Final Report

FiBL

Needs assessment for information and communication capacity building in the national agriculture research systems with particular emphasis on ecological and organic agricultural production in

Bulgaria, Serbia and Kosovo

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Executive Summary

The objective of this study, commissioned by the FAO Regional Office for Europe and SDRR, is to analyse the status of and future needs for information and communication systems of private and government organizations in the national agricultural research system and its relevant partners with respect to agro-ecological and organic production in Bulgaria, Serbia and Kosovo. Basis for analysis have been personal interviews with organizations active in the field of ecological farming and information provided by national experts in the countries studied. Network analysis has been chosen as the basic methodology to identify the level of cooperation and information exchange.

The situation with respect to ecological farming systems like organic agriculture is varying in the countries studied. While in Bulgaria the government announcing and supporting organic agriculture as model for modern environment friendly farming systems and organic agriculture so far has gained some importance for exports, we found recognition of and support for organic agriculture at its very initial stage in Serbia and almost not existent in Kosovo.

In all three countries, low-input farming systems fit well the current situation of the agricultural sector with limited financial resources by both of the government and the farmers and can open opportunities for access to European Union markets. As organic agriculture is much more than just not applying synthetic fertilizers and pesticides, developing know-how and competence are of major importance.

While in Bulgaria, both government and private organizations are quite important and developed, in Serbia and Kosovo, the state has so far not recognized organic agriculture to be of significance. In the latter two countries, organic agriculture is developed through private organizations (Serbia) or internationally funded agricultural projects (Kosovo).

In general, the level of cooperation and information generation and flow in all the countries studied needs improvement, again with Bulgaria having the most developed sector but still requiring a better institutional setting for organic agriculture. In Serbia and Kosovo, institutional development is at its very beginning or its need still needs to be recognized.

International information is the most important source of information in Serbia and Kosovo. In order to make this information accessible and acceptable, it needs to be translated and adopted to the national situation of the agricultural sector. Basic information on what organic agriculture is about is lacking in Serbia and Kosovo while information about organic production techniques are lacking in all countries studied.

A key-issue in all countries is improving the competence in modern ecological farming techniques of current research, extension and administration staff as a prerequisite to be able to transfer know-how to farmers. Therefore, also the curricula of academic education should include ecological farming methods as subject matters. Furthermore, projects should support access to internationally available information and access to international academic networks. To improve the level of competence at general agricultural administration and extension services, twinning-programmes with Western-European countries are suggested.

Projects to support the development of environment friendly farming systems should address the reported deficiencies in cooperation among research institutions and universities by introducing an institutionalized information system on organic agriculture research and fora on

organic agriculture. Electronic media initiatives could help learning how modern information technology could be applied for provision of information about environment friendly agriculture.

In Serbia and Kosovo, where environment friendly farming systems are in an initial phase, universities and research centres should provide their scientific competence in supporting and accompanying private initiatives which develop information material, curricula and training courses. Furthermore, high profile demonstration farms could contribute to get a better understanding on how organic agriculture is functioning and which options it could offer to agricultural sectors in transition.

Content

1 Introduction

Ecological and sustainable farming systems like organic agriculture systems could be understood as the request of a social movement, which regards itself as alternative to the established mainstream agriculture (Michelsen et al. 2001). Acting as an opposition against the mainstream agricultural policy, ecological agriculture developed in Europe to a very large extent independently of the existing institutions of the agricultural sector (Padel et al. 2001). As a consequence, institutions in the organic sector show decentralized structures without a common representation of interests, no common market access and without any professional public relation work (Dabbert et al. 2002). Furthermore, the independent development of the organic sector forced the organic agriculture associations to develop their own independent private services and quality assurance activities e.g. research, extension services, provision of information (target groups: public and farmers), marketing activities, inspection and certification as well as labelling.

The aim of this study is to analyse the present status of and future needs for information and communication systems of the national agricultural research institutions and their relevant partners, especially focussing on the needs for innovative, appropriate and efficient information and communication systems for agro-ecological and organic production in Bulgaria, Serbia and Kosovo.

Starting here, the needs of these institutions for further development of their information and communication systems are assessed and recommendations and prioritized needs for different stakeholder groups will be presented. Accordingly, the study has been carried out in three phases:

First Phase: Review of existing experiences and studies
Second Phase: Identification of relevant actors and availability of information

This second phase focused on the status quo considering what information about agro-ecological and organic production exists among stakeholders. Questions which were addressed are:

- How is information distributed among the actors?

- How is it gathered?

- What is the source of information on agro-ecological and organic production?

- Is there a structured way of dissemination of information?

- How does the informal information flow (communication network) work?

- What kind of information flow is there (examples: for decision support systems, management information systems, technology and production related, marketing, market and production data)?

The outcome of this phase is a compilation of data describing the current situation and will act as the basis for the in-depth studies in phase three.

Third Phase: Identification of barriers and bottlenecks

In the third phase, the existing information and communication system have been analysed in depth in order to identify barriers and bottlenecks for an efficient working of the system. The method of Network Analysis has been adapted to the special question of this study.

2 Methodology

During the last two decades, network analysis has been established as a suitable methodical approach to analyse social movements and institutions. Network analysis allows to examine how the characteristic structure of a network can affect the form and the range of the support and whether certain forms of the support develop. Network analysis differentiates thereby three aspects of characteristic (Diaz Bone 2001):

(i) The characteristics of participants, organizations and events
(ii) The kind and characteristic of the relations
(iii) The characteristics of the network structures

Diaz Bone (2001) stresses that networks, if actors can rely on them, represent social capital to implement interests or to obtain an action gain. Network relations are thereby the infrastructure for the granting or for the withdrawal of support.

Network Analysis is a powerful tool to analyse social movements and institutions with regard to cooperation and information exchange.

For the purpose of this study, we can see organic agriculture as a social movement initiated by persons and organizations that are not part of the mainstream agricultural segment (Stolze 2003).

Network analysis conducted within this study has been carried out in order to clarify existing characteristics of linkages between institutions. This will reveal existing information channels, as well as possible lacks and deficits of communication and information provision. The structure of an innovative, appropriate and efficient information and communication system can then be assessed, taking into consideration the special requirements for full-filling the multi-functional and multi-sectoral integration required to satisfy all functional roles of ecological and in particular organic agriculture (i.e. production, environment, socio-economic, and other parameters).

Network analysis sets first priority in addressing institutions in the fields of research, education, extension and farmers organization, including relevant ministries. However, information from the processing industry, commerce and consumer organizations are also considered to be important. Both public and private organizations are considered according to their involvement in the respective fields.

Approach

Network Analysis started with one or few focal nodes (institutions) that were questioned on their interrelations with other institutions of interest. They were also asked on their linkages and interdependencies with institutions so far unknown to the analysts. Thereupon, those new institutions were again interviewed on their interrelations, and so on. In this way, the circle of institutions surveyed has been enlarged step by step to draw a picture of relevant actors as complete as possible.

For in-depth analysis we focus on the national institutions which we regard as relevant for a later establishment of a communication network. Linkages to international institutions are considered through the role international actors play for the national network of institutions for research, education and extension. Anyhow, they themselves will not be in the centre of deeper analysis, but rather be regarded as external sources of information.

The empiric basis for the Network analysis has been semi-structured interviews. The interviews were carried out by FiBL scientists wherever possible (knowledge of German, English and/or

French by interviewees) and by national experts/partners. The questions asked were both factual and hypothetical (questionnaire in Annex 2). The factual questions depict the actual situation of the network, whereas hypothetical questions are used to ascertain the level of information the institutions have of one another.

In each country, a national expert has carefully been chosen considering his/her knowledge of the agricultural research stakeholders, language skills and willingness for cooperation. They have been involved in carrying out the network analysis where no English speaking persons working in the institutions were available.

Three aspects are analysed with the means of the network analysis:

a) Characteristics of actors, organizations and possible events

Here, different attributes are considered, such as size, year of establishment, financial budget, private or public status, communication policies

b) Types and characteristics of interrelations

Relations among institutions are addressed from two points of view.

- Institutions are regarded as corporate entities, which leads to the following questions: Are there any existing formal relations, e.g. via regulations? Do institutions already work together in some projects? Do they have binding contracts? Which financial flows exist between them? What means of communication do they use?

- The other approach regards linkages through the members of institutions. There may be personnel flows, social relations or even interlocking directorates. What kind of linkages would they want or consider useful?

c) Characteristics of the network structure

3 Country reports

3.1 Bulgaria

3.1.1 Overview on ecological and organic agriculture in Bulgaria

Bulgaria's agricultural land amounts to 6417 thousand ha, which represents 58 percent of Bulgaria's total area. Arable land represents 77 percent of the country's total agricultural land. Areas under perennial crops account for about 2 percent of total agricultural land while meadows, grasslands and pastures cover more than 13 percent. The share of state and municipal ownership has been gradually decreasing over the years to reach a bare 4 percent in 1998. Private ownership of arable land surpasses 96 percent, with some 40 percent being cultivated by the new cooperatives. As regards grasslands and pastures, the share of public and state ownership is still predominant at 71 percent. Detailed information on farm structure is given in Table 3-1 below.

The share of agriculture in GDP varied between 10 - 15 percent over the 1980's. Contrarily to the situation in other CEE countries, following 1993, the share of agriculture increased, reaching 18.7 percent of GDP in 1998 and decreased to 14.8 percent in 1999. The rising share of agriculture within the GDP was due to the modest recovery of the sector and a concurrent clear-cut decline in the share of the manufacturing sector.

The total number of private farms is estimated at more than 1.78 million farms. The vast majority of them have never been officially registered. Most "informal" private farms are small-sized units cultivating small plots of land for household consumption purposes only. In 1997, the number of private companies registered under the Commercial Code amounted to 6373, including 6021 physical persons and 263 legal entities. Some 1/3 of the registered companies did not operate.

Table 3-1: Farm structure in Bulgaria in 1997

	Number of farms	Land area in 1000 ha	Average area in ha
State- and municipally-owned	493	1259.2	2554.2
Cooperatives	3475	2185.6	621.0
individual owners and private	1535223	2758.2	1.6
Total	**1783495**	**6203.0**	

Source: Republic of Bulgaria, 2003

The 1997 number of cooperatives totaled 3475. While the bulk of cooperatives are involved in production, there are others that lease storing facilities and equipment, farm machinery as well as provide services and workforce to private firms or smaller cooperatives. The average land area cultivated by cooperatives is 621 ha. The number of cooperative members averages between 300-400, with more than 80 percent of them being owners of the arable land cultivated by the cooperatives. Only a very small number of landowners do work on a full-time basis for their cooperatives. The viability of private cooperatives is largely dependent on their capacity and ability to operate as production units in a strongly competitive environment. In 1997, state- and municipally-owned companies amounted to 493.

In 1996, the number of private farmers that cultivated up to 1 ha of land was highest - 1535223; the land area cultivated by them amounted to 14.6 percent of private farm land and accounted

for 6.2 percent of the country's total arable land. Private agricultural holdings cultivating more than 10 ha of land amounted to only 3506. These were production units of the big farm type and large leaseholders of land. The land area cultivated by them averaged nearly 500 ha. The share of these large scale farms amounts to only 0.2 percent of all private farms. However these large scale enterprises farm 66 percent of the land cultivated by private farms which accounts for 28 percent of the country's total arable land.

A national representative rural household survey conducted under a PHARE ACE project in early 1998, showed that during the 1997-1998 period approximately 77 percent or 1.5 million farmers did not sell their farm produce in the market, i.e. the degree of their market orientation was zero. It also revealed that all farmers classified as small in terms of gross output and about 84 percent of all farmers who cultivated arable land plots of less than 0.5 ha were not market-oriented. Only 10 percent of all private farmers (about 200 000) sold more than 50 percent of their produce in the market. These were mainly farms that had potential capacity to sustain operations and grow in an increasingly competitive environment. They however need further training, more information, better technical assistance and access to investment resources.

State activities to establish environment friendly and organic agriculture practices

The objectives of the National Agriculture and Rural Development Plan over the 2000–2006 period under the EU SPECIAL ACCESSION PROGRAM FOR AGRICULTURE AND RURAL DEVELOPMENT (SAPARD) have been defined as follows:

1. Development of efficient and sustainable agricultural production and competitive food processing sector through improved market and technological infrastructure and strategic investment policies, ultimately aimed at reaching EU standards.

2. Sustainable rural development, consistent with the best international environmental practices by providing alternative employment opportunities, economic diversification, development and rehabilitation of infrastructure.

Under objective 1 of the National Agriculture and Rural Development Plan, the following projects related to environment friendly and organic agriculture methods are envisaged:

- Improvement of phyto-sanitary control, including control on imports, producers and diagnostic activity carried out by laboratories - approx. 2 M EURO

- Continuation of work on improvement of the biological testing and registration of plant protection products - 2.5 M EURO

- Continuation of work on the improvement of the control of pesticides, residual quantities of pesticides, nitrates and heavy metals - 0.7 M EURO

- Creation of specialized units and building of a control system for the production from organic farms - 0.4 M EURO

The *Farmer Support Act* of 1998 as the underlying legal act providing for government support to Bulgarian farmers supports investment projects (Eco-Farming Program) amounting up to 41 000 Euro per farmer, aimed at environment friendly farm production or activities related with soil fertility improvement, new constructions for environment friendly crop and livestock production. Farmers' own investments are required at a minimum 25 percent of the totally invested project amount.

The second objective of the SAPARD National Agriculture and Rural Development Plan focuses on sustainable rural development. In order to implement the above principles, the Rural Development Strategy is aimed at funding the implementation of demonstration projects for organic agriculture and a pilot project, that supports environment-related farming practices. Among the funded investment projects under national State Agricultural Fund (SFA) schemes for the calendar years of 2000 and 2001 there has been one organic agriculture project which received 8000 Euro.

Under objective 2 of the SAPARD National Agriculture and Rural Development Plan over the 2000–2006 period, measure 3.1 "Development of Environmentally Friendly Agricultural Practices and Activities" will address one of the greatest challenges for Bulgaria in the process of economical restructuring: the balance of sufficient production of food and increased employment with preventive protection of the environment. Negative changes in soil-composition, water quality and bio-diversity have been observed as a result of the monoculture systems of the past: high level of soil acidity and soil erosion, increase of losses in soil, plant and animal biodiversity, soil and water pollution with pesticides and fertilizers. Low input sustainable agriculture, organic agriculture and other integrated agro-ecological measures are mentioned as an option that can lead to stabilization of the eco-systems, preservation and restoration of national resources and development of the countryside.

Activities under Measure 3.1

There are four activities envisaged under the SAPARD National Agriculture and Rural Development Plan (Republic of Bulgaria, 2003):

1. Organic agriculture

2. Protection of local breeds endangered of being lost to farming

3. Introduction of anti-erosion practices for agricultural lands

4. Management of the semi-natural habitats

In the National Agriculture and Rural Development Plan organic agriculture was chosen as a pilot agri-environment action within the framework of Measure 3.1. This is for the following reasons:

1. soil and climatic conditions in Bulgaria are exceptionally favourable for the development of agriculture.

2. the country is a traditional producer of agricultural products – it is famous for its high quality and tasty fruits and vegetables.

3. decreased use of fertilizers and pesticides over the last decade favours the development of organic agriculture.

4. the positive trend of applying less fertilizers and pesticides and thus protecting soils and water should be promoted and supported in the future as well.

5. organic products are a healthy and high quality food that must not be denied to the Bulgarian consumer.

6. there exists an opportunity that products of Bulgarian organic production could fill market niches in other countries.

7. it is necessary to make up for the delay in the production of organic production as compared to other European countries.

The major reason for Bulgaria's delay in developing organic agriculture was the slow and painful land distribution process which resulted in many very small scale farms, resulting in lack of practical farming knowledge, as private farming enterprises had no longer any tradition, etc. The lack of national legislation until recently did not support the development either, as this type of production could not be regulated. Since 2001, however, such regulations are in place.

The first projects for organic production (mainly vegetables) started in Bulgaria only 6 years ago and were export oriented. Control and certification have been carried out first by foreign control bodies. In the meantime, Balkan Biocert, a national company has been established.

So far, no state supported measures for organic agriculture have been implemented in Bulgaria. However, area payments for conversion to and continuing of organic agriculture are designed under the SAPARD measure 3.1 for implementation in 2004 (Table 3-2). Area payments will consider fodder crops, vegetables, fruits, as well as essential oil and medicinal crops.

Table 3-2 : Payment rates for organic production under the SAPARD programme (Euro/ha)

	Year 1	Year 2	Year 3	Year 4	Year 5
Essential oils and medicinal crops	225	225	225	180	180
Fruits and vegetables	391	391	391	313	313
Fodder crops	125	125	125	100	100

Source: Republic of Bulgaria, 2003

Official data on organic agriculture statistics are not available, however the Ministry of Agriculture is currently developing a recording system. Most recent data from Prazan et al. (2004) provide information on organic agriculture development from 1999 to 2002 (Table 3-3).

Table 3-3: Development of organically managed area in Bulgaria

		1999	2000	2001	2002
Area in conversion	ha	12	286	221	177
Organic area (converted)	ha	0	0	268	339
Organic area total	**ha**	**12**	**286**	**489**	**516**

Source: Prazan et al., 2004

The payment rates envisaged in the SAPARD National Agriculture and Rural Development Plan Measure 3.1 activities No 2 – 4 are shown in the tables below (Table 3-4, Table 3-5, Table 3-6).

Table 3-4: Area Payments for conservation of local breeds endangered or being lost to farming (Euro/ha)

	Year 1	Year 2	Year 3	Year 4	Year 5
Cattle	343	314	314	314	314
Sheep	42	22	22	22	22

Source: Republic of Bulgaria, 2003

Table 3-5: Anti-erosion support payment rates (Euro/ha and year)

No	Type of activity	Euro/ha
1	Grass cover with perennial grass mixtures	
	a) with cumulative fertilization;	320
	b) without cumulative fertilization.	250
2	Grassed buffer zones	250
3	Strip cropping	30
4	Runoff lead away furrows	25
5	Erosion control in row spacing of orchards and vineyards	100
6	Fore crops for erosion control	80
7	Narrow terraces	200
8	Ameliorative practices in pastures	100

Source: Republic of Bulgaria, 2003

Table 3-6: Semi-natural habitats payment rates: example Strandja Ropotamo (Euro/ha)

	Year 1	Year 2	Year 3	Year 4	Year 5
Meadow management	31.5	31.5	31.5	31.5	31.5
Stop applying fertilizers	77	77	77	77	77
Rotational grazing	61	61	61	61	61
Exclusion of grazing on sand dunes	20	20	20	20	20
Reseeding of pastures/meadows	100	-	-	-	-

Source: Republic of Bulgaria, 2003

Following eligibility criteria must be met by farmers (Republic of Bulgaria, 2003):

- basic agri-environmental training

- preparation of a whole farm agri-environment plan

- keeping of farm records and preparation of farm accounts

- compliance with the verifiable standards of Good Farming Practice

- enter the agri-environmental scheme voluntarily

- commit to apply the obligations as defined by the agri-environmental scheme during a period of at least 5 years

- have good working skills for the implementation of the measure

- have a minimum area per farm per action as specified in the description of each action.

- meet the requirements for supplementary activities

The analysis of the strengths and weaknesses of the Bulgarian agri-food sector and rural areas points to a number of internal and external structural problems over the transition period to a market economy that can be summarized as follows:

- Fragmentation of the sector resulting in an enormous number of subsistence farms

- Deteriorating level of on-farm equipment and facilities resulting in significant waste, low productivity, and poor quality of production

- Aging agricultural population and lack of skills and knowledge of modern farming practices and farm management

- Insufficient bargaining power of producers of primary products due to the underdeveloped market infrastructure, insufficient transparency of market information, lack of traditions in marketing cooperation as well as inadequate governance arrangements, i.e. lack of long term contracts between producers and processors leading to instability of prices and uncertainty of income and lack of incentives for investments in farm-specific assets (orchards, vineyards, etc.);

3.1.2   Characterization of surveyed organizations and institutions

For the purpose of this study, 14 organizations or institutions have been surveyed on the basis of a semi-structured questionnaire (questionnaire in Annex 2). The interviews have been conducted face-to-face and by telephone.

Half of the organizations were state-run and half were private organizations. Eleven organizations were not profit oriented (Table 3-7).

Table 3-7: Types of surveyed organizations

Type of organization	ID number*	Number of organizations
State-run profit oriented	11B	1
State-run non profit	2B, 3B, 5B, 6B, 9B, 10B	6
Private profit oriented	7B, 12B	2
NGO / Private or public non-profit	1B, 4B, 8B, 13B, 14B	5
Total		**14**

Source: survey data; *for reference of ID numbers and corresponding organizations see Annex 1 or Table 3-11

Among the interviewed organizations there were three organic agriculture and two organic production and trade organizations (Table 3-8). Five organizations are active in the area of academic education and research. Both national extension services surveyed are apart from advising and training farmers also engaged in organic agriculture research focusing primarily on applied research questions.

Table 3-8: Working fields of surveyed organizations

Type of organization	ID number*	Number of organizations
Organic farmers' associations	1B, 8B, 13B	3
Universities and Research Institutions	2B, 3B, 5B, 6B, 11B	5
Public Extension Services	9B, 10B	2
Organic production and trade organizations	7B, 12B	2
Environment conservation organizations	4B, 14B	2
Total		**14**

Source: survey data; *for reference of ID numbers and corresponding organizations see Annex 1 or Table 3-11

Most of the organizations interviewed are active on a national level (11) of which five are also involved in international activities. Only two organizations, official district advisory services (ID# 9B, 10B), dedicated their work solely to a specific region. One university (ID# 6B) only worked on organic agriculture at an international level. Four organizations (ID# 1B, 7B, 8B, 12B) work exclusively in the organic sector while for six (ID# 2B, 4B, 6B, 10B, 11B, 14B) organic agriculture is of particular importance. Four organizations answered that organic agriculture is only a side aspect of their work.

Most organizations provide advisory services with farm management and advice in organic production as main areas of work (ID# 1B, 5B, 8B, 10B, 11B, 13B, 14B). The two environment conservation organizations give ecological information and advice to farmers and do lobbying for organic agriculture from an environmentalists' perspective. Training on organic agriculture is provided at university level (ID# 2B; 3B) and through extension services (ID# 9B, 10B). However, the organizations mentioned low level activities in the area of marketing, processing

and rural development. Corresponding to the main working areas in which the surveyed organizations are involved, the respective target groups are first farmers, then processors and policy-makers. It is interesting to note, that more than half (8) of the surveyed institutions cover at least two of the above mentioned three areas. Thus, advice and lobbying is provided mainly through the same institutions.

3.1.3 Institutional setting and network

There are two organizations, Bioselena and Ecofarm, which are responsible for 25 percent of all connections between two actors. Thus, these two organizations can be characterized to have a central role within the network and to be the most important "movers" and "shakers". Both organizations are in a position to take important initiatives on the one side while on the other side they are able to block the entire network. Bioselena has the most powerful reputation of all organizations surveyed, followed by Ecofarm which seeks to become more and more influential. Network analysis could not clarify completely the role of the Bulgarian Ministry for Agriculture and Forestry (MoAF) as cooperation between the Ministry and other actors of the network were imprecisely described by the respondents. However, due to the fact that the Ministry for Agriculture is seen to be one of the most important actors within the organic agricultural sector, there is some evidence that the Ministry is in a similar key-position like Bioselena and Ecofarm.

One organization (Agroecological Center of the University Plovdiv), also mentioned to be of particular importance, has lost its central position within the network and thus is actually loosing influence. Another organization, Gerada, is isolated within the organic sector network as this organization is not connected at all to the organizations interviewed. The reason for this might be that Gerada is a private production and trade organization focusing on international markets.

The results of the network analysis conducted show that Bulgaria's organic agriculture network is in a developing phase within which the positioning of the organizations involved is not completed yet. The network is not particular dense (only 15 percent of all possible links are established) and shows in general a very low level of links between the actors involved in the organic sector. As most of the actors are only connected through one path with each other, this network is not in a very stable stage so far. The distribution of power within the network is very heterogeneous and there is some evidence that the organic network in general is not very powerful. There are three organizations (MoAF, Bioselena, Ecofarm) which could develop to a core group and thus become the basis for catalyzing the organic development in Bulgaria.

Cooperation with respect to the organization of training courses and editing of training material and technical leaflets are reported for the organic farmers' associations Bioselena and Ecofarm on the one side and between these organizations and the cooperative Bio Bulgaria on the other. Particularly, Bioselena and Bio Bulgaria have established very frequent contacts in this respect. Corresponding to their network position, in general, the most frequent cooperation partners mentioned by the interviewed organizations are Bioselena and Ecofarm. However, these connections are with a contact frequency of less than one per month very loose and are limited to contributions with regard to training courses, technical leaflets and training material.

Research cooperation between academic institutions seem to be very scarce even though there are some joint research projects mentioned between the University of Plovdiv and University of Stara Zagora. On the other hand, the University of Plovdiv and the University of Stara Zagora have some established connections to the private organic agriculture associations and support them with scientific editing of training material and leaflets and contribute to their training

courses. Furthermore, both universities conduct research projects in cooperation with Bioselena and the Agroecological Center Plovdiv.

3.1.4 Communication means and information needs

Relevance of information sources

The most frequently used sources for information on organic agriculture (used by 93 percent of the organizations surveyed) are a) personal contacts to experts, b) books on organic agriculture and c) personal contacts to organic farmers (Table 3.9).

Training courses, seminars, internet search, computer media and technical leaflets occurred to be the second important information sources used by 86 percent of the organizations interviewed. With exception of technical leaflets, all these sources are considered to be the most important ones (in the range of importance from 1 = rather unimportant to 5 = extremely important, they ranged from 4.3 to 4.8).

The interviewed organizations use the internet to search particularly for international information while information on a national level is covered through personal contacts to farmers and experts as well as through information from technical leaflets. Particularly the private organic agriculture associations stress the importance of individual contacts to experts and professional journals as well as information from own research activities. National agricultural newspapers are attributed to have a low to medium quality. As a consequence, newspapers are rated to be unimportant (2.8) and thus are used rarely.

Table 3-9: Importance of organic agriculture information sources

	ID number*	Rated as important (by number of organizations)
Personal contact to experts	1B, 2B, 3B, 4B, 5B, 7B, 8B, 9B, 10B, 11B, 12B, 13B, 14B	13
Books	1B, 2B, 3B, 4B, 6B, 7B, 8B, 9B, 10B, 11B, 12B, 13B, 14B	13
Personal contacts with farmers	1B, 2B, 3B, 4B, 6B, 7B, 8B, 9B, 10B, 11B, 12B, 13B, 14B	13
Training courses, seminars	1B, 2B, 3B, 4B, 5B, 8B, 9B, 10B, 11B, 12B, 13B, 14B	12
Internet, computer media	1B, 2B, 3B, 4B, 5B, 7B, 8B, 10B, 11B, 12B, 13B, 14B	12
Technical leaflets	1B, 2B, 3B, 4B, 5B, 7B, 8B, 9B, 10B, 11B, 13B, 14B	12
Own research	3B, 4B, 5B, 6B, 7B, 8B, 11B, 12B, 13B, 14B	10
Television	1B, 2B, 4B, 5B, 7B, 8B, 9B, 10B, 11B, 14B	10
Professional journal	1B, 2B, 4B, 9B, 10B, 11B, 12B, 13B, 14B	9
Fairs	3B, 5B, 7B, 8B, 11B, 12B, 13B, 14B	8
Agricultural newspaper	2B, 3B, 7B, 10B, 11B, 12B, 13B, 14B	8
Commercial enterprises (retailer, processors)	1B, 4B, 7B, 8B, 11B, 12B, 13B, 14B	8
Congresses	2B, 12B, 13B, 14B	4
General newspaper	2B, 4B, 7B, 8B, 11B	5
Radio	4B, 8B	2
Regional environment center for Central and Eastern Europe (REC), Sofia	4B	1
Ministry of Agriculture and Forestry, Bulgaria	4B	1

Source: survey data, multiple answers possible; *for reference of ID numbers and corresponding organizations see Annex 1 or Table 3-11

The organizations interviewed were asked to rank subjectively the quality of available information about organic agriculture. Weighting and summing up the mentioned ranks of quality for information services (1=low; 2=medium; 3=high) and then divided against the possible maximum score results in a relative quality index for information (maximum relative index score= 1). Results are presented in Figure 3-1 which shows that the majority of information about organic agriculture available in Bulgaria is of quite high quality. The weakest element in the organic agriculture information system are the general media like radio programmes and newspapers. Organic agriculture information provided by agricultural newspapers is considered to be of low to medium quality. Furthermore, the quality of organic agriculture congresses has been ranked only slightly above medium.

Figure 3-1: Quality-Index of information available in Bulgaria as rated by survey respondents
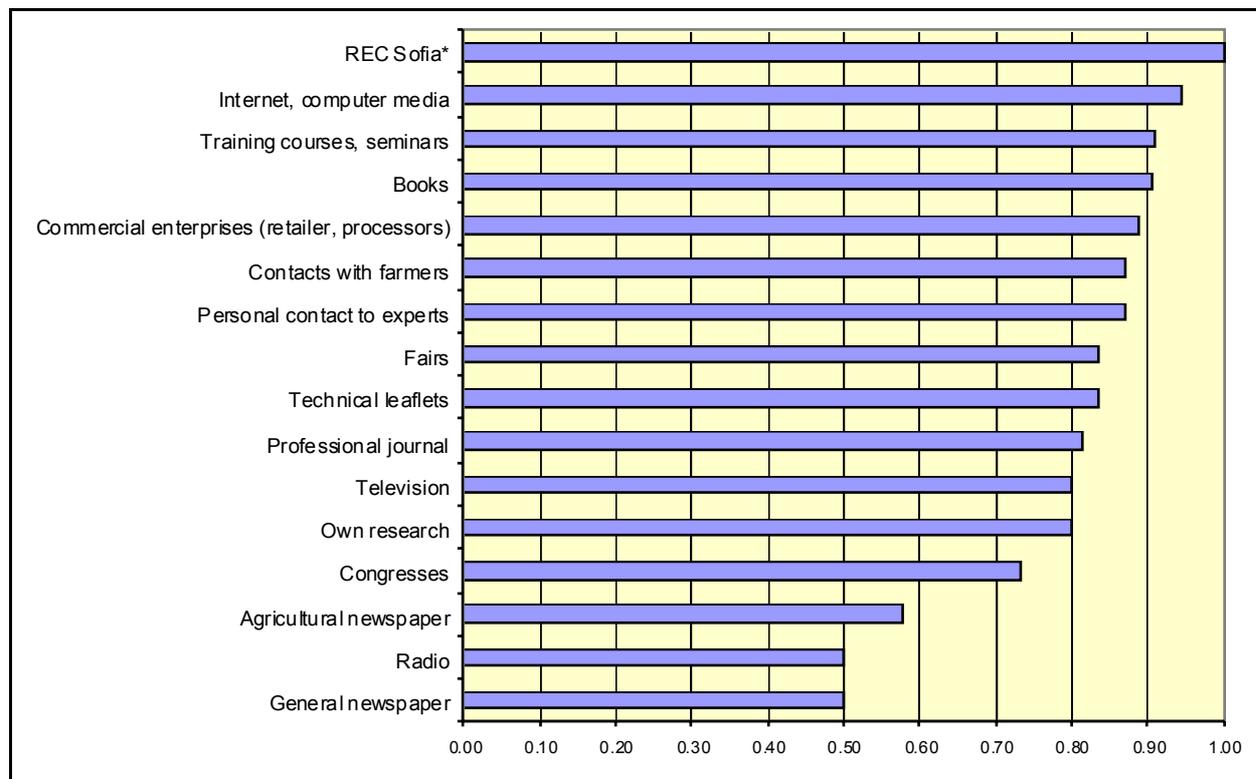
Source: survey data

* Regional Environment Center for Central and Eastern Europe (REC), Sofia

Relevance of different communication means

Nearly all organizations (86 percent) use training and seminars for their external communication (Table 3-10). This means of communication about organic agriculture is by far the most important one. Letters, technical leaflets, agricultural newspapers and fairs are used by 50 percent of the organizations interviewed. These means are rated to be of medium to high importance. Technical leaflets are particularly important for advisors. Mostly all these means of communication are offered for free.

The target group for the used communication means is very broad: farmers, students, NGO's, agricultural experts, Ministry and other government organizations, researchers, processors, general public. Consequently, information provision in most cases is neither specifically targeted to a group nor to their specific needs. Agricultural newspapers seem to be the most targeted mean of communication for experts and farmers, however its quality is rated to be low to medium. Academic journals were only mentioned to be of importance for the academic arena.

The internet is used by almost 50 percent of the respondents for receiving information and for communication to their target groups. Particularly state organizations found this media of high importance for external communication while private organizations rated its importance to be lower. This could be a consequence of limited access to the internet and the lack of technical office equipment of the private organizations due to financial constraints.

Table 3-10: Importance of communication means to clients used by the organizations interviewed

Means of communication	ID number*	Number of organizations
Training courses, seminars	1B, 2B, 3B, 4B, 5B, 6B, 7B, 8B, 9B, 10B, 11B, 12B, 13B	12
Letters	1B, 3B, 4B, 5B, 6B, 7B, 8B, 10B, 11B, 13B	10
Technical leaflets	1B, 4B, 9B, 10B, 11B, 13B, 14B	7
Agricultural newspapers	1B, 5B, 9B, 11B, 12B, 13B, 14B	7
Fairs	1B, 4B, 5B, 7B, 11B, 12B, 13B	7
Books	1B, 2B, 5B, 6B, 8B, 13B	6
Professional journals	1B, 2B, 3B, 5B, 11B, 13B	6
General newspapers	1B, 9B, 10B, 11B, 13B, 14B	6
Internet, computer media	6B, 8B, 9B, 12B, 13B, 14B	6
Radio	1B, 2B, 4B, 5B, 8B, 9B	6
Television	1B, 4B, 5B, 8B, 11B	5
Bulletin	7B, 9B, 13B	3
Other public events	1B, 11B	2
Open Doors	5B, 8B	2
School	4B	1
Consultancy	11B	1

Source: survey data, multiple answers possible; *for reference of ID numbers and corresponding organizations see Annex 1 or Table 3-11

Only 33 percent of the organizations interviewed (ID# 6B, 7B, 12B, 13B) were completely satisfied with the means of communication they use. Even though training courses and seminars are already the most important communication means in Bulgaria, the organizations interviewed intend to enhance their activities in this area. Furthermore, two organizations wish to use electronic publications about organic agriculture on the internet (ID# 1B, 3B).

The need to improve the international contacts has been stressed by both Bulgarian organic agriculture organizations and is of particular importance for the interviewed academic institutions. Organic agriculture research and academic education seem to develop somewhat isolated from the development in the EU.

Information provision

The interviewed organizations provide information on organic agriculture on two levels (Table 3-11):

    a) to the organic sector (farmers, students, agricultural experts, processors, retailers), and

    b) to the general public.

In fact, technical information on organic production is the most important type of information provided by the interviewed organizations which is followed by farm management information and market data and marketing data information. Five organizations provide general information about organic agriculture to the general public.

Table 3-11: Type of information provided by organizations surveyed

ID #	Name of Institution	Technical information on organic production	General information about organic agriculture	Farm management information	Market data and marketing information	Decision support to policy makers	Environmental issues	Research	Processing	Certification
1B	Ecofarm	x	x							x
2B	University of Stara Zagora	x		x					x	
3B	Agricultural University of Plovdiv	x	x					x		
4B	National Association Union for Ecology and Progress	x	x	x	x					
5B	Fruit Growing Institute Plovdiv	x					x			
6B	University of Food Technology, Plovdiv	x			x			x	x	
7B	Bio Bulgaria	x		x	x					
8B	Agrolink	x		x	x	x		x		
9B	Agency for Agricultural Information and Innovation Silistra	x	x		x					
10B	Agency for Agricultural Information and Innovation Ruse	x			x					
11B	Institute of Upland Stock Breeding and Agriculture, Trojan	x		x	x					
12B	Gerada, organic bee products	x			x					
13B	Bioselena Foundation for organic agriculture	x		x		x	x			
14B	Bulgarian Foundation for Environment and Agriculture	x	x							
	Number of organizations total	**14**	**5**	**6**	**8**	**2**	**2**	**3**	**2**	**1**

Source: survey data

Apart form two academic institutions (ID# 3B, 6B) also the organic farmers' association Agrolink is providing research information targeted to farmers, traders and processors. Only one organization (ID# 1B) mentioned to provide farmers with information about certification and inspections.

The Ministry of Agriculture and Forestry provides information about legislation and the pilot agri-environmental measures which will be implemented under the SAPARD framework.

Organizations' strengths and weaknesses

Private and state organizations see their strengths in different sectors. Private organizations stress that clear communication strategies, willingness for cooperation and access to international organizations are their strengths. The National Agricultural Extension Service describes its strength in networking as a potential for promotion of organic agriculture, competent technical support to organic farmers, intermediary between organic farmers and research and education organizations, technology and know-how transfer and organic market information. So far, the National Agricultural Extension Service focused on the provision of technical information and to some extent on market information.

Limited human and financial resources have been mentioned to be the most important weakness or problem, respectively. State organizations report the problem that staff members do not identify completely with environment friendly or organic agriculture systems or have insufficient skills and knowledge in this area. The latter is due to the fact that neither organic agriculture nor environment friendly farming systems in general have been a subject in the national agricultural curricula. As far as the private sector is concerned, constraints in internet access and technical equipment as well as insufficient cooperation with international organizations were mentioned as weaknesses. Furthermore some organizations mentioned a lack in strategy development with respect to both national organic agriculture policy and organizational development.

As far as academic institutions are concerned, they stressed that their capacity and capability to educate in agri-environmental subjects on the one side and scientific know-how as well as project management skills on the other to be the most important strengths. There are three main weaknesses which were identified as concerns research and education:

1. Lack of financial resources
2. Insufficient national and international cooperation
3. Researchers are not interested enough in environment friendly farming system research

The interviewed academic institutions unanimously stated the need to get access to international research networks on organic agriculture. Furthermore, they stressed the limited access to international journals. The access to both networks and scientific literature is hampered by financial constraints at the universities and research institutions. However, apart from financial constraints, deficiencies in communication and cooperation seem to be the most important weakness. For the research arena, one university particularly claimed the "Bulgarian culture" not to share information. Furthermore, as there are too many universities but not enough students, competition for students intensifies the negative communication and cooperation climate.

Information needs

Gaps in information about organic agriculture production techniques, processing technologies and marketing are the most important and most frequently mentioned ones (Table 3-12). Furthermore, access to available research results and practical organic agriculture experiences is sub-optimal. The reasons for the lack of different types of information are identified as financial constraints, the still small size of the new organic sector, limited cooperation within the organic sector and no or difficult access to the internet. To improve this unsatisfactory situation of limited access to and availability of information on organic agriculture, respondents suggested:

a) Increased state activities (Ministry of Agriculture and Forestry),

b) More activities form the Agro-ecological Center at Plovdiv University as well as from other research institutes, e.g. the Institute for Mountain Stock Breeding and Agriculture, Trojan.

c) At an international level, it is suggested that IFOAM should provide more inputs and that in general, Bulgaria's organic sector should become more internationally integrated. Information should be provided by internet, in trainings and seminars but should also be provided in printed form (technical leaflets, brochures, books).

Table 3-12: Information needs: Organic agriculture in Bulgaria

Area of information gap	Reason for information gap	Potential information provider	How information should be provided
Marketing information (data, know-how)	▪ No information access ▪ no developed market ▪ no tradition ▪ no experience ▪ Lack of research	Bio Bulgaria, MoAF, organic agriculture associations and traders, cooperation with International organic agriculture organization	Internet, printed
International research results Research results on OA techniques with particular focus on Bulgarian site conditions and farm structure	No access to academic journals due to financial reasons	IFOAM, Research Institute of Mountain Stockbreeding and Agriculture	Printed, Subscription support, Internet
OA production techniques	▪ No experience ▪ Lack of financial resources ▪ New to Bulgaria's farmers ▪ Bad management	Research institutes, OA Associations; Agroecological Center at Agricultural University-Plovdiv	Training courses, workshops, international cooperation, Books, Leaflets
Experience in OA	lack professional journals due to ▪ limited financial resources ▪ management problems) ▪ insufficient cooperation	IFOAM, Agroecological Center Plovdiv, Bioselena, Ecofarm, Research Institute of Mountain Stockbreeding and Agriculture	Printed media, IFOAM-membership, Intern. Cooperation receiving tech. Leaflets, participation at international events
Organic Agriculture Handbook for farmers resources	▪ limited financial resources ▪ lack of OA competence	International experts	Books, small brochure

Technologies in organic industries	▪ No information available ▪ Missing contacts	FiBL	Consultations and literature
Lack of clear policy for OA	▪ Insufficient activity of MoAF ▪ Lack of National Strategy for OA	MoAF	Development and discussion of a national strategy for OA involving NGOs
Bulgarian actors in OA	▪ insufficient information exchange	MoAF, National Extension Services	Internet access; special events for OA, increase professional level and content.
Internet information	▪ Lack of high speed internet access	Research Institute for Mountain Stock Breeding and Agriculture, Trojan	Computer hall
Best practice in organic agriculture trade	▪ New field	International organic agriculture organizations	Print and electronic media, seminars.
Best practice in organic processing	▪ New field	International organic agriculture organizations	Print and electronic media, seminars.

Source: survey data
Abbreviation: OA = Organic Agriculture; MoAF = Ministry of Agriculture and Forestry

There are clear expectations from the NGO's towards the Ministries: the development of organic production should be state supported by financial means (direct payments for producers, etc.). Some respondents expect also the Ministry of Economy to become active by improving the regulatory framework conditions for organic market development and trade accompanied by financial support of organic market initiatives. Some NGO's and Universities stress the need for the government to develop a national strategy for the promotion of organic agriculture. A market strategy is further requested from the government which may be part of the national strategy for the development of organic production. Apart from organic market monitoring, the Ministry of Agriculture and Forestry is not expected to become involved in information provision on organic agriculture.

Expectations towards NGO's focus mainly on increased dissemination and promotion of organic agriculture, including awareness building among consumers and strengthening the technical advisory services for organic production. Increased advertisement of the activities already carried out by the respective NGO's is further requested. This may be a first step to an increased coordination among the different actors, which a majority of them expressed as generally lacking. The universities as well as the organic agriculture associations would welcome support through and improved cooperation with non-agricultural NGOs like environment conservation organizations, consumer and health organizations with respect to general information dissemination about organic agriculture and public awareness building.

To support the market development, academic institutions and private environmental organizations expect organic farmer associations and trade companies to become more active. Furthermore, the latter two organizations should increase their activities to ensure reliable certification and inspection systems.

The organic farmers' associations request universities and research institutes to become active with research addressing specific topics of organic agriculture, such as alternative methods for plant protection, comparison of conventional and organic production systems and finding improved technologies suitable under the Bulgarian conditions (including processing). The farmers' associations also mention that the academic institutions could do more in the field of public awareness building and organic agriculture promotion. Thus, they expect promotion and

awareness building on organic agriculture to be done by both universities and NGOs. As cooperation deficiencies have been the most important weakness mentioned by the organizations interviewed, it is interesting to note that the academic institutions recognize in their own institutions potentials for improvements with respect to cooperation with other research institutes and the development of curricula for organic agriculture at the university level (introduction of bachelor and master programmes for organic agriculture)

3.1.5   Conclusions and recommendations

Applying the model for the establishment of a national organic agricultural sector suggested by Michelsen et al. (2001) and Moschitz et al. (2004), the following seven steps are required:

Step 1: The establishment of an organic agricultural sector with a formal framework for organic agriculture

Step 2: The political recognition of organic agriculture through recognising organic standards

Step 3.: The introduction of financial support to organic farmers

Step 4: The development of non-competitive interrelationships between organic agriculture and the general farming community through the establishment of fora

Step 5: The development of functioning organic food markets governed by market mechanisms

Step 6: The establishment of an institutional setting committed to promoting organic agriculture

Step 7: Issues of creative conflict

In Bulgaria, we find the organic sector in its initial phase of development, having mostly completed Steps 1-3 of basic organic agricultural sector growth (see also Table 3-13):

1. The establishment of its own organic agricultural sector represented by organic agriculture associations and formal standards for organic agriculture,

2. the political recognition documented by the quite strong government involvement recognizing organic agriculture i) as a model for an environment friendly farming system and ii) as a potential for exports to Western European countries and by

3. introducing organic agriculture area payment schemes in 2004.

Furthermore, an organic agriculture market is developing (step 5) with respect to export markets but is almost not existing as far as the domestic market is concerned. The mainstream farming community has not been involved in the Bulgarian organic sector, so far. Moreover, it seems that organic agriculture in Bulgaria is not even an issue that is discussed controversially (step 7). The latter however is an important prerequisite to establish a climate of "creative conflict" which is expected to help promoting the development of organic agriculture by keeping issues of organic agriculture on the agenda. A creative conflict involves a climate of both competition and mutual respect under a joint perception of some – but not all – common interests. It also requires mutual access to information and appropriate occasions or fora for such discussions or creative conflict.

The most important problem however, is that a developing branch of environment friendly farming systems like organic agriculture requires balanced and co-ordinated efforts of the institutions involved, i.e. an institutional setting (step 6). Network analysis showed that in the Bulgarian organic sector there are only loose connections and a low level of cooperation. This result is also supported by the statements of the actors interviewed that there is the need for more cooperation between NGOs and research institutions. The result is on the other hand quite surprising, as cooperation and networking has been mentioned by the organizations interviewed to be one of their strengths. For further development of ecological farming systems like organic agriculture, it is therefore quite important to support particularly activities and information systems which lead to more cooperation and co-ordination between the actors active in the sector. The universities and research institutions self-critically stated, that the "Bulgarian culture" of competition and disinformation between universities and research centres is an important weakness to be addressed. Again, research and academic education of environment friendly farming systems require as a first step an institutionalized co-ordination of research activities supported by an appropriate information system. Furthermore, competition among universities needs to be transformed from an unconstructive climate of non-communication and disinformation to the development of characteristic academic profiles. Due to the fact that the Bulgarian government favours organic farming systems as a way to a more environment friendly Bulgarian agriculture, one university should be supported to develop a profile as competence centre in environment friendly farming systems.

With respect to the mentioned lack of concepts and strategies in the policy arena, a first step could be to introduce and institutionalize a forum of organic agriculture governed by the organic advisory commission of the Ministry of Agriculture and Forestry (e.g. a round table, forum on organic agriculture extension and information provision, research co-ordination, development of curricula).

Table 3-13: Steps to establish an organic agricultural sector

Country	① establish-ment of an organic community	② political recog-nition	③ financial support	④ positive involve-ment of general farming community	⑤ organic food mar-ket	⑥ institu-tional set-ting	⑦ issue of creative conflict
BG	●	●	●	○	○	○	○
EE	●	◖	●	○	○	○	●
PL	●	◖	●	○	○	○	●
SI	●	◖	●	○	○	○	●
HU	● ◖	◖	●	○	○	○	●
CZ	●	●	●	○	○	◖	●
DE	● ●	●	●	◖	●	◖	● ◖
CH	●	●	●	●	●	●	● ◖

○ missing   ◖ partly completed   ● fully completed   ● ◖ / ● ● repeatedly undertaken

* limited to export market

Source: survey data, Moschitz et al. 2004

Apart from the described lack of cooperation and co-ordination among the actors within the organic sector and the academic institutions, from our survey we could identify another six main areas to be addressed:

1. Lack of skills and knowledge with respect to organic agriculture at on-farm, research and administration level.

2. Insufficient practical information about organic production technique

3. Lack of market information

4. Limited access to and training in the use of electronic media

5. Research needs

6. Lack of international integration

This survey showed the high level of knowledge required to implement an environment friendly farming system like organic agriculture in Bulgaria. Knowledge about such systems is not sufficiently established in any of the necessary sectors, i.e. farmers, advisors, researchers, educators and administrators, nor is there sufficient knowledge available or accessible. Thus both information content (knowledge) and information systems to assist creation, flow and evolution of this knowledge require considerable support. In this particular case, as mentioned earlier, information systems particular adapt to facilitate and stimulate cooperation will be particularly useful.

In order to increase knowledge about and skills for environment friendly farming systems, organic agriculture should become an integrated part of curricula both at academic as well as vocational training level. A first step was taken in 2003 at the Agricultural University of Plovdiv, as they introduced a course "Introduction into organic agriculture" for undergraduate students in the agronomy faculty, in cooperation with FiBL Switzerland. Furthermore, it seems to be quite crucial to also provide possibilities for continuing education in environment friendly production systems for mainstream agricultural experts (advisors, agricultural administration). Even though, seminars of high quality are already offered to farmers, the need to increase activities in this respect has been reported. It is important that academic institutions contribute their educational competence and technical expertise in the process of curricula development.

Although the interviewed organizations have reported a current major focus on the provision of practical information, there is also a lack of information about organic agriculture production technique, of experiences from already converted farmers and best practices in organic agriculture, processing and trade. There are at least four paths that can be suggested to improve the current situation:

a) Farmers' education should be transferred into a training and education concept consisting of training seminars accompanied by printed training materials (dossiers, leaflets) and farm visits during the vegetation period.

b) Furthermore, there is the need to modify and coordinate the current training, education and information dissemination activities in Bulgaria.

c) On-farm research programmes in form of joint research programmes between research institutions/universities, extension services, organic agriculture associations and farmers should be introduced.

d) Web based provision of international organic agriculture information translated and adapted to the national situation

The reported lack of organic market information could be solved soon as the Bulgarian government is currently working on the development of a monitoring system including organic agriculture market information. However, as Bulgaria is one of the EU candidate countries, it is quite important to consider newest developments in the EU where the Commission and EUROSTAT are currently working on a European-wide concept for organic production and market data monitoring. Information about this is available from the EISFOM-concerted action homepage (www.eisfom.org). Cooperation among the different national actors for the establishment of a local organic market is rising, as shows the formation of the company "Bioprodukt Bulgaria" in 2004.

Comparing the importance of information sources on the one side and the communication means used by the respondents on the other, we can see a discrepancy in the use of electronic media. While it seems that the internet is highly used for receiving information, the interviewed organizations prefer traditional communication means for information provision. The universities as well as the interviewed research institutions, extension services and NGOs mention financial constraints to be the hampering factor of a more intensive use of electronic media. On the other side, it also seems, that there is a lack of experiences in how to present information via the internet. The University of Plovdiv for instance claims insufficient training opportunities for students in electronic media and furthermore the wish to introduce internet services and organic agriculture information through the university website. Similar to this, also the one national extension service and the organic agriculture associations would like to enhance their activities on the internet targeted not to farmers but to administration, students, researchers, advisors and NGOs. The introduction of an electronic media initiative for academic institutions and NGOs could a) help learning how modern information technology could be applied for their own information provision activities and b) be a first step in targeting information more specifically to the user groups. So far, no concepts for such an electronic media initiative have been developed in Bulgaria. Thus, supporting a project on the development of an Information and Communication Platform would be helpful.

To improve access to internationally available information a first step could be to establish a electronic portal /directory of international organic agriculture information; again targeted to administration, students, researchers, advisors and NGOs with options to overcome some language barriers. In a second step, events like a conference or summer school in Bulgaria with the participation of international organic agriculture experts could be a starting-point to enable access to the international organic agriculture network.

The lacking access to international academic networks has particularly been stressed by the interviewed universities and research institutions. Indeed, the only cooperation mentioned by these organizations were cooperations with one university in Romania and with FiBL in Switzerland. Integration in international academic networks is essential for at least several reasons, like:

▪ to get access to already available research results

▪ to catalyze knowledge transfer from already academically available information to extension services and NGOs,

▪ to help defining a Bulgarian research programme for environment friendly farming systems

- to get access to international research funds and research consortia (6th Framework Programme of the European Commission), and

- to benefit from experiences in organic agriculture curricula at the university level (e.g. SOCRATES ECOLOGICAL AGRICULTURE GROUP: Universities of Kassel, Aberystwyth, Maribor, As, Uppsala, Lyon, Viterbo, Copenhagen, Wageningen).

Apart from organizing international congresses or seminars, it would also be helpful to introduce a central office for international research co-ordination and exchange and to establish partnerships with similar European offices (e.g. EU Research in Berne, Switzerland).

The research needs mentioned as a side aspect of the study are research on production techniques under Bulgarian conditions for all commodities, ecological farming methods, plant breeding, marketing strategies, organic processing technologies and long-term experiments comparing conventional and organic farming systems. As not every research experiment needs to be repeated under national conditions, it is essential to have information about international available research results as a basis of the definition of a targeted national organic agriculture research programme. Such a research programme should consider two objectives: a) to jointly identify research needs with all stakeholders and b) to initiate research cooperation between the Bulgarian research institutions active in organic agriculture research.

The identification and actualization of research needs as well as the quicker transfer of results will be favoured by a participatory approach, requiring special training and good communication skills at human level as well as adapted approaches to traditional and electronic communication technologies.

3.2 Serbia

3.2.1 Overview on ecological and organic agriculture in Serbia

Agriculture in Serbia and Montenegro is characterized by 6.12 million hectares of agricultural area of which 60 percent are arable land, 4.3 percent orchards, 1.4 percent vineyards and 33 percent are natural grassland. More than two million hectares are highly productive soils in the lowlands. Precipitation in this area is quite low.

Since the early 1990's, the agricultural sector has declined significantly:

- financial constraints led to drastically reduced use of inputs and decreasing investments in agriculture
- as a consequence, crop yields decreased significantly and export markets lost importance due to decreasing surpluses
- the public budget for the agricultural sector has contracted sharply
- migration from rural to urban areas increased which led to an aging population in the rural areas.

About 85 percent of the farmed land is privately owned while the balance is cultivated by state enterprises. Private farms tend to be small and fragmented, and many are part-time operated. Private farms are subsistence farms. Thus, the bulk of output is used for own consumption and only surpluses are sold on the local agricultural markets or to the state. Non-state enterprises generally need to pay in cash for any inputs obtained from the State (mainly fuel and fertilizer). As a consequence input use is reduced, resulting in lower yields in private farms than in state-owned farms. Furthermore, access to rural credit at affordable interest rates is very limited for small and medium private enterprises.

Table 3-14: Characteristics of the food and agricultural sector of Serbia and Montenegro

	UNIT	2002
Population	1000	10535
Population annual growth	percent	- 0,1
Gross Domestic Product (GDP)	MLN US$	15681
Agricultural GDP as share of total GDP 1/	percent	15,6
Rural population as share of total population	percent	48
Density	Inh/ sq km	103
Agricultural Labour Force/Total Labour Force	percent	18
Total land	1000 ha	10 200
Arable land + permanent crops	1000 ha	3 724
Irrigated land	1000 ha	29

Source: FAO Statistics Division, 2004

Half of Serbia's population lives in rural areas, but only approx. 8 percent of rural households get all their income from farming (UNECE 2002). In particular in remote and mountainous areas the population is declining and ageing, and the young people remaining in the countryside are frequently unemployed. Especially in those parts of Serbia where commuting is possible, members of farming households often work at least part-time in off-farm employment. According to FAO (2004), in 2002, agriculture amounted to about 15.6 percent of the Serbian Gross

Domestic Product (GDP). Agricultural exports and imports have a high importance for the whole economy.

In 2002, supported under the framework of the "EU Emergency Assistance Programme", from the EC's OBNOVA (Reconstruction) programme, the Serbian Government analysed comprehensively the food chain safety system (veterinary, phyto-sanitary and sanitary control) in Serbia. The analysis concluded that the existing Republican inspectorates play a key role to co-ordinate and link policy, production, trade and laboratory analysis. However, lack of co-ordination between the different inspectorates has led to duplication of efforts and failure to fully implement control measures. In addition, reform of the inspectorates is given particular urgency by the need to recover and expand export markets for agricultural products. More comprehensive controls will give international trading partners confidence and satisfy the expectations of domestic consumers regarding food safety. As an outcome of this, in 2003, the EU programme supported primarily economic reconstruction, regeneration and reform projects. Within this framework, the EU supported capacity building for the agricultural inspectorates with 5 Mio Euro and the introduction of an Animal Identification System with 2 Mio Euro. The same EU program focused on increasing the institutional framework through a master plan to reform the agricultural sector, to improve food chain safety through an evaluation of the veterinary and phyto-sanitary legislation, to upgrade Serbia's food laboratories and to establish a national animal identification system – all corresponding to EU standards. So far, establishing an environment friendly form of agriculture is neither a part of this EU-program nor an important subject of the Serbian agricultural policy.

Due to the lack of official data, we can only provide estimates on the importance of organic agriculture in terms of organically managed land area whereas we got no information about the number of organic farmers. In 2002, in Serbia and Montenegro approximately 18600 hectares UAA have been farmed organically (0.35 percent of total UAA). About 80 percent of the total agricultural area that is 4.96 million hectares is under mixed farming systems with elements of ecological farming.

3.2.2   Characterization of surveyed organizations and institutions

In Serbia, 13 organizations have been surveyed on the basis of a semi-structured questionnaire. The interviews have been conducted face-to-face or by telephone.

Five organizations were state-run while 8 organizations were run privately. Three organizations were profit oriented (Table 3-15,

Table 3-16).

Table 3-15: Types of surveyed organizations in Serbia

Type of organization	ID number	Number of organizations
State-run profit oriented	4S, 13S	2
State-run non profit	1S, 2S, 3S	3
Private profit oriented	12S	1
NGO / private or public non-profit	5S, 6S, 7S, 8S, 9S, 10S, 11S	7
Total		**13**

Source: survey data

Table 3-16: Working fields of surveyed organizations

Type of organization	ID number	Number of organizations
Organic farmers' associations	7S, 11S	2
Universities and research institutions	1S, 2S, 3S	3
Others	5S, 6S, 8S	3
Organic certification	13S	1
Trade organization	12S	1
Environment conservation organizations	4S, 9S, 10S	3
Total		**13**

Source: survey data

Most of the organizations interviewed are active on a national level (11) of which three work primarily on a regional level (ID# 7S, 9S, 13S). Three organizations are active on a national as well as on an international level. These international oriented organizations are active in the fields of research and tourism. One trade organization (Agroekonomik) only works at international level.

Two farmers' organizations (Terras, Toppas) work exclusively in the organic sector while for eight organizations organic agriculture is of high importance. Three organizations, the universities of Belgrad and Novi Sad as well as Agronet, answered that organic agriculture is of moderate importance for their work.

The provision of extension services (advice, training and education) was mentioned to be the most important field of activity of seven of the interviewed organizations. Apart from Agroekonomik, which is active in the fields of processing and marketing, all other organizations (12) provide educational activities even though only seven organizations mentioned education to be of higher importance for their work. The main target group here are farmers and as far as universities are concerned both students and agricultural experts. The development of organic agriculture institutions and marketing are of secondary importance. One certification body (ID# 13S) has been surveyed and two organizations (ID# 11S, 12S) are working in the field of processing and trade of organic products. Furthermore, three organizations are active in nature conservation (ID# 4S, 7S, 8S), two organizations are involved in agro-tourism (ID# 8S, 9S).

It is interesting to note, that research on the one side and lobbying on the other are concerns of approx. 70 percent of the organizations interviewed. In fact, research activities are conducted apart from the universities and research institutions also by organic agriculture associations as well as environmental conservation organizations. On the other side, the universities and research institutions also feel responsible for lobbying. However, lobbying of policy-makers in general, has been mentioned to be of medium importance.

3.2.3   Institutional setting and network

The network of Serbia's organic agricultural sector is not particularly dense with indifferent links. Moreover, the network is not very stable due to the fact that most of the actors are only connected to another actor by one way (bilateral connections). Power distribution within the organic agriculture information network is very heterogeneous. Natura Balkanika, Toppas and the University of Belgrade are seeking to exert highest influence. As a group, Natura Balkanika, Terras, Toppas and the University of Novi Sad are in a medium position. For Natura Balkanika it

is important to note, that this organization has a mediatory role for 50 percent of all connections between two actors.

Terras, Agroekonomik, University of Novi Sad, the Ministry of Agriculture and Toppas were mentioned to be the most important actors in the Serbian organic agricultural sector. However, the network analysis results show Natura Balkanika, Toppas and the University of Belgrade to be the most influencing network. Thus, reputation power and cooperational power in the Serbian organic agricultural sector is not congruent. There are varying reasons which could lead to this situations as:

- lack of communication and communication structures,
- cooperation is of secondary importance, and
- no overlap in the respective objectives.

In anyway, the incongruence of the reputation and cooperation network shows that in general the organic agriculture network is not very distinct and that the power position of the organizations within the network are unclear. Looking from a different point of view, Terras seems to be in a central position and will be of particular importance for the organic agricultural sector in the future. Apart from Terras, Natura Balkanika, Toppas und University of Belgrade as a group could develop to a future driving-force in the organic sector in Serbia.

The organic agriculture associations do not mention any cooperation within the organic agriculture community. However, both organic agriculture associations maintain cooperation with universities and research institutions. Subjects for cooperation are on-farm research projects and training courses. Terras established quite close connections to the University of Novi Sad and the Open University of Subotica which are supported by the fact that the director of the Open University and a professor from the economic faculty are members of the Terras board. Of particular importance is the support through the Open University with respect to electronic media. Toppas works closely together with the Fruit and Grape Research Centre and Natura Balkanika. Both universities as well as the interviewed research centre conduct research projects in cooperation with the organic farmers' associations and with Natura Balkanika (nature conservation organization). However, there was no indication of any cooperation between the universities and the research centre interviewed.

3.2.4   Communication means and information needs

Relevance of information sources

The most frequent sources for getting information about organic agriculture are training courses and seminars, contacts to experts and farmers, internet and computer media, professional journals, books, and own research experiences (Table 3-17). So far, no national information source for printed and electronic information about organic agriculture is available. All printed and electronic information derive from international sources and are rated to be of high quality (see Figure 3-2). Thus, international information sources are highly relevant with respect to both use frequency as well as information quality.

Fairs, congresses, agricultural newspaper, television, technical leaflets and general newspaper are sources of secondary importance used by a third to half of the organizations interviewed. The quality of training seminars and technical leaflets is rated quite high, however not of highest quality which could be due to the fact that international information has not been adapted to the

national situation. Mass media like television and radio are considered to have low to medium quality and therefore are not seen to be of importance.

Table 3-17: Importance of organic agriculture information sources in Serbia

	ID number	Number of organizations
Personal contact to experts	1S, 2S, 4S,5S, 6S, 7S, 8S, 9S, 10S, 11S, 12S, 13S	12
Books	1S, 2S, 3S, 4S,5S, 6S, 7S, 8S, 9S, 10S, 11S, 13S	12
Contacts with farmers	1S, 2S, 3S, 4S, 5S, 7S, 8S, 9S, 10S, 11S, 12S, 13S	12
Training courses, seminars	1S, 2S, 3S, 4S,5S, 6S, 7S, 8S, 9S, 10S, 11S, 12S, 13S	13
Internet, computer media	1S, 2S, 3S, 4S, 5S, 6S, 7S, 8S, 9S, 10S, 11S, 12S	12
Technical leaflets	3S, 5S, 6S, 9S, 10S, 11S	6
Own research	1S, 2S, 3S, 4S, 6S, 7S, 8S, 9S, 10S, 11S, 12S, 13S	12
Television	1S, 2S, 4S, 6S, 8S, 10S, 11S	7
Professional journal	1S, 2S, 3S, 4S,5S, 6S, 7S, 8S, 10S, 11S, 12S, 13S	12
Fairs	2S, 5S, 7S, 8S, 11S, 12S, 13S	7
Agricultural newspaper	1S, 2S, 3S, 6S, 7S, 10S, 11S	7
Information from commercial enterprises (retailers, processors)	1S, 2S, 5S, 6S, 7S, 10S, 11S, 13S	8
Congresses	1S, 2S, 3S, 6S, 7S, 8S, 10S	7
General newspaper	2S, 3S, 4S, 6S, 10S	5
Radio	6S, 10S	2

Source: survey data, multiple answers possible

Figure 3-2: Quality index of information available in Serbia as rated by survey respondents
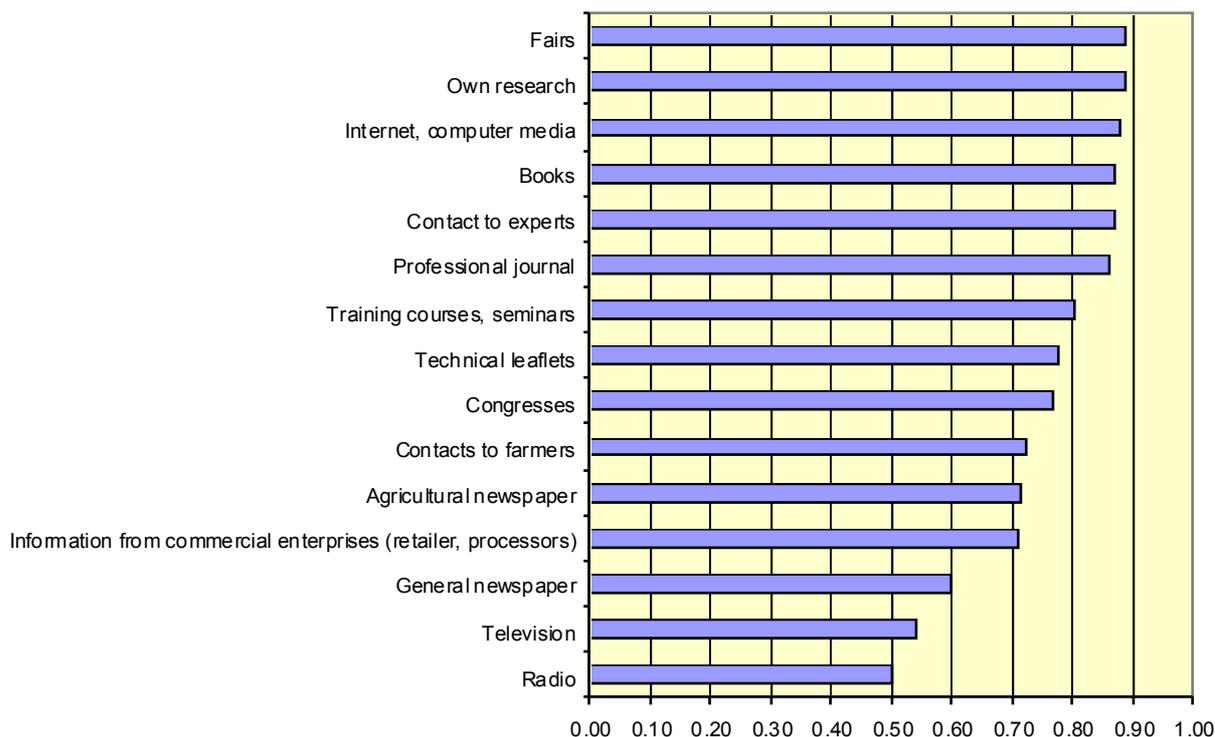
Source: survey data

Relevance of communication means

More then 80 percent of the interviewed organizations use television as a means for their external communication, followed by training courses and internet and computer media (Table3-18). Compared to the importance of information sources where television is of medium importance, television here is at the top of the list. Technical leaflets are used only by five organizations for information communication and thus play a medium role as a source for information. It is interesting that most of these means of communication are offered for free (except books, professional journals, training courses and fairs). Even though, the organizations have no distinct information about the acceptance of their communication means provided, due to the fact that most information is offered for free, they assume a medium to high acceptance. In general, the target group for information provided by the surveyed organizations is very broad: general public, students, agricultural experts, farmers, researchers.

Table 3-18: Importance of communication means used by the organizations interviewed

Means of communication	ID number	Number of organizations
Television	2S, 3S, 4S, 6S, 7S 8S, 9S, 10S, 11S, 13S	10
Training courses, seminars	1S, 2S, 3S, 6S, 7S, 8S, 9S, 10S, 11S, 12S, 13S	11
Internet & computer media	1S, 2S, 4S, 6S, 7S, 8S, 9S, 10S, 12S	9
Letters	2S, 3S, 4S, 8S, 7S, 9S, 12S	7
Technical leaflets	4S, 7S, 9S, 10S, 11S,	5
Agricultural newspapers	1S, 2S, 3S, 7S, 10S	5
Fairs	2S, 4S, 7S, 10S	4
Books	1S, 2S, 4S, 8S, 10S	5
Professional journals	1S, 2S, 4S, 7S, 12S	5
General newspapers	1S, 2S, 9S, 10S	4
Conferences	9S	1
Radio	4S, 9S, 10S	3

Source: survey data, multiple answers possible

Information provision

The most important information provided by the organizations interviewed is technical information about organic production (Table 3-19). The main target groups are farmers, processors, agricultural experts and students as well as governmental organizations at different levels. Information about marketing and market data as well as decision support information are of secondary importance.

Table 3-19: Type of information provided by OA organizations

ID #	Name of Institution	Technical information on organic production	General information about organic agriculture	Farm management information	Market data and marketing information	Decision support to policy makers	Environmental issues	Research	Processing	Certification
1S	University of Belgrade, Institute for Agriculture Economy	X								
2S	University of Novi Sad, Faculty of Agriculture	X		X			X			
3S	Agricultural Research Institute "Serbia" Fruit and Grape Research Centre Cacak Department for Fruit Crop Protection	X								
4S	Institute for Nature Protection					X	X			
5S	OPTO	X			X			X		
6S	„Agronet" Agriculture Network	X		X	X					
7S	Terras	X	X		X					
8S	AEERT	X			X	X				
9S	Natura Balkanika	X			X	X				
10S	Society for Health Food and Environmental Protection "Vrelo"	X	X							
11S	TOPPAS	X			X					
12S	AGROEKONOMIK	X	X						X	X
13S	OPOVO	X			X					
		12	**3**	**2**	**7**	**3**	**2**	**1**	**1**	**1**

Source: survey data

Organizations' strengths and weaknesses

Most interviewed institutions stress that communication, elaboration of communication strategies, networking and team work are one of their main strengths. However, one institution reported that openness to communications is rare in Serbia. Organic agriculture associations mention furthermore contact to the farmers and professionals, while nature conservation associations and the Health and Food Society (Vrelo) see that they are well recognized in public and that they have a regular presence in Serbia's media.

However, it is quite important to note that in the second place problems in communication with farmers, administration/government and the lack of cooperation between stakeholders have been reported. This problem has been reported particularly by the organic agriculture associations on academic institutions and by academic institutions on the others. Thus, while on the one side the institutions surveyed stress their own strengths in communication, they claim on the other side problems in communication. These problems are not due to lack of infrastructure but rather a social phenomenon. One organization suggested to initiate an externally moderated network to overcome the problems in cooperation and communication.

The interviewed universities and research centre stress as the most important weakness of their institutions the lack of financial resources for staff and for implementing the existing knowledge. Furthermore, one university pointed out that the lack of cooperation between the academic institutions and stakeholders is one important obstacle in Serbia's organic agriculture development.

Information needs

The list of information needs is quite huge and there is a variety of reasons for this and of suggestions to improve the situation.

As concerns production techniques, information about seeds, new OA technologies, plant protection and fertilizer management is lacking. The reason for this gap of information about production technology is due to financial constraints both of the farmers on the one side and potential information providers on the other. An important reason is furthermore, that the organic sector is lacking a critical mass, so that this "weak" sector is not attractive for information providers and thus not a subject of state financed research at universities and research centres. To close this gap, non-organic agriculture NGOs suggest that the national organic agriculture associations in first instance should provide printed and electronically available information as well as initiate training seminars (also suggested by universities).

With respect to market information, trade organizations and organic farmers' associations criticise that the Ministry of Agriculture does not monitor market and production data of organic farms. Financial limitations are one reason for this situation but also the small number of farmers and the low organizational level of the sector. There is also a lack of information with respect to farm management and farm economics in organic agriculture due to a lack of competence in economics. The actors in the organic sector are seeking more support from the Ministry of Agriculture and a better integration of the sector in a national organic association. Furthermore they propose that FAO, IFOAM and FiBL get more involved in the country.

The surveyed organizations regard both the internet and printed media to be the important means for providing missing information. The problem with electronic media is that i) some of the surveyed institutions do not have any computers and ii) small and medium farmers have so far no access to the world wide web, thus information provision through these media is not suitable. This leads to the situation that most interviewed organizations use the internet intensively as a source for international information while it is hardly used for their own information provision.

Both interviewed universities state the need for more research, introduction of funds for organic research projects and to initiate curricula on environment friendly farming systems at the academic level. With respect to the latter, the University of Novi Sad reported bad experiences in multi-functional lectures on environment friendly farming systems. They suggested to focus primarily on organic agriculture education as an example.

Table 3-20: Information needs: Organic agriculture in Serbia

Area	Reason for information gap	Potential information provider	How information should be provided
Market and marketing information	No public monitoring	Ministry of Agriculture, EU, institutions like FiBL	Data base
	Expensive		Internet
	Critical mass (small market, few farmers)		Printed media
Economic data on organic agriculture	Expensive	EU, Institutions like FiBL, experts	Research projects
	lack of competence		Print media
			International experts
			Internet
Training for farmers	No access to demonstration farms	Experts who can adapt their training to local environment, natural and social conditions	Training on the spot
	Limited financial resources		Literature
Information on funding opportunities for OA	Not available	IFOAM	Internet
Demonstration farms	Financial constraints	Other organizations which have success in that area already	Electronic media
Research information	Lack of contacts	FiBL, IFOAM, FAO	Internet
	Lack of national organization to co-ordinate activities		
Seed	No critical mass		Seminars
New technologies	Financial constraints	FiBL, IFOAM	Seminars, publications, internet
Plant protection	Weak organic agriculture production in Serbia	National organic association	Leaflets,
	Financial constraints	International research institutions	Printed and electronic media
	Lack of financial resources for research		Contact to researchers
Fertilizer management	Weak organic agriculture production in Serbia	National organic association	Leaflets
OA regulations	National OA regulations are not completely in accordance with EU	IFOAM, Ministry of Agriculture	Printed and electronic media

Source: survey data

Thirty percent of the interviewed organizations (ID# 1S, 5S, 8S, 11S) are completely satisfied with the means of communication which they use at the moment to communicate with other organizations, farmers, experts etc.

Twenty three percent would like to increase the use of technical leaflets for farmers (ID# 4S, 12S), training courses (ID# 2S) and books (ID# 2S, 7S). This is followed by films, multimedia CD (ID# 4S, 6S, 10S) and internet (ID# 2S, 7S, 13S). However, as far as the internet (web pages, e-mail distribution lists) is concerned, the organizations also stressed, that so far, the majority of potential recipients are not sufficiently equipped with computers and thus would currently not be able to access and use such services.

Communication through state extension services and NGO rural development centres, demonstration fields (or farms), conferences, specialized newspapers, video communication, and email-news groups were rarely mentioned to be a wish for future communication. As far as the organic farmer associations are concerned, only Terras (ID#7) indicated any means of communication they wish to use in the future. Research organizations mentioned future communication means they wished to be used are the internet (ID# 2S), exchange with international experts on organic farming (ID# 2S), training courses (ID# 2S, 3S) and introduction of demonstration fields (ID# 3S). It is interesting to note, that ICT communication means were mentioned by three of the organizations interviewed (ID# 2S, 7S, 13S)

The expectations of private organizations toward public bodies (Ministry of Agriculture, Ministry of Environment) to improve the current situation in information provision focus specifically on financial support. Furthermore, there seems to be a strong wish that organic agriculture gains importance in the policies of the different ministries and is made an issue to be followed and developed. The private organizations (organic agriculture associations, nature conservation organization) remained unclear on how the ministries shall increase the importance of organic agriculture in their agenda, but they clearly expected them to do so. While the Ministry of Agriculture is expected to increase its activities in organic agriculture, the Ministries of Environment, Science and Finance should start to make organic agriculture an issue. Finally, there seems to be a need for increased coordination among the different ministries regarding organic agriculture support measures.

Universities and nature conservation organizations on the other side are expecting private organic agriculture associations to focus more on general organic agriculture education and consumer awareness, i.e. on what is organic agriculture and on organic agriculture impact on the environment. Environmental issues in general should become more important in education activities of NGO's. Further issues are education on marketing of organic products and market information.

Universities and the research institute themselves demand the introduction of organic agriculture courses in their curricula as well as to increase research activities. With respect to research activities, only the academic institutions, OPTO, Natura Balkanika and the Society for Health Food and Environmental Protection expressed research deficiencies, however without specifying any research topics. Thus, seven interviewed organizations including the organic farmers' associations (ID# 4S, 6S, 7S, 8S, 11S, 12S, 13S) did not express any research expectations from academic institutions at all.

3.2.5   Conclusions and recommendations

In Serbia, ecological farming systems like organic agriculture are so far not subject of policy support and are thus mainly developed by private organizations. State-run organizations are of particular importance as far as research and education at an academic level is concerned. So not surprisingly, organic agriculture in Serbia is currently in an initial phase showing characteristics of a pioneer phase:

- High personal involvement of the actors

- Low level of cooperation and communication between organizations with similar objectives (particularly organic farmers' associations and academic institutions)

- Additionally to the organizations' basic competence, every organization feels responsible for everything: research, extension, education, PR, lobbying, information provision. This

applies not only to private organizations but also to universities and to a certain extend to state organizations.

Our analysis identified a number of contradictory issues: Indeed, network analysis showed different networks with respect to communication and reputation. Thus, those organizations with a higher level of cooperation are not the ones with the highest reputation. Furthermore, communication has been stated by the interviewed organizations to be one of their strengths while on the other side almost all organizations reported a serious lack of communication and cooperation. Last not least, television has been mentioned as one of the most important communication means used by the organizations surveyed. However, quality of television as a medium for information provision has been ranked to be low and thus is of lower importance as a source for information.

In putting these bits together, communication in the Serbian case-study means first of all informing the public about environmental issues and food production systems different from mainstream farming, thus developing public awareness of food and agri-environment. Also the term lobbying has been used in this sense, as the targets mentioned for lobbying have again been the public rather than policy-makers, stakeholders or the Serbian government. Public awareness building is a prerequisite for the development of domestic markets for produce from ecological farming systems and a first step to get ecological farming systems recognized by the state to be a real option for farmers. The particular strength of the private organic agriculture sector is thus public awareness building.

Furthermore, in order to use synergies and the specific competences of the actors involved in ecological farming in Serbia, it is essential to transfer the status of non-communication into cooperation. Network analysis gave some indication that Terras might be an organization which could reach a central position. However, it needs to be considered that some organizations mentioned that external moderation might be required. Thus, integrating all organizations active in this field through a concerted action for ecological farming and high quality food could be a first step.

Apart from acting as a donor, the potential government role in ecological farming remains unclear. As low input farming like organic agriculture provides the Serbian agricultural sector with advantages and potentials, as it does not require expensive external inputs (fertilizers, pesticides) on the one side and could be a means to increase agricultural exports to Western European markets (herbs, vegetables), there is the need that the government recognizes that organic agriculture is a viable option for farmers for higher income and for developing niche markets for export. Harmonization of the Serbian organic agriculture standards to EU Reg. 2092/91 would be an indispensable prerequisite in this respect.

Financial constraints, the very small size of Serbia's organic sector lacking a critical mass and in some areas lacking competence seem to be the most important reasons why research and information about organic agriculture for farmers and agricultural experts is missing. Without a competent research sector adapting the internationally available information (considered to be the most important source of information) to the Serbian agricultural situation it is quite difficult to provide targeted information to farmers. Due to the financial constraints which might not allow for developing "own" information material, it seems reasonable to support the Serbian organic agriculture associations in building up international cooperation and partnerships to get access to high quality information for translation and adoption to the Serbian situation. The role of university departments and research centres should be to accompany such cooperation projects with their scientific competence in order to ensure correct adoption to the national

situation and high quality information published in leaflets. This information transferred from international sources should feed into an education concept both for farmers and agricultural experts. Again, the educational competence of universities should be used here to accompany such a process.

It is not apparent from survey data whether the research and information function of the Serbian universities and research institution system serves the conventional farmers and researchers better than the organic farmers. For this service to organic farms to improve, institutional capacities, training and funding mechanisms need to be developed. As far as communication and collaboration is concerned, critical self-analysis, recognition and building on strengths of potential partners are necessary to reduce blaming and mistrust. Although Government can play a significant role in this, the present stakeholders do not consider such an option as viable.

Organic agriculture education could be introduced not only for farmers and for continuing education of agricultural experts but also at university level. Twinning-programmes with universities which have already introduced organic agriculture courses could be an efficient way to implement such courses.

In general, in Serbia the most important information needs are basic information about organic agriculture for the public and for farmers. Thus, it is not surprising that the organizations interviewed could hardly express concrete research questions due to a lack of experienced problems. In this situation, it is important that advisors both private and those working at the national extension services and people working in public administration get the opportunity to experience what options organic agriculture could offer for Serbia's agriculture and in turn, farmers need to get the opportunity to see how organic agriculture principles are practically working on a farm. In this respect, a very important project to be implemented in Serbia could be to initiate a high profile organic demonstration farm. In order to ensure recognition in both the organic agriculture community as well as in the mainstream farming community and general public, such a project should be done in cooperation between an organic agriculture association and an independent and recognized academic institution. Due to the fact, that organic agriculture in Serbia is in an initial phase, this survey results showed that information about marketing and market data as well as decision support are of secondary importance. However, with a growing organic sector, provision of such information will become crucial and thus, initial steps to develop an organic market monitor system and a decision support tool need to be taken now.

3.3　Kosovo

3.3.1　Overview on ecological and organic agriculture in Kosovo

The total land surface of Kosovo is 10 877 km^2 with two major plain areas: Kosovo plain and the Dukagjin plain. The climate is characterized as continental with some Mediterranean influence in the lower areas. Kosovo's population is mainly rural and composed of a majority of ethnic Albanians.

Of the total area, 53 percent (585 000 ha) is agricultural land, 41 percent (455 000 ha) is forest and forestry land. Around 51 percent of the farmland is used for grains (corn, wheat, and barley), 45 percent for pastures and meadows, 3 percent for vineyards and orchards (Ministry of Environment and Spatial Planning Kosovo, 2002).

88 percent of the farmland is privately owned while the rest is property of the former Socially Owned Companies. The arable land is considered of good quality and the temperate climate makes agriculture a potentially strong economy sector that should at some point be able to assure adequate food supply for the population and even enable the export of some food stuff.

Agriculture contributes 30 percent of the GDP of Kosovo while it supports 60 percent of the population. Along with the forestry sector it contributes 35 percent of GDP (Ministry of Environment and Spatial Planning Kosovo, 2002). Agriculture is an important contributor to the economy and food security at household level. However, unemployment in rural areas is estimated at 60 - 70 percent (European Agency for Reconstruction, 2003).

The production rate in Kosovo is generally low (average wheat yield is less than 3t/ha compared with 7.5 t/ha in Western Europe). As a consequence, Kosovo is not self-sufficient in food production and relies on imports. The explanation for the low agricultural productivity may be found in the agricultural system and its gaps (European Agency for Reconstruction, 2001):

- insufficient seed quality
- limited access to hybrid varieties which give better results
- archaic sowing techniques
- insufficient fertilization due to high fertilizer prices
- insufficient irrigation due to the devastation of war and the lack of maintenance
- slow cereal harvest caused by lack of agricultural machines (harvester, combine harvester).

The former system for providing advisory support to agricultural producers has collapsed but has not been replaced with any well-managed or coordinated alternative. Agricultural field staff on ministry and municipality level are often insufficiently trained and experienced to provide relevant advice. Small scale and generally unprofitable farming enterprises predominate in Kosovo, and many producers have insufficient knowledge of sustainable production techniques and also lack some of the skills necessary to commercially produce high quality and safe food (European Agency for Reconstruction, 2003). Thus, there is the need for a competent advisory support service to improve the overall profitability of farming.

Since 2000, the EC has supported a Seed Regulatory Services project that has successfully supported the development of a range of seed regulations and certification schemes, as well as the training of regulatory staff. In 2002, the EC Annual Programme for Kosovo placed emphasis

on institutional capacity building, further development of Kosovo as a market economy, while also supporting critical infrastructure needs. The 2003 Rural Economy Support Programme will complement the Agricultural Statistics and Policy Advisory Unit of the Ministry of Agriculture, Forestry and Rural Development (MAFRD), in support for veterinary services, the rural micro-finance programme targeting agri-businesses, and the Agribusiness Development Unit programme which provides loans for large private enterprises and Socially Owned Enterprises in the agri-business sector.

Organic agriculture so far does not play any role in Kosovo's agriculture and is at its very begin-ning. Data on number of organic farms and organically managed agricultural area is not avail-able. Due to the current situation in the country with low productivity, insufficient seed quality and insufficient fertilization, organic agriculture could become an option.

There are several development cooperation projects, which support the agricultural sector in Kosovo. Their main focus at the moment is on increasing production and improving the quality standard. Some of them use the organic regulations to improve quality standards others establish labels for local production, which may be linked to organic production methods for certain products at a later stage.

3.3.2 Characterization of surveyed organizations and institutions in Kosovo

As ecological farming systems in general and organic agriculture in particular are at their very beginning, organizations active in this field are scarce. Therefore, in Kosovo only six organizations could be interviewed which leads to the situation that the Kosovo case-study could not be analysed to the same extent as the Bulgarian and Serbian.

All organizations surveyed work on the national level, with three organizations being only active regionally (Kline, Kijeve, Kacanik). Among the organizations interviewed, there is one university (ID# 5K), two farmer associations (ID# 2K, 3K), one international organization, the Regional Environment Center for Central and Eastern Europe (REC) (ID# 4K) and Swiss Project for Horticultural Promotion in Kosovo (SPHP Kosovo) funded by the Swiss Government (ID# 6K). None of the organizations surveyed works exclusively in the organic sector. For one organization (Bioprodukt Kacanik), organic agriculture is of high importance. For all other institutions, organic agriculture is only an issue of moderate or even low importance.

The three regionally active organizations (ID# 1K, 2K, 3K) are involved in agricultural production (organic herbs) and compost which were mentioned to be the most important areas. Research and education activities were mentioned by REC and by Pristina University as well as by SPHP Kosovo, which is also involved in processing and marketing. REC is the only organization that does lobbying for organic agriculture in Kosovo. So it is not surprising, that the main target group of the organizations interviewed are farmers in the first place and retailers/traders in the second.

Table 3-21: Types of surveyed organizations in Kosovo

Type of organization	ID number	Number of organizations
State-run profit oriented		0
State-run non-profit	5K	1
Private profit oriented	1K, 2K, 3K	3
NGO / Private or public non-profit	4K, 6K	2
Total		**6**

Source: survey data

3.3.3 Institutional setting

Due to the low sample of six organizations interviewed and the very loose connections between these organizations, an analysis of the institutional setting in the organic sector in Kosovo was not possible. The interviewed institutions mentioned REC to be the most important actor in organic agriculture. REC is followed by Agroklina, SHBOK (not interviewed) and the Agricultural Faculty of the University of Pristina. SHBOK is an umbrella organization, whose director is a professor at the Agricultural Faculty in Pristina. Their activities, however, remained unclear. Furthermore, there is no clear notion among the people between environment friendly production in general and organic production in particular.

Most of the organizations do not have any direct contact or cooperation with each other. Even indirect contacts are lacking. Thus, as the organizations interviewed work independently without links to each other, so far it seems that there is no organic agriculture identity established. Activities are primarily funded by international organizations for development aid and on national level by the environmental protection organization REC. Only the University of Pristina is state-financed.

3.3.4 Information needs in Kosovo

Relevance of information sources

In Kosovo, the most important source for information about organic agriculture is personal contacts to national (Pristina University) and international organic agriculture experts. Furthermore, training courses and seminars at international level, technical leaflets, books, electronic media, professional journals and own research experiences have been mentioned as information sources (Table 3-22).

Table 3-22: Importance of organic agriculture information sources in Kosovo

	ID number	Number of organizations
Personal contact to experts	1K, 2K, 3K	3
Books	5K	1
Training courses, seminars	1K, 5K	2
Internet, computer media	5K	1
Technical leaflets	1K, 3K	2
Own research	3K	1
Professional journal	1K, 5K	2

Source: survey data, multiple answers possible

Relevance of communication means

In Kosovo, we can find little capacity for external communication. Organizations working in the field of organic agriculture use training courses, seminars, technical leaflets, books and electronic media for external communication.

Information provision

Two organizations (ID# 3K, 5K) do not experience any gap of information while four mentioned that there is an important lack of information. The most serious problems reported refer to the organic agriculture production method. Farmers interested in organic agriculture are seeking to get basic information about organic agriculture: how does organic agriculture work, what are the advantages of organic agriculture and how does conversion impact farm success economically (Table 3-23). One important reason for the lack of information are language problems because internationally available information cannot be used due to insufficient language skills and thus needs to be translated.

Table 3-23: Information needs for organic agriculture in Kosovo

Area	Reason for information gap	Potential information provider	How information should be provided
Basic information about organic agriculture: What is organic?	▪ No translations ▪ Insufficient language skills		
What are the benefits, economic issues	▪ Lack of economic data		
Advice	▪ Lack of competence	Foreign experts	Consultancies, training
Demonstration of organic agriculture	▪ No example in Kosovo	Farmers	Visits to Albania, CH
How to fight the pests (plant protection, prevention)	▪ No translations ▪ Insufficient language skills	REC, FiBL	Leaflets

Source: survey data

3.3.5   Conclusions and recommendations

As there is hardly any organic production in Kosovo by now, there are only diffuse expectations and visions on potential actors and institutions. According to REC, time after war is not ripe to introduce ecological ideas first as people had to reorganize their lives and cared about getting enough to eat. Farmers' associations seem to have a vague vision how institutions could support the development of the organic sector in Kosovo but this vision primarily consists of financial support to organic producers, improved marketing conditions and a higher organizational degree among the organic producers.

Kosovo will define its agricultural policy in three years time. This could be an opportunity to establish a regulatory framework for the development of organic agriculture. In order to have influence on this process, however, the different interest groups (producers, traders, consumers) need to organize themselves. Against this background, strengthening local initiatives will be important, as they are still at the very beginning with regards to know-how and experiences in organic agriculture.

Due to the reported low competence of agricultural extension and advice in general, the introduction of any modern sustainable farming technique requires to increase competence in extension and improve education (academic level, farming level) of agricultural experts e.g. through supporting Twinning Programmes with agricultural administrations or extension services and to adopt international curricula for organic agriculture education.

As personal contacts are the most valuable and reliable source for information, market oriented, sustainable organic demonstration farms need to be established in Kosovo. Such demonstration farms could serve farmers as examples to get insight views on how this modern farming technique is working and for exchange of views.

In a next step, international available information for ecological farming systems need to be made available for Kosovo farmers and experts and thus need to be translated as well as adopted to the specific situation of agriculture in Kosovo.

The role of national research institutions and the universities should be to accompany such a process of developing a sector and introducing a new farming method with their scientific competence. Thus, academic institutions should be involved in the build-up of a demonstration farm. Furthermore, to translate and adopt internationally available information to the national context requires academic competence as a supporting measure. Furthermore, universities should focus on the development of academic curricula for environment friendly farming systems in order to overcome the situation of incompetence. It seems also quite important, that the universities feel responsible to provide students with an academic education on how knowledge is transferred to extension services and farmers (education in advisory services and continuing education).

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http://www.fao.org/es/ess/compendium_2004/pdf/ESS_YUG.pdf, date: 30.12.2004

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http://www.fao.org/countryProfiles/index.asp?iso3=YUG&type=3&subj=4&lang=EN, date: 13.05.2004

http://www.ear.eu.int/serbia/serbia-a1c2e3g4.htm, date: 13.05.2004

5 Annex 1

List of organizations

Table 5-1: Organizations interviewed in Bulgaria

ID #	Name of institution	Type of organization	Characterization	Address
1B	Ecofarm	Organic farmer association, NGO	Education, Extension, OA promotion Founded: 1996 Employees: 6 Budget: 6000-7000 Leva Funds: PHARE, Austria	Plovdiv 125 Rodopi Str. Tel./Fax: 00359 32 629485skarov@hotpop.com
2B	University of Stara Zagora Agricultural Faculty	University	Research, Education, Extension Founded: 1995 (Agricultural Faculty) Students: 1770 Budget: 1,7 Mio Leva	Stara Zagora 6000, Students CampusTel: +359-42-72081; Fax: +359-42-72192E-mail: af@af.uni-sz.bg
3B	Agricultural University of Plovdiv	University	Research, Education Founded: 1948 Employees: 500 Students: 2000 Budget: n.d.	12, Mendelev St. 4000 Plovdid, Bulgaria Tel. +359 32 6166 - operator Fax: +359 32 633157 info@au-plovdiv.bg
4B	National Association Union for Ecology and Progress	NGO	Research, Extension, Processing, alternative energies Founded: 1999 members: 169 Budget: 1500 Leva	23 ivan Vazov Str 6100 Kazanlak Tel: +359 431 44911 Eko_pro@yahoo.com
5B	Fruit Growing Institute Plovdiv	State research institute	Research, Education, Extension Founded: 1952 employees: 202 Budget: 1,5 Mio Leva Funds: Magate Vienna, FAO, Nagrev Greece, GTZ-Project Promoting Horticulture, Viticulture and Agriculture in the Mountainous Region of Lovech (FAMAD)	12, Ostromila Str. 4004 Plovdiv Tel: +359 32 771 349 Fax: +359 32 670 808 inarco@infotel.bg

6B	University of Food Technology, Plovdiv	University	Research, Education Founded: 1991 employees: 23 students: 180 Budget: 5000 Leva Funds: EU 5th Framework	Plovdiv 4002, 26 Mariza bul. Associate Prof. Dr. Jordanka Alexieva Tel./fax: +359 32 452467; E-mail: alexieva@evrocom.net
7B	Bio Bulgaria	Private, profit-oriented Cooperative	Lobbying, processing, marketing, production Founded: 2001 employees: 2 members: 54 Budget: 158 000 Leva Funds: Switzerland	47 Ivan Vasov Str Karlovo Tel: 00359 335 93277igor_tzurkanu@hotmail.com
8B	Agrolink	NGO Organic agriculture association	Education, Extension, Lobbying Founded: 1999 employees: 4,5 members: 26 Budget: 51 000 Leva Funds: Bulgarian Charity Aid Foundation, TIME Ecoprojects Foundation, REC - Regional Environment Center for Central and Eastern Europe	50, Yanko Sakazov str Sofia Tel/fax: +359 2 466 675
9B	Agency for Agricultural Information and Innovation Silistra	Public Extension service	Extension Founded: 2001 employees: 4 Budget: 25 000 Leva	
10B	Agency for Agricultural Information and Innovation Ruse	Public Extension service	Extension Founded: 2000 employees: 4 Budget: n.a.	
11B	Institute of Upland Stock Breeding and Agriculture, Bulgaria, Trojan	State run, profit oriented	Research, education, extension, processing, marketing, breeding Founded: 1978 employees: 150 budget: 400 000 Leva	
12B	Gerada, organic bee products	Private, profit oriented production and trade organization	Founded: 1996 employees: 8 + 124 budget: n.a.	Dochev 6, Peter Beron Str, ap1 1000 Sofia Tel/fax: +359 2 66 27 gerada@bulinfo.net

13B	Bioselena Foundation for organic agriculture	Organic farmer associations	Research, education, extension, lobbying Founded: 1998 employees: 9 budget: 400 000 Leva Funds: SDC	47 Ivan Vazov Str. 4300 Karlovo Tel: (+359) 335 8365 Fax: (+359) 335 2038 E-Mail: biokarlovo@mail.orbitel.bg http://www.bioselena.com
14B	Bulgarian Foundation for Environment and Agriculture	NGO	Education, lobbying Founded: 1990 employees: 9 members: 300 budget: 9 000 US Dollar Funds: REC, PAN, Green grand funds, Tides Foundation,	Albena Simeinova ealbena@yahoo.com agroecofund@lycos.com Tel: +359 2 581379 (office)

Table 5-2 Organizations interviewed in Serbia

ID #	Name of institution	Type of organization	Characterization	Address
1S	University of Belgrade, Institute for agriculture economy	University	Research and education Founded: 1919 Employees: 464 Students: 3353 Budget: 15 Mio Euro	Nemanjina 6, PO Box 127, 11080 Zemum, Serbia & Montenegro http://www.agrifaculty.bg.ac.yu/
2S	University of Novi Sad, Faculty of Agriculture	University	Research and education Founded: 1954 Employees: 400	Trg Dositeja Obradovića 21000Novi Sad http://www.ns.ac.yu/stara/eng/fakulteti/poljoprivredni/osnovna.htm
3S	Agricultural Research Institute "Serbia" Fruit and Grape Research Centre Cacak Departement for Fruit Crop Protection	Research Institute	Research, education, extension Founded: 1954 Employees: 80 Budget: 450 000 Euro/year	Kralja Petra I 9 32000 Cacak
4S	Institute for Nature Protection	State nature conservation and planning organization	Research, education, lobbying, extension Founded: 1948 Employees: 84 Budget: 725 000 Euro/year	Institute for nature protection 11070 Novi Belgrade, III bulevar 106 http:/www.natureprotection.org.yu
5S	OPTO (Topola Rural Development Program) A program sponsored by Swedish International Development Cooperation Agency	NGO	Education, extension, marketing Founded: 2002 Employees: 15 (1 in organic agriculture) Members: 16 Funds: Swedish International Development Agency	Bul. Kralja Aleksandra 9, 34310 Topola
6S	„Agronet" Agriculture Network	NGO expert organization of farmers, cooperatives' founders and managers, consultants	Research, education, lobbying, extension Founded: 2002 Employees: none Members: 46 Budget: 400 000 Euro/year Funds: USDA, USAID, OPTO, Italian government	Carigradska 3, 11000 Belgrade www.agromreza.org

7S	Terra`s	NGO Association for organic food	Research, education, lobbying, extension, production, marketing Founded: 1990 Employees: 6 (paid by Open University Subotica) Members: 195 (55 farmers) Budget: 50 000 Euro/year (without wages for employees) Funds: Open University Subotica, Avalon, Arci Italy, REC, Open Society Fund, Ecofund Subotica	Trg Cara Jovana Nenada 15 24000 Subotica, Serbia & Montenegro www.terras.org.co.yu
8S	AEERT	NGO Association of Experts for Eco-Rural Tourism	Research, education, marketing Founded: 2001 Employees: 0 Members: 27 Budget: 250 000 Euro/year (irregular) Funds: Ministry of Trade, Tourism and Services Republic of Serbia, Ministry of Science, Republic of Serbia, city of Kragujevac	Radoja Domanovica 12 34000 Kragujevac www.kg.ac.yu/AEERT
9S	Natura Balkanika	NGO Regional Nature Society	Research, education, lobbying Founded: 2000 Employees: 12 Members: 31 Budget: 50 000 Euro/year Funds: EED, IFAK	Balkanska Street, 68, Dimitrovgrad 18320 www.angelfire.com/trek/balkanika/start.htm
10 S	Society for Health Food and Environmental Protection "Vrelo"	NGO Organization for health food and environmental protection	Education, lobbying, extension, production, promotion of healthy food Founded: 1988 Employees: 0 Members: 100 Budget: 150 000 Euro/year Funds: REC, Novi Sad Directorate for environmental protection	Vojvođanskih brigada 17/I, P.Fah 38 21 000 Novi Sad

11 S	TOPPAS Transitional organic production processing association of Serbia for the county of Kusumlija, Blace and Brus	NGO organic production and processing association	Research, education, lobbying, extension, production, marketing, promotion Founded: 2002 Employees: 3 Members: 40 Budget: 40 000 Euro/year Funds: Diakonie Stuttgart	Mihajla Pupina 4/18, 18 430 Kursumlija
12 S	AGROEKONOMIK Holding company	Private profit oriented Agricultural cooperative	Production, processing, marketing Founded: 1998 Employees: 100 (5 in organic section) Members: 40 Turnover 200 000 Euro/year (organic products) International active company	Agroekonomik, 11 000 Belgrade, Ustanicka 64/IX,
13 S	OPOVO	State run, profit oriented 0rganic certification	Production, processing, marketing Founded: 2000 Employees: 260 Members: Budget: 4,8 Mio Euro/year	

Table 5-3: Organizations interviewed in Kosovo

ID #	Name of institution	Type of organization	Characterization	Address
1K	KS Ecoklina	Private, profit oriented Environmental protection organization	Founded: 2000 Employees: 3 Members: 55 Regionally active: Kline	Drini i Bardhë, Klinë, Kosovë
2K	Agrollapusha – Kijeve	Farmer association, private profit oriented	Founded: 2000 Employees: n.a. Members: 80 Regionally active: Kijeve Funds: GTZ, Caritas	Vesel Kryeziu Kijeve
3K	Bioprodukt - Kazanik	Farmer association, private profit oriented	Founded: n.a. Employees: n.a. Members: n.a. Regionally active: Kacanik	
4K	Regional environment center for Central and Eastern Europe (REC)	NGO Environmental Protection organization	Research, education, lobbying Founded: 2000 Employees: 7 Budget: 250 000 Euro/year Funds: AVALON	The Regional Environment Center for CEE Field Office Kosovo/a Kodra e Diellit, Rruga III, Lamela 26, Pristina, Kosovo – UNMIK
5K	UNIVERSITY OA PRISTINA Faculty of Agriculture	University	Research, education Founded: n.a. students: 650 Budget: n.a. Funds: n.a.	Rr. "Nëna Tereze" p.n., Pristinë
6K	SPHP Kosova	Project	Compost, plant nursery, marketing berries Budget: 1,2 Mio CHF Funds: SDC	Intercooperation, Pristina, Robert Berlin Fehmi Agani Street, Arbria 3 Dragodan, P.O. Box 2 Pristina, Kosovo Tel: +381 38 243 043 info@intercoopkos.org www.intercoopkos.org

6 Annex 2 Questionnaire

Introductory Remarks

This questionnaire is about the organic agriculture and agro-ecological sector in your country and about the role of your organization or institution in that sector. We especially focus on the information and communication system of the sector. To get a comprehensive picture from the situation in your country, we first have some questions on your assessment of the organic agriculture and agro-ecological sector before we will come to your organization/ institution. In our study we define the two sectors as follows:

Organic agricultural sector:

In this study, organic agriculture is defined as the type of ecological farming that follows standards and regulations as the EU regulation 2092/91 on organic agriculture. The "organic agricultural sector" comprises all organizations and institutions working in the agricultural field and focus especially on organic agriculture. Furthermore, also processing and marketing organizations that process and sell organic food products fall into this category.

Agro-ecological sector:

Hereby we understand all organizations that do not exclusively focus on agriculture, but take the more or less "environmental" view. These can be environmental organizations as, for example, animal welfare organizations that are engaged in questions of land use and agriculture.

* All data are treated confidentially *

A. The organic sector in your country

(1)   Which organizations and institutions do you see as the most important in the organic agricultural sector of your country?

Please list and rank the five most important organizations/ institutions!

1. _____
2. _____
3. _____
4. _____
5. _____

(2)   a) In your opinion, which local organizations and institutions already working in the organic agricultural sector in your country, should be more active?

b) What additional contribution would you expect from them?

This local organization/ institution should be more active in the organic agricultural sector of my country	Expected contribution from the organization/ institution

(3)   In your opinion, which local organizations and institutions not yet active in the organic agricultural sector of your country should get engaged?

What should they contribute to the organic agricultural sector?

This local organization/ institution should be more active in the organic agricultural sector of my country	Expected contribution from the organization/ institution

B. Your organization/ institution

In this section, we would like to get more information regarding the situation of your organization/ institution. We are interested not only in characteristics of your organization, but also in your possible cooperation with other organizations active in the organic agriculture and agro-ecological sector.

B.1 Characteristics of your organization/ institution

(4)   Please indicate the type of your organization
- ☐   State-run profit oriented
- ☐   State–run non profit
- ☐   Private profit oriented
- ☐   NGO / Private or public non-profit
- ☐   Other: ____

(5)   What t is your field of activity?
More than one answer is possible!

- ☐   Research
- ☐   Education
- ☐   Extension
- ☐   Lobbying
- ☐   Agricultural Production
- ☐   Processing
- ☐   Marketing
- ☐   Other: _

(6)   On which geographic level are you working?
Several choices are possible!

- ☐   International level
- ☐   National level
- ☐   Nationwide, but on regional level
- ☐   Only in specific regions: Please list the region(s) here:

_____

_____

_____

(7) How important is the organic agricultural sector for your organization?

☐ Work exclusively in the organic sector

☐ High importance, but not exclusive

☐ Moderate importance

☐ Low importance

☐ No importance

(8) What are the main subjects concerning the organic agriculture and agro-ecological sector you are working in (e.g. plant protection, animal welfare, economics...)?
Please rank the subjects according to their importance for your organization!

1. _____

2. _____

3. _____

4. _____

5. _____

(9) Which are your main target group(s) concerning the organic agriculture and agro-ecological sector?
Please rank the target groups according to their importance for your organization!

1. _____

2. _____

3. _____

4. _____

5. _____

B.2 Cooperation with other organizations and institutions

This section will look at links between your organization/ institution and others. Even though our main interest lies in the organic agriculture and agro-ecological sector, it is also interesting to know if you are cooperating with organizations/ institutions outside this sector. Therefore, we will ask you in some questions to specify the sector your partners are working in.

(10)   Does your organization/ institution share the office with any other organization/institution?

☐   No, we don't share an office with any other organization

☐   Yes, we share the office with following organization(s)/ institution(s):

Please give the name of the organization and indicate if it is part of the organic agriculture or agro-ecological sector or not!

Name of the organization/ institution	It is part of the following sector:		
	Organic	Agro-ecological	Neither

(11)   Does the state (government, public administration) assign any job(s) or function(s) in the organic agriculture or agro-ecological sector to your organization/ institution?

☐   No, we don't carry out any job or function that the state assigned to us

☐   Yes, following job(s) and function(s) are assigned to us by the state:

Please specify the type of job and the time period for which it was/ is assigned.
Think of the last five years!

Job/ function	Time period of the contract with the state (year of assignment, ending of contract)

(12)   Do you cooperate with any other organization/ institution of the organic agriculture or agro-ecological sector?
Please think of common activities with other organizations, not of services that your organization provides for others!

☐   No, we don't have any cooperation

☐   Yes, we cooperate with the following organizations/institutions:

_____

_____

_____

_____

In which activities do you cooperate?

How often do these activities take place?
Please fill in one table per partner organization!

Name of cooperating organization/ institution: __

Type of common activity	Number of activities per year
Training courses	
Special events	
Fairs	
Training Materials	
Publishing of books	
Professional journals	
Technical leaflets	
Website, Internet	
Research projects	
Other:	

(**13**)　**Does your organization meet regularly with any other organization/ institution of the organic agriculture or agro-ecological sector for exchange?**

Please consider, for example, meetings, discussion rounds, bilateral exchange with experts, workshops,...

Are these contacts permanent or rather sporadic?

☐　　No, we don't have exchange meetings

☐　　Yes, we have exchange meetings with the following organizations:

　　Please indicate how often you meet!

Name of organization/ institution	Frequency of exchange meeting					remarks
	1-2 times a year	several times a year	monthly	weekly	more often	

(14)   Are people in the management board or directorate of your organization/ institution also active in other organizations/ institutions of the organic or agro-ecological sector or vice-versa? Is there any overlapping?

☐   No, there is no overlapping in the management or directorate

☐   Yes, following persons also work for other organization(s)/ institution(s):

If possible, please indicate the name of the person together with his/ her function in your organization and the function in the other organization.

Please also specify the sector in which the other organization is working.

(If you don't want to give names, please indicate at least the number of persons and their position in the two organizations)

Name of the person and position in your organization/ institution	Name of the other organization/ institution and position there of the person concerned	This organization is part of the following sector:		
		Organic	Agro-ecological	Neither

B.3 Information and Communication

(15)   a) Which sources of information do you use for getting informed on topics of the organic agricultural sector?

b) Are these sources local or international?

c) How important are they?

d) What is the quality of these information sources?

Please mark only the relevant sources of information and assign the appropriate rank and quality!

Use ranks from: 1 = rather unimportant to 5 = extremely important

Information source	Local	Inter-national	Rank of importance	Quality of source		
				low	medium	high
Own research						
Books						
Professional journals						
General newspapers						
Agricultural newspapers						
Technical leaflets						
Internet, computer media						
Radio						
Television						
Training courses, seminars						
Fairs						
Congresses						
Contact with experts						
Farmers						
Processing						
Trade						
Others:						

(**16**) **a) Would you like to have information about the organic agricultural sector, which is not accessible for you at the moment?**

☐ No, there is no information gap

☐ Yes, we would like to have more information *(see table)*

b) What do you think is/ are the reason(s) why you don't have this information?

c) In your opinion, who should provide this information?

d) How should this information be provided (e.g. print media, electronic media,...)?

a) Information that is lacking	b) Reason for information gap	c) Possible provider of information	d) How information should be provided

(17)   a) Which means of communication do you use for external communication to your members, other organizations/ institutions, the public etc.?

b) Who receives this information?

c) Is the information free or do you charge the recipients a fee?

d) How do recipients accept your offer /the respective means of communication?

Please mark only the relevant means of communication and assign recipient, cost and acceptance!

Means of communication	Recipient of the information	Cost of information		Acceptance of means		
		free	charged	low	medium	high
Letters						
Technical leaflets						
Books						
Professional journals						
General newspapers						
Agricultural newspapers						
Internet, computer media						
Radio						
Television						
Training courses, seminars						
Fairs						
Other public events						
Others:						

e) If some recipients do not accept the means of communication well, in your eyes, what could be the reason(s)?
Please specify the means of communication where you see a need of improvement!

_____

_____

_____

_____

_____

(18)   What means of communication would you wish to use in future?

Are there any means of communication that you don't use at the moment that you would like to use in future?

☐   We are completely satisfied with the means of communication that we use at the moment

☐   In future, we would like to use the following means of communication:

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____
7. _____
8. _____
9. _____
10. _____

(19)   a) What kind of information do you pass on to actors in the organic agricultural sector?

Information types can, for example, be:
decision support, management issues, technology and production related, market data…

Actors in the organic agricultural sector could be:
other organizations/ institutions, farmers, processing companies and trade…

b) Who is (are) the target group(s), i.e. actors in the organic agricultural sector that receive the information?

c) How is the acceptance among the target groups?

Type of information provided	Target group	Acceptance of information		
		low	medium	high

d) If some recipients of your information do not accept it well, in your opinion, what could be the reason(s)?

Please specify the type(s) of information where you see a need of improvement!

—————————————

—————————————

—————————————

—————————————

(20)   a) In general, where do you see the strengths of your organization with regard to your information and communication policy?

For example, did you elaborate a communication strategy?

—————————————

—————————————

—————————————

—————————————

b) Where do you see weaknesses of your organization concerning information and communication?

Can you give reasons?

—————————————

—————————————

—————————————

—————————————

(21)   Does your organization/ institution get any money from other organizations/ institutions?

Did it get any in the last five years?

.

☐   No, we didn't any money from other organizations in the last five years

☐   Yes, we got money from the following organization(s)/ institution(s):

Please give the name of the organization and specify the sector in which it is working!
If possible, please indicate the amounts of money and/ or rank the donor organizations/ institutions according to their importance for you.

If the monetary source is very sporadic, i.e. irregular, please only consider the year 2002!

Name of the organization/ institution	This organization is part of the following sector:			Amount of money or rank of importance	Regularly	Irregularly
	Organic	Agro-eco-logical	Neither			

(22) **Does your organization/ institution pay money to any other organizations/ institutions?**

Did it pay them money in the last five years?

☐   No, we didn't pay any money to other organizations in the last five years

☐   Yes, we paid money to the following organization(s)/ institution(s):

Please give the name of the organization and specify the sector in which it is working!

If possible, please indicate the amounts of money and/ or rank the beneficiary organizations/ institutions according to their importance for you.

Name of the organization/ institution	This organization is part of the following sector:			Amount of money or
	Organic	Agro-ecological	Neither	rank of importance

C. Formal data on your organization/ institution

In the end, we would like to ask you about some formal information of your organization.

Year of formation: _____

Number of employees: _____

For universities: Number of students: _____

For associations: Number of members: _____

Yearly budget: _____

Name of the person interviewed: _____

Position of the interviewee in his or her organization/ institution: _____

Thank you for having taken the time to answer our questions!

Further remarks of the interviewee *(please indicate the n° of the question!)*:

_____

_____

_____

_____