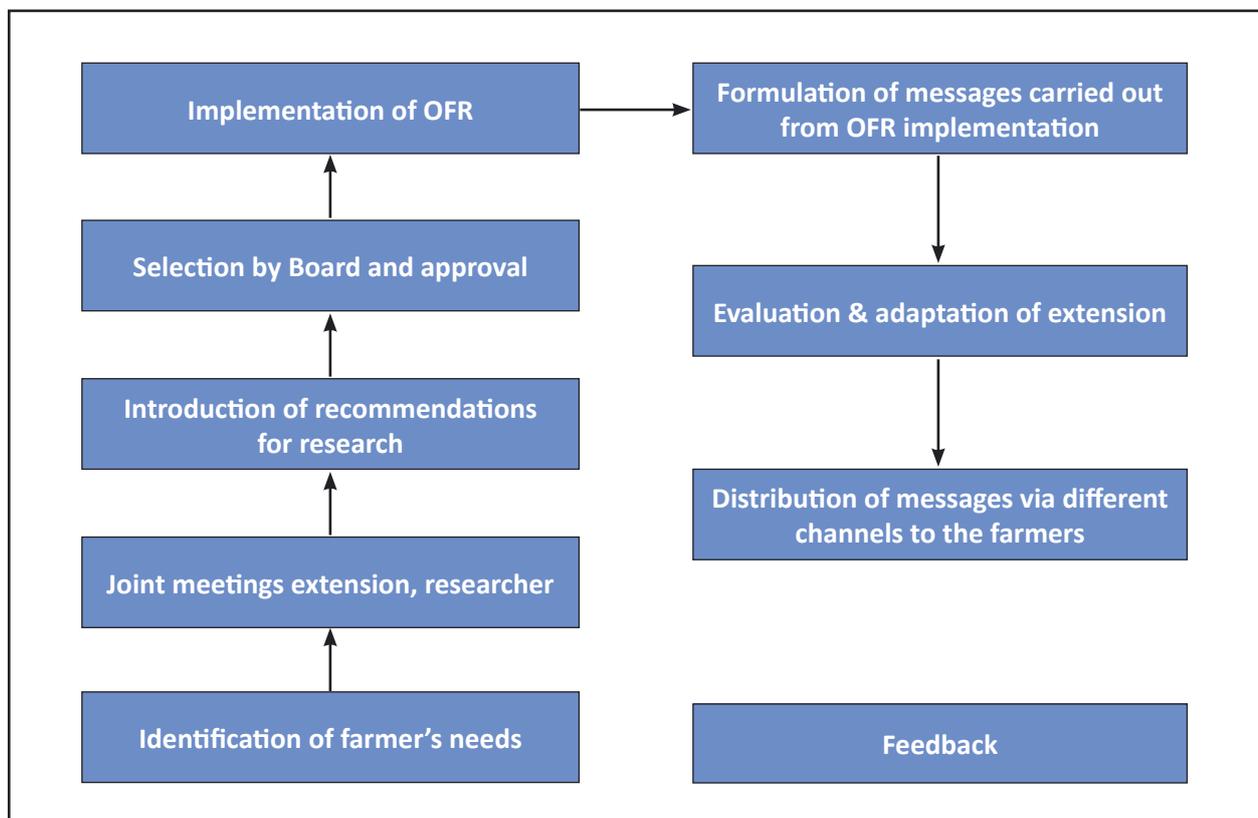


Figure 2: On-farm-research procedure

This is at least partially different for “on-farm-research”. The selection process usually starts with advisors and farmers meeting to identify research needs; the advisors then introduce the needs during regular meetings of advisors and researchers. The decision making procedure for financing OFR components starts in October. ATTCs report on activities carried out during the year and define the problems for research in the next budget year. Proposals prepared by ATTCs are then assessed and evaluated by the Approval Committee at the Ministry (Director of Production Department, General Director for Agricultural Policy, Director for the Finance and Planning), which selects the most appropriate proposals. The results of OFR projects are formulated in extension service type messages and distributed via various channels. Feedback is collected and considered for the next round of OFR proposals. The entire OFR process is shown in figure 2. It shows that the involvement of farmers in the process ends after the identification of a potential research issue, leaving the further decision making solely to a board of ministry staff. Full involvement of the farmers here would mean opening the decision making board to farmers’ representatives and/or processors’ associations.

3.4 The knowledge application level

Farms in the Western Balkans region can be roughly classified into three groups; these are:

1. A large group of farm families with small-holdings, for whom farming has a basic subsistence function which supplements off farm income (if there is any chance for this). These small family units represent 80-90% of all holdings.
2. A smaller group of farm families with enough resources to produce for the market and who are able to cover their own needs (15-20%). These farms are more market oriented.
3. A very small group of bigger commercially oriented family farms and farming companies. These constitute a minor portion of the farming community (3-5%), have more resources (surface area, animals, money, technology and knowledge). They are specialized in certain areas of production (dairy, horticulture or fruit production) and are fully integrated into the national and regional markets.

The average farm size across the region is 3-5 ha, with the group of smallholdings being 1-3 ha, the group of semi-commercial holdings being 3-10 ha and the commercial farms being anything above this. These figures are rough estimations as there is no stable statistical data in any of these countries. However, the data can serve as a reference point when it comes to the question of farmers’ knowledge and information needs.

3.5 Linkages within the AKIS (Annex 3)

In some ways the AKIS model is purely descriptive in character; it presents the stakeholders in a knowledge system and describes their functions and linkages. However, the normative idea behind the model is that the better the linkages and cooperation between the actors are, the more benefit is yielded for each of the stakeholders and for the system as a whole. This is easily understandable, bearing in mind how expensive communication breakdowns can be or how much energy can be spent carrying out parallel activities.

Since the functional linkages between different actors of the AKIS vary from country to country, it is not possible to generalise on the AKIS of the whole Western Balkan region. However, if we examine the linkages between the stakeholders, some general characteristics become apparent, as do some interesting exceptions. Over the past two decades concerted efforts have been made to establish solid and effective advisory structures. The fact that public institutions (in terms of both management and financing) dominate in all of the countries can be taken as a sign that it is in the interests of policy-makers to support and improve agriculture. For most of the other institutions that act as knowledge creators, providers and appliers, development has been very similar; that is, they were either newly established or totally restructured and reconstructed. –This means that active cooperation and linkages between the organisations of the subsystems of the AKIS are still weak. Apart from a few exceptions it seems that each organisation is very much focused on its own development; this is especially the case if the boundaries of a subsystem (Ministry of Agriculture with Institutes for Applied Research and Agricultural Extension) have to be crossed.

When considering knowledge transfer the network of input and product traders and processors must be taken into account. On average, 23 percent of all Albanian farm expenditure goes towards chemical fertilizers. This figure may be slightly different region-wide although it provides an idea of the importance of farming inputs for the average farmer. In UNMIK Kosovo far more input supply outlets (137) are registered than public advisors (30 field staff). This implies that input supply stores are located all over the region in a very dense net. The majority of these stores are small and independent; however, some companies, especially in the areas of agricultural interest (Vojvodina, valley plains around Skopje) have already developed into integrated companies, providing inputs and advisory services as well as gathering, processing and marketing farm products. In almost all countries the public extension system is either not connected at all, or only poorly connected, with the upstream and downstream private sector production line (input suppliers, processors and traders). The cooperation between public extension and input suppliers is weak and mostly ad hoc (individual advisors may invite local traders for specific meetings). These poor linkages with the private sector are partly due to the reluctance of the advisors to be misused as hidden sales agents, and partly due to the sales people at the larger companies being perceived as superior because of their specialization and effectiveness. The advisory system in UNMIK Kosovo is an exception in that it works in cooperation with banks to provide rural credit, and Montenegro, where the specialised Livestock Selection Service cooperates with the dairy sector.

Rural and agricultural NGOs are present in of the countries in the region. They usually work in restricted geographical areas or specialize on specific areas of expertise (e.g. organic production or rural development). Most of these organisations show excellence in their fields and are flexible and well linked to the international network. However, on the whole public advisory services do little to actively foster linkages with them in order to use their capacities to serve their common clientele. In Bulgaria the public advisory service and NGOs compete for NRDP 2007-2013, which implies caution to exchange of information and a lack of full transparency. Examples of fruitful cooperation can be seen in Albania, where NGOs specialising in breeding cattle (LEA) and organic production (Bio Adria) have been invited by the Ministry and the Centres for Applied Research (ATTC) to perform trainings and to assist advisors in problems they do not feel prepared for. However, even here this cooperation is not systematic, but rather was initiated by individual NGOs that offered cooperation resulting in the fruitful exchange. The same is true in terms of the cooperation between a group of private advisors in FYR of Macedonia and the public advisory system.

Weak cooperation between farmers' organisations (associations and cooperatives) and the advisory system is a general trait of the region as a whole. This is surprising, considering that farmers are the extension services' number one clients. This is in line with the observation that public advisors usually work with individual farmers rather than with farmers' groups. This lack of cooperation with farmers' groups may be caused by the fact that extensionists perceive many of these groups as weak.

Insufficient cooperation between the public advisory system and agriculture research institutes is not a general issue, as in most cases both subsystems are part of the ministry. However, in some of the countries there is room for improvement to a greater extent than in some others. In this respect some positive examples can be seen in Albania where "on-farm-research" provides a good platform for cooperation, and Montenegro, where the organisational setup provides close and steady cooperation between research and extension.

4. Farmers knowledge and information needs (Annex 4)

The knowledge and information needs of agriculture and rural areas should be subdivided into three different levels (see fig 2)

4.1 The production and processing level

As noted above, there is a lack of basic vocational training for farmers. Therefore, especially for small-holder farmers and semi-commercial farmers, farming knowledge is basically the knowledge provided

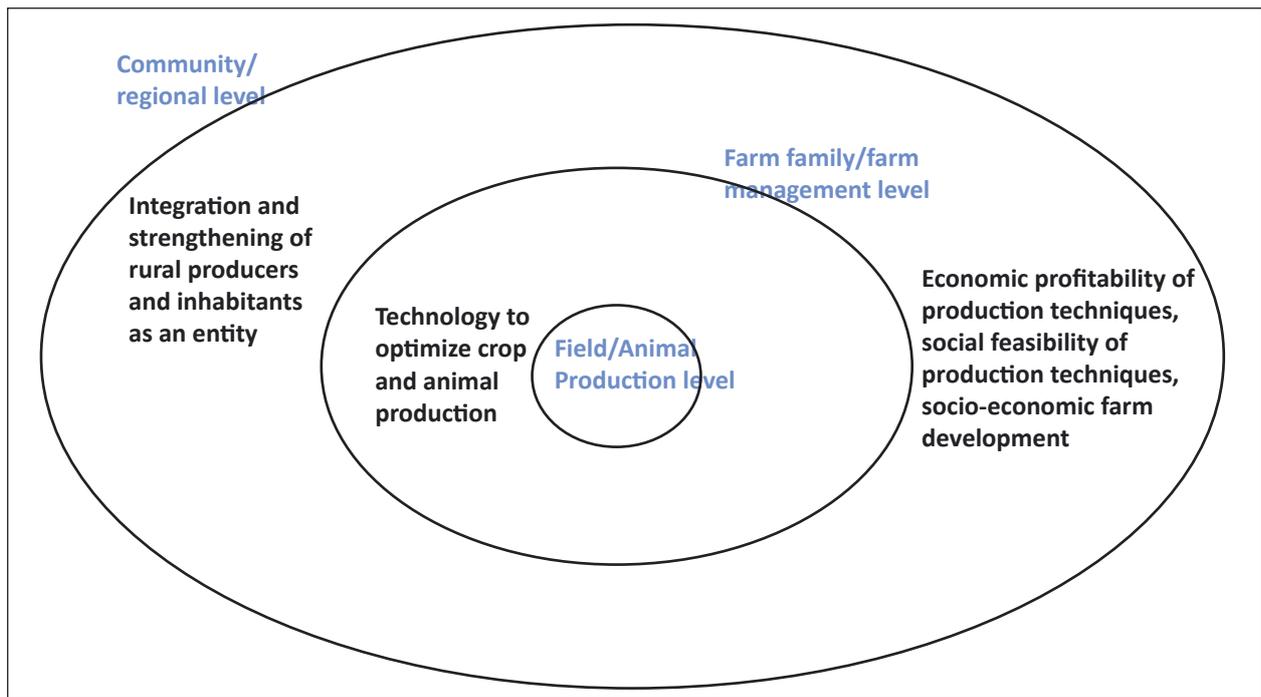


Figure 3: The levels of intervention of rural advisory work

by the family or by neighbours. For most of them sound knowledge on plant nutrition, the effect of rotations, the mechanisms of action of plant nutrition and plant protection and other important basic topics is lacking. In light of this, extension still needs to provide very basic knowledge and information. Farmers do have these basic needs but are reluctant to mention them during interviews. This is because farmers do not even realise that they are lacking important knowledge. However, to make good economic and ecological use of plant and animal treatment agents, there is an urgent need to understand how these agents work when they are applied.

This is reflected in the findings of the needs assessments within the seven countries of the region. Farmers needs, expressed by farmers and by extensionists relate to:

1. Production techniques and technologies, especially on modern forms of intensive and mechanized production:
 - In the livestock sector this includes the design of feeding schemes for dairy and fattening cattle, the whole area of milking hygiene and fertility as well as livestock breeding.
 - In crop production this means the application of new technologies and the use of new devices in mechanisation and irrigation, alternative crops and seeds and new cultivation techniques (direct drilling etc.)
 - In horticulture and the production of fruits and berries farmers also demand knowledge and skills on new and more intensive production systems.
2. The economy of specific productions: Gross margin calculations.

Box 6: The strawberry field of farmer Ferat

Farmer Ferat needed to install irrigation for his newly planted strawberry field. Water needed to be brought from some distance and the method of irrigation was not yet clear to him.

The technical and practical advice he needed would have started with selecting the field in the correct location. Questions about availability of water, distance to the water source and differences in the altitudes of the field and the water source, should have been discussed with an advisor. The issue of a strawberry variety suited to the location and demanded by the local market would then have been discussed. Along with considerations on an adequate water distribution system on the field, the advice would have ended with rough cost calculations on the profitability of the investment when using different irrigation methods. None of these things were considered in the real case.

3. The safe and economical use of fertilisers and plant protection agents.

It is important to understand that these farmers do not need isolated and theoretical information but practical knowledge that is integrated in the individual farm context (Box 6).

4.2 The farm management level

Farmers' information needs regarding farm management are also strong and there are two main directions that these demands can take:

1. Farm calculation and farm development:

- Support for the development of their farms. This includes support in the joint elaboration of potential and promising development directions, the writing of farm development or business plans and the provision of necessary credits.
- Calculations on the profitability of investments and risk analysis for different development scenarios.
- Bookkeeping and accounting.
- Knowledge and Information on regional and national subsidy programmes and the conditions and methods of applying for the credits and grants.
- Information on regional and national rules and regulations concerning farming.

2. Product market development and marketing:

- Present and up-to-date information on product and input supply markets (regional-national, prices, qualities and quantities).
- Information and knowledge on the marketing (regional/national/international) of products and on conditions for entering new markets. Here especially the big commercial farms are interested in international certification schemes like HACCP or Global GAP.

4.3 The regional rural development level

Needs for regional rural development were expressed by farmers, even though many of them understand rural development as very much focused on farming and farm related activities. This is understandable as more than 90 percent of the rural population earns its livelihood from farming, although rural development should include all rural dwellers. Needs identified by farmers include:

1. Information and support on rural and agriculture tourism.
3. Information on national and international rural development programs and support regarding the procedure for qualifying and on how to apply for these programs.
4. Support for the initiation of supplying, processing and marketing associations. This support comprises of course technical issues like machinery, rules and regulations for hygiene standards, bookkeeping etc. It also includes support on the management and effective steering of groups, associations and cooperatives.

Box 7: Extension as an implementer of agricultural policy programs

The National Rural Development Program (NRDP) 2007-2013 in Bulgaria has defined a number of development measures for agriculture (Young Farmer Investment Program, Setting up Producer Groups, Agri-environmental payments a.o.). These programs are clearly defined subsidy programs, funded by the EU, which demand certain conditions and activities from the farmers who apply for them. In order to support farmers' applications, and so as to comply with the required activities, most of the measures have a defined extension accompaniment program, which is paid for by the state. Advisors are provided with program specific training by the ministry and the advisory institution is being paid according to the number of positively approved subsidy applications for individual farmers. The Bulgarian public extension service is presently almost exclusively financed by this subsidy program money.

5. Current extension system responses to these needs (Annex 4)

The majority of public extension service staff in the region are well trained and experienced in production techniques. This results in their work having a strong focus on this area. However, there are a number of reasons why farmers do not always benefit from advisory services at production level:

- The average age of advisors is well over 40 and there is a very small number of young experts. The advantage of this situation is that in most cases advisors are well trained and more importantly have a lot of experience in their fields of expertise. The disadvantage of this is that many new developments in the field of agricultural production (integrated pest management, the system of organic production, environmental impacts of agricultural production, climate change impact, modern systems in fruit growing etc.) are not within the scope of their settled knowledge. For the advisors this fact either presents a challenge, in that they have to catch up with new developments, or manifests itself as insecurity and leads to them avoiding the new and 'fashionable' issues.
- As noted above, the farmer/advisor ration is between 1000/1-5000/1. This makes giving one-to-one advice to farmers practically impossible. However, most advisory services follow the method and individual contact, which is by far the most common practice in advisory work in the region. This implies that a very small number of farmers are well served, while the majority of farmers do not even know of the existence of farm advisory services.
- The technical expertise of individual advisors does not guarantee that the technical information they can provide is relevant for the farmers. Advisors tend to use a very theoretical approach, focusing on isolated problems rather than embracing a holistic view of the integrated agricultural system (see Box 6). For example an advisor could be focused on the selection of the best silage crop, while neglecting the fact that it is part of a whole farming system, including diversified production, harvesting techniques, preparation of silage, impact of silage on dairy cattle production, use of manure for corn fertilization etc.

The weaknesses of the present public advisory systems are most obvious when we look at advice to **on farm families and farm management**:

1. Extension for integrated farm development (investments in certain production/marketing activities, family decisions on the vocational training of potential successors, decisions about stopping or starting certain business activities) is not covered by public extension in the region. Advisors in the public systems do not have the time, means and/or the training for it. What is missing in this respect in practically all public services, are skills in the socio-economic assessment of farms, in the calculation of production gross margins, of profitability of investments, risk assessments and in the management of farm development projects. As for the gross margin calculation it was the INP of Serbia and the Farm Monitoring System in FYR of Macedonia that went a step ahead in the last year with a project to provide reliable average figures on production gross margins. In this field there are a few private advisors who usually have good economic knowledge and they sell their services to the better farmers by helping them with the process of farm development planning, investment calculation and credit financing (see Box 8).
2. Regarding national rules and regulations on farming, public advisors are usually well informed and able to transfer this knowledge to the farmers they are in contact with.

Box 8: Private advisory service on economic farm development.

In FYR Macedonia the IFAD program for financial farm advice launched a well elaborated selection and training process for young agricultural experts to become agro-economic farm advisors. After a two year education and on-the-job training program the advisors were ready to work individually and independently in the field of economic farm development, the elaboration of business plans and the negotiation of business credits. Since 2009, 11 farm business advisors have been selling their services to the better off semi-commercial and commercial farms in FYR Macedonia.

3. In a considerable portion (Bosnia, UNMIK Kosovo, FYR of Macedonia and Albania) of the countries in the region, there is either no information system on markets, or where it does exist it does not function well. Most countries started to develop such a system, but are not able to fully implement it. This is partially due to the scarcity of staff or to conceptual mismatches meaning that information reaches the farmers only by chance and often much too late. Serbia and Montenegro are a step ahead in terms of a working data collection, interpretation and publishing system (s. Box 9).

4. Advisors in the public systems are not specialised in marketing and, the knowledge and skills surrounding it. NGOs in the region proved to have gathered considerable knowledge, which is of course spread in the regions they are working in or in their fields of specialization (e.g. organic farming and rural development, see Box 10). However, as NGOs are usually restricted in terms of location and subject matter and support in this important field for the farmers is also limited. The same applies to international trading and food security standards (HACCP, Global Gap). At the moment interested parties comprise of the very few large commercial farms; therefore, this topic is covered by private consultants, who support these enterprises by informing about the standards and helping them achieve them.

5. In most of the countries the handling and sometimes the administration of regional and national support programmes dominates part of the activities of the public extension services. This means that in all of these cases public advisors are well up to date about conditions and procedures for these programmes and can even use the contacts, created through farmers' applications, to support farm families in an even broader way. The question is whether the public program manages to include a large number of farm families that are potentially entitled to the services. If they do manage this, administrative work tends to eat up the biggest portion of working time for the advisors and comprehensive advisory support to these family farms is becoming negligible. Public extension becomes an extended arm of national and EU agricultural policy implementation.

Box 9: The market information service in Montenegro.

The national plant production extension service was founded in 2003 in order to address production problems on crop farms. At present it has 20 staff who are either academics or technicians and who work in five regional centres and two municipal offices. The service provides general information on its website and publishes flyers and brochures. One of its official tasks is to gather region specific market information, feed it into the market information system and make this information accessible weekly via broadcasting, on websites and in written reports. This means that a large portion of the advisors are taken up with the collection of data. However, farmers feel very happy about the timely and reliable information coming via their preferred form of communication.

Box 10: Open market for bio-products for the first time in Albania

In October 2007 organic farmers sold their products in front of the Pyramid of Tirana; this was organized by the NGO "Bio-Adria". Some desks and umbrellas were set up for this activity. Vegetable, fruits, olive, oil, wine, mushrooms, fresh herbs and citrus were all sold successfully and city consumers were informed on the range of products and the specific quality of organic products. Consumers requested more such activities during the year. Source: Bio-Adria Journal, No.3, 2007

Advice on the **level of regional rural development** is restricted to the activities of individual advisors in the public service, as well as to NGOs and to donor projects.

Most stakeholders do not yet understand the concept of rural regional development as integrating the social, economic and environmental development of a region including the creation and strengthening of regional value added chains. However, there are NGOs that are going in this direction and there are individual public advisors (see Box 11) who support farmers' associations in their efforts for processing and marketing their produces. Serbia went a step ahead with the creation of regional

Box 11: Support to a farmers' association by the public extension agent.

Doboj is a frontier region in Bosnia, being a part of the Republika Srpska, but interspersed with Muslim settlements. Sevarlije is a Muslim village with many internally displaced families. With the support of international projects, the farm families of the village established a farmers' association that is active in the field of produce marketing, input supply and production innovation. For the latter a very close cooperation with the regional extension office exists, for joint planning and implementation of training workshops for the members of the association. One of the results of this cooperation has been the introduction of dairy farming and the good management and feeding of dairy cattle.

development offices, staffed by NGOs and with a mandate to identify potential for rural development and to support regional processes accordingly. The same is true for FYR of Macedonia, where the Ministry of Local Self Government created regional economic development offices.

6. Possible reasons for the deficiencies in the extension systems

Public services are strongly focused on production techniques, while farm management, markets and marketing, regional rural development and the promotion of producer organizations are only partially served. Where there is a service it is mainly provided by private service providers and NGOs. This is partly due to:

- deficiencies in the political vision and the institutional setup of agricultural extension
- deficiencies in institutional policy and strategy
- problems with resources
- the methodological approach that most public advisory services follow
- the lack of skills and capabilities needed by staff to respond to these needs

6.1 Deficiencies in the political vision and the institutional setup of agricultural extension

The AKIS-model of understanding may be incomplete in many respects (addressing farmers only as appliers of knowledge and not as knowledge creators is definitely a flaw in the model). However, it provides a comprehensive picture of actors in a field of knowledge, grouped together around a common interest; that is, creating, spreading and applying knowledge in agriculture in the most effective and efficient way possible. If this broad picture of a system were taken as a starting point for reflection and planning, the outcome of such a process would be an approach of networking and active task distribution. The political vision of the actors in the field should not be restricted to their own role and function but they should try to figure out how the given tasks can be distributed between all actors, always according to the potential and capacities that the individual institution can provide. The question then would not be exclusively: "How can we provide enough resources and staff to do a certain task?" but also: "Which actors in the field could cooperate or partner up and use the resources they already have for this task?" The answers would be very varied. For most of the political decision makers and managers a paradigm shift is not easy to apply, which is proven by insufficient cooperation between actors of the given AKIS in the region.

A second, more tangible consideration is the institutional setup and task distribution within public extension services. Both forms identified earlier (1. field advisors part of the municipal administration, and 2. field advisors part of the national agricultural extension system) seem to have certain advantages and disadvantages. Municipal field advisors can be closer to clients and do have some more autonomy in task fulfilment. However, this advantage is outbalanced by two severe disadvantages that make extension work almost impossible for them. For their facilities they rely almost entirely on the level of interest in agricultural issues shown by the political head of the municipality, and the municipal budget. In every example in the region this has led to a poor infrastructure (mobility and communication facilities) and to an overload of administrative tasks.

The burden of administrative tasks also applies to the advisors in the national extension system. All of them have to implement national subsidy programs to a lesser or greater extent. On the one hand this can provide good opportunities to find contacts with a large number of potential clients. On the other hand, the expansion of these programs (under EU policy) and the need for the participating farmers to control their correct implementation bears the following risks:

- The advisors will be overburdened with administrative work and neglect less pressing advisory tasks.
- The advisors will face a role conflict because being a controller puts one basic prerequisite of advisory work in danger; that is, mutual trust.

6.2 Institutional policy and strategy

Management's main task is to organise the day to day work of an institution in an efficient way. However, management is also about developing and implementing long-term strategies so that the institution can make best use of its resources in order to carry out its tasks, both present and future. In this respect there are some outspoken challenges to most of the national extension systems.

1. Given the **limited resources** an extension strategy has to **clearly define** three issues:
 - **Results that should be achieved** and tasks that can be achieved with the manpower and facilities that are available. This helps to strengthen the accountability of the individual advisor (result-based staff management), and of the institution as a whole and it provides the necessary political argument in the fight for reliable and long-term funding.
 - **The target groups** that advisors predominantly have to care for. Defining these target groups consciously helps to more actively involve the members of these groups in identifying and prioritizing extension issues. In this way it supports the move towards a more demand-led extension system. Target groups should be characterised with easy and feasible indicators so as to give advisors a clear indication of whom to contact and which topics to cover.
 - Appropriate **working methods** have to be selected to reach the target groups. For most of the public services there is no clearly defined approach, which often results in single farmer contact. Given that there are between 1000 and 5000 farmers per advisor this is an impossible mission. An example in this context is the extremely low frequency of working contacts with farmers' associations. One reason for this may be that many farmers' associations are underdeveloped and weak. However, if working with associations or groups of farmers is defined as an approach by the extension service, one of the basic tasks of the advisors would also be to help stabilize and develop these organisations.
2. If properly used, **monitoring** can be a useful instrument for the effective management of an advisory service. However, it has to provide relevant information not only about staff activities but also about the impact of their work and the needs of clients. To make monitoring an efficient management instrument, it requires sound interpretation of data, firm conclusions to be drawn and good decisions made (e.g. detecting and reacting to the administrative overload of advisors or individual offices, identifying and responding to staff training needs or detecting outdated activities or approaches and responding to them). The good use of data monitoring by management often seems to fall short. Monitoring in this sense could also support performance related incentive systems and systematic career development and staff management approaches that are an important contribution towards keeping advisors motivated and dedicated to their work.
3. Extension needs experienced and skilled staff as well as young staff to follow in their footsteps. In a number of countries the age of the majority of field advisors are well over 40. This is an advantage due to the experience they have accumulated, although it can also be a disadvantage because it can prevent new ideas and new knowledge from entering the system with young professionals and fresh graduates. The reasons behind the scarcity of young graduates in the system include the absence of active recruiting and integration strategies, as well as the relatively low salaries in public services when compared to better paid labour market opportunities that are available. All public extension systems in the region lack a systematic approach for attracting young experts to the system and for providing them with the practical knowledge and skills needed by advisors. In fact the conscious

attraction, selection and integration of young professionals is only one element in developing and helping institutions to adjust to the challenges of an ever changing working environment. Targeted training of and use of existing staff according to their specific professional and personal strengths are other important activities of a learning institution. In a time at which extension is more being challenged more than ever to support farmers within a strongly changing environment, these are problems that services management has to face.

6.3 Resources problems

Problems with resources exist in almost every public service. A yearly budget of EUR 1.5 m for 150 staff, like in FYR of Macedonia, means EUR 10 000 per staff member. Deducting fixed costs such as salaries, cars and office facilities, there is not very much left for the working costs (materials, fuel, and telephone) not to mention regular training programs for the advisors.

Along with this there is of course the problem of scarce manpower. This difficulty is made more serious by the fact that those public services that work at the field level with municipal staff are especially in need of basic infrastructural equipment like secured mobility, telephones and computer and internet facilities. This situation makes two of the measures mentioned above even more important. One is the definition and restriction of target groups which may be difficult to push through at a political level. The second is monitoring the real impact and publishing the positive results of the work. This can help to convince politicians and at least secure, if not increase, sustainable public funding.

6.4 Difficulties with the methodological approach

A clear strategy on how to work effectively in spite of all these limitations is necessary. One specific issue of such a strategy is how the task is approached and methodologically defined. In most countries the methodological approach is deficient and ends up with farmers and advisors having individual contracts. By tackling three specific issues, a good deal of the problems that surround resources can be mitigated.

1. Mass media (TV and radio) are used quite frequently by all public services. However, there seems to be no experience with concerted information and communication campaigns that use every means of communication in a systematic way, that are adapted to the client needs, and that are aimed at spreading and discussing an issue with the members of the target group at various levels and intensities.
2. None of the public services has defined an outspoken group approach, which could mean establishing thematic groups (production of fruit, milk-production) or to address and work predominantly done with farmers groups (associations, cooperatives) that already exist. This makes staff even scarcer.
3. Properly functioning farmers' groups would have the potential to actively participate in defining the focus, strategy and priorities of extension work. Not having farmers and farmers' organisations involved in the definition and prioritisation of extension issues leaves them without their own responsibilities for the service and means that the service often prepares and elaborates on issues that are of only minor interest to them.

6.5 Lack of staff skills and capabilities

The main function of public advisory systems in the Western Balkans region is to provide information and knowledge on production technique related topics. When looking more closely at the implementation of this function, two critical points can be noticed:

1. The majority of advisors are not prepared enough on specific questions of modern, mostly more intensive and more elaborate farming techniques, because they received their vocational education before the economic and political turnover.
2. Concerning methodology, most of them have difficulties in specifying, adapting and integrating their knowledge in order to respond adequately to the problems of living systems and to scale up approaches in order to have an increased outreach and impact.

Good services are offered in terms of farm management, marketing and regional rural development. However, these are restricted to individual regions, countries or target groups because the majority of public advisors feel insecure about applying and bringing forward issues that they are unfamiliar with¹

In light of this, it can be seen that public advisors are also poorly equipped to facilitate the management and steering mechanisms of farmers' associations and to coordinate programs and partnerships.

7. Training needs and training capacities in the agriculture sector in the Western Balkans region (Annex 5)

As shown above farmers have a range of needs on knowledge and information. These needs form the basis for the definition of training needs both for farmers and the extension workers and are the required measure when looking at training capacities in the region.

7.1 Training for farmers

Basic vocational training for farmers should start before the active and responsible takeover of a farm holding. However, the majority of farmers in the region do not have any formal training in farming. There are two options for obtaining basic vocational knowledge in the region, one being a vocationally oriented upper secondary school, either leading to a University education or to practical work; the other one is University education. Even though this institutional vocational education was not in the focus of the present studies, some findings and conclusions can be presented.

7.1.1 Vocational secondary school

Research figures from UNMIK Kosovo show that rural people especially are underrepresented in secondary schools. In general they make up 40-50% of the potential students. Due to UNMIK Kosovo's difficult recent history this situation is better in the other countries of the Western Balkans. However, most secondary school students choose to attend the general secondary school rather than the vocational schools. This is underlined by the comment of an expert in the area of school reform and school development (Kurt Nielsen pers. com.), who pointed out that out of all of the students enrolling in an agriculture vocational secondary school 86% of them are not aiming to work as farmers but rather to follow up their education with university studies (and not agricultural studies in most cases).

Box 12: Training centre and secondary school in Lipjan.

Unlike other upper secondary schools in UNMIK Kosovo, the agriculture school in Lipjan near Pristina specialises in adult education and thus provides grown-up people with the chance to finish their secondary school educations even after years of regular work. After the years of unrest in the 1990s, when they did not have the chance of a regular school education this approach is necessary for the people in UNMIK Kosovo. For the Norwegian development agency "Norge Wells" this was the condition for them supporting the school on its way to developing a practice oriented curriculum. Step by step the school was equipped with agricultural components like an apple orchard, a greenhouse, a cow and pig stable, a mechanical workshop and processing units for milk and fruit. Presently the school courses are a real mixture of theory and practise and the pupils are responsible for specific production processes assigned to them. The school is presently trying to develop into an adult training centre for the farming population, running regular short practical courses for practising farmers.

¹ – Farm management (Farm planning/farm systems thinking, Bookkeeping/Accounting, Investment calculation)

– Marketing (how to initiate and access markets, quality standards, Food safety regulations),

– Regional rural development (Market information on specific product and service markets, Project management, National/ International programmes on rural regional development, Group dynamics and group development, Conflict management, Facilitation techniques for processes, meetings, coordination etc.).

One of the reasons for this is perhaps the fact that even vocational education is not very practice oriented in the sense that it does not provide the knowledge and skills needed to run a farm professionally or to work as a professional on a farm. Rather this education is directed at leading pupils towards academic studies. Two conclusions can be drawn from this:

1. From people who do have secondary educations, only a very small percentage have been trained at a vocational secondary school.
2. Even if they have trained at a vocational secondary school, their practical knowledge and skills are far from what is needed in terms of the professional capacities for running a farm.

7.1.2 Professional adult education for the farming population

Advisory services in all countries provide public presentation lectures and workshops and also organise farmer gatherings on demonstration fields. However, in terms of regular training in specific fields of production (milking, fertility of dairy cows, pruning in the apple orchard...), farm management (bookkeeping, investment planning...) or processing (hygiene in dairy processing, small-scale fruit processing...) the only country in which there is a nationwide offer is Bulgaria where Centres for Professional Training within the Ministry of Education and Science carry them out. Other modular long-term trainings for basic agriculture education for adults are presently being developed in Bulgaria by the National Agricultural Advisory Service with the potential to be financed by the EU through the National Rural Development Programme. As for the other countries, training programmes for farmers are not institutionalized but rather offered sporadically by NGOs, donor projects or individual training centres (see Box 12). A survey, performed in UNMIK Kosovo in 2004 suggests that only 4% of the rural population has ever participated in adult education and training programmes. This figure may not be exactly valid for 2010 and for the other countries of the Western Balkans. However, indications suggest that the situation is not totally different across the region today.

7.2 Universities

Agricultural universities in the region, as places of academic training, struggle with two major challenges. One is that studying agricultural sciences is not very attractive for young people (see above). According to a personal statement made by an agricultural university professor in Serbia, less than 30% of the students in the faculty actually attend because they really wanted to study agriculture. The majority registered only because they didn't get on to their preferred courses. This selection problem is confirmed by university teachers across the whole region.

The second challenge that universities are facing, is their very theoretical approach and the insufficient connection of theory with the real farming situation. If they did not grow up in a farming household, agriculture students lack practical knowledge about farm work and the processes of farm production, as there are no obligatory periods of practical study on farms before or during the courses. Students hardly have the chance to work practically in the field of their chosen profession, be it as the heads of family farms, farm managers, researchers or advisors (for an exception from this see Box 13). This shortfall is due to the scarcity of resources, but also to a lack of structural reform in the field of research and education, which in the majority of the countries is still in its early stages of implementation.

7.3 Training for agricultural advisors (Annex 6)

As described above, with the strong support of international donor projects the establishment of advisory services in the region started after the political turnover in Albania and Bulgaria, and after the years of crisis and civil war in the former republics of Yugoslavia. These donor projects are still active at national level in Serbia (WB project), Bosnia (WB project) and in FYR FYR of Macedonia (Sida). The common strategy of all of these projects was to establish and support advisory structures (public and private) in order to select and train advisors and to provide them with the necessary tools and materials for their everyday work. In almost all cases the establishment of potentially workable extension structures can be called successful, even though with the retreat of international project

money many of these structures are only barely being maintained and without any effort to develop them further. Similarities appear when looking at the preparedness and expertise of the active extensionists. They have been provided with a sound base of technical (and partially methodological) knowledge and skills, before being left on their own. This is especially true for a small number of experts, selected carefully by an IFAD project in FYR of Macedonia. These agriculture economic advisors ran through an intensive two-year curriculum with trainings, internships, on-the-job accompaniments and feedback providing them with the necessary professional and personal standing that allowed them to take the risky step into a self-supporting, private existence as independent agriculture advisors. Other approaches were nowhere near this intensive, although assessing the project programmes and training material, there has been considerable investment in the staff capacity of the established extension providers.

The need for ongoing training for advisors, to keep them up to date and to provide them close support in their day to day situations is

acknowledged by the responsible people in Ministries and agency managements. However, due to resource and/or political constraints the picture in each of the countries varies considerably. Training for agricultural advisors in Bulgaria is fairly regular; it is planned, scheduled and performed within NAAS on a regular basis and according to the agro-political programs that the advisors are obliged to support. Stable procedures for the follow-up to trainings have also been established. The programs and the reports of the trainings performed in one region are communicated to other regions through NAAS internet platform. Staff members have expressed general satisfaction with information and training measures.

The staff training situation in Albania is less reliable and less scheduled, although Agriculture Technology Transfer Centres (ATTC) are obliged to provide field advisors with ongoing training. There are no systematically planned training offers for the field advisors, although with the tool of On-Farm-Research – conducted in a joint effort between individual field extensionists and researchers from the ATTC – joint and practical learning is provided in the field of production technology. However, trainings on methodology, farm-economy, markets, environmental issues and changing rules and regulations in the political framework of agriculture are lacking since the ATTCs lack expertise on these topics.

UNMIK Kosovo has followed a different method of keeping its advisors updated. Starting in 2008 the Ministry launched a two-year extension support program. This program comprises of advisor trainings on specific production techniques, project management and farm-economic issues; on-the-job accompaniments by technical experts and travel costs for the advisors. However, as it is a project, this most valuable approach to continuous training is always in danger of being a victim of budget cuts when project funds run out and a budget for the services has not been included in the government budget.

Being a very small unit Montenegrin production related advisory services (Plant Production Service and Livestock Selection Service) do not provide any systematic training offers for the field advisors. However, as they are a part of the Biotechnical Institute and the headquarters of the services are located in the premises of the faculty, there is a steady flow of information between administration, research and individual field advisors. This is not true for the locally stationed municipal agriculture advisors, who have practically no access to training and selected information.

No systematic training is on offer for Serbian field advisors. However, the Institute for Science Application in Agriculture (ISAA) is currently preparing itself – with the support of an upcoming World

Box 13: The Biotechnical Institute of Montenegro as an Institute for Higher Education.

On becoming independent in 2006, Montenegro did not have an Institute for higher education in agriculture. Yet, there was the highly renowned Biotechnical Institute in Podgorica, hitherto an agriculture research institute. In 2008 this Biotechnical Institute was upgraded and extended into the Agricultural Faculty of the University of Montenegro. As opposed to the neighbouring republics, Montenegro's initial disadvantage turned into a head start for as the research facilities were already in place and the researchers were also lecturers, and lecturing was conducted with a more practical approach than in other faculties. Students have regular and compulsory access to working laboratories (milk, soil, wine) and are continually confronted with the real life problems of practical agriculture.

Bank project – to transform into a national training and support institute for agricultural advisory services. The same applies for FYR of Macedonia, where the National Extension Agency (NEA) is still supported by international donor programs and the Foundation Agro Centre for Education (FACE) to keep its advisors up to date. However, as yet, there is no consistent strategy or programme for continuous training offers for field advisors.

Advisors in Bosnia also lack systematic offers of professional training. However, there are donor projects that provide training on a broad range of issues in agriculture and rural development; in this respect rural advisors take their chance to come forward. However, looked at from a national or entity perspective, these trainings are not coordinated and planned, nor institutionalized at national and/or regional level and are thus potentially not accessible to all agricultural advisors.

7.4 Training materials

Donor projects have helped and still do help to establish advisory service structures and to provide farming families with professional advice. Projects also provided a large number of trainings for the staff of the emerging services. These trainings have usually been well documented with precise programs and accompanying content material. Therefore, across the region there must be an abundance of training materials on a broad range of topics. In UNMIK Kosovo training material comprises methodological issues like “Needs Assessment”, “Group Dynamics”, environmental issues like “Possible Impacts of Plant Protection Agents on the Environment” and issues of farm economy like “Investment Calculation”, and “Gross Margin Calculation”. In Bulgaria, together with other European partners the Agricultural College of Plovdiv developed an on-line training course for organic farming (www.ecojob-ap.org). A lot of material is being produced by the present projects in the region on an ongoing basis. This is usually only acknowledged by a very small network of local, regional, and sometimes national, actors (it is not shared at national or regional level for the benefit of the extension services and extensionists in the region).

8 Conclusions for the training level

These projects that helped to establish extension services in the Western Balkan countries have been successful in most of the countries in the sense that they left behind them sustainable structures for extension services along with qualified extension workers. However, even though they put a lot of emphasis on the qualification and training of these advisors, they have not been able to succeed in the institutionalisation of training systems. Bulgaria may be an exception in some ways as it takes half yearly or yearly training programs and publishes them in a brochure or on the internet, with at least some description of the courses that have been offered, which is an indicator that training has been systematically conducted. None of the other countries has been able to establish a similar system because donor programmes and projects have been focusing exclusively on subject-specific training offers. Something that was missing from the long term perspective was a programme for training extension trainers and extension program managers; these are considered essential for providing sustainable services.

As a consequence, after the closure of the projects so far, the training function has not been taken over by most of the institutions. The lack of an institutionalised training function leads to a number of consequences that need to be reconsidered:

1. Training materials prepared by various projects and by extension organisations have been neglected and maybe even have been lost. No mechanism/system has been established at country, and regional level, to collect and systematize these and keep them in an open repository for repeated use by training providers, extensionists and students in the region. Scarce resources are wasted through the doubling of efforts at country and regional levels, rather than saving time and money by building on existing training programmes and materials.
2. If offered at all, trainings are planned based on pressing needs (NRDP implementation in Bulgaria). This is both fair and necessary as it is the existing problems that extension has to deal with. However,

planning and performing advisor training merely on a short term basis also has some risks attached.

- a. Long-term political strategies and development tendencies may not be taken into consideration and the necessary preparation of advisors for future challenges in the field may be lacking.
 - b. The perception of an actor is led, and at the same time restricted, by patterns of his own experience. Purely focusing on the perceived needs of the given actors in the system may mean that important factors that are not yet within the scope of farmers, advisors or other staff within the system (recent research developments, developments and innovations in other sectors, emerging markets etc.) are left out. A good example of this is when a strong focus is placed on On-Farm-Research and exclusively technical issues without considering factors that may enable or hinder this but that are out of the control of the actors concerned.
3. There is not enough awareness within the public systems of the capacities and skills available in the field that could be taken advantage of or that could even be integrated in order to develop staff and keep the system as a whole up to date. The extension system seems to have an almost blind eye when it comes to taking advantage of the different extension training capacities of the staff of NGOs, private advisors or other private actors (input suppliers, processors, credit institutes) and use them as lecturers, trainers or even training providers.

Obviously, a lack of recruitment and preparation strategies is one of the reasons that the average age of public advisors in the region is well above 40. Training and integration programs enabling newcomers to become professional advisory workers, is missing in all of the countries.

9 Recommendations for Human Capacity Development and regional networking

Suggestions for measures to improve the training situation have to take three conditions into account:

1. There are initiatives, efforts, structures and experiences in the individual countries that can be relied on (Annex 7).
2. There are measures and activities that have to be carried out at a national level.
3. There are measures and activities that should be carried out at regional level.

Regional level activities are justified when the following conditions of the activity have been fulfilled:

- It involves only a small number of specialized people at national level.
- It is not too specific for the different countries.
- It surmounts the capacities of an individual country.
- It requires a multitude of different perspectives and experiences are not found within national boundaries

Bearing in mind the given situation in the training sector as well as these conditions, a number of initiatives and activities can be identified at regional level that may be able to help improve the human capacities in extension.

As stated above, the countries have failed, to various extents, to institutionalize advisor trainings developed through projects in their existing institutions. This means that in most of the countries there is a lack of trained trainers and trained programme managers. Due to this deficiency, allied with the need for different perspectives, it would be advisable to develop and conduct the following on a regional level:

- Regular trainings for training managers, helping them to outline training programmes, develop training outlines, to find and contract suitable trainers and to calculate trainings etc.
- Regular trainings for trainers. As trainers are usually subject matter specialists, a specific focus should be placed on methodological issues like outlining and planning trainings, adult learning, facilitation and group dynamics etc..
- Institutionalizing training for training managers and trainers in the existing institutions/organizations
- A database/platform for trainers with regional experience to serve as a basis for requests from national advisory organisations.

As mentioned above, materials on extension (extension packages, brochures and leaflets) and on training (background material and training programs) are spread all over the region. In many cases,

these precious materials are lost or forgotten after the responsible person left has left their duty station or project. In order to avoid these losses and the doubling of efforts, there should be a repository in which these materials can be (at least partially) collected, systematized and made disposable to interested parties all over the region. The repository should be made available on a web platform accessible to everyone involved in extension training activities, with a content management system that allows easy uploading of any new materials that have been prepared or updated.

The same applies to a multitude of good examples in approach, organisation, techniques and procedure all over the region. Some of them are described in the good practice boxes within this text, but there are many other examples of best practice. Such a best practice inventory would also serve as an important basis of the next recommendation.

The good communication and exchange of professional experiences within the republics in the former Yugoslavia declined dramatically when Yugoslavia fell apart, and the previous state of affairs is still far from being revived. As a consequence of this an exchange program can be justified because – especially within the small countries like Montenegro – there is a strong desire to exchange experiences and learn from others. This makes sense as the countries are all at a slightly different stage in their development and there are best practises of different kinds to see in each of them. In order for this to not merely be a program for travel, any supported cross-border move should have a specific professional reason, this usually being the transfer of best practice examples from one of the neighbouring countries which could be applied back home (followed by the implementation of a plan to adapt, specify and integrate it into the own system).

Examples of this could be:

- The practice of on-farm-research in Albania
- The organisation of the research-extension link in Montenegro
- The training approach for advisors of the NAAS in Bulgaria
- The practice oriented agricultural secondary school in Lipjan in UNMIK Kosovo
- The influence of EU membership on the extension procedure in Bulgaria
- The development of a training institution in Serbia
- Cooperation of public services and NGOs in Albania
- The functioning of private advisory services in FYR of Macedonia
- The development of the farm business management approach using the Farm Monitoring System in FYR of Macedonia
- The theory-practise link of academic education in Montenegro
- The functioning market information service in Serbia and in Montenegro
- The functioning of a monitoring system as a steering instrument for extension management in Serbia

Naturally, this is an incomplete list of regional best practices. However, a more lively exchange will make more examples come to light.

The regional level could and should develop training modules (if they do not exist already) and offer trainings on a number of issues that are of a more general concern, not directly production technique oriented and of immediate importance at present. Modules could be developed in collaboration with national training institutes or programs could be provided to national training institutions. Small countries like Montenegro, UNMIK Kosovo and FYR of Macedonia should also consider continually working together with the establishment and also consider running an agricultural training institution.

Training modules to be developed and offered systematically should be on the following issues:

- General topics: The approach of farming systems as a holistic understanding of agriculture; Value chains as a concept for market development; Rural development as an integrated concept of social, cultural and economic development in rural areas; Organic farming as a whole-farm approach.
- Farm management topics: Investment calculation, work planning, integrated farm development, book-keeping, gross-margin calculation, marketing of products, quality management, office management, time management.
- Farm-environment interaction topics: Adequate use of pesticides, impacts of agricultural procedures on the bio-diversity, manure management, nitrogen-management, agro-bio-diversity, mechanisation and environment.

- Methodological topics: Communication, Extension talks, The role of an advisor, Group dynamics and group steering, Group facilitation and group advisory work, Conflict management, Design and implementation of communication campaigns, Management and leadership methods for the support of farmers groups and associations, Development of extension materials, Participatory/demand led extension planning, Farmer-to-farmer approaches, Promotion of farmer organizations and the concept of Problem solving.
- EU related topics: Common Agricultural Policy (CAP) instruments of the EU – Cross Compliance, Quality Standards, Subsidy Programs, Rural Development measures of the EU (Leader, second pillar of CAP, Interreg)
- Market related topics: market actors, access to market standards, food safety, access to prices, credit subsidies, storage, group marketing

There are three important conditions for the development and provision of these trainings:

1. They have to be conducted in a theory-practice mixture and in real advisory situations and processes in order to enable trainees to immediately apply their new knowledge and skills with their clients.
2. They have to be offered and conducted systematically in order to give all advisors the chance to enrol and participate. Therefore they need to be institutionalized at national/regional level.
3. Training should be based on demand and it should be a requirement that the requesting institutions have a budget line for training staff.

The institutions of the trainees should be ready to institutionalize the content of the training and its implications.

With the systematic involvement of input suppliers, the poor ratio of public agricultural advisors to farmer households could be improved. Individual input suppliers are located in almost every village and most of them are not too knowledgeable about the mechanisms, the limitations and the dangers of the produce they sell. This usually translates into farmers using fertilizer, pesticides and feed carelessly. Developing a program of training modules for input suppliers that could be offered to them on a national basis could be a worthwhile task at the regional level. This training could go beyond using farm inputs and cover other aspects depending on the educational background and interest of suppliers.

As production techniques are sometimes very specific and as the on-going emphasis of training is given there, meaning that a large number of advisors should undergo these trainings, regular national training offers should also developed, specifically in these areas of knowledge.

However, developing national institutions as well as specialized institutions could mean turning the present absence of such institutions into an advantage. This would mean for example, that at a regional level an agreement would acknowledge the relative excellence of Albania in the question of irrigation, the relative excellence of Serbia in crop growing knowledge and skills, the relative excellence of Montenegro in dairy husbandry etc. Backed by this regional agreement, the individual countries could focus on the development of their training institutions in their specific areas of competence, knowing, that the advisory systems in the neighbouring countries would regularly train their advisors in the respective topics for providing region wide training. This would mean developing specialized national training institutions with a regional vocation.

Public extension organisations throughout the region have not developed a managerial concept for recruiting and integrating newcomers or preparing them to do a good job as advisors. A defined trainee program for young graduates could help to attract more young experts. Any such trainee program should include hands-on experience, and young people becoming familiar – through contact with mentors – with the work that extensionists do, and with methodological training, the research-extension organisation and training on relevant rules and regulations. As one of the bigger countries, and thanks to the current support it receives from a World Bank project in the agricultural sector, Serbia could go a step ahead in developing such an integration and training program, sharing its experiences on a regular basis with the responsible colleagues working in neighbouring countries in the region.

Annex 1: Characteristics of the public advisory services in the Western Balkans

Characteristics/ Country	Albania	Bosnia	Bulgaria	FYR of Macedonia	Montenegro	UNMIK Kosovo	Serbia
Institutional Setup	Department of ministry	Rep. Srpska: State Agency Federation: Under resp. of cantons	Department of ministry	State Agency	Part of Agric. University	Department of ministry	Department of ministry
Field advisors	Field advisors (205) part of agric. administration	R.S. Field advisors (15) are agency staff (agric. administration) Fed.: Field advisors are part of municipality administration	Field advisors (105) part of agric. administration	Field advisors (150) agency staff (agric. administration)	Field advisors (40) university staff	Field advisors (30) municipal staff	Field advisors (215) agric. administration staff
Finance	Ministry budget (1 Mio € in 2009), Advisors salary from municipality	Agency budget (300.000 € in 2009) Cantonal budget	Ministry budget as basis, implemented programme cases as payment	Ministry budget (1 Mio € in 2009)	Ministry budget	Ministry budget, advisors salary from Municipality	Ministry budget (1,5 Mio in 2009)
Resources of field advisors	Office, some with PC some with internet access	Office, telephone PC, Internet access Vehicle (RS)	Office Telephone PC Internet access Vehicle	Office Telephone PC Internet access	Office, Telephone, PC, Internet access Vehicle	Office Telephone PC Internet access	Office Telephone PC Internet access Vehicle
Age of majority of advisors	> 50 years	No info	> 45 years	>40	= 40 years	> 40 years	< 40 years

Annex 2: Methodological procedure of the advisory services

Features/ Country	Albania	Bosnia	Bulgaria	FYR of Macedonia	Montenegro	UNMIK Kosovo	Serbia
Approach to farm families	Individual contacts (Sample farmer)	Individual contacts (Sample farmer)	Individual contacts (Sample farmer)	Individual contacts (Sample farmer)	Individual contacts (Sample farmer)	Individual contacts (Sample farmer)	Individual contacts (Sample farmer)
Direct Display Methods	Demonstration plots, field visits, field days		Demonstration plots, field visits, field days		Demonstration plots, field visits, field days		Demonstration plots, field visits, field days
Lectures				Public lectures, education programs			Public lectures
Mass media	Leaflets, brochures, Radio, TV	Leaflets, brochures, Radio, TV	Leaflets, brochures, Radio, TV	Leaflets, brochures, Radio, TV	Leaflets, brochures, Radio, TV	Leaflets, brochures, Radio, TV	Leaflets, brochures, Radio, TV
Priority setting	Through bottom- up process to define “On-farm- research” topics. Policy dependent	No defined procedure/ policy dependent	EU/national policy	No defined procedure/ policy dependent	No defined procedure/ policy dependent	No defined procedure/ policy dependent	No defined procedure/ policy dependent

Annex 3: Linkages of the advisory services with other actors in the AKIS

Actors/ Country	Albania	Bosnia	Bulgaria	FYR of Macedonia	Montenegro	UNMIK Kosovo	Serbia
Applied research	Intensive cooperation through common on-farm-research projects and training programs for advisors by the research centres	No regular cooperation	Intensive cooperation, research institutes within Agricultural Academy provide training for advisors, prepare extension material and render laboratory services	Good cooperation	Intensive cooperation as advisory services are part of the Biotechnical Institute/ Agric. Faculty	No regular cooperation. Very weak applied research	Intensive cooperation, Extension stations do applied research themselves
Universities	No regular cooperation	No regular cooperation	Informal cooperation between parts of extension system and Agric. University	Good cooperation	Intensive cooperation as advisory services are part of the Biotechnical Institute/ Agric. Faculty	Cooperation on personal level through training program for extensionists, which is partially performed by academic university staff	Regular cooperation in Vojvodina, where University department developed and implements monitoring system
NGO/ private extension providers	Involvement of individual NGOs in training and implementation	No regular cooperation	Competition for public program funds, weak cooperation	Poor cooperation Sporadic cooperation with private advisors	Sporadic cooperation	Sporadic cooperation	No information
Input suppliers/ processors	Poor cooperation, sporadic contacts on field level	Poor cooperation	No information	Good cooperation with input suppliers, poor with banks	Good cooperation with processors	Good cooperation with bank for rural credit	Poor cooperation
Farmers associations	Sporadic cooperation	Sporadic cooperation	Sporadic cooperation	Poor cooperation	Sporadic cooperation	Sporadic cooperation	No information

Annex 4: Farmers needs and answers of the national extension systems

Needs	Albania	Bosnia	Bulgaria	FYR of Macedonia	Montenegro	UNMIK Kosovo	Serbia
Knowledge on biophysical basics of farming	No, should be part of the vocational school education	No, should be part of the vocational school education	No, should be part of the vocational school education	No, should be part of the vocational school education	No, should be part of the vocational school education	No, should be part of the vocational school education	No, should be part of the vocational school education
Knowledge on general production techniques	Yes, partially provided through a joint learning process (OFR) (50%)	Yes, in the Republika Srpska (25-80%), No in the Federation	Yes, through production technique experts	Yes, through production technique experts (40%)	Yes, through production technique experts (30%)	Yes, through production technique experts (30%)	Yes, through production technique experts
Knowledge and skills on specific and up-to date production techniques (organic farming, modern fruit tree cultivation, etc.)	Only partially, as advisors are not always up to date, some expert knowledge is contracted in from NGOs	Only partially, as advisors are not always up to date,	Only partially, as advisors are not always up to date,	Only partially, as advisors are not always up to date,	Yes, for the fields of milk and crop production advisors are close to the farmers and their needs and able to access necessary new knowledge	Only partially, as advisors are not always up to date,	Only partially, as advisors are not always up to date,
Calculation of production	Yes (10%)	No	No	No	Yes (10%)	Yes (20%)	No
Integrated advise considering production as one part of a farming system	No	No	No	No	No	No	No
Environmental impacts of production	Only partially	Only partially (3%)	Only partially	Only partially	Only partially	Only partially	Only partially

Investment calculation	No	No	No	Partially as part of the service of a group of private advisors	No	No	No	No
Farm development advice	No	No	No	Partially by private advisors	No	No	No	No
Market Information	Not regularly and timely (10%)	No	Yes (20%)	No	Yes	Yes	Yes	Yes
Marketing advice	Partially	Yes (5%)	Partially	No	No	Partially	No information	No information
Information and advice on national subsidy programs	Yes (20%)	Yes (15-75%)	Yes (80 -100%)	Yes (60%)	Yes (30%)	Yes (50%)	Yes	Yes
Information and advice on international agreements and regulations	Only partially by NGO	No	Yes	Only partially by private advisors	No	No	No	No
Information and support on rural and agriculture tourism	No	No	Partially, if part of an NRDP measure	By NGOs	No	No	No	No
Information on national and international development programs	No	No	Yes	Over the last two years by public service	Only partially by NGOs	No	Yes, recently started by the initiation of Rural Development Offices	Yes, by Rural Development Offices and individual municipal advisors
Support for the initiation of processing and marketing associations	Yes in individual cases (10%)	Yes (10%)	Yes if part of NRDP measures	No	Yes (10%)	No	No	No

Annex 5: Overview of existing training and education capacities

Country/ Target Group	Albania	Bosnia	Bulgaria	FYR of Macedonia	Montenegro	UNMIK Kosovo	Serbia
Pupils	n.i.	n.i.	n.i.	Secondary schools provide basic agric. knowledge, little practice oriented.	Secondary schools provide basic agric. knowledge, little practice oriented.	Secondary schools provide basic agric. knowledge, little practice oriented.	Secondary schools provide basic agric. knowledge, little practice oriented.
Students	Two agricultural faculties provide agricultural studies	Seven agricultural (cantonal level and Rep. Srpska) faculties provide agric. studies	Agric. Faculties (Sofia, Plovdiv) provide agric. studies	Four agric. faculties provide agric. studies	Agric. faculty provides agricultural studies, very practice oriented	Agric. faculty provides agric. studies	Agric. faculties (Belgrade, Novi Sad, Cacak) provide agric studies
Farmers	Agricultural Technology and Transfer Centres (ATTC) provide training courses for farmers and extensionists (no long-term program, predominantly production technology)			FACE organizes and performs practical trainings for farmers (on contract basis)		Agric. training centre provides practical training for farmers	
Extensionists	(ATTC) provide training courses for farmers and extensionists (no long-term program, predominantly production technology)	Cantonal research institutes provide field days for farmers and extensionists (not regular)	Agricultural Academy (AA) provides training courses for farmers and advisors.	FACE organizes and performs practical trainings for extensionists (on contract basis) FYR of Macedonia Agric. Adv. Services Project (MAASP) active until end 2010 providing regular trainings for public and private advisors	Agric. faculty/ Biotech. Institute provides training for staff (extensionists)	Private consultancy companies perform practical training programs for advisors (all levels of advisory work, contracted by ministry)	ISAA performs practical training courses (not regular, production technology oriented) Serbian Transitional Agriculture Reform Project (STAR) takes up activities 2010 preparing for the provision of advisor training program.

Annex 6: Advisors training needs and answers of the national systems

Needs	Albania	Bosnia	Bulgaria	FYR of Macedonia	Montenegro	UNMIK Kosovo	Serbia
Systematically planned and performed training program for extensionists	Partially, ATTC provide training for advisors, according to present needs and financial opportunities	No	Yes, performed by the Ministry in order to prepare advisors for the implementation of NRDP measures	Yes, training in preparation of regional operational plan conducted by MAASP	No	Partially, a two year extension project provides advisors with necessary knowledge and skills on production techniques, farm economics and project development	Not at present, but to be initiated within 2010 by ISAA
Training on problem solving in a farming systems approach	No	No	No	No	No	No	No
Training on selected production techniques	Yes	Yes, but on an ad-hoc basis by projects and NGOs	Yes	Yes, by (FYR of)Macedonin Agric. Adv. Serv. Project.	Yes, if necessary by University lecturers	Yes, in the frame of project	Yes after program initiation
Training on extension methodology	No	No	No	Partially as components of MAASP trainings	No	No	No
Training on farm-economy, farm management and whole farm development	No	No	Partially	Partially as components of MAASP trainings	No	No	No
Training of marketing, market development and value chains	No	No	No	Partially as components of MAASP trainings	No	No	No

Training on environmental impacts of farm production	No	No	Yes, as parts of the NRDP measures	Partially as components of MAASP trainings					
Training on national rules and regulations	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Training on EU programs for rural development	No	No	Yes	Partially as components of MAASP trainings	No	No	No	No	No
Training on EU regulations important for production marketing and product quality	No	No	Yes	Partially as components of MAASP trainings	No	No	No	No	No
Training to support farmer groups and associations	No	No	No	No	No	No	No	No	No
Training in specific computer programs	No	No	No	No	No	No	No	No	No
Training in foreign languages	No	No	No	No	No	No	No	No	No
Needs	Albania	Bosnia	Bulgaria	FYR of Macedonia	Montenegro	UNMIK Kosovo	Serbia		

Annex 7: Specific strengths and potentials in the region to answer the demands of the agriculture sector

Fields	Albania	Bosnia	Bulgaria	FYR of Macedonia	Montenegro	UNMIK Kosovo	Serbia
Institutional setup	Ministry is in discussion to involve more stakeholder in the task of research and extension (Universities, NGOs)			Spatial distribution of public advisory service offices in all agro-ecological zones	Institutional setup of advisory services outside the ministry gives more room to manoeuvre		
Involvement of the private sector				MAFWE established Coordination Body of public and private sector institutions		Regular cooperation between field advisors and rural credit bank	
Development and Involvement of NGOs/private extension providers	Regular cooperation of applied research and extension with individual NGOs for training and advisory work			Cooperation with private consultants in the fields of farm management and farm economy		Cooperation on local level with NGO	
Cooperation with applied research	On farm research as a means to practically link up farmers, extensionists and research		Agricultural Academy as institute for applied research provides training for advisors and elaborates extension material	Embryo organisation funded by MAFWE	Biotechnical Institute/Agric. Faculty as roof organisation of advisory services provides necessary knowledge and renders necessary laboratory services		

Extension Management	Functioning monitoring system with extended data collection on advisors activities and expressed farmer needs	Functioning monitoring system with data collection on advisors activities				Functioning monitoring system with data collection on advisors activities	Functioning monitoring system with data collection on advisors activities
Communication strategy						Market information system functioning	Market information system functioning
Defined methodological approach	Yes, Agric. Information Centres as contact platforms and information outlets.		Dispersed offices of NEA provide contact points throughout rural areas				
Fields	Albania	Bosnia	Bulgaria	FYR of Macedonia	Montenegro	UNMIK Kosovo	Serbia

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