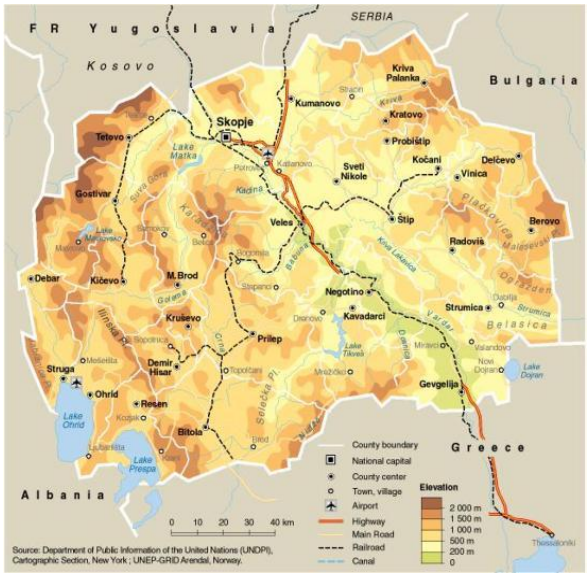
PART I – SITUATION OF AGRICULTURE AND RURAL AREAS

1.1. COUNTRY PROFILE

The Republic of Macedonia is a small land-locked country with diversified natural endowments and climate, "melting pot" of variety of traditions and cultures, rich in history and archaeological and cultural heritage. The country is located in the South Western part of the Balkan Peninsula and in the South-East part of the European Continent. The country shares its borders with two EU member states, Greece to the South (262 km border length) and Bulgaria to the East (165 km border length), and with Serbia in the North (232 km including the UN-Administered Kosovo Territory) and with Albania to the West (191 km).

Geo-strategically positioned, the country is at the crossroads of two major pan-European transport corridors (number VIII and X), which link Central Europe to the Adriatic, Aegean and Black Seas.

The total land area is 25,713km^2, which is equivalent to 6% of EU-25 land area, and about the size of Belgium.



The country is characterised by a great variety of landscapes. Heterogeneous, with numerous relief forms, with different expositions and inclinations, and with great differences of altitude (from 40 to 2,764m above sea level). The division into mountains and basins of lower relief category (undulating-hilly, sloping and flat relief) is of great significance for the regionalisation.

The territory is prevalently mountainous and intersected by large valleys. Hills and mountains account for around 79% of the land area with the balance made up of plains (19%) and natural lakes (2%). The average altitude is 850 meters above the sea level. High mountain regions (above 2,000 meters) take up 38% of the territory. The highest peak is Golem Korab, with 2,764 m metres. The middle mountain regions (ranging between 1,000 to 2,000 meters) take up 29.28% of the territory, while the remaining territory is less than 1,000 meters altitude. The plains amount to 4,900 km^2.

The availability of water resources is made up of natural lakes (tectonic and glacial origin), artificial lakes and river basins. The natural lakes in the country are trans-boundary waters. The largest one is Ohrid Lake (348 km^2, including 118.9 km^2 in Albania) being the oldest lake in Europe at the same time the deepest natural lake in the Balkans, than Prespa Lake (275 km^2 including 49.4 km^2 in Albania and 47.8 km^2 that belong to Greece) and the Dojran Lake (43 km^2, including 15.8 km^2 in Greece). The biggest among the glacial lakes is Bogovinsko Lake on the Shar Planina Mountain, while the biggest artificial lake is the Shpilje Lake[1]. There are around 110 major and minor artificial lakes, of which only 20 with volumes larger than 1 million m^3 are being used for irrigation, water supply and production of hydroelectric power.

In total, there are around 4,410 water springs, and 35 rivers cross the country flowing into four river basins of which three are important in terms of water flow: the Vardar carries 80%, the Crn Drim 13% and the Strumica 7%. The most significant river is the Vardar (301 km).

Soil structures are very heterogeneous (there are more than thirty types of soils) as consequence of the varied natural conditions for the soil creation (topography, climate, flora, geological formation and anthropogenic influence). The mountains are composed of non-calcareous hard rocks, including quartzite, and various silicate rocks: acidic, neutral, basic and ultra basic rocks; as well as calcareous rocks such as pure limestone, marbles and dolomites. Basins are composed of loose and lightly cemented sediments, and a small quantity of young volcanic rocks. Undulating-hilly terrains in the basins are composed of sea and lake sediments. The sloping terrain consists of colluvial and some fluvioglacial deposits.

1.1.1. Climate and its Influence on Agriculture

As a result of its geographic position and topography, the country is at the crossroads of continental and Mediterranean climates. Temperatures, rainfall, atmospheric pressure, wind and moisture vary significantly and influence the overall water regime. Dry and hot periods predominate (summer-autumn), while cold periods are short (winter). Rainfall is irregular, sporadic and in small quantity throughout the country, (average annual precipitation is 733 mm). Therefore, the majority of the territory is dry (the Ovce Pole region is the driest region in the Balkans). Higher precipitation is characteristic from October to December and weaker from March to May. A typical Mediterranean characteristic are the short and intense rain showers that cause soil erosion, landslides and local floods.

The climatic variations deeply affect the agricultural production in the country. Late spring and early autumn frosts, regular hail phenomena in summer and droughts cause severe damage to the agriculture production.

In the table below are presented the lowest temperatures (in Celsius degrees) achieved in the winter period; the earliest dates of early autumn frosts; and; the latest dates of late spring frosts for the different agro-meteorological stations in the last 30 years.

[1] The largest is Shpilje on the Crni Drim and Radika River, with a volume of 520 × 106 m3, followed by Tikvesh Lake on the Crna River, with 475 × 106 m3

Table I - 1 Lowest temperature, early autumn frosts and late spring frosts

No:	Region	Lowest in C	Early autumn freezing	Late spring freezing
1	Delcevo	-29	07 Sept	05 May
2	Mavrovo	-28	08 Sept	05 May
3	Pretor	-27	09 Sept	20 May
4	Resen	-27	09 Sept	20 May
5	Berovo	-27	14 Sept	05 May
6	Krusevo	-26	23 Sept	15 May
7	Skopje	-25	26 Sept	15 May
8	K.Palanka	-24	29 Sept	15 May
9	Kumanovo	-24	30 Sept	15 May
10	Bitola	-23	30 Sept	15 May
11	Prilep	-22	02 Sept	10 May
12	Strumica	-21	02 Oct	30 Apr
13	Gevgelija	-20	02 Oct	15 Apr
14	Ohrid	-20	03 Oct	10 May
15	Struga	-20	03 Oct	11 May
16	Stip	-19	16 Oct	30 Apr
17	D.Kapija	-18	19 Oct	20 Apr

Source: MAFWE, Hydro-meteorological Directorate

All agricultural areas of the country are prone to early autumn frosts from early September to the second decade of October, whereas late spring freezing occurs from mid April to the second decade of May. Both early autumn frosts and late spring freezing affect fruit production (apples, plums, cherry) located in Delcevo, Berovo, Resen, Pretor, Ohrid and Struga, open-field early vegetables (salad, peppers, tomato, cucumber) located in Strumica, Gevgelija, Demir Kapija and grape production in the three vine-growing areas (Povardarie, Pelagonija-Polog and the Pcinja-Osogovo).

Hail is another negative weather phenomenon that causes huge damages to agricultural production. Since 1971, an operational hailstorm protection system existed in the country (based on rockets) but the system experiences difficulties in timely protection and it is considered as obsolete.

In the table below are reported the hailstorm days from the 17 agro-meteorological stations:

Table I - 2 Hail storm days

No:	Region	Hail storm days	No:	Region	Hail storm days
1	Krusevo	71	**10**	Mavrovo	32
2	Berovo	64	**11**	Strumica	31
3	K.Palanka	63	**12**	Bitola	27
4	D.Kapija	39	**13**	Prilep	26
5	Kumanovo	38	**14**	Resen	24
6	Gevgelija	37	**15**	Pretor	15
7	Delcevo	35	**16**	Struga	15
8	Ohrid	35	**17**	Skopje	2
9	Stip	35			

Source: MAFWE, Hydro-meteorological Directorate

Based on a 20 years data analysis, places and regions with highest frequency of hailstorm appearance in the period between mid-April and mid-October have been identified as follows:

- Probability of hail storms is higher in east part than in the west part of the country;
- Berovo, Demir Kapija, Stip, Strumica, on the eastern side i.e. regions predominant producers of fruit, vegetable and grape, are frequently affected, whereas Ohrid and Resen (predominant apples and cherries producers) are affected on the western side;
- May is the month where the frequency of hail is biggest followed by June and July.

Crop water deficiency (drought) is a very common phenomenon in the country, appearing during the vegetation period when soil humidity and rains are not sufficient for normal growth and development of plants and fruits. Overall, annual precipitation is low ranging from 970 mm in Mavrovo mountainous area to 490 mm in Skopje and Stip areas.

Table I - 3 Average rain falls

No:	Region	Rain falls (mm/year)	No:	Region	Rain falls (mm/year)
1	Krusevo	730	**10**	Mavrovo	970
2	Berovo	600	**11**	Strumica	550
3	K.Palanka	610	**12**	Bitola	610
4	D.Kapija	550	**13**	Prilep	580
5	Kumanovo	500	**14**	Resen	730
6	Gevgelija	650	**15**	Pretor	730
7	Delcevo	550	**16**	Struga	790
8	Ohrid	730	**17**	Skopje	490
9	Stip	490			

Source: MAFWE, Hydro-meteorological Directorate

The total amount of rainfall is higher in agricultural areas in the west side of the country (Resen, Pretor (Prespa), Struga, Ohrid) regions with fruit production than in the east side of the country (Stip, Skopje, Strumica, Demir Kapija, Gevgelija) agricultural regions with open field early vegetable and grape production.

The table below shows the highest temperatures in the country in the last 30 years. It is obvious that agricultural areas Gevgelija, Strumica, Stip, Skopje, Kumanovo with open field vegetable production (salad, peppers, tomato, and cucumber) and grape production are affected by temperatures above 40C°.

Table I - 4 Highest temperature measured in last 30 years

No:	Region	Highest temp (C°)	No:	Region	Rain falls (mm/year)
1	Krusevo	35	**10**	Mavrovo	34
2	Berovo	36	**11**	Strumica	43
3	K.Palanka	37	**12**	Bitola	41
4	D.Kapija	44	**13**	Prilep	42
5	Kumanovo	40	**14**	Resen	37

6	Gevgelija	42	**15**	Pretor	37
7	Delcevo	38	**16**	Struga	37
8	Ohrid	37	**17**	Skopje	42
9	Stip	42			

Source: MAFWE, Hydro-meteorological Directorate

The provision of supplemental irrigation during the crop water deficiency periods (combined often with high temperatures) is a necessary to preserve the crops from failures and/or from quality degradation.

1.1.2. Population

According to the latest census, in 2002, the country had a total population of 2,022,547 in 564,296 total numbers of households (3.6 persons per household); with an average population density of 79 persons per km^2 compared to EU average of 115.

The population is mainly concentrated in the urban centres, with 23.1%, in Skopje-the capital city, 5% in Kumanovo, 4% in, Bitola, 3.5% in Tetovo, 3% in Veles, and in 24 other smaller cities-towns (most of which are up to 15,000 inhabitants).

According to the Census 2002, the gender structure of the population is 50.2% men (68.8% are between 15-64 years of age) and 49.8% are women (67.7% being between 15-64 years of age).

The country's population has a multi-ethnic structure. In 2002, it consisted of the following major ethnic groups: Albanians (25.17%), Turks (3.85%) and Roma (2.66%). The balance of 4.14% is made up by other ethnic groups-Serbs, Vlachs, Boshnjaks etc.

The average age of the population in the country is approximately 33 years, and almost 68% of the population is between 15 and 64 years of age, i.e. is of able-bodied age. The average rate of population growth is estimated at approximately 0.4%, while the birth rate is almost twice as big as the mortality rate. Still, the country has an unfavourable net average migration rate - 1.45/1,000 inhabitants.

1.1.3. Political situation, Governance and Administrative system

1.1.3.1. Political profile

The country became independent in November 1991 and it is a parliamentary democracy with elections held every four years.

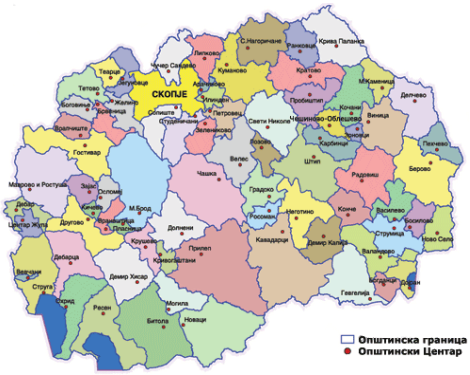
The country is committed to the challenges of acquiring membership in the EU. The country is a member of the UN (since 8th of April 1993), member of the IMF (14th of December 1992), of the World Bank (25th of February 1993) and of the European Council (since 9th of November 1995). On 15 October 2002, it was officially accepted as a member of the WTO. The Parliament of the country ratified the Agreement for joining the WTO in January 2003, thus opening up the way to the country becoming a full member in April 2003. Following the Agreement for cooperation with the EU in 1997, in April 2001 the country signed a Stabilization and Association Agreement with the EU,

enabling it to get almost tariff-free access to European markets. After its ratification in the parliaments of all EU member-states, SAA entered into force on 2 April 2004.The country's application for EU membership was formally submitted in Dublin on 22 March 2004, followed by the submission of the responses to the EU questionnaire to the EC in Brussels on 14 February 2005. In October 2005, the EC made positive recommendations regarding the country's candidate status, and in December 2005, the recommendations were accepted by the European Council and the country was given the status of candidate for EU membership.

1.1.3.2. Governance context

In the governance context, the state powers are separated into legislative (the Parliament), executive (the President of the Republic and the Government) and judicial (Judicial Council of the Republic). The Government of the Republic is located in the capital Skopje.

1.1.3.3. Administrative system and territorial organisation



According to the EU Nomenclature of Statistical Territorial Units (NUTS), the Republic of Macedonia as a country is classified in the NUTS I and II, and it is divided into 8 Statistical Regions (corresponding to EU Classification NUTS III), and into 34 groups of Municipalities (equivalent to districts - corresponding to EU classification NUTS IV) and into 84 Municipalities including the city of Skopje (corresponding to EU classification NUTS V) [2].

Local issues are decided and organised by Local Governments. Local self-government units are Municipalities settled (headquarters) in towns or in rural centres (villages). The city of Skopje is a separate unit of local self-governance because of the specific character of the city as capital of the country.

The settlements and towns within the Municipality can establish forms of self-governance of Urban Communities or Local Communities,

The Law on Local Self-Government[3] stipulates, among others, the following competencies of the Municipalities:

- Urban and rural planning.
- Protection of nature and of the environment (from pollution, noise and ionizing radiation).
- Local economic development (determining development priorities, running of local economic policy; support the development of small and medium size enterprises and entrepreneurship at local level, participation in the

2 Law on Territorial Organisation of Local Self Governments (OG 55/2004, 12/2005)
3 OG 5/2002

establishment and development of local network of institutions and agencies; promotion of partnership).

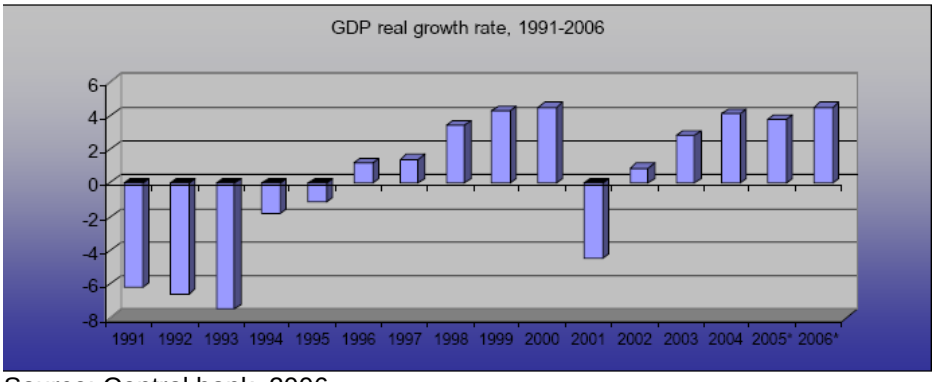
- Communal activities - water supply (including potable); water drainage and waste water purification; maintenance of public hygiene; solid waste management; regulation and organization of public local transportation; supply of natural gas and heating energy; construction, maintenance of local roads, streets and other infrastructure facilities (parking spaces, markets; parks, park-forests and recreational spaces).
- Culture - preserving of cultural heritage; celebration of events and persons of importance for the culture and history of the municipality.
- Recreation - development of recreational activities of the citizens; maintenance and construction of recreation facilities of public interest for the municipality.
- Social welfare and child protection – kindergartens and homes for the elderly.
- Healthcare – governance of the network of public health organizations and primary care.
- Education – establishing, financing and administering of primary and secondary schools, in cooperation with the central government.

1.1.4. Macro-economic Situation

The Republic of Macedonia is a small economy in transition. Since independence, the economic development of the country has gone through three major processes: transition to market economy; macro-economic stabilisation and structural adjustment; and maintaining macro-economic stability.

The early years of transition to market economy (1991-1994) were accompanied with continuous regional instability. The break-up of Yugoslavia and the loss of the traditional markets and economic linkages led to deterioration and oversize of the production capacities. UN sanctions against Yugoslavia and Greece's economic embargo significantly impeded economic development opportunities until 1995. In the period 1991-1995, the GDP dropped by more than 30%. Due to the constant decline of the economy, in 1994, with the support of the IMF and the World Bank, the Government adopted a Stabilization and Structural Adjustment Programme. The process of privatisation was initiated and was followed by reforms in the financial sector.

Figure I - 1 *GDP real growth rate 1991-2006* (preliminary estimations)*



Source: Central bank, 2006

In the period 1995-2000, the overall economy grew by 16% while inflation and the budget deficit remained low. However, the rate of unemployment remained at over 30%, representing one of the highest unemployment rates in Europe. The five years of continued economic expansion were put to a halt by the 2001 crises, which led to a 4.5% drop in GDP in 2001.

After this significant drop, the real growth rate started to rise in 2002 (0.9%), in 2003 (2.8%), and continued into 2004 and 2005 at around 4% annually. Estimated growth rate in 2006 (4.5%) reached the level of the growth peak as in 2000.

The conservative fiscal and monetary policies have provided a significant degree of macroeconomic stability. Inflation was reduced by less than 1%. The continuous gradual liberalisation of exports, and. the process of continued decrease in average tariff rates played a key role in keeping inflation at a relatively low level.

However, low incomes and standard of living, increasing poverty, high unemployment rate (at 37.3% of the workforce in 2005), low growth rate, external trade imbalance and a low foreign direct investment remain central economic issues.

Table I - 5 Main Macroeconomic Indicators

	2000	2001	2002	2003	2004	2005	EU-25 (2005)
GDP (€ current Million.)	3,893	3,839	4,001	4,105	4,324	4,500	10,864,500
GDP per capita (€ current)	1,921	1,886	1,981	2,025	2,147	2,235	23,543
Real GDP development	4.5	-4.5	0.9	2.8	4.1	3.8	1.8
Exports of goods and services (% of GDP)	36.81	33.62	29.51	29.42	31.15	36.44	9.87
Imports of goods and services (% of GDP)	56.06	48.93	5.85	47.73	51.87	55.34	10.9
Inflation, GDP deflator (annual %)	5.8	5.5	1.8	1.2	-0.4	0.5	2.2
Registered unemployment rate (%)	32.2	30.5	31.9	36.7	37.2	37.3	8.9
€-Exchange rate (1 € = x units NC)	60.8	61	61.1	61.3	61.3	61.4	

Source: SSO, Central Bank of the country, EuroStat pocketbooks

Despite challenges and difficulties during the transition period, the country has stood firm on the road of political and economic reform and open-market economy, which has resulted in a modest, yet continuous growth. The basic goals of the country's economic development programme include economic growth and development, active involvement in regional and global integrative processes, maintaining macroeconomic stability and continuous structural reforms, especially targeted at promotion of small and medium-sized enterprises (SMEs) and attracting foreign direct investments (FDI) which would lead to economic growth and reduced unemployment and poverty

1.2. DESCRIPTION OF RURAL AREAS

1.2.1. Administrative definition of rural areas

For administrative purposes, the differentiation between rural and urban areas in the country is based on the local territorial organisation of the local self-governments where settlements are divided into towns and villages in accordance with the number of inhabitants, predominant economic activity and employment structure per economic activity, physiognomy of the settlement and social and technical infrastructure development. According to these criteria:

- The towns are compactly built up residential areas with a population exceeding 3,000, has a developed structure of various economic activities, above 51% of the employees are working in the secondary and tertiary sector, has an urban physiognomy of zones for residence, recreation and green area (parks), town, square, street infrastructure, communal services and acts as a functional centre for the surrounding populated places.
- Villages are defined as mono-functional populated areas, in which one business activity is prevalent and whereas the area has agricultural physiognomy and function.

Total number of towns in the country (excluding the city of Skopje) is 33 towns and the total number of villages is 1,715 out of which only 1,570 are populated.

Based on this administrative differentiation criterion, 43% of the total country's population (according to census data 2002) are living in villages and the remaining 57% is settled into towns (including the city of Skopje).

1.2.2. Definition of the rural areas for RD policy implementation

For the purpose of efficient implementation of the Rural Development Policy in the country (as well as implementation of the Programme), the need of designation of rural areas has been addressed in the article 24 of the Law for Agriculture and Rural Development (OG 134/2007) by establishing general compass for further differentiation of rural areas.

Therefore, the rural areas are defined as geographical whole with relatively small number of inhabitants or population density and specific socio-economic characteristics.

The general approach has been further broken down into details in order to specify the areas targeted with the Rural Development Policy. The specifics are adopted by the Government in the Decree on the criteria for designation of rural areas (OG 137/2008).

The criterion related to the specific socio-economic characteristic is differentiating the areas where the population is less than 3.000 inhabitants, less than 51% of employment is outside agriculture, in which one economic activity dominates, and the surrounding area has agriculture physiognomy i.e. without home zones, economy, recreation and public green, square and has

no developed system of streets and communal services. According to this definition of the criterion, all villages (1,715) in the country are rural areas.

The criterion related to “relatively small number of inhabitants” is applicable to settlements with less than 30,000 inhabitants. According to this definition of the criterion, small towns (24) have been referred to as rural areas in the country.

Based on the Government Decree, the Minister for Agriculture, Forestry and Water Economy has adopted the “List of the rural areas in the Republic of Macedonia” which is published in the OG No. 154/2008.

The indicators for designation of the rural areas within the scope of the specified criteria are identified on the basis of the available data from the Population Census 2002. By means of geographical area, the rural area is defined in the boundaries of cadastre territory per towns and villages based on the country’s territorial organisation.

Therefore, the Rural Development Policy targets 57.5% of the total country’s population (according to census data 2002) which are living in rural areas.

Analysis of the Rural Areas as well as continuous studies on characteristics of the rural areas shall be performed, as to provide further basis for efficient implementation of the Rural Development Policy and effective use of the available instruments and assistance to mitigate the problems and boost the development.

1.2.3. Rural Demography and Education

From 1981 to 2002, the number of young people (0 to 19 years) declined from 41 to 32.2%, while population aged 65 and above increased from 8% to 10.6%. Unsatisfactory rural age structure is particularly found in the Pelagonija (18.8%), East (15.5), Vardar (12.9) and Northeast (12.7%) regions.

Table I - 6 Population development within different statistical regions

Region	Total	Change increase 1994-2002	Growth rate		Migration balance		Population density	
	1994	2002	No	%			1994	2002
National level	1,945,932	2,022,547	76,615	3.94	0.48	-30,992	76.0	79.0
Pelagonija	242,614	238,136	-4,478	-1.85	-0.23	-5,297	49.7	48.8
Vardar	131,035	133,180	2,145	1.64	0.20	-1,670	40.7	41.4
Northeast	163,841	172,787	8,946	5.46	0.66	-1,557	70.6	74.4
Southwest	211,226	219,741	8,515	4.03	0.49	-6,191	64.2	66.8
Skopje	545,228	578,144	32,916	6.04	0.73	243	314.6	333.6
Southeast	168,481	171,416	2,935	1.74	0.22	-4,743	64.8	66
Polog	281,982	305,930	23,948	8.49	1.02	-8,472	116.8	126.7
East	201,525	203,213	1,688	0.84	0.10	-3,305	48.3	48.7

Source: J. Jakimovski (Institute for Sociological Political and Juridical Research, Skopje)

Regarding the other regions, the population increase is marked with large deviations. Namely, in accordance with the population growth rate, it is lowest in the East, Vardar and Southeast region, equal with the average in the

country in the Southwest region, somewhat higher in the Northeast and Skopje region, and highest in the Polog region.

In the country, 96% of the total population of over 10 years is literate. There is gender equality in the literate population, but around two thirds of the illiterate population is female[4].

If the overall literacy situation is good, there appears to be a difference between urban and rural areas in the educational structure. According to the 1994 census, a sizeable share (37.9%) of village and farming population above the age of 15 have insufficient or total lack of primary education: 10.5% are illiterate and 27.4% have not completed primary education. The low rate of education in the rural areas is due to the: "*moving out of young and capable population for work, … the lack or small number of education facilities, not sufficient care for improvement of the school education of the young population, isolation of the undeveloped villages, etc*"[5].

The educational problem is obvious among the unemployed, since only 8% of them have higher or university education, the majority (54%) has secondary education, and the remaining 38% are unskilled. Young population (age 15-25) participate with 23% of the unemployed, however this percentage amounts up to 82% among the young working capable population[6].

Education is a driving force of the economic and social development. It is also a factor for innovative readiness. The educational system certainly plays an important role in the young people's ability to value the local product and the local tradition. The quality of education and life-long learning could reduce the disparities between urban and rural areas, which are striking.

Smallholder farmers (especially in backward areas) have the weakest educational and professional level among agricultural producers. In the country, apart from formal secondary and university education, there is a lack of additional (informal) education and training for farmers. Existing media programs (radio and television) relating to agriculture are limited in duration and are very general in scope. There are no specialised agricultural magazines. The country's agro-web (all official national web pages supplying useful information for agricultural stakeholders) is very poor and offers obsolete information. There are also a limited number of programs teaching about local culture and history, especially about the local public resources, which can encourage and improve the quality of life[7].

1.2.4. Employment and Unemployment structure of Rural Population

According to the latest statistics[8], out of the total active population (885,609) of the country, 36.1% are unemployed (of which 82% are long-term unemployed[9]). This does not compare favourably with the EU-25 average of

4 Source: State Statistical Office, 2002 Population Census, Book 13

5 Rural Social Structure, J. Jakimovski 2004

6 Statistical Yearbook, 2005

7 MAFWE- Annual Agricultural Report 2005

8 Survey for labour force N; 2.1.6.26 of 9 Oct 2006 SSO

9 The standard definition of long-term unemployment is all unemployed persons with continuous periods of unemployment extending for a year or longer (52 weeks and over); it is expressed as a percentage of the overall labour force (long-term unemployment rate) or of total

8.6% in 2005. Unemployment is worse in urban (68%) than in rural areas (32%)[10] but the gap is narrowing. Furthermore, 44%[11] of the poor live in rural areas.

Available statistics do not provide adequate details on rural employment by branches. Indeed the majority of rural population is engaged in the agricultural sector (mainly subsistence/household farming) and other activities, if any. Agricultural wages tend to be significantly lower than in other sectors, and almost half of all agricultural workers are unpaid family workers. Agricultural employment is also highly seasonal. The 2005 WB Poverty Assessment report concludes that agricultural employment serves as a social buffer, helping alleviate poverty and unemployment particularly in times of high off-farm unemployment.

A comparison of exclusively agricultural households[12], mixed households[13], and non agricultural households[14], shows that mixed households have the highest incomes, followed by agricultural households and then by non-agricultural rural households[15]. Studies have shown a trend towards diversification into non-farm employment as a result of economic need (and, to a lesser extent, attitudes towards farming), and confirm a positive correlation between income and the number of non-farm activities households engage in.

1.2.5. Rural Infrastructure Development

1.2.5.1. Social and Health Care Infrastructure.

Rural social care infrastructure (kindergartens, schools, public community centres – libraries, clubs) was developed in the past, but in the majority of cases is in serious disrepair and or abandoned.

Most of the population from rural areas, especially those living in high-mountainous villages, are lacking fundamental health services, including primary health services. All activities of the primary health care are included in each healthcare centre, which correspond to the distribution at a level of 30

unemployment (incidence of long-term unemployment). For more details on the international definition of unemployment, users should refer to the resolution adopted in 1982 by the 13th International Conference of Labour Statisticians (ICLS)

10 Unemployment report from 31 August 2006 published 18 Sept 2006 from the Agency for Employment

11 Growth and Poverty, 2002-2004. Western Balkans Programmatic Poverty Assessment (World Bank).

12 Agricultural households are considered those, which have their own agricultural holding and where all the work age members of the household are engaged at the holding as agricultural workers. None of the household members is officially employed outside the holding and none of them owns trade premises. According to the 2006 Statistical Yearbook, there are 17,362 in 2005.

13 Mixed households have their own agricultural holding where, besides the workers at the holding, one or more members are permanently employed in the public or private sectors or perform some non-agricultural services. According to the 2006 Statistical Yearbook, there are 127,612in 2005

14 Non-agricultural holdings are those which own no holdings but where one or more members are permanently employed in the public or private sectors, or perform certain non-agricultural services. According to the 2006 Statistical Yearbook, there are 362,516 in 2005

15 Source: State Statistical Office mentioned in WB document *Agriculture and EU Accession: Achieving Macedonia's Agricultural Potential* (November 2006).

municipalities (NUTS 4). Primary health care is provided in 293 villages. Within the healthcare centres, there are special medical units in the villages, with a total of 152 permanent and 121 with temporary physicians available.

1.2.5.2. Technical Infrastructure

The country's road infrastructure (including the network of feeder roads) contains 9,573 km of roads in a categorised road network of which 909 km are motorways, 3,058 km are regional roads and the remaining 5,606 km are local (unclassified) roads. Of the latter around 50% are either soil based or unimproved at all and regular maintenance and extraordinary repair are a problem. Railroad transportation is poorly developed and includes network of 699 km of open railway lines, 226 km of rail yards and 102 km of industrial tracks.

In the country, water quality has the highest national and public health priority. Safe sanitation is a top priority for urban areas, but in rural areas there is still much to be done. The percent of the rural population with public water pipeline installation is 72.3% (compared to 87.7% of the total population), 18.7% have access to water under pressure from cisterns (compared to 8% of the total population), and 8.96% of the rural population lack water supply installation (4% for total population). The state of water supply, even though there has been considerable construction, is not yet satisfactory. The existing water supply capacities cannot supply sufficient quantities of high quality water, which is particularly noticeable in the highly populated Eastern areas of the country. Generally, waterworks are poorly equipped and there is insufficient protection of the sources and hygiene.

There was a National Action Programme for improvement of the sanitary-hygienic situation in rural areas from 1971-1991. It was led by the Institute for Health Protection-Skopje, financed by the Water Economy Secretariat and the Health Insurance Fund. During this action programme, water-supplying networks were built in 850 villages, as well as 25 sewerages. Since 1991 to the present, new water-supplying networks have been built in 90 villages. In 1971, access to safe drinking water in the country was at 64%, and after the 1971-1991 National Action Programme and efforts from 1991-2003, access to safe drinking water in 2003 has increased to 93%.

Improvement of the water supply is the responsibility of the Ministry of Environment and Physical Planning, MAFWE and Ministry of Transport and Telecommunications. The role of the Ministry of Health, through the Institute for Health Protection-Skopje, is to monitor the quality of drinking water from new sources, and Regional (10) Institutes for Health Protection have the responsibility to monitor water quality during the year according to the Preventative Health Programme.

The MAFWE in cooperation with the Ministry of Environment and Physical Planning, Ministry of Health, Ministry of Local Self-Government and other relevant stakeholders, supported by JBIC and JICA, are working on the improvement of water supply systems and irrigation in the north-eastern part of the country for seven municipalities - Kratovo, Probistip, Zletovo, Lozovo, Stip, Karbinci and Sveti Nikole, around 100,000 inhabitants. Process started in

2005, but there were some previous investigations in 2001 as well. Special consideration is put on children' health and drinking water quality.

There is a high level of political support, and a high level of public awareness, but the finance for construction of new water supply networks, as well as maintenance of those already built, is a big problem.

Sewerage systems exist only in the cities and major settlements. The remaining settlements (i.e. the rural villages) for the great majority do not have any sewerage system and utilise septic tanks or uncontrolled wastewater discharge. The share of rural population with a public sewage installation is low and is estimated at 17.7% (for total population it is 60.1%). Total rural population without any installation for sewage is 8.9% (total population 4%).

The supply of electrical power is available to 99.75% of rural population and provided through well-developed transmission and distribution network with sufficient capacity of electric energy sources (1,430 MW) to provide regular supply. The electric network inside the rural dwellings is not modernised to sustain the regular uninterrupted supply of the energy to the domestic appliances.

In the country, there are only 6 wastewater treatment plants. They are located in Ohrid/Struga, in Dojran, in Resen/Prespa, which are of the highest priority on natural protection, and in Makedonski Brod, Krivogastani and Kumanovo. The wastewater treatment plants at the lakes are outdated and insufficient in terms of effluent quality. In addition, only 10% of rural population is covered by public municipal collection of solid waste (against 70% of total population).

Residents of many rural settlements, especially in mountain and remote villages, experience poor public transportation services (bus lines) to modern roads and thus to stores, schools, markets, etc. The telephone network (both fixed lines and GSM) covers the great majority of the territory; however, access to information and communication technology is low in rural areas. Postal services have degraded in the recent years and small villages are often uncovered. National and local television, including cable and satellite, and radio are available throughout the country.

Municipal centres and larger villages generally have retail (green) market infrastructure working. Access to market (for selling agricultural produce or handicrafts or for purchasing raw materials) is more time consuming and costly for people living in isolated villages.

1.2.6. Regional development disparities

The regional development disparities among the statistical regions in the country are illustrated in the Table presented below using four development indicators: GDP per capita, change in population, share of population with higher education and unemployment rate.

1. GDP per capita on a regional level reveals huge discrepancies as regards the level of economic activities between the Skopje region and the rest of the country. The Skopje region, with per capita GDP of USD 11,964 (PPP) in 2002 is way above the national average (6,850) which is equivalent to 50% of the EU average.

Account should be taken of the fact that the regional GDP values are with reference to production generated on the territory of the region, rather than on the average income of citizens in a given region. This means that many citizens from the other regions contribute to the generation of Skojpe region GDP, though they transfer their incomes to the regions in which they live.

The Skopje and Pelagonia regions are the only regions with a GDP per capita higher than the average in the country (USD 6,850 $). The Polog region exhibits the lowest level of economic activity, with only USD 3,076 per capita.

With the exception of the Northeast region, all other seven regions have generated an average real per capita GDP growth during the period 1998-2002, ranging between 1.4% in the Polog to 8.7% in the Skopje region.

The Skopje region is the only region with a positive average annual growth rate of 7.7% between 1998-2002. All the other seven regions have seen a decline in the average value added per capita over the five year period under observation. The reason for that may be found in the unsuccessful restructuring of large socially owned enterprises which failed to find its place in the market under changed economic and political conditions. It seems that the Skopje region, which covers the largest urban part of the country and is populated with people with higher incomes, offers better opportunities to set up and conduct business than the rest of the country. The large concentration of the population with high incomes gives a very conducive environment to the development of market based services which generate high economic growth rates in the Skopje region. On the other hand, the service sector in the other regions could not generate sufficient growth to make up for the closure of formerly large socialist enterprises. The most severe decline was experienced in the Polog (-7%) and Northeast (-6.6%) region.

2. The regional disparity analyses shows an increase of the population in the inter-census period 1994-2002 in all regions except in Pelagonija, where the number of inhabitants decreased by 4,478 (1.8%), and the average annual population growth rate is negative 0.23%. The population increase in the other regions shows large deviations, the population growth rate being the lowest in the East, Vardar and Southeast region, equal with the average in the country in the Southwest region, somewhat higher in the Northeast and Skopje region, and highest in the Polog. The Skopje region stands out for its huge absolute population increase, as it accounts for as much as 43% of the total population increase in the country, while Polog has the highest relative – as well as a large absolute – population growth, as it participates in the total population increase in the country by 31.3%.

The Skopje and Polog regions, account for three-fifths (60.5%) of the total natural population increase in the country. Together with the Southwest and Northeast, these four regions account for about 84% of the total natural population increase.

The population density increased for 3.9%, ranging from 0.8% (East region) to 8.5% (the Polog region). The Pelagonija region is the only one in which the density is on the downward line. The Skopje region was and remains the area with the highest density in the country with municipality of Chair being characterised with highest population density in the region. Only the Skopje

and Polog regions have a population density higher than the average. Furthermore, the population density of the Skopje region is eight times bigger than the region with the lowest population density and 2.6 times bigger than the Polog region.

3. Significant disparities exist among the statistical regions concerning the level of educational attainment. The highest proportion of the population with higher school, faculty or academy lives in the region of Skopje (48.1%); which is four times more than Pelagonija as a second most significant region according to this indicator (12.3%) and nine times more than the share of the population with higher school, faculty or academy that lives in the Northeast region (5.2%). The concentration of educated people in the City of Skopje is outstanding; almost 50% (49,554) of the highly educated people in the country live in the city.

4. The regional unemployment rate in 2002 varied between the ranges of the lowest of 30.4% in the Skopje region to 49.9% in the Polog region. Three regions: Skopje, Southeast (34.4%) and East (34.5%) had an unemployment rate bellow the national average (38.1%). In Skopje region, the service industry is the most dominant, engaging 66% of the employed in that region. Also, this is one of the regions where the unemployment rate of women (28.4%) is lower that that of men (31.8%) due to the high presence of women in the service industries. The industrial sector is the most dominant in the East region, covering 49% of the employed in the region, much more than any other region. This is also a region with equal rates of unemployment of men and women. The Southeast region is mainly an agricultural region with agriculture employing 36%. The unemployment rate of men is 31.9% whereas the unemployment rate of women is significantly higher (38.2%).

The extremely high long term unemployment (80% of all the unemployed registered with the Employment Agency) is a feature which can be found in all regions without an exception. It also shows an ascending line in the record of unemployed at the Employment Agency. However,even if we were to take out 100,000 unemployed who are registered in order to be entitled to health insurance, long term unemployment would still be very high, i.e. 75% of the total number of unemployed. This is a clear sign on the structural characteristics of the unemployment phenomenon and insufficient creation of new jobs.

Table I - 7 Development disparities among the statistical regions of the country

Region	Surface area (km^2)	Population 2002 census	Population density 2002	GDP per capita PPP 2002 USD	GDP per capita PPP 2002 USD country=100	Unemployment rate % 2002	Unemployment 2002	Population with higher education, 2002	Share of population with high education, 2002
Total	**25,713**	**2,022,547**	**79.0**	**6,850**	**100**	**38.1%**	**283,469**	**104,083**	**100**
Pelagonija	4,719	238,136	50.5	6,905	100.8	39.9%	41,527	12,788	12.3
Vardar	3,346	133,180	39.8	5,591	81.6	43.9%	24,784	5,717	5.5
Northeast	2,306	172,787	74.9	3,541	51.7	48.6%	29,161	5,377	5.2
Southwest	3,280	221,546	67.5	4,192	61.2	42.4%	29,142	8,673	8.3
Skopje	1,818	578,144	318.0	11,964	174.7	30.4%	67,664	50,112	48.1
Southeast	2,741	171,416	62.5	6,050	88.3	34.4%	26,513	5,765	5.5
Polog	2,479	304,125	122.7	3,076	44.9	49.9%	35,496	6,875	6.6
East	4,188	203,213	48.5	5,104	74.5	34.5%	28,853	8,776	8.4

Source: UNDP study on Disparities among Municipalities, 2004

1.3. OUTLINE OF THE SITUATION IN THE RURAL ECONOMY

1.3.1. General description of the economic activities and legal basis

The State Statistical Office delineates business subjects by main activities in accordance with the National Classification of Economic Activities-NCEA (OG 20/98). According to the Law on One - Stop - Shop System and maintaining of Trade Register and Register of other legal entities (OG 84/05), starting 01.01.2006 determination of business subjects by main activities is carried out by the country's Central Register.

In the Evidence of the business subjects, maintained by the State Statistical Office, in 2005 a total number of 175,557 businesses were recorded. From the total number 38.2% are enterprises, 41.4% are trade companies, 11.9% are sole proprietors and 8.5% are others (bodies of state administration, units of the local self-government, political parties, association foundation and other). According to the main activity, most of the recorded business subjects in the Evidence are registered in the section wholesale and retail trade, repair of motor vehicles, motorcycles and personal and household goods 50.8%, in manufacturing section 12.0%, in transport, storage and communication section 9.6%, in the section other community, social and personal service activities 7.3%, in the section hotels and restaurants 4.7%, in the section real estate, renting and business activities 4.5%, in the section construction 4.5%, in the section agriculture, hunting and forestry 2.8% etc.

Private enterprises play an important role in the economy as evidenced by their (a) contribution to GDP, (b) the effects they have on the creation of employment, (c) as well as the value of exports.

The enterprise sector in the country does not substantially differ from the sector in other countries in terms of its importance for the economy. Almost in all countries in the region SMEs represent between 98% and 99% of the total number of enterprises in the private sector. Similarly, the number of registered enterprises continuously is increasing, and so is their contribution to the economy. Still, the number of registered enterprises is not always a sufficient indicator: of the approximately 180,000 registered enterprises, only 1/5 is active meaning that they perform some business activities during the year. Most active enterprises are small in size. For example, in 2005, this size category of active enterprises represented 98.7% of the total of active enterprises, reflecting the importance of these enterprises for the economy of the country.

In 2005, the number of active enterprises was 44,424. The number of small enterprises was 43,877; the number of medium-sized enterprises 463 and the number of large enterprises was 84.

Table I - 8 Number of active enterprises by sectors (2005)

Sector	Small	Medium	Large	TOTAL
Agriculture, hunting and forestry	934	30	2	966
Fishing	28	0	0	28
Mining quarrying	86	6	1	93
Manufacturing	7 069	183	39	7 291
Electricity, gas and water supply	57	16	6	79
Construction	3 061	43	9	3 113
Wholesale and retail trade	21 511	109	12	21 632
Hotels and restaurants	1 937	18	1	1 956
Transport, storage communication	4 468	23	9	4 500
Financial intermediation	34	1	1	36
Real estate, renting and business activities	2 150	16	2	2 168
Public administration and defence	2	1	0	3
Education	294	0	0	294
Health and social work	1 387	3	0	1 390
Social and personal services	859	14	2	875
TOTAL	**43 877**	**463**	**84**	**44 424**

Source: Central Registry (Ministry of Economy), 2005

Small enterprises are mostly active in the wholesale and retail sector. Their number in 2005 was 21,511, which represents 49.0% of the total number of small active enterprises. Other important sectors in respect to the number of small enterprises were manufacturing with 7,096 enterprises, transport, storage and communication with 4,468 enterprises and construction with 3,061 enterprises. Agricultural enterprises account for 2% of the total.

The SMEs sector is made up largely of micro and small enterprises concentrated in low value added operations in the service, wholesale and retail, transport and construction sectors.

The number of enterprises by towns is also an important indicator that shows the density of enterprises in specific regions or towns. Actually, as the number of enterprises in a given region increases, the same region is more developed and competition among enterprises is enlarged. Besides Skopje, where most of the enterprises are located, there are other regions in the country in which the number of enterprises is relatively high compared to the population of that region. The number of active enterprises in Skopje is 17,228, which represents 38.8% of the total number of enterprises. Towns that also have large numbers of enterprises are Bitola (3,067), Stip (2,290), Tetovo (2,167), Kumanovo (2,153), Prilep (2,081), Strumica (2,041) and Ohrid (2,010). For details, see table 1, Annex 1.

The average number of businesses per thousand inhabitants in rural municipalities (municipalities with a seat in a village) is 36.8 compared to 99 in urban municipalities (with a headquarter in town). The national average is 86.8 businesses per thousand inhabitants.

In 2005, according to the State Statistical Office 10% of total number of business entities' headquarters was located in rural municipalities and 2.9% of the total number of registered enterprises is in the area of agriculture, hunting, forestry and fishery (5,024) – of which 21.4% are based in the rural municipalities. (Table 2, Annex 1)

Status of Legislation. The establishment and the operation of SMEs are defined by more than 60 laws, which – among others - regulate (a) the registration of companies, (b) commercial and financial operations, (c) employment relations or (d) taxation. In this context, laws that were newly adopted or amended during 2005 included the following:

Classification of Enterprises. According to the Law on Trade Companies, enacted in 2004, enterprises may take one of the following legal forms: General Partnership Companies, Limited Partnership Companies, Limited Liability Companies, Joint-stock Companies and Limited Partnerships by shares.

Most of the enterprises are registered as limited liability companies (LTD). This means that one or more natural or legal persons establish them, and that the number of founding shareholders does not exceed 50. In addition, the founding (initial) capital of the enterprise should be at least € 5,000 in MKD equivalent. Enterprise definitions also take into account the size, turnover and activities of the enterprises.

Table I - 9 Classification of enterprises

	EU Definition for Enterprise	Law on Trade Companies (2004)
Micro	Up to 10 employees Annual turnover ≤ EUR 2 Mio. and/or Balance sheet total ≤ EUR 2 Mio.	2/2[16] Up to 10 employees Annual turnover ≤ EUR 50.000
Small	Up to 50 employees Annual turnover ≤ EUR 10 Mio.and/or Balance sheet total ≤ EUR 10 Mio.	2/3 Up to 50 employees Annual turnover < EUR 2 Mio.; or Balance sheet total < EUR 2 Mio.
Medium	Up to 250 employees Annual turnover ≤ EUR 50 Mio.and/or Balance sheet total ≤ EUR 43 Mio.	2/3 Up to 250 employees Annual turnover < EUR 10 Mio. or Balance sheet total < EUR 11 Mio.
Large	All others which do not fall under the above	All others which do not fall under the above

Source: Law on Trade Companies, 2004, Ministry of Economy

The classification of enterprises in the Law on Trade Companies was prepared in accordance with EU definition. However, bearing in mind the size of the economy and the corresponding size and economic capacity of the economic actors in the country, the turnover/income and assets value comparing to EU definition are adjusted (decreased) by ¼.

[16] 2/2 – two out of two conditions should be met; 2/3 – two out of three conditions should be met

Sole Proprietors. The Law on Trade Companies regulates the legal framework for sole proprietors. The difference between a LTD and sole proprietors lies in the personal responsibility of the sole proprietor for his/her liabilities with his/her property. The name of the firm (legal entity – sole proprietor) consists of the name, the father's name and the surname of the sole proprietor. Such a legal form shortly is termed "TP".

Table I - 10 Number of Sole Proprietors by Sectors (2002-2005)

Sector	2002	2003	2004	2005
Agriculture, hunting and forestry	10	23	31	30
Fishing	0	0	0	1
Mining quarrying	0	0	0	0
Manufacturing	978	957	915	910
Electricity, gas and water supply	0	0	0	0
Construction	181	172	168	159
Wholesale and retail trade	3,634	3,565	3,602	3,501
Hotels and restaurants	901	873	873	818
Transport, storage communication	574	540	529	509
Financial intermediation	2	1	2	1
Real estate, renting and business activities	1,007	1,077	1,182	1,262
Public administration and defence	0	0	0	0
Education	25	21	21	21
Health and social work	160	150	130	81
Social and personal services	578	578	584	601
TOTAL	**8,050**	**7,957**	**8,037**	**7,894**

Source: Central Registry (Ministry of Economy)

In 2005, the number of sole proprietors was 7,894. Compared with the previous three years, this was the lowest number. Still, the difference is insignificantly small, i.e. the number of sole proprietors varies only slightly (by no more than 2-3%). For example, in 2005 the number of sole proprietors was by 1.9% lower than the number in 2002 or by 1.8% compared with 2004.

Sole proprietors are mostly found in the wholesale and retail trade sector. In 2005, 44.3% of the total number of sole proprietors was operating in this sector. Other significant sectors that have a larger number of sole proprietors are real estate, renting and business activities (15.9%), manufacturing (11.5%) and hotels and restaurants (10.3%). These four sectors together represent a share of 82.2% in the total number of sole proprietors in 2005.

Throughout the years, some sectors have increased in importance as far as the number of sole proprietors is concerned. For example, in the sectors agriculture, hunting and forestry, real estate, renting and business activities and social and personal service the number of sole proprietors is increasing continuously since 2002. On the other hand, the number of sole proprietors is decreasing in sectors like manufacturing, construction, hotels and restaurants, transport, storage and communication, as well as health and social work.

1.3.2. Craftsmen sector

A new Law on Craftsmen Activities was adopted in 2004, replacing an old law dated 1998. The Law defines craftsmen as any physical person that is registered in the Registry of Craftsmen in the Regional Craft Chamber. The Registry of Craftsmen includes the information of the craftsman, the activities undertaken, description and codes of these activities in accordance to National Clasification of Economic Activities (NCEA), and Company name, abbreviation of company name (if applicable), location and address of the premises. There are four groups of activities that are considered as a craft activities:

- Manufacturing and small scale production
- Services
- Artistic craft
- Home base hand craft

In May 2007, the Law on Craftsmen Activities was amended and from September 2007, all craft micro and small enterprises registered by Law on Trade Companies are obligated to register in Regional Craft Chambers. This amendment improves the control (and statistics) and gives a better overview of the situation of this sector in term of number and activities of all craft micro and small enterprises in the country.

Table I - 11 Micro enterprises registered by Law on Craftsmen Activities (2007)

Cities	Micro Craft Enterprises	Services	Production	Artistic craft	Home based Hand craft	Craftsmen based in villages
Skopje	3,518	1,799	1,105	293	323	2% (70)
Strumica	179	135	35	5	4	2% (4)
Gostivar	310	120	180	0	10	10% (31)
Tetovo	130	49	78	0	3	7% (9)
Veles	96	77	10	4	5	10% (9)
Total:	**4,137**	**2,180**	**1,486**	**298**	**345**	**3% (123)**

Source: Regional Craft Chambers of Skopje, Strumica, Gostivar, Tetovo and Veles

Almost 90% of all craft activities in rural areas are services, 6% are home-based handcraft activities, 3% are small-scale production and 1% is artistic craft activities. The Regional Craft Chambers of Ohrid, Kumanovo, Debar, Vinica, Gevgelija and Stip are in a stage of establishing their Craft registers and are excluded from the table. The above figures are most probably underestimated considering the fact that a large number of micro and small craft enterprises is still not registered under the Law of Craftsmen Activities and they still operate according to the previous Law from 1998 and are registered in Ministry of Economy (For example Gostivar had 2,500 craftsman, Veles had 1,200 craftsmen and Strumica had 1,640 craftsmen). Also, a number of micro and small craft enterprises are registered under the Law on Trade Companies and this data is not still available in the Regional Craft Chamber Registry.

At last, the contribution of the informal sector should not be under estimated. Field research conducted by different Regional Craft Chambers (Strumica and Gostivar) showed that in some regions the informal craft sector is bigger than the formal one.

In addition to this, for example the USAID project *Made in Macedonia* has identified 430 home base handcraft & art craft enterprises and only 10% of those are registered under the Law of Craftsmen Activities or Law of Trade Companies.

Craft activities in rural areas*.** The major areas of home manufacture in the craft sector in ***rural areas in the country are:

- Weaving (Eastern Part of the country, in villages around Delcevo, Berovo, Pehcevo, Kocani Vinica, Western part of the country, in villages around Tetovo);
- Embroidery, knitting and sewing (Central area of the country, villages around Krusevo, Bitola, Resen);
- Pottery, (villages around Kicevo, Veles, Strumica);
- Woodwork, woodcarving and wood processing (Eastern Part of the country, in villages around Delcevo, Berovo, Pehcevo, Western part of the country, in villages around Tetovo and Gostivar);
- Blacksmiths (South of the country, villages around Strumica);
- Felt production (Eastern Part of the country, in villages around Delcevo, Berovo, Pehcevo, Kocani, Vinica, Probistip);

The Craft Sector established centuries ago and with long traditions in the country, is perceived as a sizeable contributor to the social, economic and cultural life of the rural areas of the country. The transition period influenced this sector and especially the group of crafts related to the rural areas. Trend of losing the markets continued for the main reason -changes resulting from the technological advancement of the society, which has led to the complete waning of most of them. Another reason for these crafts dying out is that this layer of the handicraft sector characterizes itself with a low level of entrepreneurship and lack of business skills (product development, marketing and sales). In the last 5 years the crafts sector has shown some growth in terms of export and domestic sales also accelerated by international technical assistance (*Made in Macedonia*, USAID Project 2002-2005). Main export product is the traditional woven rug “jambolija”. Although domestic sales have been lower, local marketing efforts resulted in a high level of return on investment and now appear to be the most sustainable market option.

1.3.3. Micro and small enterprises in specialty/niche food products sub-sector

The definition of the speciality/niche food products sub-sector is difficult as it covers several agriculture sub sectors (fruit & vegetables, herbal, (medical and aromatic plants & wild mushrooms, apiculture, mushrooms cultivation and dairy).

The main criteria defining this sub-sector are that it includes micro and small enterprises located in rural areas that support the characteristic life style, that sell products based on raw materials partly related to own-farm resources and use traditional production techniques/recipes. Main sales are on local markets, “food boutique” oriented retail outlets, gifts and souvenir markets. Packaging and labelling are “additional value”.

This sub - sector of micro and small enterprises is including enterprises, which are using mostly local on- farm resources for production/processing of niche food products such as: Honey products, Fruit jam and preserved fruit; Traditional vegetable products-pepper powder, “ajver”, “pindzur”; Preserved vegetables; Fruit-berries processing products; Medical/oil herbs and spices; Mushroom cultivation and processing; Home made vinegar; Dried fruit and vegetable; Milk products (cheeses such as: ”ovco sirenje”, “kaskaval”).

The typical enterprise in the speciality/niche food sub sector, could be described as a small-scale, newly founded, private local entrepreneur-owned company registered under the Law of Trading Companies, fulfilling the minimum hygiene standards for processing and trade, local market oriented and with capital inflow from domestic sources.

This sector is currently a small one in terms of number of enterprises. In the Fruit and Vegetables, the Chamber of Commerce Registry[17] there are 35 micro and small fruit and vegetable processing enterprises. Four of them (12%) are registered in villages and 40% (14 enterprises) are specialising in producing special niche products like “ajver”, “pindzur” and “lutenica”.

In the mushroom cultivation sub-sector, the number of registered micro and small enterprises for mushrooms cultivation is around 30 (Source: Central Register and Chamber of Commerce), but assumption is that this number is bigger because of presence of “unregistered” producers who are selling on “open green” markets in big cities.

In the apiculture sub-sectors, most of the producers (12.000 beekeepers) are in informal economy and according from the data (National Association of Beekeepers) approximately 500 – 600 are registered as a legal entity. In Chamber of Commerce Registry there is only one honey producer registered. They are registered mostly under Law for Trading Companies, but several beekeepers registered under Law for Craftsman activities have also been identified.

In the medical/oil herbs and wild mushrooms sub sector, the Chamber of Commerce Registry includes 17 micro and small fruit and enterprises for production, collecting and processing of medical and aromatic plant and wild mushrooms. 18% (3 enterprises) of them are registered in villages and 100% (17 enterprises) of them have collecting points in different villages in the country. The challenges related to development of this sector are high because of the complexity of this sector and short time of existence (lack of analyses about the sector, no developed strategies, no data of lessons learned etc). This sector needs to establish basic technology level, so the

[17] Catalogue of Chamber of Commerce 2006 (issued with cooperation and of GTZ and Land O’Lakes” USAID Project

possible investments should be focused on investments in buildings and equipment.

Generally, rural areas are not attractive to businesses for several reasons: lack of concentration of population, poorer educational levels, lesser flexibility of the potential workforce, and distances from potential markets (for both inputs and outputs), all putting businesses in rural areas at a cost disadvantage. Poorly developed and diversified economic infrastructure and the consequent lack of quality jobs are common features of rural areas in the country. These are also the main causes of development lag typical of these areas.

1.3.4. Rural Tourism

Rural tourism in all its forms (agri-tourism, eco-tourism, cultural/monastery, wilderness sports, eno-gastronomic, hunting, spa, etc.) and, more in general the tourism industry is small and well below the potential. Tourism is regulated by the Law on Tourism (OG 62/2004) and its bylaws. The Law on Tourism defines ethno-village tourism services as visit of tourists in village households for the purpose of vacation and recreation. Tourism services in ethno-village tourism are renting horses for horseback riding, photo-safari, producing and selling of local handicrafts, souvenirs, instruments and other products and services in the village household. The Law on tourism (OG 62/2004) defines services in eco-tourism (art.51) as visiting regions with special natural characteristics, as well as in protected areas for the purpose of vacation, recreation and site seeing of the natural beauties on a manner determined by law. Tourism services in eco tourism are renting of vehicles for site seeing of natural beauties, selling of natural fruits, describing the natural beauties, photo safari and other services that do not harm the nature on a manner determined by law (art.52).

In addition, the Law on Catering (OG 62/2004) mentions Catering services in village households (Article 53), as follows: "*Services related to renting rooms and apartments may be provided in the households in the villages (hereafter referred to as: village households), the owner of which or the person having the right of utilization is a member of the village household, up to 10 rooms, or 20 beds. The services under paragraph 1 of this Article may be provided if the conditions stated in Article 5 of this Law have been fulfilled. In addition to the services under paragraph 1 of this Article, hot and cold meals, beverages and drinks mainly from own production may be prepared and served in the village households for not more than 50 persons (travellers) at the same time. Services of wine or brandy tasting may be provided in the village households, as well as serving home made food, in a furnished section of the residential or business facility, in a closed, covered by a tent, or open space, for not more than 50 persons (travellers) at the same time. For the purpose of improving the quality of the catering offer, in the village households the travellers (persons staying in the village households) may prepare meals, drinks and beverages for their own needs.*"

The competent government authority for tourism is the Tourism and Catering Department in the Ministry of Economy, which has recently announced an open tender for updating the Tourism Master Plan of 2002. In addition, a draft

Strategy for Tourism and Action Plan has been prepared by the Ministry of Economy and is in a process of consultations with the social and economic partners and line ministries.

The knowledge transfer system for tourism is within the Faculty of Tourism and Catering placed in Ohrid, Faculty of Tourism in Skopje and an Institute for Tourism Researches.

Table I - 12 Number of tourists and number of nights spent (2000-2006)

Year	Number of tourists			Number of nights spent		
	Total	domestic	foreign	total	domestic	foreign
2000	632,523	408,507	224,016	2,434,639	1,940,772	493,867
2001	333,308	234,362	98,946	1,254,582	1,041,831	212,751
2002	441,712	318,851	122,861	1,850,384	1,575,664	274,720
2003	483,151	325,459	157,692	2,006,867	1,660,667	346,200
2004	465,015	299,709	165,306	1,865,434	1,504,845	360,589
2005	509,706	312,490	197,216	1,970,041	1,527,053	442,988
2006	499,473	297,116	202,357	1,917,395	1,474,550	442,845

Source: SSO Yearbooks, 2006

Tourism experienced drastic changes in the early 1990's, with the break-up of Yugoslavia. Although in the first years from the statistical viewpoint the share of foreign tourists seemingly increased, it was due to the fact that the guests from the other former republics of Yugoslavia were considered as foreign. There were also years when the country's internal tourists were almost the only users of tourist capacities, but in the recent years, even their number decreased due to the low living standard of a great part of the population.[18]

The conflicts in the region contributed to a bad media image. The comparison of data from 1987 and 2001, shows that the number of nights spent by foreign tourists decreased for 86%, from 1.55 million to merely 0.21 million, and the number of nights spent by domestic tourists decreased for around 57%, from 2.43 million to 1.04 million.[19] After halving in 2001 compared to the previous year, the annual number of tourists has been growing gradually but slowly. In the period 2000-2006, the official statistics show that the average number of tourists (both inbound and domestic) is around 480 thousand per year, of which only one third (around 150 thousand/year) is from foreign countries. Of these, 50% is from the neighbouring countries.

The average number of nights spent per tourist is four, but foreign tourists spent about half of this figure. Tourism contributed with 1.5% to the GDP in 2005 and the average number of employed in the sector in the period 2000-2005 was 10.192 reaching 10.671 in 2005.[20]

Official statistics do not provide data focused specifically on rural tourism in all its forms. During the period 2000-2006, the leading tourist destinations are the lake areas, the most important one being the lake of Ohrid, followed by Skopje (20%), mountain areas (9%) and Spas (4%).[21] According to a study carried

18 GTZ

19 Ministry of Economy – *Master Plan for tourism in Macedonia*, Louis Berger S.A, April 2003. The study is being currently updated and reviewed

20 SSO

21 SSO

out in 2002[22], the main reasons for coming to the country are business trips, mainly in Skopje and seminars mostly in Ohrid, vacation and recreation and cultural tourism.

Table I - 13 Nights spent by tourists according to type of tourism site (2001-2006)

	Total	Skopje	Spas	Climate areas		Non-tourist areas
				Mountain areas	Lake areas	
Total						
2001	1,254,582	147,426	122,698	106,559	772,487	105,412
2002	1,850,384	159,371	136,129	119,369	1,326,885	108,630
2003	2,006,867	189,014	122,737	119,800	1,493,006	82,310
2004	1,865,434	177,470	131,993	117,443	1,345,217	93,311
2005	1,970,041	195,825	125,539	122,761	1,417,306	108,610
2006	1,917,395	191,314	120,298	110,337	1,369,428	126,018
Domestic						
2001	1,041,831	29,958	119,230	98,481	730,074	64,088
2002	1,575,664	27,843	129,034	114,148	1,230,932	73,707
2003	1,660,667	34,067	114,203	113,751	1,355,619	43,027
2004	1,504,845	31,164	123,340	104,783	1,199,461	46,097
2005	1,527,053	33,622	111,787	98,203	1,231,869	51,572
2006	1,474,550	32,913	104,253	89,200	1,179,950	68,234

Source: SSO, 2006

Foreign tourists arrive mainly by road or regular air flights. In 1998, foreign tourists spent an estimated average of €72.5 per day.

The tourism activities are organised and supported by different organisations and associations, the most important one being the Services Chamber within the Chambers of Commerce that deals with trade, tourism and catering; and the Chamber of Tourism that was established in 2002[23]. Two tourism associations function within the Services Chamber, the Association of Tourist Agencies (ATAM) and of the Hotel Proprietors Association (HOTAM).

The National Development Plan (2007-2009) states that the development of tourism is regarded as an important development priority both because it offers numerous business opportunities and jobs, but also because it supports the country's objectives in the area of trade, export and investment. The NDP further states that rural or country tourism is often considered an indicator of good quality regional development and that the country does have the potential for development of this tourism, because of the characteristic traditional architecture, favourable environment, diversity of sites to see, visit and do and the hospitality of people. According to the National Development Plan (2007-2009), the planned investment needs for rural tourism development for the three year period total € 3 million (or about 2.8% of the total planned investments - still to be determined).

The National Agricultural and Rural Development Strategy 2007-2013 (NARDS) states that it is a priority to promote the integrated development of a sustainable rural tourism in the country, which should be carried out in

[22] Ministry of Economy - *Master Plan for tourism in Macedonia*, Louis Berger S.A, April 2003. The study is being currently updated and reviewed.

[23] Ministry of Economy - *Master Plan for tourism in Macedonia*, Louis Berger S.A, April 2003. The study is being currently updated and reviewed.

cooperation by all relevant Ministries and stakeholders (private sector, associations, etc). NARDS considers rural tourism an important factor for off-farm employment in rural areas that suffer from weak number and strength of enterprises (in particular SMEs), a lack of alternative off-farm opportunities and mainly agricultural rural population, often subsistence oriented, with low incomes and value added. Therefore, NARDS supports rural tourism as a sub measure of the measure Development and diversification of rural economic activities.

From a point of view of the tourism industry, a study conducted in 2002[24] detects that some of the priorities of the tourism sector are increasing the export of tourism services, better employment situation, improvements in the distribution of tourists throughout the year and better geographical distribution of tourists throughout the country (tourists are currently concentrated in the capital and in the lake region of Ohrid). The development of rural tourism would contribute to these objectives as well.

Eco tourism. The natural conditions of the country (geological content, relief, climate, hydrography, soil, flora, and fauna) make it one of the countries in Europe with wealth of natural values. In the past five decades of organized protection of natural rarities in the country, 74 objects of nature have been included in the protected areas network, with a total area of 187,895 ha, or 7.30% of the national territory. According to the Law on Nature Protection (OG 67/04; 14/06 and 84/07), the following have a status of protected wealth:

- 3 national parks, with an area of 108,338 ha, or 4.2%;
- 4 strict natural reserves, with an area of 12,855 ha, or 0.50%;
- 3 landscapes with special natural characteristics, with an area of 2,338 ha, or 0.09%;
- 14 distinct plant and animal species outside the natural reserves, with an area of 2,709 ha, or 0.10%;
- 33 nature parks protected (category of nature monuments), with an area of 61,655 ha, or 2.4%.

The law regulates the nature protection by protecting the biological and landscape diversity, and the protection of the natural heritage, in protected areas and outside of protected areas. The system of protected areas is established for the purpose of protection of the biological diversity within the frames of the natural habitats, the processes occurring in the nature, as well as the abiotic features and the landscape diversity. By proclamation of the area as protected, it acquires status of natural heritage. Categories of natural heritage, within the meaning of this Law are:

1. Strict Natural Reserve. Strict Natural Reserve is an area, which, because of its significant or characteristic ecosystems, geological or physical and geographical features and/or species, as well as originally preserved wilderness, acquires the status of natural heritage, primarily for the purpose of carrying out scientific surveys or monitoring of the protection.
2. National Park, The National Park is a large, mainly unchanged area of land or water with particular multiple natural values, which encompasses one or

[24] Ministry of Economy - *Master Plan for tourism in Macedonia*, Louis Berger S.A, April 2003. The study is being currently updated and reviewed.

more, preserved or insignificantly changed ecosystems, primarily designed for the conservation of the original natural, cultural and spiritual wealth. The National Park is intended for scientific-research, cultural, pedagogic-educational and tourist-recreational purposes.

3. Natural Monument, Natural Monument is a part of nature with one or more natural characteristics and specific, threatened or rare features, characteristics or forms, and has special scientific, cultural, educational and spiritual, aesthetic and/or tourist value and function. Natural Monuments include: lakes, rivers, gorges, waterfalls, springs, caves, rocks formations, geological profiles, minerals and crystals, fossils, rare or indigenous trees and bushes characterized by great age and specific habitual characteristics, as well as limited small areas of endemic and rare animal or plant communities significant for their scientific value.
4. Nature Park, Nature Park is an area that has one or more authentic, rare and characteristic components of nature (plant, fungi and animal species and communities, relief forms, hydrological values etc.).
5. Protected Landscape and Protected Landscape is an area where the interaction of the people with the nature has created over time a landscape with particular characteristics and aesthetic, environmental, cultural and historical or ethnographical importance, characteristic for that area only, which at the same time has a significantly high biological diversity.
6. Multipurpose Area. Multipurpose Area is an area, which is usually spreading on a relatively wide territory of land and/or water, rich in waters, forests or meadows, and may be used for hunting, fishing or tourism, or reproduction of wild animals.

In the specific mountain/climbing tourism segment, the French, Polish, Slovenian, German, Dutch nationalities seem to be the most reported (all with rising figures in the last three years). The situation for what concerns Eco-tourism in the country appears an interesting one, taking into account that:

-a large number of NGOs appear operating in some form in this sector, in many rural areas of the country. This appears to be the result of the many small-to-medium scale capacity-building projects funded since 2000;

-since 2004 a magazine about mountain tourism named *Korab-Tough* has been published twice a year as in inter-Balkan initiative that is now involving 7 different countries (Albania, Bulgaria, Croatia, the Republic of Macedonia, Greece, Serbia and Montenegro);

-visits in various parts of the country enabled to assess that hiking and climbing are among the most favourite activities by foreign tourists, arriving in the country either with organized-tours, or by self-initiative (in couples or small groups). These activities are already interesting some rural areas that provide suitable food and accommodation.

Unfortunately, there is no nationwide system for accreditation of guides in specific sectors (e.g. climbing, horse riding, etc), so standards cannot be checked and guides that are already recognized according to European and/or International standards can be out-placed in their activity by local people that just have some knowledge of the sites being visited by tourists.

This situation is likely to produce some negative effects on the state and development of eco-tourism activities (e.g. lack of security, grey market, etc).

Cultural and Monastery Tourism. The cultural tourism in the country has the biggest development potential considering the diversity and quality of cultural and historical treasures and archaeological sites in the country and the increasing interest in cultural tourism on the market. There are 10,974 buildings registered as part of the immovable cultural heritage[25] (4,361 archaeological sites; 1,726 churches and monasteries with over 150,000 square metres of mural fresco paintings; etc.) and 500,000 museum relics. Institutional responsibility for cultural heritage (by types) rests with the Bureau for the protection of cultural monuments (immovable cultural heritage) and museums, libraries and the national cinématheque (moveable cultural heritage).

Cultural sites in the country already attract tourists, mainly as a package offer along with the visits of neighbouring countries. The country is rarely the initial motive to visit the region, but it is a very common reason to extend the stay, which represents a potential market for other tourism segments. Data concerning the visits to cultural sites need often still to recover up to the figures recorded in the former Yugoslavia period.

Cultural tourism is one of the priorities in The National Programme for Culture 2004-2008 (OG 31/98; 29/2003) where it is considered an important factor for sustainable development of culture. A part of this programme focuses on creating conditions for development of cultural tourism as a factor of social and economic development; affirmation, presentation and usage of cultural and natural sites for the purpose of cultural tourism.[26] Some of the projects of the Ministry are the finalised World Bank project *Development of Municipalities through Culture* that was implemented for strengthening local economies and cultural industries, reduction of poverty, increased and sustainable employment and socio-economic development, the current UNESCO project on promotion of cultural tourism with a purpose of devising four publications on the cultural heritage and other projects.

The cultural heritage is regulated according to the Law on Cultural Heritage Protection (OG 20/04, 115/07), passed on 19 March 2004 and effective from 1st of January 2005. According to the Law, the term cultural heritage includes the material as well as the spiritual cultural heritage, defining their meaning as an expression and/or a testimony of the human creation in the past and the present, or a representation of the interaction between the man and the nature, with cultural and historic importance of their feature, significance and function, under special legal regime on their protection. According to its features the cultural heritage can be immovable, movable and intangible; according to its cultural importance it can be heritage of special importance

[25] According to UNESCO cultural heritage is defined as term which encompasses several main categories of heritage: **Tangible cultural heritage** [movable cultural heritage (paintings, sculptures, coins, manuscripts, etc.), immovable cultural heritage (monuments, archaeological sites, and so on), underwater cultural heritage (shipwrecks, underwater ruins and cities and so on)]; **Intangible cultural heritage** (oral traditions, performing arts, rituals, and so on); **Natural heritage** (natural sites with cultural aspects such as cultural landscapes, physical, biological or geological formations, and so on) and **Heritage in the event of armed conflict**. This definition is applied in the Law on Cultural Heritage Protection (OG 20/04,115/07).

[26] Source: National Programme for Culture 2004-2008

(cultural heritage of outstanding national importance and cultural heritage of great importance) and important cultural heritage; and considering the condition of risk it can be cultural heritage in danger (when a special legal mechanism for urgent conservation has to be provided) and not endangered cultural heritage. Any good that has the highest national importance and universal values for the mankind and its history, culture, art, science or technological progress is considered to be of “outstanding national importance”. Any good that has big value for national history, culture, art, science or technological progress is considered a “cultural heritage of significant, special importance”. The cultural heritage that is not classified as heritage of special importance is called “important cultural heritage”.

A cultural heritage threatened by destruction, damage or with serious attack on its integrity is considered a “cultural heritage in danger”. The purpose of the protection is to preserve the cultural heritage in its initial form, to preserve the integrity of all data that it carries, to raise awareness of its values and importance for cultural identification, to enable its use for satisfying cultural, scientific, educational, religious, economic, tourism and other needs and finally to be transmitted to future generations. As a basic value of the country and a public interest, it is to be protected under any circumstances according merely to its cultural value and the conditions of risk. The immovable cultural heritage and the immovable goods are protected together with their surrounding, or so called contact zone defined as the area surrounding the immovable cultural heritage that is important for preserving its historical context and is protected in a manner different of the manner for protecting the immovable property. A protected area is the area of the protected good and its contact zone.

In the following table are shown the villages that are protected as Monuments of Culture and have the status of Cultural Heritage (according to Article 175 from the Law for Protection of Cultural Heritage).

Table I - 14 Villages Listed as National Cultural Heritage

Village	Municipality / Region
Galichnik	Mavrovo and Rostusa / Polog
Kicinica	Mavrovo and Rostusa / Polog
Gari	Debar / Southwest
Smilevo	Demir Hisar / Pelagonija
Zeleznec	Demir Hisar / Pelagonija
Konjsko	Resen / Pelagonija
Gorno Vranovci	Caska / Vardar

Source: Ministry of Culture

The competent Government authority is the Ministry of Culture and special professional service – Directorate for Protection of the Cultural Heritage, as an independent legal agency within the Ministry of Culture. The Directorate for Protection of the Cultural Heritage is responsible for managing the National Register of Cultural Heritage following the national classification that represents a standard form of typological definition or identification and systematization of various cultural heritage of the country. This classification was adopted as Book of Rules (OG 37/06) to ensure a single approach to identification of the cultural heritage and development of an information system for cultural heritage with good comparability and usage of data.

The Ministry is currently working to adapt the new classification system to the sites/monuments previously classified, which process requires a substantial amount of time.

The new Law establishes, for the first time, the category of “Intangible cultural heritage”, which refers to the oral traditions, performing arts, rituals expressions of folklore-habits, rituals, tales, mental creations, folklore songs, stories, legends, adages, riddles, dances, plays, old and rare crafts, traditional crafts and other expressions of the non-material national creation, language and toponyms. Cultural heritage may be publicly or privately owned. Private owners have an obligation to care and maintain cultural heritage and property and to provide access for scientific and cultural research purposes and in some cases to provide access to the general public.

A study was conducted in 1998 on the tourism valorisation of monasteries in the country that emphasizes that an appropriate tourism offer would contribute to their preservation and will help their maintenance. According to such study, there were 155 monasteries in the country, offering 148 rooms for accommodation of visitors, some with emphasised tourism potential due to the favourable natural and geographic characteristics, peaceful locations and availability of tourism accommodations. The monastery tourism in the country is mostly transit and weekend tourism, and much less stationary tourism. Some monasteries have facilities that cannot be used for tourism purposes without prior reconstruction and adjustment, which should be done by preserving their authentic elements from the period when they were built, while others accept visitors only in the periods of religious holidays. There is also the problem of accessibility, road infrastructure and signalization and information brochures, as well as better tourism promotion of monasteries on national level.

The study, however, does not provide many detailed and comparative figures concerning the provision of accommodation and other services that could have been used as an important benchmark to monitor the development of these tourism activities in following years. In overall terms, this sector appears well placed to be further promoted towards both the domestic and the foreign market, and several tourist agencies are already doing it.

Wine tourism. Because of the climate and natural eco-characteristics, the country produces some high quality wines and production tends to be concentrated in a few areas. The sector has been increasing its dimension in the last 3-4 years. Unfortunately, the country's vineyards are not treasured at all and they are not fully included in the country’s tourism profile. The main reason that many wineries are still not developed in the sense of tourist product is that, until a few years ago, their primary goal was to invest in the modernization of the production infrastructure, new technologies and equipment, in order to replace the production of bulk wine and offer to the market high quality bottled wine.

It is a fact that there is no quality tourism without a wide selection of excellent local wines or without beautiful vineyard landscapes, but the development of wine tourism is also closely related to modern accommodation, tasting facilities as well as with a sustainable marketing strategy. The wine areas in the country are concentrated in three regions situated mostly along E-75-

Corridor X, where there is big fluctuation of transit tourists. It is crucial to integrate these potentials and advantages of the wine tourism in the entire tourist offer of the country. As for the weaknesses, there is no detailed analysis of the potentials of wine tourism; there is a lack of accommodation facilities, lack of government initiative and not sufficient marketing and promotion.

During the last few years, the number of new private wineries (mainly small and medium-sized plants) has considerably grown from 28 in 2003 to 50 in 2007, and some of them are starting to adapt and diversify their activities in the direction of wine tourism. A few of them are in the process of preparing accommodation facilities and around 10 wineries have wine tasting facilities.

In December 2005, an association named “MakVino” has been created (with the assistance of Wine Cluster Project of the USAID) with the aim to organise the wine processing industry, promote the country's wines and assist in defining a wine strategy. So far, this association gathered 11 companies out of the 50 registered.

The Tikvesh Wine Route Foundation was founded by 4 municipalities (Kavadarci, Negotino, Demir kapija and Rosoman) and two wineries, and officially established on the 29/11/2006, it now has 11 member wineries in the Kavadarci-Negotino area, the support of Association of MAKVINO (wine producers), of three NGOs from Negotino and three Mountain Associations. The goal of the Foundation is to gather all stakeholders from the region and provide basis for continued development of attractive tourism products and promoting the region as an attractive tourism destination. The Foundation is currently working on a project for creating a new tourism product for valorisation of the potentials of the region for wine, agri, winter, hunting and fishery tourism. The Foundation has so far promoted awareness on wine tourism at regional level, and contributed to institutional building, providing also services (e.g. educational tours in Italy). In addition, other wineries, are already independently attracting a remarkable number of tourists in their cellars, and plan to be able to further enlarge their activity, adding restaurants and rooms, by the end of 2007. Smaller wineries tend to show the same plans, but do not appear to have proper funding. Another large winery interestingly stated that it is considering setting-up a sort of Wine Academy in the area, in order to create a wine-archive and organize specialised training workshops.

In the case of Wine Tourism, visitors mainly arrive from neighbouring countries, plus some from Czech Republic, and also from Germany and Israel. A market for wine-tourism in the Tikvesh area appears to have been already started (all the visited wineries had established links with more than one tourist agency), although some problems do persist (quality of facilities, limited incoming service, limited number of groups arriving/year, lack of promotional materials such as map of wineries offering tasting/catering opportunities, etc).

Farm-Tourism and Village tourism. Currently information on the state of development of rural tourism activities in single farms/properties is unavailable, whereas some indications are provided at village level. A number of rural villages have been interested, in the last 5/7 years, by pilot research

works/projects mostly funded by foreign donors (e.g. USAID, GTZ, Swiss Aid, Dutch Aid, UNDP, World Bank, SIDA, etc).(elaborated in Annex 13)

These projects have addressed mainly the Southern (Ohrid and Prespa lakes) and Eastern (Berovo) parts of the country. The majority of these projects was focused on institution building and on the definition of strategies/plans, and did not include monitoring of the actual development of new business activities (including rural tourism ones).

Moreover, some villages have already been included in tour operators programs, and others are displayed on the official *Exploring Macedonia* and *Go Macedonia* web sites. In addition, the Tourism Department of the MoE started in 2007 a project aimed at assessing the development potential of some rural villages for developing tourist activities but is at preliminary stage.

From the preliminary results of a recent survey, it appears that many NGOs in the country are involved in the organization of activities affecting both the rural environment and rural tourism (usually eco-tourism).

In the case of farm/village tourism, visitors mainly arrive from Holland, Germany and the US.

Foreign investment is for the moment very low but interest has been shown by Dutch (for a number of localities), USA (for a number of localities), Swiss, Portuguese (Prespa lake), Finland (Mariovo area), Italy (Ohrid and Prespa area).

The number of tourist agencies including visits and/or activities in villages can be reasonably estimated in 5/10, mainly based in Skopje and Bitola.

Spa tourism. The territory of the country is characterized by high geothermal activity, mostly with low-enthalpy geothermal energy. The country is situated along the very favourable geothermal zone that starts in Hungary to the North and Italy to the West and stretches through Greece down to Turkey. However, there has not been a systematic measurement of terrestrial heat flow neither organised use of the natural resource for medical/tourist purposes.

Even with a long tradition in medical use of thermal waters, the country has a limited number of active thermal spas. It is evident from the potential of the thermal resources that the approach to this economy sector should be changed in order to reach possible benefits. Orientation towards introduction of recreational activities appears as one of the feasible and economically justified solution.

The country is rich with geothermal resources offering possibilities for development of a large spa business. However, presently, only 8 spas exist in the country. Temperature of the thermal waters differs, depending on the location and geothermal field in question. Highest is the temperature of the water in Bansko thermal spring (73ºC), then in Banja – Kocani (55ºC), Kezovica Spa (54ºC), Katlanovo (40.5ºC), Debar (38.6ºC), Negorci (38ºC), Kumanovo (31ºC), etc.

The same is with the flows on disposal, i.e.: Debar thermal spring (91.2 l/s), Kosovrasti (68.8 l/s), Bansko (35 l/s), Kumanovo (3,34 l/s), Kezovica (5.4 l/s), and Negorci (1.8 l/s).

The existing eight spas have been built between 1960 and 1980. After that, a period of stagnation began due to the slow adjustment and privatisation process. The existing spas are included in the Health care policy of the country managed and funded by the Health Fund through the health care contribution. The process of privatisation of these facilities and the great potential of the country for thermal tourism increases the interest and the activities for development. During the recent years, some new initiatives to recover the situation have been undertaken. The renovation of the current facilities to provide more wellness services rather than the focus being put in medical-cure segment is needed.

The role of rural tourism in favour of the development of rural areas. In the EU's rural development policy, which is becoming increasingly important within the common agricultural policy, the development of rural tourism is one of the possible measures to preserve and rejuvenate rural areas and the rural heritage. Projects in this area qualify for financing via the national rural development plans.

There is a lack of data and of reliable indicators on rural tourism although some studies have been occasionally carried out in the last 10 years. According to the study on the possibilities for development of rural tourism in the country[27], the support to rural tourism would help reduce the tendency for depopulation that the villages and border regions are facing. As in other European countries, rural tourism can significantly contribute to the rural development process in rural areas through:

- Generating income and jobs;
- Exchange between rural and urban areas;
- The multiplier effect in the case of relatively small-scale direct investments;
- Strengthening the local/regional structures by creating networks and public/private partnerships;
- Stimulating developments in the area of physical infrastructure (which in turn may provide opportunities for other economic developments);
- Increasing the diversity of economic activities;
- Raising awareness of the value of an area, such as its landscape, nature and culture, and the economic potential of these.

Agri-tourism in particular is seen as important for protecting the ‘rural way of life’, the rural culture. Tourism offers to farmers an extra economic activity, which increases agriculture's chance of survival. Tourists also constitute a market for the farm produce, for example via the sale of 'regional products' on the farm. Preserving farming promotes the preservation of the agricultural landscape, a key aspect of the rural product for recreation and tourism.

The basic feature, that may represent a suitable basis for a proper start-up of rural tourism sector, is that tourism (including rural tourism) in overall terms is growing all over the country, and especially in the most known destinations (e.g. Ohrid and Prespa lake), and that the country is starting to present its

[27] PhD Nikola Panov – *Possibilities for development of rural tourism in the Republic of Macedonia*, 2000

tourist resources in a more integrated and effective manner, introducing itself to key tour operators.

1.4. AGRICULTURE AND FOOD PROCESSING

1.4.1. Role of agriculture and food industry in the national economy

Agriculture (including hunting, forestry and fishery) is an important economic sector and is the third largest sector after services and industry. In the 2000-2006 periods, the share of the agricultural sector in the overall GDP has remained relatively stable around 12% (compared to the 1.6% in the EU-25).

If agro-processing is included, the percent increases to 16%. Agricultural GDP, in line with overall GDP, declined in 2001, but has recovered since.

Table I - 15 Key Agricultural sector indicators (2000-06)

	2000	2001	2002	2003	2004	2005*	2006**
GDP (€ current million.)	3.893	3.839	4.001	4.105	4.325	4.500	4.827
Gross Agriculture Production	468.9	451.4	494.8	548.0	570.4	556.9	580.1
Agricultural % of GDP	12%	11.8%	10.0%	11.4%	11.3%	12%	12%
GDP real growth (%)	4.5	-4.5	0.9	2.8	4.1	4.1	4.0
Agriculture growth (%)	1.0	-10.8	-2.0	4.8	6.2	1.8	3
UAA (in 000 ha)	1,236	1,244	1,316	1,303	1,265	1,275	n.a.

* Estimated ** Projected
Source: SSO 2006; Study on the State of Agriculture in Five Applicant Countries, EC DG-AGRI 2006

Agriculture has served as shock absorber for the socio-economic and structural changes in industry and other sectors of the economy. Officially, the sector provides income and employment to approximately one fifth of the national workforce but the real contribution probably exceeds this percent as 36% of the labour force and 44%[28] of the poor live in rural areas and population in rural areas rely basically on farming as a major form of economic activity, forestry, craftsmanship and rural tourism. Population engaged in farming includes a high proportion of elderly persons and young people having little motivation to enter and remain in agriculture due to the low and uncertain incomes and poor working conditions.

Agricultural products represent 15-17% of the total country's exports, although the country remains a net importer of agricultural and food products, which accounted for about 15 percent of total imports in 2004-05. The agricultural trade deficit in value terms has been widening in recent years, though a sizeable increase in tobacco and wine exports narrowed the gap in 2005. The trade pattern (export of labour-intensive products and importing land-intensive products) reflects the country's comparative advantage for labour intensive production systems, and the relative land-scarcity.

[28] Macedonia: Growth and Poverty, 2002-2004. Western Balkans Programmatic Poverty Assessment (World Bank).

Promotion of the competitiveness of the production and increase in the income of the rural population is one of the preconditions for social stability in the country. Decline in agriculture, forestry and fishery and associated industries could have significant adverse consequences in rural areas and to the overall economic and social stability of the country.

The country's agriculture is facing major challenges and structural reforms. WTO membership increased possibilities for export expansion but also competition on the domestic market from imported products. These challenges are going to be even more severe with the implementation of the Free Trade Agreements with the neighbouring countries and the EU-27. Strengthening the competitiveness of the country's agribusiness is the focal point for its survival. This must be supported by the reform of the public institutions and by the implementation of well-targeted agricultural support policies and rural development measures.

1.4.2. Agri-food Trade

Agriculture is an important contributor to foreign trade. The relative share of agri-food and fishery exports in the total trade for the period from 2000-2006 averaged 16.8% whereas, in the same period, the relative share of imports was 13.7%. The country is a net importer of agricultural and food products mostly meat, processed products and other food preparation as well as for cereals.

The agricultural trade deficit in value terms has been increasing up to 2004, but in 2005 and 2006, it shows a decreasing trend linked, among others, to increased trade liberalisation.

Table I - 16 Value of total and agricultural products trade (2000-2006)

In € million.		Total trade	Agriculture Trade	%
2000	export	1,435	221	15.4%
	import	2,272	281	12.4%
	trade balance	-837	-62	7.4%
2001	export	1,293	215	16.6%
	import	1,892	268	14.2%
	trade balance	-599	-53	8.8%
2002	export	1,178	221	18.8%
	import	2,106	314	14.9%
	trade balance	-928	-91	9.8%
2003	export	1,207	214	17.7%
	import	2,038	292	14.3%
	trade balance	-831	-84	14.3%
2004	export	1,346	214	15.9%
	import	2,354	338	14.4%
	trade balance	-1,008	-125	12.4%
2005	export	1,644	279	17%
	import	2,601	348	13.4%
	trade balance	-957,5	-69.5	7.3%
2006	export	1,906.2	318.0	16.7%
	import	2,987.7	367.4	12.3%
	trade balance	-1,081.5	-49.4	4.6%

Source: State statistical office, 2005

In comparison with 2005, the export of agro-food products in 2006 increased by 14% whereas imports increased only by 5.6%.

The EU-27 is the most important partner of the country in trade with agro-food and fishery products, with an average share of 43% in the total trade exchange in the 2004-2006 period. The share of agro-food and fishery products export in the EU-25 in total export of these products for 2006 is 46.5%, while the share of import from EU-25 in total import of agro-food and fishery products is 39.8%. Analysis of agri-food trade trends between the country and EU-25 is elaborated in the Annex 2.

Serbia and Montenegro (including territory of Kosovo) is the second most important trade partner of the country in 2006, in the trade exchange with agro-food and fishery products with share of 28.7% in total export and share of 19.9% in total import.

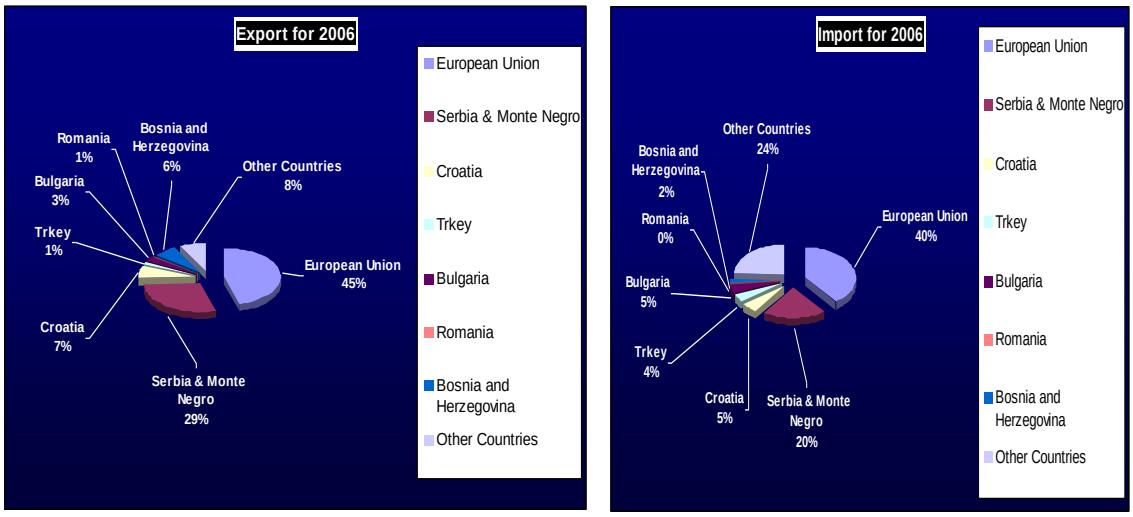
Third partner of the country, in 2006, in trade exchange with agro-food and fishery products is Croatia, with share of 7.2% in total export and share of 5.4% in total import, then Bosnia and Herzegovina with share of 6.4% in total export and share of 2.1% in total import, Bulgaria with share of 2.7% in total export and share of 4.7% in total import, Turkey with share of 0.9% in total export and share of 3.7% in total import and other countries.

Table I - 17 Trade in agro-food, fish and fishery products by countries (2005-06), in Mio. Euro

	Export				Import				Trade balance	
	2005		2006		2005		2006		2005	2006
Country	Mio. €	Share %	Mio. €	Share %	Mio. €	Share %	Mio. €	Share %	Mio. €	Mio. €
EU-25	129.5	46.5	145.1	45.6	145.4	41.8	146.4	39.8	-15.9	-1.3
SCG	77.5	27.8	91.4	28.7	60.7	17.4	73.2	19.9	16.9	18.2
Croatia	18.0	6.5	23.0	7.2	19.8	5.7	19.9	5.4	-1.8	3.1
Turkey	4.8	1.7	2.8	0.9	17.5	5.0	13.7	3.7	-12.6	-10.9
Bulgaria	5.7	2.0	8.5	2.7	20.3	5.8	17.4	4.7	-14.6	-8.9
Romania	1.1	0.4	2.2	0.7	0.3	0.1	0.8	0.2	0.8	1.4
Bosnia and Herzegovina	14.2	5.1%	20.3	6.4%	7.4	2.1%	7.7	2.1	6.8	12.6
Other countries	27.6	9.9%	24.7	7.8%	76.7	22.0%	88.4	24.1	-49.0	-63.7
Total	**278.6**	**100.0**	**318.0**	**100.0**	**348.1**	**100.0**	**367.4**	**100.0**	**-69.5**	**-49.4**

Source: SSO, 2005, 2006

Figure I - 2 *Share of Trade Partners in trade with agro-food and fishery products in 2006*



Source: SSO, 2006

The country's agriculture is facing major challenges and structural reforms. The political and economic integration of the country into the world economy is being conducted and supplemented through three mutually compatible processes of trade liberalization: global integration in the multilateral trading system, integration in the EU, and regional trade integration, conducted simultaneously. This resulted with membership in WTO, the conclusion of Stabilisation and Association Agreement (SAA) with the EU, CEFTA membership and the conclusion of a large number of Free Trade Agreements (FTAs).

The *regional integration* process has been marked by a series of free trade agreements (FTAs) with the countries in the region. The *global integration* was implied by the entry of the country in the World Trade Organization (WTO) in 2003, while the process of *European integration* is defined with the Agreement for Stabilization and Association.

<u>WTO membership</u>

The country applied to join the WTO in 1994, having commenced the negotiations in 2000 and completing them in October 2002. The process of agro-food trade liberalization took a major step forward between 2002 and 2004 with the completion of negotiations for the World Trade Organization (WTO). The Agreement itself was ratified in Parliament in February 2003. The country officially became a member of WTO on 4 April 2003. One of the principles of the WTO system is for the countries to reduce the trade barriers and allow unimpeded trade relations. In the WTO negotiations, the country agreed on significant liberalization for most of the products, while for the agricultural products the customs protections has been retained at a satisfactory level, due to the importance of the agriculture sector. The average customs tariff for the farming products as a result of the negotiations has been reduced from 24.87% to 13.75%. These reduced customs tariffs are a basis for further liberalization of the multilateral and bilateral basis.

By the WTO membership, it committed to termination of quotas (other than tariff quotas in existing free trade agreements), abolition of variable levies and export subsidies, to phased reduction of import tariffs and reform of the State Office for Commodity Reserves. Thus, most of non-tariff protection is being eliminated. However, tariff quotas will remain in place as agreed within the FTAs. In accordance with WTO commitments, import tariffs have been reduced for most traded products, though moderate-to-high tariffs remain in place for highly sensitive commodities produced in the country. Tariff rates applied are now in accordance with the bound rates agreed with the WTO and agreed rates in the context of FTA agreements. As a result conclusion of the Doha Development Agenda round of WTO negotiations, tariff protection of domestic producers will decrease significantly between 2003 and 2008, with average tariffs reducing by as much as half over the period. This trade liberalisation will reduce the price of imported agro-food products, on the one side will expose the country's farmers to increased competition, and on the other side will favour consumers or extra profit from traders. However, export-oriented production is expected to gain under the new trade regime.

The reduction in tariffs will result in a significant reduction in tariff revenues from agro-food imports. It is expected that the WTO import tariff liberalization will result in budget revenue reductions that will be particularly significant in the short run.

As most frequent forms for further trade liberalization are establishment of preferential trade agreements, free trade zones, customs unions and common market (for ex. Common market for EU). The main objectives of the regional free trade agreements are stimulating growth of the domestic economy via:

(i) better access on the market of the national export products in other countries
(ii) attracting and increase of foreign direct investments as well as modern technology as an element in the investments
(iii) increase of the productivity of production and competition on the domestic and external market

Stabilization and Association Agreement

The FTA with EU as part of the Stabilisation and Association Agreement (SAA) is the most important preferential agreement, because of the scope of trade exchange between the country and EU. The FTA between the country and the EU-15 began in mid-2001 under an Interim Agreement that provided for tariff concessions for agricultural and food products, up to 2003. Further negotiations between the European Commission and the country were carried out in 2003, for the purpose of further agro-food and fisheries trade liberalization by 2011, as foreseen in the Interim Agreement. Following the eastward EU enlargement, a series of negotiating rounds took place in 2004 resulting in the Enlargement Protocol, which entered into force on 1 May 2004[29]. On the basis of the trade agreement most of the barriers for entry of the country's farming products have been eliminated, except wine, baby beef, sugar and fish and fish products, for which customs quotas have been agreed

[29] OG 27/2004

or gradual liberalization. On the other hand, for entry of the agri-food products with the origin from the EU, the country has agreed on:

(i) elimination of the customs tariffs for the products defined as non-sensitive,
(ii) gradual liberalization for the mid sensitive products in the transition period to 2011, and
(iii) maximum customs protection for the highly sensitive products and for a part of these products- duty free quotas.

In accordance with Article 35 (SAA), as a result of Romania and Bulgaria's EU membership, the negotiations for the adaptation of the SAA to take account of the accession of Bulgaria and Romania to the EU have been successfully concluded.

CEFTA membership

As a part of the trade integrations connected with the process of accession of the country in the EU is the membership in the Central European Free Trade Agreement – CEFTA, as a means for regional cooperation and evidence for political and organizational; maturity of the countries – candidates for the EU accession.

The country ratified the CEFTA Agreement in 2006 and started its implementation on 24 August 2006.

SEE countries under the auspices of the Stability Pact and the European Commission in June 2006, started the multilateral negotiations for establishment of legal framework of the new Single free trade agreement in the region, named as Agreement for amendment of accession to the Central European Free Trade Agreement (CEFTA-2006).

This agreement was signed on 19 December 2006 in Bucharest-Romania. Countries signatories of CEFTA – 2006 are as follows: Republic of Bulgaria, Republic of Croatia, Romania, the Republic of Macedonia, Republic of Albania, Bosnia and Herzegovina, Republic of Moldova, Republic of Montenegro, Republic of Serbia and the United Nations Interim Administration Mission in Kosovo on behalf of Kosovo. The new CEFTA Agreement was ratified by the countries-signatories and started its implementation in the second half of 2007. It replaced the previous Free trade agreements among the countries signatories.

Free Trade Agreements (FTA)

From 1996 to date, the country has concluded nine free trade agreements, including the one with the European Union as part of the SAA. Most of these Bilateral Agreements are with former Yugoslav republics, which are traditional markets for the country's products due to past formal links. Since 2001 after signing the SAA also the European member states are becoming important trading partner for the country.

FTA quotas are negotiated annually. Starting from 2003 the principle 'first come first serve' applies for all FTAs, i.e. the first exporters will be able to fulfil the quotas without quantitative limits. Most of the agreements are signed in accordance with the Stability Pact and the one with the EU under the SAA

article 16 and 22. General details regarding the existing FTAs are provided in the table below.

Table I - 18 Free Trade Agreements

N.	Contracting party	OG	Entered into Force	Balance of Dynamics of Liberalization
1	Serbia and Montenegro	56/1996	01-Oct-96	Symmetrical
2	Croatia	28/1997, 51/2002, 100/2002	08-Jul-98	Symmetrical
3	Turkey	83/1999	01-Nov-00	Asymmetrical in favour of the country
4	EU	35/2001, 39/2001, 27/2004	01-Jun-01	Asymmetrical in favour of the country
5	EFTA countries	89/2001, 62/2003	01-May-02	Asymmetrical in favour of the country
6	Ukraine	53/2001	15-Jul-03	Asymmetrical in favour of the country
7	Bosnia and Herzegovina	45/2002	01-Jul-02	Asymmetrical in favour of BiH
8	Albania	47/2002	15-Jul-02	Symmetrical
9	Moldova	77/2004	01-Jan-05	Symmetrical

Source: MAFWE Trade Policy Unit, 2006

Opening of markets has been mutually granted in most of the agreements, i.e. approximate balance regarding the covered products, anticipated reductions of tariff rates, anticipated terms for liberalization and concessions granted in the field of agriculture. Parts of the agreements are asymmetrical in favour of the country, i.e. those trading partners open their markets for products originating from the country much faster than the country opens its markets for their products. The agreement with Bosnia and Herzegovina is the only agreement in which the country agreed to asymmetrical liberalization in favour of the opposite contracting party.

WTO membership increased possibilities for export expansion but also competition on the domestic market from imported products. These challenges are going to be even more severe with the implementation of the Free Trade Agreements with the neighbouring countries and the EU-27. A decline in agriculture, forestry and fishery and associated industries could have significant adverse consequences in rural areas and to the overall economic and social stability of the country. Strengthening the competitiveness of the country's agribusiness is the focal point for its survival. This must be supported by the reform of the public institutions and by the implementation of well-targeted support policies and rural development measures.

1.4.3. Agricultural labour

According to the results of the 2004 Workforce survey, done by the State Statistical Office, employment in agriculture (include forestry and hunting) amounts to 87,608 employees, or 16.8% of all employees in 2004. Agriculture is an additional activity for 12,164 persons, of which approximately 66% are

working on family farms. Agricultural employment rose in 2004 by approximately 15% in comparison with 2003 (14% in 2003)[30].

In the absence of accurate indicators of the total workforce involved in agriculture, which can be expected from the forthcoming Agricultural Census in 2007 (the first since 1964), MAFWE estimates that approximately 100,000 people are engaged in agriculture (including enterprise employees and full-time farmers). Additionally MAFWE estimates that 20,000 part-time farmers and significant seasonal employment (particularly in the fruit and vegetable sector) work in the sector, for which accurate data is very limited. More than half of the total engaged labour is employed in crop production with the remainder in the livestock sector.

Table I - 19 Total agriculture labour input (1000 AWU[31])

Item	Description	2000	2001	2002	2003	2004
1	Total agricultural labour input (1000 AWU)	136	197	138	97	101
2	Non-salaried agricultural labour input	67	109	74	61	70
3	Salaried agricultural labour input	70	89	64	36	32

Source: State Statistical Office, "Economic accounts for agriculture"

The workforce used in agriculture by all individuals involved equals 101,000 annual working units. Of which, the share of unpaid labour, i.e. workforce from within the family, is 70%, while the remaining 30% go to employed workforce including seasonal workforce and full-time labour, as well as farm-related services by external providers. Thus, the country's agricultural workforce mainly consists of individual farm based labour.

Total income from agricultural activities of all agricultural households and companies shows constant annual growth in the 1998-2004 period (in 2004, it is estimated at MKD 25,123 million). In the same year, the net salaries of labour involved in agriculture amounted to MKD 9,692 a month (approximately MKD 460 a day or about €7.5).

1.4.4. Agricultural Land

1.4.4.1. Land Resources and Land Use

In 2006, the surface of Macedonia's agricultural land[32] amounted to 1.225,513 ha or about 48% of the total land area, while forests covered an area of 947,653 ha or 37%. Agricultural land included 687,324 ha of pastures (or 55.5%) located mainly in the highlands, and 537,419 ha of cultivated land (or 44%) mainly concentrated in valleys. Cultivated land decreased from 633,000 ha in 1999 to 537,419 ha in 2006, mainly due to land abandonment (rural-urban population migration) and urban/industrial developments, which occur at the expense of agricultural lands. The biggest drop is recorded in the use of

30 According to the 2004 official workforce survey performed by the State Statistical Office.

31 Annual Working Unit

32 Agricultural land includes cultivable and pasturelands. Cultivable land includes land for arable crops, orchards, vineyards and improved pastures. State Statistical Office, Statistical Yearbook 2005

arable land and gardens and orchards whereas the land under meadows is slowly increasing.

According statistical data from 2006, from the total cultivated land 438,925 ha (82%) was arable land[33] and gardens, 60,264 ha meadows (11%), 25,239 ha vineyards (5%) and 12,991 ha orchards (2%).

An estimated 34% of the total arable land is left fallow each year. The abandoning of arable land is mainly due to the rural- urban migration and usage of the land for urban purposes and other non-farming activities.

All crops faced decreasing trends in sown areas over the observed period, this is especially evident for cereals.

In the last few years, the vegetable crops have stabilized descending development of the areas sown, after the drop experienced in 2000 and 2001

Regarding legislation, the 1986 Law on Land Use regulated the transfer of privately held agricultural land while attempting to prevent fragmentation and promote consolidation[34]. The law also prohibited the division of land parcels by sale, inheritance, or gift. This law was amended in 1991 to reduce some of the restrictions on land transfers. The latest amendments to the Law for Agricultural Land from 1998 did not introduce any changes regarding marketing of state-owned land. The state owned land cannot be subject to trading but is allowed to be managed as follows: *given with concession* to both domestic and foreign natural and legal entities for the period depending on the particular production[35]; *leased* to the domestic and foreign entities on short-term (for 5 years) and on long-term (from 5 to 40 years) with public announcement, and *given usage of land free of charge* for categories of socially vulnerable groups[36] and *contracted for one year renting* of free agricultural land that is without owner.

1.4.4.2. Land Ownership and Farm Structure

Around 80% of total cultivated land is owned or leased by 180 thousands private farms with average size of 2.5-2.8 ha fragmented into parcels of 0.3-0.5 ha. About 40% of the private farms are smaller household farms with less than 2 ha (further fragmented) that produce mainly for household subsistence

33 Arable land includes land planted to annual crops (cereals, industrial, vegetable and fodder crops), nurseries and fallow land.

34 By this Law, land fragmentation was constrained in several ways. First, a tax (by 3%) was levied on agricultural land transfers to discourage them. Second, the law required that a right of first refusal be offered to the users of nearby socially owned land and then to owners of neighbouring plots. It is reported that these restrictions were frequently not followed in practice.

35 a) Fodder and field production for the period of 20-30 years, green-garden and semi-annual plants production for 30-40 years, and wild animals and fish farms for the period of 10-30 years. The procedure of concession is realized through public announcement with auction by the commission based on the Government decision and organized and supervised by the MAFWE.

36 As farmers without land, unemployed persons, users of social assistance, unemployed from bankrupted companies etc

selling surpluses to supplement other sources of income[37]. The remaining 20% of cultivated land is state owned rented to 136 agricultural enterprises[38].

The privatisation process failed to include state-owned agricultural land managed by Agrokombinats due to the fact that the law defines agricultural land as a public good or national treasure, thus allowing the state to maintain the title to this agricultural land in accordance with the Law on Transformation of Enterprises Managing Agricultural Land. The privatisation process of public agricultural enterprises (Agro-Kombinates) started in 1996, but until early 1999 only 15% of the enterprises were privatised. The process was accelerated with the implementation of the Action plan for privatisation and all Agro-Kombinates were privatised following the model of conversion of ownership. The transformation of the Agro-Kombinates was according the Law on Transformation of Enterprises with Social Capital (OG 38/93, 48/93, 21/98, 25/99, 39/99, 81/99, 49/00, 6/02, 31/03, 38/04, 35/06) and Law on Transformation of Enterprises and Cooperatives with Social Capital managing agricultural land (OG 19/96,25/99,81/99,48/2000). The Agro- Kombinates were transformed according to the provisions of the Law on Trade company (OG 28/04, 84/05, 25/07) are registered as Joint stock companies.

The majority of pastures is still owned by the State and managed by the Public Enterprise for Pastures Management.

Effective use of agricultural land is hampered by parcelling and fragmentation stemming from previous limitations on usable areas and ownership[39], inheritance customs, as well as a tradition of informal relations in the land market.

The weak land market, which failed to contribute to farm consolidation, as well as the low economic growth and lack of social security, keeps feeding the process of fragmentation and diversification of production in small lots in order to offset market fluctuations and satisfy food needs.

In the long run, the existence of small and very fragmented farms, even if with medium intensity production levels, impedes the modernization and mechanisation, which inevitably results in lower competitiveness.

1.4.5. Irrigation

1.4.5.1. Water Resources

Average annual precipitation is 730 millimetres (mm) unevenly distributed in space and time. Rainfall varies from 400 mm in the centre and east to 1,400

37 MAFWE - 2004 Annual Agricultural Report: Agricultural Sector Complementary Information; Statistical Tables.

38 Privatised former *agro-kombinats* and farm co-operatives. Agro-Kombinats used to be vertically integrated agri-businesses managed by the state, which have large land holdings and operate on state owned land on usufruct rights basis, while the state holds the effective property rights. AKs are diversified in primary production, input production, agro-food processing activities, commercial storage and marketing services. Very often they were input suppliers and main buyers from the private farmers but indirectly through the Socially Owned Agriculture Cooperative, which have smaller land holdings and engage only in primary production

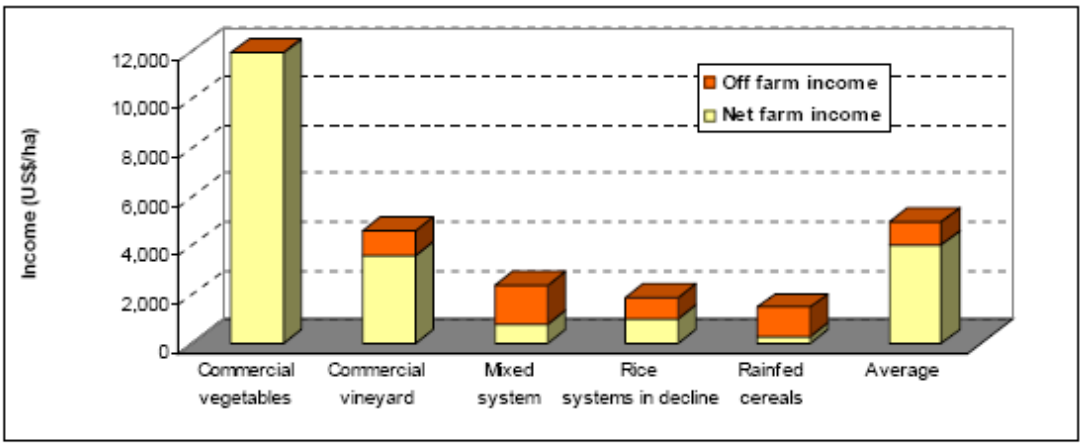
39 Until 1984, the maximum amount of land allowed to be owned by a single farmer was 10 ha or 20 ha in hilly and mountainous regions.

mm in the west, and occurs mainly from October to December and March to May. In an average year, the evapo-transpiration is higher than rainfall, leaving crops with a water deficit of 250 mm in the west and 450 mm in the east. About 75 percent of the country is classified as a semi-arid region. The country is also very prone to droughts.

During drought years, the water deficit for crop production is high, causing significant economic losses in terms of reduced agriculture production in both rain-fed and irrigated areas.

The impact of irrigation on farm incomes as a result of increased yields, increased cropping intensity, crop diversification, increased land-use intensity can be clearly observed in the financial performance of the farmers. According to a survey of 125 farmers conducted in 2002, net farm incomes are higher than average in the central and eastern part of the country, where farmers have access to irrigation and practice commercial horticulture. Net farm incomes are significantly lower in the west, where rain-fed cereals are produced, and in former rice growing areas such as Bregalnica region (Figure 4)[40].

Figure I - 3 *Farm household net income survey*



Note: this graph does not show relative contribution to agricultural GDP due to lack of data on this.
Source: G. A. Cornish C. J. Perry (2003). Water Charging in Irrigated Agriculture: Lessons from the Field.

1.4.5.2 Irrigation Systems and Water Management

Irrigation systems have existed in the country since 1956 so most irrigation schemes are more than 25 years old. After 1991 following the declining trends in agricultural production of enterprises and cooperatives, irrigation schemes were widely neglected and started deteriorating so the total irrigated area underwent a severe decline.

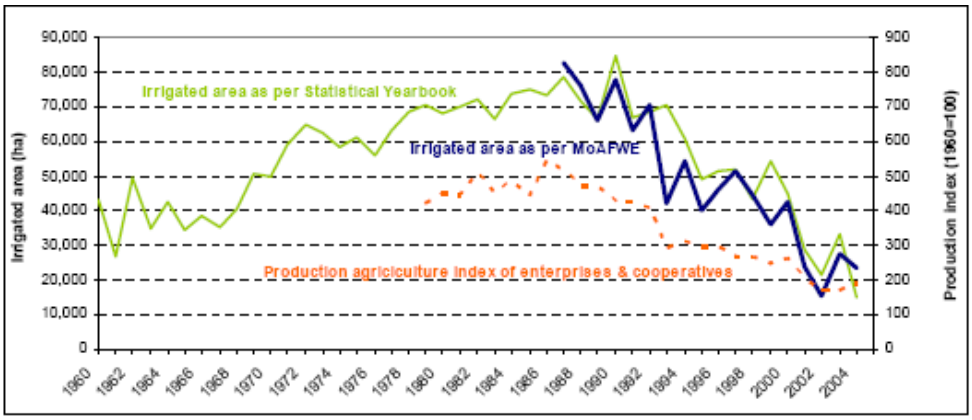
According to official statistics, the total area with irrigation infrastructure is 144,894 hectares (ha) comprising 144 schemes, but only 123,864 ha can actually be irrigated. Cultivated land in the country with irrigation potential is around 400,000 ha, this includes the existing area under irrigation systems.

[40] Source: Study on the state of Agriculture in the Western Balkans, 2006

Generally, all irrigation systems have functional difficulties. The most common problems are the obsolete equipment and infrastructure, inadequate maintenance because of lack of funds and transitional processes in the water economy and the agriculture sector. From the financial aspect, the irregular payment of water charges has reduced the funds for regular maintenance of the systems.

|The loss of markets for agricultural produce after 1991, together with the price liberalization, reduced demand for irrigated agricultural commodities, and the dismantling of socially-owned agriculture and food processing conglomerates, resulted in decreased agricultural income. As a result maintenance of irrigation systems by the State Water Companies was deferred, resulting in physical deterioration of irrigation schemes, falling service levels, irregular water supply, reduced water-use efficiency, and high water losses (sometimes over 50 percent). The negative effects on crop production eroded the ability of farmers to pay for irrigation, leading to further deterioration in service quality and abandonment of irrigations systems. A deteriorated irrigation infrastructure, poor water management arrangements and inadequate meteorological and hydrological network and forecasting capabilities, exacerbate the economic and financial impacts of droughts on the country's agriculture (Figure 5)[41].

Figure I - 4 *Deteriorating irrigation has had a negative impact on agriculture 1960-2004*



Note: the graph is for agricultural enterprises only since the data here is available only for these types of farms.
Source: MAFWE database and Statistical Yearbooks (several years).

The most recent institutional reform of the irrigation sector was launched in 2003, accompanied by infrastructure improvements. Though the reorganization process is not yet complete, Water Management Organization (WMOs) started being replaced by water user groups, including Irrigation Water Communities (IWCs, non-profit voluntary organizations of farmers created at the level of the irrigation distribution network), Association of IWCs (AIWCs) and Water Economies (WEs).

Comparing the structure of irrigated land per crop groups of 2005 and 2004 shows drastic reduction in irrigation of cereal crops (-17.7%), forage crops (-22%), orchards (-11.8%) and vineyards (-12.6%), and significant increase in

[41] Source: Study on the state of Agriculture in the Western Balkans, 2006

the irrigation of areas under vegetable crops (+22.7%) and secondary crops (+75%)

Table I - 20 Structure of irrigated land per crop groups in ha (2004-05)

DESCRIPTION	2004	2005	2005/2004
TOTAL irrigated area	23.160	20.740	-10,0%
Cereal crops	7.501	6.170	-17,7%
Industrial crops	2.129	2.131	0,1%
Vegetable crops	2.283	2.801	22,7%
Forage	3.159	2.468	-22,0%
Orchards	1.785	1.574,5	-11,8%
Vineyards	5.988	5.231,5	-12,6%
Other	315	551.5	75,0%

Source: Water Economy Directorate, Information for use of hydro-melioration systems 2004-2005

The main on farm water application systems include the old-fashioned furrow irrigation, and to a lesser extent sprinkler and drip irrigation equipment (especially on perennials). The widespread use of furrow irrigation leads to inefficient water use, high losses and spreading of diseases.

1.4.6. Plant Production

During the period 2000-2006, plant production shows a decrease in sown areas and in particular cereals (Annex 3). In the last few years, vegetable crops have stabilized the descending trend in areas sown, after the drop experienced in 2000. General production trends in the crop sub-sector have been positive, but yearly fluctuations are higher than in the EU-25. This is possibly due to the lack of application of improved farm technologies (including irrigation) to mitigate climate variations and to shifting targets of past agricultural support policies.

1.4.6.1. Cereals

Cereals are strategically important and the most grown crops, but the country does not produce enough to meet the domestic needs. In the 2000-2006 period, wheat was the most frequently planted cereal crop covering 53% of the total area planted with cereal crops, followed by barley (26%), maize (17%), rye (2%), rice and oats (1% each). Maize, barley and rye are mainly used for animal feed.

During the 2000-2006 period, overall cereals planted area decreased. The trend of reduction of area planted with cereal crops in the last years is mainly

a result of the reduction of the market price and of direct state support (price guarantee of wheat and premium for every kilogram of produced grains).

1.4.6.2. Industrial crops and fodder

In the 2000-2006 period, industrial crops (including fodder crops) are sown on approximately 10% of arable lands. In 2006, most of the industrial crop area was planted with tobacco (35%) and alfalfa (37%) and the balance is made up of sunflower (7%), sugar beet (1%), motley hay and clover (6% each), fodder peas (3%), fodder maize (4%) and fodder beet (1%). Other industrial crops (namely poppy and fibre crops) are statistically insignificant. In the reference period, industrial crops have slightly decreased their area sown, whereas fodder crops have remained stable. Overall, industrial and fodder crops have increased production, reflecting yield increases.

Tobacco is traditionally a strategic product for the country due to its social aspects; it is the main cash crop and engages considerable rural labour in the specific production areas and in the processing industry. During the 2000-2006 period, the areas under tobacco have decreased by 20%, due to the transformation of the tobacco kombinats and erratic support policies followed by the Government.

In the 2000-2006 period, the area planted with **sunflower** has decreased by 10% following a longer-term trend (from 30.4 thousand ha in 1992 to 3.7 thousand ha in 2006). Sunflower is grown mainly in Bitola region (50%) followed by Pelagonija, Kumanovo and to some extent, Sveti Nikole regions[42]. **Oilseed rape**, traditionally grown for forage purposes, is a relatively new crop for edible oil production. It is sown on approximately about 500 ha in the 2001-2005 period (240 ha in 2005). **Oilseed rape** is mainly used for edible oil production and oilcakes for animal feed, but also it is leading oil seed crop for bio-diesel production. **Soybean** is also another dual use crop (human food/animal feed and bio-diesel). In 2006 soybean was sown on the area of 538 ha. No import custom taxes are applied to oilseed rape oil (as well as for soy, castor oil, sesame, flax and hemp) while for peanuts it is 5%.

The great majority of **Sugar beet** production comes from individual agricultural producers, concentrated on limited areas in the Pelagonija valley and are processed in the only sugar factory in the country (Bitola). It is the only industrial crop where the sown areas increased in 2004 and 2005 after a steep decline in 2002 and especially rapidly declined in 2006 (in average 1,600 ha in the reference period). This was a result of the introduced subsidies (direct market support to deliverers of sugar beet to the processors).

Poppy is grown on limited and controlled fields and under state administrative control[43] and is purchased and processed by an authorised chemical company (Alkaloid). Current domestic production of poppy capsules (poppy straw) covers only 30% of industry needs, and the balance is covered by imports of raw material for extraction of alkaloids mainly from Spain and Australia. There is potential for increasing the surface of poppy cultivation

[42] Data from Agro Food Industry “Blagoja Gorev”, Veles

[43] Law on production and market of narcotic drugs (O.G. no. 13/91)

from the current 100-150 ha to around 2,000 ha. Customs taxes on imported poppy seed accounts for 15%.

Feed and fodder production meets only 30-35% of the total national requirements. Forage plants cover only 8% of the total arable area in the county unlike the countries with developed livestock industry where this share is about 40%. One of the reasons for this situation is the lack of sufficient land per farm and small size farms, which are unprofitable to be cultivated by forage plants. Furthermore, the country is net importer of maize for seed and fodder for almost half of domestic needs. The lack of fodder and feed (and thus their high cost) is one of the main limiting factors for livestock production development which has negative effect on the cost structure of meat production (feed and fodder can account for 50 to 85% of production cost) particularly with intensive fattening.

1.4.6.3. Fruit production

In the 2000-2006 period, fruit orchards covered 15.1 thousand hectares, of which apples (18%), plums (7%), sour cherries (5%), peaches (3%), pears (2%), and apricots and cherries (1% each). The average orchard farm size in the country is approximately 3 ha. Out of total orchards, 84% are in the private sector. In the reference period, average total fruit production[44] has been 125 thousand tonnes[45] to which apples contributed around 60%, and stone fruits (cherries, sour cherries, peaches, apricots and plums) with 35%.

Due to the favourable climate, the country's table grapes are of prominent quality and significant exporting potential with prospectively increase of the current foreign currency influx of €7 million (2005). The assortment of the table grape varieties includes several classes from very early to very late table grape varieties. Due to favourable climatic conditions in some vine growing regions table grape varieties have a comparative advantage over wine varieties, but their presence in the favourable growing regions is insufficient.

Areas under orchards have shown a consistent decline since the late 1980' (in the average 500 ha per year converted to annual crops or pastures) and an increasing obsolescence of plantations. These trends are mainly a consequence of the absence of investments due to the transformation of the social sector (whose plantations account for approximately 50% of fruit farming - especially apricot, peach, almond and sour cherry, etc. - were neglected), loss of the traditional Yugoslav markets that entailed export market uncertainty, and diseases (which have halved the pear orchards).

The main problems faced by perennial crops (both orchards and table grape vineyards) are the un-favourable age structure, the presence of commercially outdated varieties, and lack or inadequateness of open field (furrow) irrigation systems for orchards and table grape varieties which cause unstable yields and quality variations. Addressing these problems (renovation of orchards and table grape vineyards and installation of efficient and water-saving irrigation equipment) requires important financial investments, which are difficultly bearable for the smallholder farmer alone.

[44] Not including grape and nuts
[45] SSO 2005.

General low level of productivity and high production costs appear to be the main constraints to the competitiveness of local fresh fruit supply to markets and are mainly caused by inadequate and obsolete cultivation practices, reduced levels of inputs use and of post harvest technologies. There is a need to support the introduction of new technologies focused on novel cultural and chemical treatments (to mitigate low temperature damage of plants and to accelerate and intensify floral bud initiation and subsequent reproductive development), on environmentally friendly methods for weed, pests and insect control, the use of healthy and certified plant material aimed at producing high quality, superior yielding varieties for out-of-season fruit production. Another important problem is the protection of orchards and table grape vineyards from hail, which is common in the country. This also requires on-farm investments (hail protection nets) which should be supported.

Common problem for fruits and table grapes are post harvest losses and the low marketable quality of produce. Causes for post-harvest losses and quality non-conformities within the domestic fruit distribution system are multiple. While some of them have a technical or a marketing origin, others are due to shortcomings caused by poor infrastructure investments in the handling, storing, packing and transport phases. For the sector to survive the competitive pressure of EU exporters, a larger use of post-harvest, modern technology all through the various stages of the fruit distribution chain needs to be supported to improve the quality of the supplies. This includes cooling technology to be used, at field level immediately after harvest, to selection/grading, storing, packing/packaging, transport equipment and facilities. Investments in post harvest infrastructure and equipment should be targeted giving priority to those that are closely connected to the European Logistic Corridors that link the country to the rest of Europe. In this frame, attention should also be given to the way products are transported, by giving priority to those operators using European standard pallets and packages that ease loading and off-loading operations.

The European consumers require fruit products meeting hygienic standards higher than those currently used within traditional outlets (both city markets or retail shops). This requires development, adoption and enforcement of voluntary hygiene management systems (GAP, Integrated Crop Management Protocols, EUREPGAP etc) which would be of great help for the improvement of the country's horticultural sector. This problem is being tackled by the MAFWE at legislative, implementation and enforcement levels, via national measures. In the context of this measure, the adoption of hygienic standards is considered in the eligibility and ranking criteria.

Many fruit varieties (including table grapes) that can be found in the country's orchards and vineyards are outdated. At present, there are two seedlings nurseries in the country: one at the Institute of Agriculture and a privatized one in Skopje. Both nurseries do not produce certified virus-free material. Virus-free seedlings are mainly imported from Bulgaria and Serbia (fruits) sometimes from the EU, mainly from Greece and Italy. For the development of the fruit sector, it is crucial to develop domestic production of virus-free materials. Thus it is necessary to support development of small-scale virus-free materials nurseries, container production of seedlings specialized propagation techniques and fertilization.

The integration of the fruit supply chains is another problematic issue, the solving of which will contribute to increase the competitiveness of the industry on both domestic and international markets. The development of strong producer organizations is the foundation for further quality development of fruit production. In addition, the setting up of supply chain agreements (vertical integration) and integrated cold chain management will allow a better and more reliable access to the markets to the producers. This issue is being tackled by the MAFWE at legislative and implementation levels, via national support measures. In the context of this measure, vertical integration is considered in the eligibility and ranking criteria.

1.4.6.4. Vegetable production

The production of vegetables, particularly early vegetables is one of the significant characteristics of the country's agricultural sector and is one of the most significant sub-sectors that offer a solid basis for further competitive development of the Macedonian agriculture. Although vegetable production is a traditional production sector, it is still in a development phase and the market orientation of vegetable production is on the rise.

The production of vegetables is predominantly located in the northern parts of the country (Skopje and Kumanovo) with a mild continental climate and in the southern parts of the country with a Mediterranean climate (Strumica, Gevgelija, and Valandovo). In the 2000-06 period, around 690,000 tonnes were produced on a total area of approximately 52,000 hectares, mostly in open field, followed by greenhouses cultivation and only a small fraction is under glasshouses.

During the 2000-2006 period potatoes lead with 25% of the total vegetable production, followed by tomatoes and peppers (18% each), watermelons (17%), and by other vegetables (cabbage (10%), cucumbers (5%), onion (4%), along with other vegetables such as beans, peas, lentils, leek, green, string beans, cauliflower, lettuce, eggplants, etc.). Recently, in addition to the traditionally produced vegetable crops, producers are becoming increasingly oriented towards intensive production of non-traditional crops (for the country), which are demanded on the EU markets and beyond, and which enable higher incomes with limited resources like broccoli, Brussels sprouts, Chinese cabbage, asparagus and others.

Tomato, pepper and cucumber are mainly grown under greenhouses (plastic covering) and glasshouses. Around 300 ha of the vegetable production area is under greenhouses with heating systems, while the remaining production is cropping under plastic tunnels and in open fields.

Greenhouse production is mainly gravitating around urban area i.e. has significant features of peri-urban agriculture. The main production regions are Strumica, Gevgelija and Skopje region. The main type of construction used for greenhouse production are "plastic tunnels" which are the simplest construction in smallest dimensions (high 0.8m and wide 3 meters while the length can differ) from wood or metal construction and covered with plastic sheeting. The "tunnels" are also used reproduction of seedling material and for early production of vegetables. The "halls" is another type of greenhouses that are bigger in size (the height is usually 3 meters and the width and length

can differ), with a permanent construction and covered with plastic sheeting. Some of the recent halls have drip irrigation system and heating. Usually in one year two crops can be grown in the same greenhouse, for example, early tomatoes as first, and gherkins or cabbages as the second crop.

In modern glasshouses (especially in the Strumica region, where some glasshouses are heated with geo-thermal water) production of vegetables is highly profitable due to early harvest in January (one month before neighbouring countries) and high prices are maintained until April/May.

However, in the last 10 years, due to the delayed glasshouses privatization process, very little maintenance and investment in technology modernization has been made in the majority of the glasshouses. Currently, the exploitation of the existing 260 ha (most in blocks of 6-24 ha) of glasshouses ranges between 70-75% of the capacity. This is due to inefficient and obsolete heating systems, which substantially raise production costs, and, since there is an acute lack of working capital to pay for heating, many glasshouses have no advantage with regard to the time of harvesting.

To improve the production efficiency of the glasshouses and of greenhouses large investments are needed for general repair works, installation of modern ventilation and heating systems, computerization, soil-less cultivation, irrigation, etc., which require to be supported. Also of the use of thermal waters for heating, which is environmentally friendly, should be further expanded where possible.

A serious problem for vegetables are the post harvest losses and the poor marketable quality of produce. Causes for post-harvest losses and quality non-conformities within the domestic vegetable distribution system are essentially due to poor infrastructure investments in the handling, storing, packing and transport phases. For the sector to survive the competitive pressure of EU exporters, a larger use of post-harvest, modern technology all through the various stages of the vegetable distribution chain needs to be supported to improve the quality of the supplies. This stretches from cooling technology to be used, at field level immediately after harvest, to selection/grading, storing, packing/packaging, transport equipment and facilities. Investments in post harvest infrastructure and equipment should be targeted giving priority to those that are closely connected to the European Logistic Corridors that link the country to the rest of Europe. In this frame, attention should also be given to the way products are transported, by giving priority to those operators using European standard pallets and packages that ease loading and off-loading operations.

The integration of the vegetable supply chains is another problematic issue, the solving of which will contribute to increase the competitiveness of the industry on both domestic and international markets. The development of strong producer organizations is the foundation for further quality development of horticultural production. In addition, the setting up of supply chain agreements (vertical integration) and integrated cold chain management will allow a better and more reliable access to the markets to the producers. This issue is being tackled by the MAFWE at legislative and implementation levels, via national support measures. In the context of this measure, vertical integration is considered in the eligibility and ranking criteria.

1.4.6.5. Other crops

Flower production is one of the prospective industries of agriculture with secured marketing and satisfactory prices, as well as already demonstrated interest for foreign investments in the production capacities.

Furthermore, the country has abundant aromatic and medicinal herbs and wild herbs. From the export of essential oils, solutions and other products of these plants the country realises a foreign currency inflow of around $10 million annually[46.] Nevertheless, one of the limiting facts is that they are mainly quantities from wild plants, while organised production of plantations of aromatic and medicinal herbs, which have huge potential, is at the very beginning of its development.

Medical plants. Similar to other East European and Mediterranean countries, the sub-sector of medicinal and aromatic plants in the country is dominated by traditional collection of wild products, as far as the production side. Since ancient times, wild collected medicinal and aromatic plants have always been an integral part of the local traditional medical treatment. The demand for products from this sector increases constantly, not only by the domestic market, but by the export market as well. For the rural population, wild plant collection and their sale means additional income generation.

In the past, collection of wild products was mainly characterized by an uncontrolled and unsustainable exploitation of the biodiversity. Therefore, the national heritage of rare plant species is endangered.

Training of collectors is an imperative and precondition of a sustainable and controlled collection of medicinal and aromatic plants. In this regards, the Manual for collectors of medicinal and aromatic plants has been prepared[47]. This Manual gives detailed information about the characteristics of the collection areas, plant parts harvested, time period of collection, harvesting tools and method as well as to the post collection treatment.

There are approximately 3,500 vascular plant species in the country, of which 700 have medicinal properties, but only 120 species are utilized. Most of these plants are herbaceous, a small portion are shrubby and the fewest, woody. Their qualitative and quantitative distributions within the Republic have not been fully determined (i.e., a chorographic atlas of the medicinal plants has yet to be published).

In Annex 4 listed are the medicinal plant species registered in the country according to the Country study on Biodiversity, 2003. The collection and use of medicinal plants can be divided into three categories: personal use, retail/wholesale trade and other commercial purposes. A mechanism for regulation and classification is necessary before it can be determined how much dry plant material an individual can collect from an area and before a permit for this collection can be issued[48].

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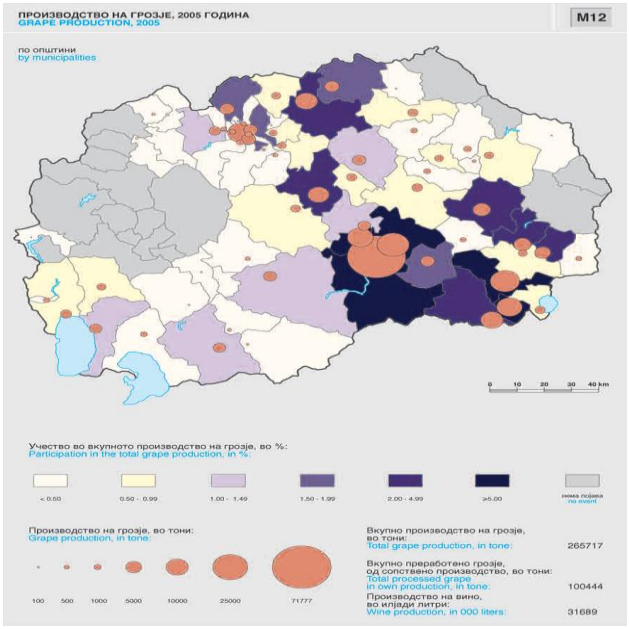
46 Source: SEED Report – The Balkan Herbs Sector

47 "Medicinal and Aromatic Plants – manual and monographs for collectors according to the principles of organic production", 2004 -jointly supported by GTZ Agro Promotion Project - Skopje and SIPPO (Swiss Import Promotion Program)

48 Utilization i.e. collection of the forest fruits can be allowed by approval from MAFWE

The collection of medicinal plants for commercial purposes in the country varies widely with the species collected, the collectors themselves and the seasonal quantity of the collected material. Most serious is the large seasonal demand by foreign buyers for specific plant species, facilitated by certain local trade companies, which have no previous experience in this field. According to the nature of the plant material used (e.g., root, fruit, leaf, flower or stem), the greatest risks and threats are for those plants which are used whole, followed by those whose roots are collected and then those with useful bark. Species with a restricted area of distribution are most threatened (e.g., *Acorus calamus, Salvia officinalis* and *Sideritis scardica*). Based on data from the past ten years, the most troubling situations are with the species: *Adonis vernalis, Colchicum autumnale, Herniaria glabra, H. hirsuta, Gentiana lutea, G. punctata, Hypericum perforatum, Lichenes,* various species within the genera of the family *Orchidaceae,* whose parts are used in the production of salep, *Sideritis scardica, S. raeserii* and *Thymus* spp.



1.4.6.6. Viticulture

Vine is a traditional crop for the country. For the producing areas, it is main income crop, source for employment of the local population and at the same time contributing towards the development of the production of wine, which has large export trade relevance. Viticulture is probably the most important and strategic the country's industry in the area of plant production, since together with the wine production it contributes to around 17%-20% of the agricultural GDP. Wine holds the first position in the export of beverages, and is the second most important product after tobacco in terms of export value of agricultural products. There are three vine-growing regions in the country divided into 16 sub-regions (Vineyard districts). Detailed table with vineyard distribution per region is presented in Annex 5. The main production takes place in the Vardar Povardarie Region (Central region), which accounts for around 86% of the total vineyard area (2006), followed by the Pcinja-Osogovo Region (the Eastern Region covering about 8%) and the Pelagonija-Polog Region (the Western Region covering 6% of the area). In the Vardar valley the number of vineyards is increasing, while other regions the surface is decreasing.

Overall, in the past 12 years there is a downward trend of the land areas under grape production (from around 30 thousand ha in 1995 to 24.3 thousand in 2006). This tendency is likely to continue in the future, since new plantings and replacements (mainly from the smallholder sector) are insufficient to offset the uprooting of old ones.

During the 2000-2006 period, an average of 25.7 thousand ha were cultivated, of which 70% (around 17.9 thousand hectares) were for wine production, and 30% for table grapes and dried raisin (around 8 thousand ha).

Around 25.000 farms are involved in viticulture. Among these farms, around 70% are individual holdings and 30% are agricultural firms. The current average size of the parcels is estimated to be between 1.1 ha and 1.3 ha fragmented into plots of 0.3/0.4 ha in general and 0.1 ha in the area of Skopje.

Average annual production in the 2000-2006 period is 233,065 tonnes (254,308 tonnes in 2006 of which around 28% are table grapes). Average yields in the reference period are 9.2 tonnes/ha, and in the last three years they show an increasing trend due essentially to good climatic conditions.

White wine grapes predominate in the country (mostly of the Smederevka variety, around 60%, which is not much in demand on the market). The red wine variety Vranec is present in approximately 20% of vineyards.

The country's vineyards have suffered a long period of under-investment, resulting in an unfavourable age structure. Almost 40% of vineyards (for wine production) are older than 20 years. They are prioritised to be the target of investment for their rejuvenation (uprooted/re-planted) in order to maintain the country's production potential. The rejuvenation requires significant financial investments. The assortment of wine grape varieties is inappropriate in terms of quality, location and market attractiveness and current representation of the wine grape varieties is often not in compliance with the recent Book of rule on the classification of grape varieties (OG 6/2007). Furthermore, a high percentage of the vineyards are located in the so-called freezing zones where bud freezing happens frequently. The replacement of inappropriate grape varieties from freezing zones to locations that are favourable (inclination, windy locations, stable temperatures, etc) for grape production will contribute to achieving stable yields and improved quality. The rejuvenation and re-placement of the vineyards require significant financial investments especially for the small farmers but also for firms owning larger areas invested in vineyards, due to the lack of nurseries (there are only two nurseries for production of grape seedlings: the Agricultural Institute in Skopje, and a private company), and the outdated technology used in the production. For certified planting material with good quality, the producers rely on import from neighbouring and EU countries. There is a necessity to support development of new nurseries in the traditional vine growing regions for the production of certified propagating material for vines, especially for autochthonous (Stanusina) and regional specific varieties (Vranec, Kratosija, Smederevka, Zilavka, Zupljanka, Plovdina, Prokupec) as well as for internationally attractive varieties (Merlot, Cabernet Sauvignon, etc.).

One of the important limiting factors to wine grape varieties production is the insufficient (400-600 mm/year) and uneven distribution of rainfall during the vegetation period, which cause yield instability and quality variations, which are reflected subsequently in the wines. The utilisation of water-saving on-farm drip irrigation is necessary for recommended varieties used for the production of non-premium wines (i.e. table wines, etc.) for wine classification (see Part II 2.1.4. Wine).

The use of mechanization–based processes in vineyard production is weak (mechanization is used currently only for soil cultivation and vine protection). No machinery is used for the ampelo-technical measures, harvesting, etc. The existing tractors and auxiliary equipment is technically and economically obsolete, with frequent breakdowns and high utilization of fuel and oil. It is thus necessary to renovate the machinery and specialized equipment of vine growing to reduce production costs.

Wine grape producers suffer from several management problems. Grape producers do not have the ability to obtain credit, or to influence raw materials supply (thus reduced use of agro-chemicals), exert price control of the grape, and ensure timely payments for their deliveries, especially from the larger processing capacities. Grape sales to the wineries are generally not regulated by specifically agreed pre-conditions or by cooperation contracts (whether short-term or long-term).

Limited domestic support for the wine variety vineyards has been provided under the MAFWE Annual Agricultural Development Programme since 2004. Measures in the programme relate only to the planting of high quality new vine plants for wine-grapes of the recommended varieties.

1.4.6.7. Organic farming

The Law on Organic Production was adopted in 2004 and it regulates the production, processing, marketing and labelling of organic production. This law is applied to all types of agricultural products intended for human consumption and animal feeding, where methods of organic production are implemented. In 2004, a Programme was prepared for the instigation and development of organic agricultural production, which was implemented in 2005. The funds for development of organic farming production in 2007 amounted to MKD 11 million for the following measures: (1) Financial support for organic areas and areas under conversion from conventional agricultural production into organic one, (2) Financial support of organic production in livestock farms; (3) Financial support of expenses for control and certification of organic products; (4) Financial support for the costs of lab analyses in organic farms; (5) Implementation of the scientific – research project important for acquiring participation of foreign projects for organic agricultural production and (6) General measures.

In 2006, in the country 104 operators[49] – clients have applied for organic inspection and certification, out of which, 101 farmers have been certified for primary organic production, two companies for processing and one company for trade of organic products. In comparison to the 2005, the number of the interest organic producers in 2006 increased rapidly, showing a growth of more than 100%[50].

The control and certification of the cultivated area intended for organic agriculture by Balkan Biocert started in 2003. In the 2005 a total of 49 farmers were inspected on arable area of 274.5 ha and two companies with their own

[49] Including companies for collection of wild products

[50] Data source: Balkan Biocert ,2007

regions for collection of wild products on the total area of 6,869.43 ha[51] was inspected. The number of the inspected farmers in 2006 significantly increased to 101 farmers with total cultivated area of 509.42 ha.

In 2006, 509.42 ha arable land, including 31 various crops, 505 beehives, were inspected and certified. The highest volume is produced of Japanese kaki *(Diospyros kaki),* but even this amount (8 tonnes in 2005) is not sufficient for export, although there would be a market for organic kaki. According to PROBIO[52] there are good conditions for production of organic fruits in the country, especially kiwi, figs, kaki and pomegranate. In addition, there is a good potential in collection of wild products (herbs, teas, fruits, mushrooms) and some animal breeding sectors such as sheep, goat, cattle. An asparagus and olives emerged as significant new crops and several applicants are interested in growing organic vegetables as cabbages, peppers and carrots.

In comparison with 2005, the total arable area (including fallow land) for organic production increased by almost 33%, while the area of collection of wild products increased by 4%[53].

The control of the organic products and processing is conducted by the inspections bodies authorised by the State Authority (MAFWE). Inspection bodies provide continues control of production and processing, issuing on certificates in accordance with specific standards.

Currently in the country are accredited two inspection/certification bodies Balkan Biocert Skopje, branch office of Balkan Biocert Plovdiv, Bulgaria and the INCEBO Skopje.

The advisory services are the key element in the organic farming development in the country, At the moment, the trainings for organic farming delivered to the advisories are very modest and limited, barring in mind that the short trainings usually are performed in foreign countries with support of international organizations and donor projects (GTZ, CIHEAM-IAMB, USAID, SLR and others).

Multiplicators are an internally developed network of advisors on organic agriculture who operate within the Swiss Project on Organic Agriculture (PROBIO-FiBL).

In order to extend multiplicator's know-how in organic production, a series of training were conducted. These trainings covered different topics of organic farming: organic fruit production, organic grape production, organic bee keeping, introduction to organic animal husbandry, and also trainings on general principles in organic production, on the existing national regulations and private (commercial) standards for organic farming, on the historical development of the organic movements (IFOAM), etc. Further planned are training on organic vegetable production, organic pest and disease management, etc.

For primary organic producer purposes, NEA is providing small advisory packages including general advice for organic production (bookkeeping, plans

[51] Two companies from collection of wild products (1,303.43 ha+ 5,566 ha)

[52] Joint organisation, funded by Swiss Development and Cooperation Agency and the Cooperation Office at Skopje

[53] Areas of two processing companies in the country operating in processing of wild products

for production and rotations of crops, soil fertility, usage of seed materials, pests and diseases, etc.).

The most important problem at the moment is the lack of accredited laboratories for soil and crop tests. There is no accredited laboratory in the country to perform these tests but the tests are carried mainly in Serbia or Bulgarian laboratories.

The National Strategy with Action Plan for organic agriculture in the country was adopted on 12 September 2007 by the Government.

1.4.6.8. Good Agricultural Practices

The draft Code for Good Agricultural Practice has been prepared in the beginning of December 2007. In the preparation of the Code, a working group consisted of experts from the relevant institutes, the Faculty for Food and Agriculture and from MAFWE was involved. Adoption of the Code by the Minister is expected at the end of December 2007.

The Code covers the main areas concerning, land use, fertilizer use, animal husbandry including animal welfare, and manure management, plant protection, water management and water pollution, agriculture systems and biological diversity etc. Furthermore, in the Code of Good Agriculture Practice training to farmers on application of GAP is envisaged to be performed with the support of the National Extension Agency.

The Code is in line with approximated national laws and the international standards, mainly Codex Alimentarius as well as the recommendations in the EU Nitrate Directive EEC/91/676.

Table of content of the Code of GAP is listed in Annex 6.

1.4.7 Animal Production

Historically seen, animal breeding is the dominant activity of the individual agricultural sector, except the pig breeding that used to be carried out on large state farms. During the last decade, with the reduction and transformation of the big Agro-Kombinats, the owners' structure of the animal production farms has not changed to a great extent. Such a development basis contributed to maintain the structure of animal production farms as predominantly private holdings. In other words, the current structure of animal production in the country consists of a large number of individual farm producers whose production is mainly for their own consumption, a certain number of commercially oriented family farms that are on the rise and big specialised animal production enterprises, the number of which is in decline.

The predominant private farms are characterised by low level of modernisation and low hygiene conditions. The insufficient animal hygiene and welfare are main impediments for increasing the competiveness and penetration on the EU markets.

According to the most recent data from the State Statistical Office, the total number of animals, per category, can be seen in the table below.

Table I - 21 Number of animals (2001-2005)

	2001	2002	2003	2004	2005	2006
Bovine	265,266	258,973	259,976	254,803	248,185	255,430
Sheep & Goat	1,285,099	1,233,830	1,239,330	1,432,369	1,244,000	1,248,801
Pigs	189,293	196,223	179,050	158,231	155,753	167,116
Poultry	2,749,637	2,900,966	2,417,362	2,725,298	2,617,012	2,585,327

Source: State Statistical Office, 2005, 2006

Despite the increase in livestock numbers in 2006, the analysis of the numbers of animal in the last years shows that the animal stock is steadily reducing. According to the data from 2006 the individual agricultural farms own 96% of the total number of bovine, 96% of the total number of sheep, all goats, horses and bee hives.

The enterprises, as legal entities that deal with the organised animal production, participate with 37% of the total number of poultry and 39% of total number of pigs.

1.4.7.1. Dairy farming

Cow milk is produced by large number of private producers, with rather small herds (average of less then 10 cows). Many farmers keep breeds that have dual purpose, i.e. milk and meat production. However, there are also farmers who are specializing in high productive diary cows. This specialization is accompanied with investments in modern production methods and facilities that complying with quality and safety standards. These dairy farmers invest in milking equipment, improved housing, milk storage equipment, fodder preparation, breeds and breeding, etc.

The number of cows slightly decreased in 2003 and 2005 while milk yields per cow increased.

Table I - 22 Milk yield per cow (2000-2004)

	2000	2001	2002	2003	2004	2005	2006	Average
Milk per cow (litres)	2,343	2,096	2,094	2,140	2,362	2,025	2,497	2,222

Source: Veterinary Directorate of the MAFWE

The cows are kept everywhere in the country except in the very high regions as the milk collecting costs are too high there. In some high regions, the cows are kept as mother cows for veal production. The following table shows that 86.4% of the farms have only between one and five cows and they keep 54% of the total cows.

Table I - 23 Structure of the dairy farms in the country (2005)

Farm (cattle)	No. farms	Cumulative number of farms	% Farms	Cumulative % farms	Number of cows	Cumulative number of cows	% of cows	Cumulative % of cows
1 - 5	42,098	42,098	86.4	86	100,521	100,521	54.0	54%
6 - 10	4,669	46,767	9.6	96	34,367	134,888	18.5	73%
11 - 30	1,634	48,401	3.4	99	27,163	162,051	14.6	87%
> 30	340	48,741	0.7	100	23,956	186,007	12.9	100%

Source: Veterinary Directorate of the MAFWE

The cows are held in stables 12 months a year. The main calving season is February – March. The fodder basis of the cows is maize silage, alfalfa, grass, hay and compound fodder.

Very small structured dairy farms cause relative high cost for purchasing milk collection and cooling equipment. Raw milk collection itself is organised in all possible ways. The dairies them self collect directly milk from “larger” farms as of 200 -500 litres. List of registered dairies is presented in Annex 7. Total sheep and cow milk production in 2006 was 291,290 thousand litres, which is 18.3% more than the previous year.

1.4.7.2. Cattle breeding

Cattle production in the country is primarily for milk production while meat production is a by-product (beef production of is based on fattening of male calves from dairy breeds and slaughtering of spent dairy cows). As a result, beef sub-sector remains the most under-developed sub-sector. The biggest portion of the domestically produced beef originates from dairy herds.

The 2.6% reduction of the number of bovine in 2005 which is bigger than the average decline of 1.7% in the period 1997 – 2004 came as a result of the reduced birth rate with the bovine that is by 6% lower than in 2004.

According to the latest data from the State Statistical Office, the total number of bovine in 2006 compared to 2005 has shown the increasing line for 7,245 heads or 2.9% and the number of cows and heifers also increased for 7,063 heads or 4.5%.

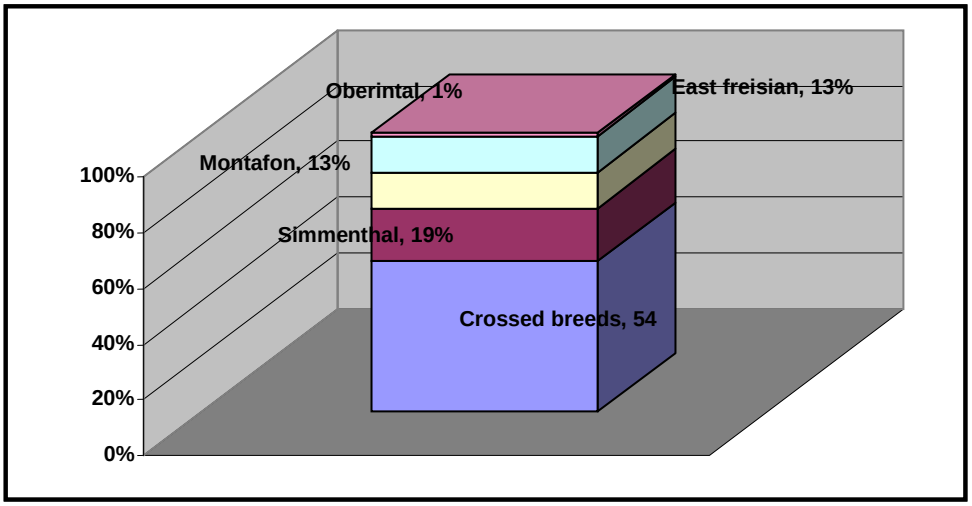
There is no single typical beef meat production system. Specialized beef meat production tends to be based on grazing or grass feeding, though there are examples of more intensive feeding systems with the animals being kept indoors and/or being fed with prepared feeds.

Thus, as country with semi-arid climate and mountainous-hilly topography, with a number of mountainous pastures and meadows, cattle breeding for meat could be a potential profitable agro-business for the people living in the rural areas. In the pastoral and mountainous regions, where cereals are hard to grow, pasture-based, or so-called *extensive* systems of beef production could be practiced. Characteristically, cattle reared in such regions grow more slowly, usually to higher weights, and produce meat that is more mature and stronger tasting. Calves from *suckler cows* are recommended to be reared in such extensive systems.

Around 75% of the farms on which bovines are reared are mixed, while the other is farms specialised in cow milk production. Such individual farms are most often characterised by a small number of heads (75% possess 2 - 3 cows) and undefined technological cycle. Contrary to this, the big farms have high-potential genetic materials that represent a generator – nursery of genotypes.

The country's bovine breed structure shows the predominance of milk or dual purpose breeds. At the moment, the following breeds of bovine are present in the country and their proportion in the breed structure is as follows:

Figure I - 5 *Breeds of bovine*



Source: Veterinary Directorate of the MAFWE, 2006

Table I - 24 Number of bovine farms (2006)

No of bovine farms	
from 1-5	29,975
from 6-10	8,641
from 11-15	2,677
above 16	3,236
Total	44,529

Source: Veterinary Directorate of the MAFWE, 2006

Due to the dominant structure of dairy cows in the total bovine population, beef production is not sufficient to meet consumer's demands including meat-processing industry.

The weight of the slaughtered domestic bovine expressed in bovine carcasses in 2005 amounted to 7,604 tonnes and is by 12.5% less than the quantities of beef in 2004 (8,691 tonnes in 2004). Moreover, according to the latest data from the Veterinary Directorate, the total number of slaughtered bovine is 6,189 and the total meat production is 1,033,251kg. In 2006, total meat production decreased for 0.8% compared to 2005. As the domestic production meets only partially the domestic needs, meat processors mainly resource beef for processing from imports (around 14 thousand tonnes). Part of this import under reduced import customs quotas might have an influence on the lower prices of the meat on the retail sale market.

1.4.7.3. Sheep and Goat breeding

Sheep breeding has long tradition in the country and plays a very important role in animal production. As country with semi-arid climate and mountainous-hilly topography, small ruminants are the most popular animal species for the country's rural people to breed.

Sheep breeding is semi-nomadic and breeds that can be used for milk and meat production are mostly present. Sheep and goat breeding is mainly carried out in the mountain areas in perimeter on the northern, western and eastern borders in a belt that is between 10 and 80 km wide.

The average annual production per ewe on former state owned farms is 0.92 lambs, 17.13 kg of marketable milk and 2.20 kg of wool. There are no exact records of private farm production, but some indicators show significantly higher production on these farms, especially in the case of marketable milk (45 kg per ewe). Although the level of sheep production is rather low, it is very important from the economic point of view, due to the export orientation of the lamb production (roughly 2,000,000 tonnes of lamb meat is marketed on markets of the EU. On the other hand, sheep cheese has been marketed locally, and it meets the demand for this product.

The sheep farms are usually family-owned businesses. Since recently, there is an upwards tendency of establishment of commercially oriented sheep farms. The main products of this traditional business are the *suckling* lambs and the milk-processed products, such as soft white sheep cheese *(sirenje)*, sheep yellow cheese (*kashkaval*), sour milk, curd, whey, and the less important by-products, as mutton, *pastrma*[54] and wool.

The breeding structure of the sheep in the country consists of two varieties of the Pramenka breed:

- *Ovchepolka* – 60%,
- *Sharplaninka* – 30%,
- Their crossbreeds with various *Merino* breeds, and
- Imported varieties, *Württemberg* and *Awassi*.

Table I - 25 Sheep Population (2001-2006)

Year	Total sheep	Breeding ewes	Lambs and yearlings	Rams and sterile ewes	Average number of milking ewes
2006	1,248,801	858,684	321,404	68,713	879,786
2005	1,244,000	833,181	330,939	79,880	827,861
2004	1,432,369	1,005,271	339,734	87,364	n.a.
2003	1,239,330	827,435	326,748	85,147	n.a.
2002	1,233,830	882,823	279,893	71,114	n.a.
2001	1,285,099	896,769	317,427	70,903	n.a.

Source: SSO Yearbook, 2001-2006

Based on the State Statistical Office data for 2006, there are around 1.24 million sheeps, largely owned by individual breeders (96%). However, the statistical number corresponds to the survey methodology and not to the exact number of heads as the identification, registration and tagging of small ruminants is ongoing (to be completed in 2008).

Total number of sheep until 2005 has followed the same path of decline by 13.2% including the total number of ewes (decrease by 17.1%).

The number of sheep population experienced most dramatic change in the last 7 years as their numbers reduced by 25%. This big reduction is due to the

54 Dehydrated salted mutton meat.

problems with the marketing of the lamb meat in the period 1996-1998 due to the spread of foot-and-mouth-disease within the national sheep flock.

However, the latest data for the total number of sheep in 2006 compared to 2005 show increase by 0.4%, as well as the number of breeding ewes (increased by 1.6%), pointing out towards recovery of the situation.

Table I - 26 Total and number of slaughtered sheep and goat and meat produced

Total number of Sheep and Goat	867,062
Total number of slaughtered sheep and goat	293,095
Total number of sheep and goat meat (kg)	158,234

Source: Veterinary Directorate, 2006

Sheep breeding has always been based on small individual family farms with flock size ranging from 200 to 250 sheep (source: Federation of farmers).These farms have been managed and maintained as family businesses, using family land, barn facilities and labour. Many times the size of the farm depends on the size of the property, and in many occasions larger farms or group of farmers rent state pastures in the up-lands during the summer period.

Lamb production. Lamb meat is the main product and covers the domestic needs and is an important export product of the agricultural sector.

The average sheep meat production from 1999 to 2004 was 5,444 tonnes, which is 23% lower than the production of sheep meat in 2004, equal to 7,030 tonnes and 6,857 tonnes in 2005. Total number of slaughtered lamb in 2006 is 284,846. The total lamb meat is 2,851,512 kg.

The lamb carcasses are mainly exported to the EU through the registered slaughterhouses in the country.

Table I - 27 Total export of lamb meat per country (2006)

Country	kg
Italy	1,049,141
Greece	1,643,313
Croatia	41,193
Bosnia and Herzegovina	10,062
Total	2,743,709

Source: Veterinary Directorate, 2006

Traditionally there were 9 slaughtering facilities for lambs[55] and the number of lambs yearly exported reached around 2 million. In 2005, this figure is much lower (around 273,000, according to the Faculty of Veterinary Medicine).

The lamb carcasses weigh approximately 9 kg, which meets main export market requirements. The season of lamb slaughter is limited to two weeks in

[55] List of licensed for export lamb slaughterhouses can be found in Annex 8.

April and in December, in order to meet the demand for lamb meat in the period around Easter and Christmas.

Goat breeding. Since the prohibition against goat breeding was abolished in 1989 (after more than 40 years), the interest of farmers in goat production has been increasing. The number of goats estimated by the SSO is 63,579 in 2006, which has increased by 2% since 2005 (62,190 goats in 2005). Almost whole of the goat population is owned by individual farmers (97%).

There is no previous information on the production level of goats, but it is around the productivity of the local Balkan breed. This goat breed has poor productive characteristics and is raised very extensively. However, the raising interest in goat breeding resulted with introduction of quality breed Alpina goat and cross breeds thereof.

1.4.7.4. Pig breeding

In the 2000-2006 period, the average pig population was 180 thousand heads (167.1 thousand in 2006). According to statistical data, the number of pigs in the country shows a decrease (particularly noticeable in the private sector), mainly due to the high price of feed, the largest production cost component. The most recent information about the number of pigs in 2006 compared to 2005 has increased by 7.3% and the number of heads for reproduction has also increased for 13.5%.

The structure of the pig herd is shown in Table below:

Table I - 28 Pig population (2001-2006)

Year	Total	Piglets	Fatteners	Sows and Gilts	Boars	Other
2006	167,116	49,746	81,879	28,148	1,866	5,477
2005	155,753	49,023	73,526	24,809	2,004	6,391
2004	158,231	47,917	75,924	23,960	2,279	8,151
2003	179,050	52,909	82,778	31,508	3,985	7,870
2002	196,223	53,127	104,422	29,999	2,168	6,507
2001	189,293	61,353	92,109	26,541	1,958	7332

Source: SSO Yearbook 2001-2006

The structure of the pig herd is piglets of around 30 percent, fatteners around 50%, sows and gilts 16%, boars with 1% and others 3%[56].

The enterprises, which deal in an organised manner with the pig breeding and production (closed cycle, artificial insemination, etc), are owners of around 40 percent of the total number of pigs in the country, while the remaining 60 percent of the pigs are property of the individual producers (low intensity breeding and selection, with around 1-3 sows and total herd of 15-20 heads).

The most common breeds are Landrace (Belgian, Danish, Swedish and German) as well as big Yorkshire and Durok. The input of new genetic material is only done with the import of boars, to avoid inbreeding and increase of average production results.

[56] Data for year 2005 are from the May 2006 report of the SSO.

1.4.7.5. Poultry breeding

The poultry sub-sector is mainly geared towards the production of eggs and secondarily of poultry meat. Poultry includes several different species of domestic birds, such as chicken, turkeys, geese and ducks. However, the dominant production type is chicken.

It is until recently that the country did not have poultry meat production beyond the spent laying hens that at the end of their productive life are slaughtered for further processing. Local production of broilers is a relatively new business for the farmers, and is potentially quite rewarding. The broiler production system represents a transition from traditional socialist production model to modern market oriented farming, implementing standards to satisfy the consumer requirements for quality, healthy and safety of product.

The poultry meat reproduction cycle is fast. The bird population and available poultry meat increase rapidly. The cost of feed is by far the most important aspect of the poultry meat production.

Poultry meat production tends to take place in housed conditions or other enclosed systems, in order to allow better disease and pest control, as well as to enable production efficiency.

The production system of consumption eggs is intensive. When the export market for eggs diminished, the sector was plugged with over-capacity, inefficiency, over-employment and high input costs, the consequence of which was closing down of the production facilities or switching to broiler production.

In recent years the consumption of poultry meat has risen, partly as a result of the price competitiveness with other meats, and also due to increased consumer health concerns associated with other meats. So, as the consumer awareness is rising it becomes easier for the domestic producers to compete with imported poultry meat.

The poultry meat market is still 90% constituted of frozen product and if the trend of the country's market follows the consumption and quality demand of the new EU member States, fresh poultry will supersede the frozen product as the consumer preference turns towards fresh product, even though it has a price premium (approx. 20 to 35% more expensive).

Table I - 29 Consumption of poultry meat in the EU and in the country

Poultry meat consumption per capita projections – 2006 (Kg per head)				
	EU – 25	**EU -15**	**EU -10 (new member states)**	**Country - 2004 (SYBM 2005)**
Poultry	22.9	22.6	24.5	11.0

Source: C.L.I.T.R.A.V.I. Brussels (from Sub-sector study on meat and milk 2006)

From the table it can bee seen that the consumption of poultry meat in the country is significantly lower that the other nations, even if the figures for consumption could be “higher than the reality” as there are rural households who have their own chickens which do not appear in statistics. This would indicate that there is very strong potential growth in this sector and probably

an increasing trend towards consumption of fresh product at marginally higher prices compared with imported frozen meat.

According to the statistical data, the total number of poultry in the country is around 2.6 million, of which 83% are laying hens with total production of around 340 million eggs in 2005, which in 2006 has decreased for 2.7%. The enterprises, as legal entities that deal with the organised livestock production participate with 37% of the total number of poultry.

The poultry sector in the country includes 12 big farms for broilers and 30-35 small farms. Bigger farms have the capacity for 20,000 chickens/turns or 120,000/year or in total capacity for all 12 farms is 1,440,000 chickens, while smaller farms have a total capacity of around 1-1,200mil chickens/year. The average capacity is around 5-7,000 chickens per turn.

Laying hens. There are 15 bigger farms with capacity of 50-100,000/turns and 50 family farms with capacity of 3-10,000 laying hens/year. Total capacity is about 1-1,100,000/year.

The latest data (Veterinary Directorate 2005), about the total number of the poultry, which is 1.965.799, show a decreasing trend (numbers of poultry in 2006 has decreased about 1.2%compared to 2005).

The average production of poultry meat in the period 1999 to 2004 was 4,099 tonnes that is 22% higher than the production in 2004. Domestic production is growing fast in more recent years; from 1997 to 2002, it has increased by over 10% annually, as a result of the increase of population as well as the increase of the consumption per capita. Latest results, from the Veterinary Directorate (2006) about the total slaughtered poultry are 1,012,546.

The domestic production of chicken meat is insufficient to cover demand; therefore, large quantities of chicken are imported. In 2005, the production of poultry meat amounted to 3,809 tonnes, which is only about 20% of the domestic demand. The remaining 80%, mainly frozen poultry meat for the processing industry, are covered from imports. In 2005, the import of poultry in the country amounted for € 21.1 million in value and around 25,000 tonnes in quantity. The import of poultry meat mainly encompasses import of hens and chicken meat (90%), while the import of turkey meat participates with only 10% expressed in value. The main countries that supply chicken meat are the USA (with 30%), Slovenia (18%), China (14%) and the EU-15 (13%).

1.4.7.6. Beekeeping

Natural conditions in the country are favourable for development of bee keeping. The melliferous plants -covered mountains are a plentiful source for production of aromatic honey that can find a good market within Europe. Depending on their natural habitat, they can be classified as forest plants, meadow plants, field crops and weeds, fruit trees, industrial and oil crops and medicinal plants. Most of the melliferous plants bloom in late spring - May to July and very few flowers in early spring or fall. Forests of spruce and fir trees provide late-summer harvests of dark, honeydew honey with high value on the export markets. Other important forest resources are sweet chestnut, lime, sycamore and wild cherry.

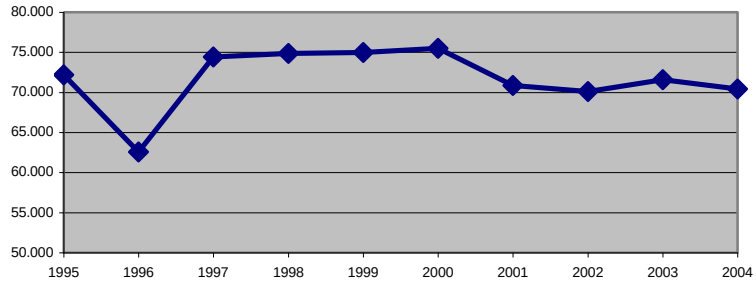
Pollen analysis of the country's honey shows that:

- most honey is multifloral, to be marketed under the category: meadow honey
- a significant 34% of the honey could be marketed as monofloral.

The race of honeybees in the country is *Apis mellifera carnica,* known as 'The Carniolan bee', characterized by gentleness and high productivity. It winters in a small cluster with a relatively modest food supply and its development in spring is rapid.

Currently, there are approximately 11,000 honey producers. In most cases, bee keeping is a part-time activity providing some 40% to 45% of household income. Only 14% has commercial production of honey. There are also some 12 honey processors in the country. In 2005, a repro-centre for selection and breeding of reproductive material has been registered.

Figure I - 6 *Number of bee hives from 1999 to 2004*



Source: State Statistical Office, 2005

Statistical data indicate a decreasing trend in the number of beehives since 2000. In 2004, number of beehives is 70,417 and in 2000, it was 75,500. In 2005, the number was even lower-68,988 beehives on average. The number of beehives in 2006 compared to 2005 has increased by 1.6%. In average, each bee producer has approximately 7 beehives.

Main outputs from the apiculture are honey, beeswax and propolis. Total production of honey averages some 1,137 tonnes. In 2004 it was 916 tonnes and in 2005 the honey production amounted to 1,042 which is 13.8% increased. According to the latest data from the State Statistical Office, honey production in 2006 has decreased for 16.7%.

Average production of honey per hive is low, ranging from 12 to 20 kg per hive depending on the season. The average honey production per beehive is 15 kg in 2005. Better-managed hives, however, produce 50-60 kg/hive/yr.

Most of the honey production is consumed domestically and 8% is exported. Average export of honey in the period of 1999 – 2004 is 27 tonnes, and in 2004 it was 23 tonnes in quantity terms and 71,000 € in value terms. In 2004, the main export destinations were USA, Australia and Serbia and Montenegro. Honey is currently subject to an import tariff of 45%, and the share of imports is less than 1%.

1.4.7.7. Milk sector priorities

The tendencies in the livestock breeding are linked to milk production, making meat production a minor part and reducing the presence of meat producing breeds. The annual milk production in the country for 2006 was estimated to be 291,290 thousand litres showing evident increase of around 18% comparing to 246,164 thousand litres total milk production in 2005. The cow milk production in 2006 amounted to 234,708 thousand litres and was 19% higher than in the previous year (197,464 thousand litres in 2005), while the sheep milk production reached 56,582 thousand litres with an increase in production of around 16% compared to the previous year (48,700 thousand litres). The average milk yield per ewe in lactation was 64 litres in 2006. The annual average milk yield per dairy cow is around 2,5 litres for 2006 and they are relatively stable in the last few years. However, the high quality milking cow breeds can reach 5 litters average annual milk yield per cow. These cows are bred on larger farms (Agriculture Companies and Cooperatives). In terms of results per farm structure, higher milking yields per dairy cow are achieved by the Agriculture companies and cooperatives, but higher milking yields per ewe are achieved by the Individual Agriculture Holdings. This analysis reflects the organisation structure of the primary milk production.

The participation of the individual milk producers in total milk production amounts to around 90% showing modest growth in the last two years. Most of the milking cows (247,484 heads) are owned by individual farmers, which produce on average 2,4 litres of milk per year. Same situation applies with the sheep herds where the majority of the sheep population is owned by the individual farmers.

The very small structured dairy farming causes relatively high costs for milk collection and milk cooling equipment on farm. Raw milk collection is organised in different ways. The dairies collect directly milk from “larger” farms as of 200 -500 kg onwards and they have their own milk collection centres with milk cooling tanks (lacto-freezer). There are also raw milk traders, which collect raw milk. Very small dairies (farm dairies) which concentrate on sheep and goat milk process their own milk and buy milk only from the neighbourhood.

Contracts between milk processors and dairy farmers are made on quality basis without proper education of the farmers on how they can fulfil these strengthened quality standards.

The problems related to this sector can be qualified as relatively basic and concern raw milk quality, production management competence, problems regarding HACCP application and the meeting of international hygiene standards. Consequently good and hygienic milking praxis and good milking and cooling equipment are a precondition for improvement of raw milk quality. Moreover, a good feeding management is necessary to lead towards good fat and protein contents of the raw-milk.

Therefore, the main needed investments are on-farm milking machinery and milking equipment and milk cooling tanks on farms and / or at milk collection points. This equipment is needed for cow, sheep and goat farming. They will have a strong positive impact on the entire dairy sector because milk-cooling

tanks will solve problems regarding hygienic raw milk quality, cost price reduction per dairy product, longer shelf live, enable the dairies to develop modern and high profitable products, enlarge the dairy product range, and enable production of dairy products of export quality. In addition, to comply with the animal welfare standards, an investment is necessary for improving the stables and waste management.

1.4.7.8. Meat sector priorities

The key weaknesses of this sector are the lack of equipment and of holdings complying with EU standards. Problems were also identified in waste treatment and waste disposal, hygiene, animal welfare and in meeting environmental standards on the agricultural holdings.

In order to upgrade the holdings to community standards it is necessary to invest in construction/reconstruction and purchasing of new machinery.

With no support, the sector will not be able to meet the required level of investment in the mid-term and long-term development perspective of competitive agricultural holdings.

1.4.7.9. Animal waste rendering

The rendering of waste animal material is an area of the meat industry that has not yet been addressed on a national scale and there is no rendering plant dealing with animal waste in the country.

The meat-processing sector is importing virtually 100% “bone-less” meats so the animal waste from this sector is very limited. Slaughterhouses have contracts with the local authorities who take away their waste (bones, horns, hooves etc) and dispose it in landfill sites.

Blood from slaughterhouses is not collected for further treatment and ends up in the municipal wastewater collection system. Some plants have a waste pre-screening operation, which removes some of the waste from water.

As an indicator to waste rendering, the industrial norm for waste capacity calculations in Western Europe is that 10% of the slaughtered weight of animals is discarded as waste. Therefore, it can be estimated that the required rendering capacity for the country is around 700-800 tonne “rendering” waste per year from cattle and pig slaughter.

The establishing of a rendering system is a mid-term priority for the Government in order to implement waste collection and disposal. For this, specialist companies need to be contracted to give professional advice for such installations.

1.4.8. Agricultural Markets and Market Policy

1.4.8.1. Agriculture Markets

Improving the ability to compete on domestic, regional and EU markets is the biggest challenge that the country's agriculture faces.

If producers and agro-processors manage to compete with prices and meet the quality and food safety requirements, the country's products will have access to EU and regional markets.

Trade liberalization will also result in lower producer prices, and minimal direct budget support for agriculture as a result of the low AMS ceiling agreed with the WTO. Continued fiscal rigor will further limit the ability of MAFWE to increase public support for agriculture. Producers will thus have to substantially increase productivity and product quality if they are to be competitive. Those who do not meet these challenges will face lower incomes and a reversion to subsistence production.

Numerous products have the potential to be competitive, however. Agriculture in lowland areas benefits from good climate, fertile soils and access to natural upland pastures. Transition countries with good agricultural resource endowments can be competitive in crops. Creating a policy environment, which allows progressive, efficient producers and processors to expand, despite increased competition and limited public support, will be critical to the future of agriculture.

The improvement of market structures is crucial for the successful development of the agricultural sector in the country. The establishment of competitive structures and enterprises in the agro-food sector and viable marketing and trading units will define the market share of the sector. Production capacity modernization calls for vast investment amounts targeted at the bringing national quality, health and marketing standards in line with EU requirements upon the country’s accession to the Community.

The agricultural products in are marketed at wholesale or retail markets. At wholesale markets, large amounts of imported, or produce from domestic growers are accepted, temporarily stored and prepared for further sale. Organized wholesale markets do not have sorting, classification and packing facilities, necessary to fulfil marketing requirements. The adoption of marketing strategies through introduction of new regulations in line with the EU standards is necessary for the strengthening of these facilities. A large portion of fresh produce is retailed to the so-called Green Markets, and thus distributed do the end consumers. Recently, the wholesale markets assumed an increasingly important role in distribution of the produce. In the country, although domestic consumers are increasing their attention to quality attributes of produce, the domestic market seems to remain primarily price-oriented. Therefore, in the country quality of produce is nowadays primarily an export issue.

The export of fresh agro-food products is mainly carried out by domestic and foreign wholesalers or traders, which deal with the whole range of available produce. The most attractive products are early season fresh products due to the higher prices that can be achieved both on export and domestic markets. The advantage that the country has in trade competition is that the harvest season starts at least one month earlier than in most neighbouring countries. The main markets for fresh produce are EU counties, Serbia, Montenegro, Croatia, Slovenia, and Bosnia Herzegovina.

Export to the EU involves high quality requirements for grading produce and packaging and high quality transports. Nevertheless, the need for large quantities of standardised early season produce represents a good opportunity for the country to increase the export of agricultural products in the future.

1.4.8.2. Competitiveness of agricultural products

The competitiveness of the country's agri-food sector is becoming increasingly important with its growing exposure to world (and particularly EU) markets and the changing nature of its domestic markets where the increasing penetration of trans-national and domestic supermarkets, the introduction of international grades, standards and business practices and the consumer's increased demand for quality and safe foods risk to marginalize local small producers and processors.

Nominal Protection Coefficients (NPC) for wheat, maize, early tomatoes, fresh apples, cow milk, pork and lamb indicate that, on average, lamb, vegetables and apples are currently competitive on international markets, but many traditional crop and livestock products are not. Wine and tobacco also have demonstrated export potential (NPC < 1).

A high average NPC does not mean that there are no competitive producers and processors in the country. The relatively high prices of agricultural commodities in internal market simply mean that marginal producers are high-cost and that low-cost producers lack the means to expand. High import protection has allowed them to continue operating, and encouraged them to sell internally rather than in lower-price export markets.

The evidence of substantial agricultural exports shows that some producers are able to compete in markets abroad. The most market-aware farmers currently appear to be drawn to horticultural products (i.e. fruit, berries, mushrooms, flowers, and early season vegetables) and may have already developed comparative advantage within this product category. The competitiveness of many agricultural products can also be improved. In particular, the fertile soils and favourable climate of the lowland areas in the country are appropriate for a wide range of agricultural products. Land and labour are also relatively cheap. The ability to obtain competitive production from this resource base is limited by inadequate irrigation, small farm size, fragmented land holdings, poor technology, inadequate working capital, and low investment. These constraints lead to low land and labour productivity. The country may also have a comparative advantage in small ruminant production on natural upland pastures if labour supply problems can be solved. Lack of effective marketing and logistics also increase production costs. Measures to address these constraints are essential if the ability to compete is to improve.

Table I - 30 Nominal Protection Coefficients for main Commodities (2002)

Wheat	Maize	Early Tomatoes	Fresh Apples	Cows Milk	Pork	Lamb
1.28	1.21	0.91	0.84	1.29	1.23	0.82

Source: Study on the state of Agriculture in the Western Balkans, 2006

The time frame for increasing competitiveness is relatively short. Given the medium-term need for continued fiscal constraint, the capacity to compensate farmers for lower prices and increased competition through increased budgetary support for agriculture will also be limited. Hence, those components of the agricultural sector which are unable to respond to increased competition, or which respond too slowly, will probably contract.

Government policy has been slow to react to these challenges. Major opportunities do exist in a number of areas but require more consolidated efforts from both the public and private sector to improve competitiveness and raise standards. The findings were quite revealing and point the way towards future opportunities for the country in the food industry.

1.4.8.3. Market Policies

The Governments aims at increasing competitiveness of the farm sector and the food industry by strengthening the genetic base for agricultural production, adopting modern farm management systems.

In order to improve the quality of marketed and traded products a harmonisation of sanitary and phyto-sanitary measures with international standards is under way. In addition, EU compliant laws in terms of food safety and veterinarian protection are in the pipeline, and it is planned to implement EU requirements on quality standards as soon as possible. In their regular work veterinary programme and a phyto-sanitary and seed program are formulated to promote and secure production against diseases and pests and to create more consumer trust and confidence in regional products, which currently have to compete with imported products.

Marketing of agricultural raw products and processed food shall be improved. The country has to deal with three major challenges:

- High safety of food, an issue that is mostly related to appropriate supply chain management.
- Effective competitiveness of the supply chain participants, which chiefly deals with business networking through consolidation of sales, standardization of the produce, and adoption of value-driven marketing strategies.
- Appropriate preservation of the environment and workers' safety and health, which are issues predominantly related to sound rural development strategies.

The food consumption patterns are heavily influenced by cultural and social backgrounds, which tend to change slowly and not always in a uniform manner from one country to another. That will result in the need for operators of this industry, to conceive and implement individual approaches to each specific single market.

Furthermore, it should be considered that the regional Balkans market is progressively reducing, as Bulgaria and Romania recently joined the EU. The regional market is therefore reducing to some small countries, with Serbia

being the largest and most attractive target country, loosing attractiveness and likely becoming more and more expensive in terms of logistics arrangements, marketing efforts and border procedures, particularly when compared to the open and large EU single-market.

1.4.8.4. Agricultural prices

The State Statistical Office gathers price data from various markets, recording quantities and purchase prices for certain commodities. No differentiation is made to account for product quality. No data on production stage or quality are tracked. These prices are, in many cases, likely to be an inaccurate reflection of average prices for specific commodities.

In the first half of 2006 consumer prices increased by 3.1%, compared to 0.2% on average during the first half of 2005. Low inflation in the past few years is mainly the result of trade liberalisation, which resulted in the decline of food prices, due to the countries accession to the WTO. However, during 2006, increases in excise taxes and higher energy prices led to an acceleration of consumer price rises.

Producer prices (See Annex 9) in wheat have remained relatively stable in recent years, while the prices in rye and meslin and barley have reduced significantly. Raw tobacco shows high fluctuations in the last years, due the increase or decrease of international prices. The prices of apples, another significant agricultural product, decreased dramatically in 2003 as a result of favourable climatic conditions, which led in a major production increase. Potato prices showed increasing trends following the increasing consumption. Comparing prices for main products with EU averages proofs the relatively high price level for crops (with the exception of apples) in the country. Pork prices are above EU 25 averages and poultry below.

1.4.8.5. Production –consumption balance

Since no official market balance sheets are available and taking in consideration the fact that there is no data on the ending and beginning stock for the commodities, these balances are based on the assumption that the consumption and exports are equal to the production and imports per annum which makes them incomplete and neglect changes in stocks.(Annex 10)

1.4.8.6. Trends in demand and distribution

As the level of wages is expected to increase with the country's approximation and accession to the EU, the range of products requested and the qualitative features of agricultural fresh and processed products should also improve.

Indeed, following trends already ongoing within EU countries, an increasing importance will be given by domestic consumers to factors such as quality, produce safety and produce information.

The relatively high share of young people among total population[57] and the increasing amount of employed women, might also favour a shift of

[57] UNICEF estimated the country's population below 18 years old in 2003 to be 27.1% of the total country's population.

preferences towards less conventional types of foods. This mainly refers to foods including a higher level of added services, such as “ready-to-be-used” kind of products.

Nevertheless, despite the fact that higher levels of income usually bring more sophisticated consumption patterns even for food products, this should not be expected to be an abrupt process. Definitely, widespread (and therefore massive) improvements in the income levels will be, on average, reached only through a slow progression. However, if a wider range and higher quality of domestic agro-food products will not be made available to meet higher consumer’s demand, the risk exists that this latter might be increasingly satisfied with imported agro-food products.

The strong concentration of the food demand brought forth by the development of Multi Purpose Retailers will inevitably affect also the nature, the way of operating and the size of those operators (either producers and/or intermediaries) who might wish to supply Multi Purpose Retailers outlets with a wide range of products all through the year.

The provision of a range of services capable of either increasing added value to products or making the logistic of the delivery and produce storing faster and more efficient will imply a level of organization and logistics at supplier level, which very rarely can be found among traditional agricultural producers.

In addition, there is a need of supplying retailers with products meeting quality and hygienic standards higher than those currently used within traditional outlets. This requires use of harvest and post-harvest equipment and facilities and the adoption and enforcement of hygienic and quality management systems. Again, operators with a certain size and level of organization can more successfully deal with these requirements.

Furthermore, the suppliers will likely be imposed with delayed payment terms for their deliveries[58]. This can be withstood only by financially sound suppliers, with a good ability to correctly manage enterprise financial.

Additional to lack of capital and high production costs, performances of the country's agro-food sector are also hindered by a general lack of market channels and marketing organisations.

It is clear that the country's agricultural outputs cannot influence price levels within main markets -either world, EU or regional ones. This situation, therefore, confines the country into a typically “price taker” position.

Certainly, productivity and produce quality should be reached with those prevailing within EU countries, in order for the country not to be flooded with external products more price-competitive and, with few exceptions, also better quality.

Therefore, in order to meet consumer’s requirements the country's agricultural products have to be primarily:

1. Properly sorted, graded and packed
2. Clearly labelled for:
   a) Information

58 MPR operators in EU pay their supplies usually from 30 to 60 days from delivery and even later.

b) Traceability and Integrated Emergency Response System
3. Hygienically Safe
4. Tasting Good

1.4.9. Biodiversity and Environment Related to Agriculture

1.4.9.1. General features of biodiversity

Bio-resources have an important place in the tradition and culture of the country.

The Study on Biodiversity in the country identifies and describes major eco-systems

- **Forest ecosystems** cover a large portion of the country and are found in several regions: The “Oak region” is distributed within the lowlands and highlands up to 1,100 m and covers 73% of the total forested area; The “Beech region” covers the mountainous areas between 1,100-1,700 m (about 22% of the total forested area). It may be differentiated into a sub-mountain and a mountain belt. The sub-mountain Beech region is present between 1,100-1,300 m (an area of the climate-zonal community), where refugial types of Beech forests as well as Pine forest communities (Black pine) can be found. The mountain belt spreads between 1,300 and 1,700 m (the area of the climatogenic assn. *Calamintho grandiflorae-Fagetum*) and is formed by various types of Beech, Beech-Fir forests and, in the secondary habitats, forests of White pine, Aspen and Birch are present. The “pre-mountain (subalpine) region” is located between 1,700 m and approximately 2,100 m. In these areas, the forests are almost destroyed. Forests of Spruce (*Picea abies*), Mountain pine (*Pinus mugo*) and Molika (*P. peuce*), however, as well as heath of *Bruckenthalia spiculifolia, Vaccinium myrtillus* etc., can be found.
- **Dry land/grassland ecosystems** occupy a large part of the country. They occur in the lowland and highland belt (in the highland pastures), and often in secondary habitats primarily because of permanent degradation of forest phytocenoses (mainly Oak), but also due to recolonisation of abandoned farmland by grassland species. The ecosystems themselves are present at altitudes of from 60m to approximately 1,200 m above the sea level.
- **Mountain ecosystems** are found within a large portion of the country, especially on mountains over 2,000 m in elevation – Belasica, Bistra, Deshat, Dudica, Galichica, Jablanica, Jakupica, Korab, Kozhuf, Nidze, Osogovo, Pelister, Shar Planina, Stogovo etc. – where there are optimal conditions for their development. Mountain and high-mountain vegetation which develops above the upper forest boundary (over 1,800 m) is very rich and diverse.
- Wetland ecosystems in the country are present in various forms (relic lakes, glacial lakes, reservoirs, rivers, streams, springs and temporary waters). The group of key aquatic systems includes the three natural lakes and the developed river network, especially the watershed of the Vardar River.

The current status of the key ecosystems in the country reflect both the local environmental conditions in which they develop and global climate changes. In the country, biological resources represented by indigenous varieties, breeds and species should be preserved for the sake of economic, scientific, cultural, socioeconomic and environmental interests.

The term *biodiversity* is not used in the country's highest legal framework – the Constitution. The key elements of the constitutional method of protection can be recognised in most of its provisions, however. Thus, the nomenclature of *the fundamental values of the constitutional system of the Republic*, inter alia, includes *environment and nature protection and promotion* (Article 8, Paragraph 1, Item 10). In addition, the Constitution guarantees the right of all citizens to a *healthy environment* and the Republic provides appropriate conditions for exercising this right. At the same time, protection of the environment and nature is regulated as a constitutional obligation of all people (Article 43). Furthermore, the Constitution provides for the possibility of legal limitations on the *freedom of the market and entrepreneurship* (Article 55, Paragraph 3) on behalf of biological diversity. Finally, it provides equal *constitutional status* for all *natural properties* and *plant and animal life* as a whole (status of *properties of common interest for the Republic*). Such a status implies special protection for each individual property of common interest, as well as specific protection of the entity to which it belongs, as a group object of protection (Article 56, Paragraph 1). This constitutional framework provides a solid basis for establishing and developing a coherent system of environmental protection and, within it, designing a clear model for biodiversity conservation.

The country's current biodiversity legislation is in the process of approximation with the EU legislation. While approximation of the EU Habitats and Birds Directives will be a major step forward, further steps are necessary to address all of the country's responsibilities under the Convention on Biological Diversity (e.g. bio safety. The weight in the process is to seek and achieve the maximum possible synergy between development of the NBS and that of NEAP2, NSSD, EU approximation, and the Pan-European Biological and Landscape Diversity Strategy (under the Ministerial 'Environment for Europe' process).

1.4.9.2. Agrobiodiversity

Biological diversity in agriculture is one of the most critical areas of the overall biodiversity on the globe, with 75% of all food production based upon only about 100 plant species and domestic animals. In the country, biological

resources represented by indigenous varieties, breeds and species should be preserved for the sake of economic, scientific, cultural, socioeconomic and environmental interests.

The country possesses significant agro biological plant diversity due to its favourable geographic location and climatic conditions. The diversity of a large portion of the local species has not been adversely affected because agricultural production is not intensive in many regions. In such areas, indigenous species and locally bred varieties are grown, representing an important source of genetic material no longer appearing within the genotype of commercial species.

The major portion of the total arable land is used for field and garden production (84.2%), with the greatest percentage consisting of wheat, tomatoes and peppers. Fruit and grape production comprises 7.1%, mostly consisting of native and introduced grapes (4.4%), apples and plums. Meadows cover 8.5%, and are most often planted with alfalfa.

The bulk of the crops produced consist of commercial varieties, the major portion of which are imported from abroad, with a minor number of locally-developed varieties, mainly created by the Institute of Agriculture in Skopje. Small producers still grow local varieties and indigenous species, especially in garden plant production. The number of varieties/species used in agricultural production within the country is evidence of great biological diversity. There are 129 recognised domestic varieties and 2,205 imported varieties used domestically.

There are indigenous breeds and varieties of domesticated animals in the country, which are fully accommodated to local breeding conditions. During the past 50 years, however, new, more productive breeds have been imported. Both the original imported breeds and crosses with local varieties are still present today. Crosses between indigenous breeds/strains and imported breeds are known in several species:

- *Busha* is a local breed of cattle found in highland and mountain areas. During the last 30-40 years, it was crossed with many imported breeds. According to official statistical data (see Chapter 1.4.5.8.), Busha comprise 30% of the total number of cattle raised.
- *Pramenka* (sheep) is represented by three strains: Karakacanska, Ovchepolka and Sharplaninka. While the Karakachanska strain is considered to be endangered, as classified by the Food and Agriculture Organization (FAO) (2000), the other two strains are widely used in sheep production.
- *Domestic (Balkan) goat.* Although its numbers are on the increase, it is difficult to make a clear distinction concerning this breed. The goats come in different colours (white, grey and multicoloured), with outstanding long hair and sword-like horns.
- *Local primitive pig* is raised on ranges in the regions of Makedonska Kamenica, Strumica and Sveti Nikole. Although it is a very primitive breed, more field and laboratory research is needed in order to clearly define its status.

Table I - 31 Indigenous breeds and species

Species	Breed	Strain	Status of Population
Cattle (*Bos Taurus)*	Busha		Stable
Sheep (*Ovis aries)*	Pramenka		
		Karakachanska	Critical
		Ovchepolska	Stable
		Sharplaninska	Stable
Goat (*Capra hircus)*	Domestic (Balkan) goat		Stable
Pig (*Sus scrofa)*	Local primitive pig		Unknown (critical)
Dog (*Canis familiaris*)	Sheep dog – Sharplaninets		Stable

Source: Country Study of Biodiversity, first national report, 2003

Because of excessive and uncontrolled exploitation of wild plant and animal species, there is a serious danger that many will disappear. Due to the importance of maintaining biological resources, there is a pressing need to adopt regulations concerning these species and to specify annual collection quotas.

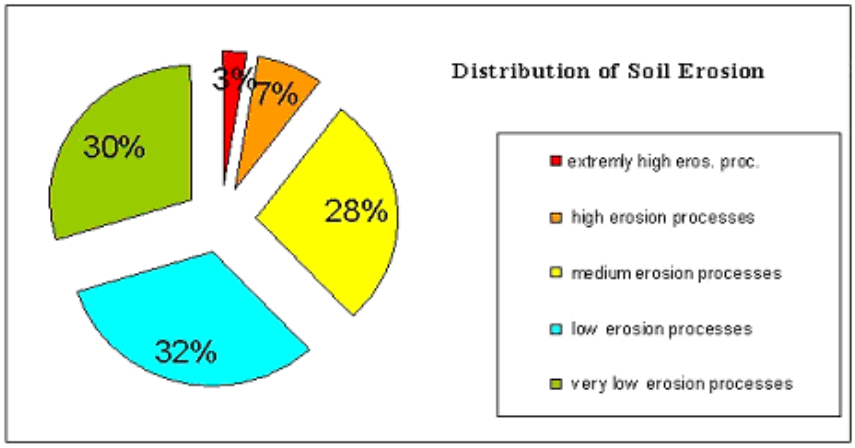
Manuals and monographs for collectors of medicinal and aromatic plants has been prepared in 2004 and issued by the MAFWE (supported by SIPPO and GTZ) to educate the collectors. Also under the Law on Forests (OG 47/97, 7/00 and 89/04), Book of rules for manner of usage and collection of other forest products (OG 54/00) is adopted by MAFWE to regulate the collection of the forests flora and mushrooms.

It is essential to pay greater attention to biological diversity that is traditionally utilised, and to endeavour to create recognisable standards for quality, origin and certain other traits for specific products.

1.4.9.3. Agro-environmental problems

Soil erosion is one of the most important environmental problems and it has increased in the last decade. The combination of natural vulnerability (sloping terrain, vulnerable soil structures and occurrence of intensive rains), inappropriate land use (destruction of natural flora, conversion of grasslands for cash crop cultivation, establishment of large fields involving the destruction of former shelterbelts, landscape elements and field margins) and farming practices (overgrazing, use of monocultures, limited application of organic materials, ploughing of steep slopes, lack of soil conservation tillage techniques, insufficient land use for winter cover crops) contribute to the acceleration of erosion processes. Currently an estimated 38% of the country experiences medium to severe erosion processes, with an annual total soil loss of about 17.1 million cubic meters. Soil erosion results in large amounts of sediment ending up in artificial and natural accumulations, leading to a reduction of storage or flow capacity of water and damage of critical hydraulic infrastructure.

Figure I - 7 *Distribution of Soil Erosion*



Source: Agricultural Institute (Skopje, 2006)

Water pollution by nitrates and phosphates, pesticides and organic manures caused by agricultural sources are reported in the country. Although untreated municipal and industrial wastewater discharge is the main cause of water pollution, diffuse pollution of ground and surface waters with nitrates and phosphates (due to excessive application of mineral fertilisers and animal manures, especially in highly erosion-prone soils) occurs in areas where there are many intensive farms. According to the latest data there is a low use of mineral fertilisers (around 104kg NPK per ha of arable land or 12kg NPK/ha agriculture land). There is no data on fertiliser use at farm level. Point source pollution of surface waters with pesticides, nitrogen compounds, phosphates, various organic materials with high Biological Oxygen Demand (BOD) and pathogenic organisms (due to poorly stored and managed pesticide, manure, slurry, dirty water, silage effluent and other farm wastes) occurs in areas with highly intensive farming and livestock establishments. It is expected that agricultural pollution will increase with the modernization and intensification of agriculture.

Water resource quality is affected by pollution and soil erosion, with agriculture a contributory factor. The quality of the country's water resources ranges from satisfactory to poor. Quality is relatively good in the upper reaches of rivers, deteriorating rapidly in the middle and lower reaches. Untreated municipal and industrial wastewater discharge is the main cause of water pollution, but agricultural activities also contribute, threatening both surface and groundwater sources. Livestock farms are a particular problem. While average use of fertilizers has declined, from 90 kg/ha in 1994 to 45 kg/ha in 2002, some water bodies (including Bregalnica and Vardar rivers) are reported to suffer pollution from excessive nutrient loads, particularly in summer. Modernization and intensification of agriculture will further threaten surface and groundwater sources and reservoirs. Polluted water constrains farmers' crop choices, especially more profitable crops like vegetables and fruit. Soil erosion also affects water resources, but currently receives limited attention. About 38 percent of the country is prone to high soil erosion due to topographical features and heavy rainfall, but in many cases, soil erosion is

caused by unsustainable agricultural practices. Soil erosion has resulted in large amounts of sediment ending up in reservoirs and irrigation and drainage facilities, leading to a reduction of storage/flow capacity and damage of critical infrastructure.

An effective framework for trans-boundary water resources is important for safeguarding access to irrigation. About 98 percent of the country lies in watersheds of trans-boundary rivers, and most of the country's rivers are shared with neighbouring countries. Allocation issues persist in some of the shared basins. Since agriculture is the main water user, it is in the interest of the agricultural sector to put in place or re-establish cooperative arrangements for trans-boundary water bodies.

Biodiversity loss. Agriculture is a sector posing a severe threat to the biological diversity of the country, especially due to intensification of agriculture (associated with higher fertiliser and pesticide use, semi-natural grassland conversion to arable land, and new irrigation developments) is reported in localized high production potential areas. Biodiversity loss due to land abandonment, in particular in marginal areas, can lead to the deterioration and eventually the disappearance of semi-natural habitats and traditional landscapes in the places concerned. Traditional management of grasslands, and low input, high crop diversity mixed farming, which maintained of high nature value habitats, have ceased in many marginal but environmentally valuable areas. Land conversion to urban use: The country experiences an intensive urbanization and the expansion of some settlements, at the expense of agricultural land. In accordance with the data of CORINE Land Cover 2000, artificial areas in the country[59] take 1.45% of the total area.

Agricultural generated air pollution has not been given appropriate attention as the majority of national initiatives focus on emissions from industrial plants and transport. Methane and ammonia emissions (so-called glasshouse effect gases -GHG) originating from inadequate storage and application of slurry and manure occur in regions where there are significant numbers of livestock farms. The estimated share of the GHG emissions from the agriculture sector in the national emissions is 14.13%. Air quality is also affected in windy areas, as the upper layer of soil can be eroded causing sometimes pesticide and fertiliser pollution in areas where it accumulates.

The Green Houses Gas (GHG) Inventory in the country was prepared for the first time as a part of the First National Communication on Climate Change, where the three main GHG - CO2, CH4 and N2O were inventoried for the period 1990-1998.The country's inventory team used Intergovernmental Panel on Climate Changes (IPCC) methodology, recommended by the United Nations Framework Convention on Climate Change (UNFCCC), explained in details in the Revised 1996 IPCC Guidelines for National GHG Inventories.

The main problem is the absence of relevant statistical department within the Ministry of Agriculture, Forestry and Water Economy (MAFWE) and non-existence of appropriate systems, which will serve as a reliable and constant

[59] Artificial areas include: continuous and discontinued urban land, green urban areas, sports facilities, industrial and commercial facilities, roads, railways and airports, mines and waste disposal sites.

source of field data which will be further on statistically appropriate elaborated and delivered to the State Statistical Office for further integration with other relevant data. Collection of activity data for realization of this inventory, concerning the agriculture sector is based on official data of the State Statistical Office as a key source. Greenhouse gases emissions are computed using data for each category and each sub-sector further multiplied by the specific emission factors, which are estimated separately for each year.

The GHG Inventory for Agriculture is based on the data for the following gases: CH4, N2O and CO 2-eq, and their emission from the following source categories:

- CH4 emissions from enteric fermentation in domestic livestock,
- CH4 emissions from manure management,
- N2O emissions from manure management,
- CH4 and N2O emissions from agricultural residue burning,
- Direct N2O emissions from agricultural soils,
- Indirect N2O emissions from nitrogen used in agriculture,
- CH4 emissions from rice production.

Other gases such as hydro fluorocarbons (HFCs), per fluorocarbons (PFCs), and sulphur hexafluoride (SF6) and SO2 are not specific, characteristic for agriculture.

It is evident that the main sources of the emissions are the enteric fermentation and agricultural soils, both with about 40-50% of the total CO2-eq emissions. Table I-35 and I-36 presents the contributions of the individual GHG in the total CO2-eq for the agriculture.

The total CO2-eq emissions in the country for the period 1990-2002show that the main contributor to the total CO2-eq emissions is the energy sector with about 70% of the total emissions. The second biggest contribution comes from the agriculture sector with about 10-15%, while all other sectors are contributing with less then 10% each. The only exception from this general conclusion is in the year 2000, when due to enormous forest fires the emissions from the Land use change and forestry (LUCF) sector are about 18% of the total national emissions.

Contribution of individual GHG to the total CO2-eq emissions, both in absolute values and in percents. About 75-80% of the equivalent emissions are direct CO2 emissions from burning, 12-14% are the CH4 emissions, 5-9% are the N2O emissions and about 2% are the CO emissions:

Table I - 32 Contribution of individual subsectors to the total CO2-eq emissions in agriculture (expressed in %)

Enteric Fermentation	36.39	36.67	37.08	37.84	37.33	37.93	39.20	40.40	38.82	41.41	40.55	42.66	50.81
Manure Management	8.91	8.90	8.67	8.81	8.83	9.20	10.28	10.84	11.15	12.04	11.76	12.17	14.73
Rice Cultivation	0.49	0. 49	0.47	0.29	0.10	0.07	0.26	0.35	0.32	0.32	0.29	0.12	0.18
Agricultural Soils	54.21	53.94	53.77	53.06	53.74	52.80	50.25	48.41	49.72	46.23	47.39	45.04	34.27
Total	**100.00**	**100.00**	**100.00**	**100.00**	**100.00**	**100.00**	**100.00**	**100.00**	**100.00**	**100.00**	**100.00**	**100.00**	**100.00**

Table I - 33 Contribution of individual GHGs to the total CO2-eq emissions in agriculture (expressed in %)

CH4	39.70	39.97	40.37	41.03	40.22	40.91	42.71	44.13	42.63	45.64	44.58	46.59	55.64
N2O	60.30	60.03	59.63	58.97	59.78	59.09	57.29	55.87	57.37	54.36	55.42	53.41	44.36
Total	**100.00**	**100.00**	**100.00**	**100.00**	**100.00**	**100.00**	**100.00**	**100.00**	**100.00**	**100.00**	**100.00**	**100.00**	**100.00**

Environmental problems related to irrigation. Although the country's irrigated area has decreased in the last 15 years, the construction of new irrigation schemes and the low efficiency and water consuming irrigation systems impose greater water demands especially in the driest months of the year when river flows need to be maintained downstream to protect fish, other freshwater species and their predators. Water-saving on-farm irrigation techniques (e.g. using drip irrigation) may alleviate the pressure on limited water resources and improve runoff of agro-chemicals.

Soil-related environmental problems are (a) soil pollution by fertilizers and pesticides (localized particularly in fruit – apple, and vegetable producing regions), (b) loss of soil organic matter (due to mono-cropping, low organic fertilizer use), (c) soil compaction of the upper soil layers due to the both dryness and intensive rainfalls. Contamination of soil from local sources: In rural areas and around villages there are numerous unregulated/unorganized waste disposal sites. Around 200 ha are under waste disposal sites. Problems, which result from the current method of waste management, are the pollution of water resources, with permanent taking possession of the land/soil and its contamination.

Genetic erosion of local breeds and varieties has been given little attention and financial support. Breeds and crop varieties considered to be endangered and maintained are the Busha cattle breed, the Karakachan sheep, the domestic (Balkan) goat, the local primitive pig race, the Sharplaninec shepherd dog and some landraces and indigenous species of cereals, fruits, vegetables, industrial crops, etc.

1.4.9.4. National Breeding Programme (Incl. Species at risk of loss)

Based on the Law on Animal breeding the country adopted a National breeding programme for animal breeding which refers to the period from 2000 to 2009, and it prescribes in detail the development directions of all animal breeding branches: bovine breeding, sheep breeding, goat breeding, pig breeding and poultry breeding. The Ministry of Agriculture, Forestry and Water Economy (MAFWE) in cooperation with authorised institutions in the field of animal breeding deal with the implementation of this Programme. The breeding programme represents a systematic performance of activities in the field of animal production, based on the findings from the population and quantitative genetics, in order to improve the production features of the population of domestic animals. Taking into account the new requirements of the market model of the economy, new objectives were set within the complex system of animal breeding, namely:

1. Production of animal products (milk, meat, eggs, wool, skins and their processed products) for the domestic market and for export on a competitive basis;
2. Structuring the complex animal-breeding system throughout all the production phases (reproduction, production and slaughtering/marketing);
3. Self-organisation of the animal breeding co-operative systems based on known international principles: primary production profit; overall service animal breeding infrastructure.

1.4.10. Agricultural Knowledge and Information System

An Agriculture Knowledge and Information System links people and institutions to promote mutual learning and generate, share and utilize agriculture related technology, knowledge and information. The system integrates farmers, agricultural educators, researchers and extensionists to harness knowledge and information from various sources for better farming and improved livelihoods. (FAO and World Bank 2000)

1.4.10.1. Educational system of agriculture

The country's educational system, under the responsibility of the Ministry of Science and Education (MoSE), went through reforms towards the modernization of curricula and educational activities. In 2004, the government adopted a 2005–2015 national programme for the development of education to comprehensively reform this area based on the processes of democracy, decentralization, autonomy, pluralism, multiculturalism and globalisation, as well as on international educational standards of knowledge and skills and on the principles of lifelong learning. However, the educational system still needs to be improved in order to establish educational standards compatible with the ones of EU member states, including external verification, design of appropriate study programs, information exchange and cooperation with educational institutions of other countries, etc.

1.4.10.2. Agricultural research

On the basis of the Law on Scientific Research, agricultural public research and technological development activities are under the competence of, and funded through, the MoSE. The country's research system in the wider area of agricultural sciences consists of six public scientific research institutes: Institute of Agriculture (Skopje), Institute for Livestock (Skopje), Institute for Tobacco (Prilep), Institute for Southern Crops (Strumica), the Faculty of Veterinary Medicine and the Hydro-biological Institute, Ohrid.

The Research Institutes, affiliated with the universities, are poorly supported by the Government. Agricultural research institutions currently employ some 300 persons wholly or mainly engaged in research, of which about 40% are at graduate or post-graduate levels. Apart from institutes, a smaller portion of research in agriculture is conducted by high educational institutions in the area of agriculture and by the country's Academy of Sciences and Arts. All these institutions suffer from major institutional deficiencies: low capability to respond to upcoming challenges and support policy reforms in EU approximation process; insufficient facilities, equipment and materials, and unsatisfactory level of young researchers' ratio in the total number of researchers.

Public spending on agricultural research and education has been reduced in the 2003-2005 period. The MoSE method of funding of research institutions has recently changed, and provides only for core funding of salaries, which constitute only about 20% of the budgets, while the balance comes from project funds. Funds for research projects are granted according to the proposed programs or by a public bidding procedure. In 2005, the total amount spent for all five research institutions' activities (including their current

expenditures) was only MKD 141 million (equivalent to €2.3 million). As a result of under-funding, research staff cannot be fully utilized. In order to overcome lack of funds in the short term, many institutes are devoting greater efforts to providing services for which they can charge, such as seeds sale, agriculture information services, and advice to farmers on fertilizer regimes, rather than research work.

Communication channels, policies and finances to improve research orientation are not available due to lack of funding, awareness and commitment. Research is still oriented towards large-scale exploitations rather than based on needs by the wider community of small- and medium-scale farmers.

1.4.10.3. Academic and vocational education

Secondary Vocational Education and Training (VET) is based on three to four-year programmes, and training programmes, all developed and regulated by the state. In order to adjust it to the social and economic changes and the requirements of the labour market, the country is currently transforming the secondary VET particularly aimed at integration of the work and continuation of the education as an important component for building of a knowledge-based society.

The following table shows the number of Secondary schools in Agriculture, veterinary, food production and forestry in 2003/04 and 2004/05 and the corresponding number of pupils. In the agriculture branch secondary schools a negative enrolment trend is evident (except for forestry), as employment after high school graduation is difficult.

Table I - 34 Number of Sector secondary vocational education schools and pupils

Type of school	No. of Schools 2003/2004	No. of Schools 2004/2005	No. of pupils 2003/2004	No. of pupils 2004/2005
Agriculture	10	10	2,883	2,722
Veterinarian	4	4	1,364	1,267
Food production	6	6	2,026	1,885
Forestry	2	3	390	411
Total	22	23	6,663	6,285

Source: Agricultural Institute (2006)

There is no evidence of serious non-formal education (carried out by workers' universities, employment centres, etc.) in any of the agricultural areas in the country. Although there is university capacity in agricultural and veterinary sciences, it has never been used for training of farmers (except within incidental donor funded projects), which is still mainly carried out at a secondary level of education. A law on non-formal education and adult education regulating the offer of educational services of non-formal type through an adequate system of accrediting should contribute to overcome these deficiencies is planned to be adopted in 2007. The Adult Learning Strategy, which sets out the future plans for the development of human resources, was promoted by the Government in 2006. This Strategy will also represent a basis the development of non-formal and lifelong education in the

area of agriculture. So far, the first steps for creation of curricula (Good Agricultural Practice – GAP, entrepreneurship skills, organic production, first aid in agriculture, etc.) for various stakeholders in agriculture have been made by the *Foundation Agro-Centre for Education (FACE), founded by the Institute of Agriculture in Skopje*.

The country's agricultural higher education system includes five educational institutions: the Faculty of Agricultural Sciences and Food in Skopje, the Faculty of Veterinary Health in Skopje, the Faculty of Biotechnical Sciences in Bitola, the Faculty of Forestry in Skopje and the Centre for Polytechnic studies at Tetovo State University.

Albeit large agricultural production/industrial enterprises have been mostly closed or restructured, educational institutions still do not respond in terms of curricula, educational and qualification standards to the needs of much larger community of small- and emerging medium-scale farmers and agricultural industry. In addition, the stand-alone nature of the country's agricultural universities hampers the possibility of interdisciplinary studies, which are important in sectors relevant to EU policies (cross-compliance principles, environmental dimension and rural development). At the same time, there are weak links between schools and businesses. The majority of students who join agriculture faculties are from the rural areas but agricultural higher education is increasingly neglected by students, so every year more than thirty percent of the free places remain unfilled.

Table I - 35 Number of enrolled students in Sector higher educational system

Faculty	Year 2003/2004	Year 2004/2005	Year 2005/2006
Faculty of Agricultural Sciences and Food in Skopje	1,306	1,156	924
Faculty of Veterinary Health in Skopje	359	339	324
Faculty of Biotechnical Sciences in Bitola	865	841	930
Faculty of Forestry in Skopje	698	804	726
Centre for Polytechnic Studies at Tetovo State University*	n/a	n/a	116
Total	3,228	3,140	3,020

Source: SSO

The decreasing interest in agriculture-related professions could worsen given the deteriorating trend in the agricultural sector, the low level of professionalism and commercialization of farm production and limited job opportunities. In addition, within the formal education system in the country, when it comes to post-graduate studies in agriculture, the student receives modules for scientific approach (Master of Science), but there are no specialized studies in certain areas (Specialized Master Diploma).

1.4.10.4. Conclusions on education and research

The framework for the establishment of quality partnerships and transfer of agricultural technologies and knowledge between the higher education and research institutions on one side and the economy on the other is ineffective. The mechanisms of interaction between research and agro-food business

sector are not developed, and this leads to insignificant private investments and participation in applied research and innovation. In addition, there is insufficient involvement of employers in the profiling of the workforce that will correspond to the current needs of the market. The policy does not stimulate cooperation between higher education and research institutions and the economy.

Agricultural research policy in the country today remains highly fragmented. Inter-institutional cooperation and horizontal linkages between research and educational institutions, administrative policy formulation institutions (MoSE and MAFWE), the National extension services (NEA) and the end users in the sector are very weak. No seriously organized approach of communication and knowledge transfer between research institutions and the national advisory service has been established yet and as a result potentially useful research results are not readily available to producers. The public scientific research institutions do carry out some advisory activity but it is mainly limited to a few publicly funded training/educational activities (mainly linked to their research activities) and to the occasional provision of advice on an individual basis.

1.4.10.5. Agricultural extension and advisory service

In the country, agricultural advisory services are primarily provided by public sector institutions and increasingly by the private sector, including farmers associations. The private sector includes different categories service providers. The most relevant, though still limited at country level, are the individual advisors or consulting firms (agricultural engineers, economists, agronomists, soil specialists, plant protection specialists, veterinaries, etc.) that in some cases also avail of laboratories and professional equipment. Usually the frequency and distribution (number of advisors, range of available specific expertise) of delivered advice by this category is directly related to the level of economic and demographic development of the specific regions, being more concentrated where agriculture is prosperous and economically important in the region. Their target groups are progressive farmers, willing and able to pay for specialist services, and agro-processors. In these regions, advice is also provided by input suppliers (seeds and seedlings, fertilizers, agrochemicals) and machinery and equipment suppliers, as part of pre- and post- sale company policies.

The range and the quality of services provided by the existing farmer associations and producer associations are variable and determined by their internal human and organizational resources and to the availability of international donor projects and funds. Generally, these still offer a limited range of services, use insufficiently diversified methods, address limited target groups and have a limited effect in satisfying the advisory needs.

So far the trials for the establishment of more professional private organization of advisors, such as associations or advisory groups, have been of limited duration and have been usually linked with lifetime of support provided by different project and during their activities (such as Agro-manager in the past and IFAD consultants) and a certification system for suppliers of agricultural advisory services has not been established in the country yet.

Apart from the scientific-research institutions (for whom the provision of agricultural advisory services is a limited and supplementary activity), the main publicly mandated bodies are the National Extension Agency (NEA) that provides advice nationwide to farmers as primary activity, and the MAFWE which carries out some activities in this field.

NEA's structure is designed at three management levels: directorate, regional centres and work units. NEA has headquarters in Bitola and coordinates 6 regional centres and 30 working units all over the country. Out of 125 employees, 90 are technical advisors. NEA is responsible for, and mainly oriented to, the provision of technical advice to individual agricultural producers through education meetings (farmer field days), the provision of off-the-shelf technical-economic packages for different agricultural production patterns and tailored services to individual and associated farmers. NEA is the largest receiver of state funds allocated for agricultural advisory services and its annual budget (salaries and basic operational costs) is entirely covered by the MAFWE. It has no other income as only a small portion of its target group is able or willing to pay. The 2005 budget consists of five budget programs in average of annual amount of MKD 45 million (€730,000) or around 3% of the public budget spending in agriculture in 2005.

At the moment, there is no dedicated MAFWE internal administrative capacity committed to the extension policy in the agricultural sector that realistically envisages and promotes joint actions among stakeholders in knowledge creation and transfer process. Recently MAFWE embarked on advisory improvement reforms supported by the SIDA-funded MAASP programme, which started in 2004. Recommendations prepared by MAASP for improvement of the advisory services should serve as a contribution to the process of creating an appropriate strategy and policy in the area of advisory services, primarily for NEA. An infrastructure for engagement at municipal level through five pilots has been established and initial activities have begun, providing base for collaboration among municipalities, NEA, private sector and farmers associations through advisory groups. This fieldwork should provide basis for identifying sustainable and demand driven agriculture service provision, identifying priorities, stimulating interest, leading actual implementation and organizing monitoring.

1.4.10.6. Agriculture knowledge policy

The Ministry of Education and Science is responsible for the organisation, finance, development and promotion of science and technological development, state-of-the-art communication technologies, information science and technology, as well as international cooperation regarding these issues. All research, including agriculture, is funded through this ministry. The method of funding has recently changed with the MoSE now only providing the core funding of salaries, together with indicative allocations of funds for programs and sectors in line with the strategy for agricultural research. Any organization or individual can submit a bid or proposal to undertake a research project. The MAFWE currently has no formal responsibility for agricultural research although it is consulted on major issues and can fund specific research projects separately.

1.4.11. Agriculture and Rural Financing

Provision of financial services for agricultural and rural development is rather limited. The rural financial system consists of commercial banks, micro-credit banks, savings houses, informal financial channels and considerable credit-oriented programs financed by donors.

Access to credit resources for rural and agricultural activities is very limited since the financial institutions are quite reluctant to invest in them as:

- agriculture is viewed as a risky or highly risky sector, where a majority of farmers do not perform bookkeeping, there is lack of secure title deeds to be used as collateral, insurance premiums are expensive and therefore not used regularly,

- rural enterprises are generally micro and small-scale, with low managerial and administrative skills,

Financial institutions show a little interest in these activities largely due to a lack of knowledge of the characteristics and performance of the agricultural and rural businesses, lack of proper know-how and skills for appropriate analysis of the agricultural and rural businesses, for risk assessment and cost-effectiveness of the investments, and therefore lack of previous experience in approvals and disbursement of credits in this sector. Furthermore, the high administrative expenses especially connected to the processing of the small loan applications makes the individual farmers and rural businesses less attractive for the banks and saving houses.

On the borrower's side, both farmers and rural entrepreneurs have generally low educational level, limited knowledge of commercial crediting (interests rates, repayment schedule, grace period, collateral etc.) and prefer to borrow money from the informal sector to avoid costs and bureaucratic procedures.

One of the reasons of the gap between financial institutions and borrowers is the limited and inappropriate technical and business support to planning and follow-up of the investment.

A number of donor funded projects and credit lines (Dutch credit line, IBRD, IFAD I&II) have tried to fill the need for rural and agricultural credit. The experience so far has shown that successful rural credit policy, with solid foundations, can be developed only with functioning of efficient mechanisms for commercial crediting in line with market conditions.

The Agriculture Financial Services Project (IFAD 2) represents the only donor credit program currently present in the country in agriculture. Loans are available to individual farmers and firms dealing with processing and trade of farming food products with interest rate of 6%, i.e., 7% for funds provided through commercial banks. The servicing of loans, including grace period, is from one to seven years, depending on the purpose of the loan. There is a revolving fund established and operating through commercial banks, as well as delivery of technical assistance to credit users.

MAFWE contributes annually with a small sum to the IFAD 2 project. Additionally, the Ministry of Local Government through the Bureau for

Underdeveloped Regions participates in subsidizing interest rates to IFAD 2 credit users who live in the undeveloped municipalities.

Recently the Government has enacted a Decision on establishment of Agriculture Credit Discount Fund providing rural credits towards the farmers with subsidised interest rate of 4% when providers are commercial banks and 6.5% if the loan is provided through the saving houses. The credit policy (category of credit users, priority sectors and amount of loan) is developed by MAFWE to correspond to the IPARD related projects and towards the implementation of the National Rural Development Policy. The total available fund currently is set on about 11 mill. EUR.

1.4.12. Food Processing Industry

1.4.12.1. General overview

According to the analysis made by the Economic Institute in 2003, there are approximately 1,600 enterprises for the production of food and beverages in the country, with an annual average employment of about 17,000 employees. The majority (96%) of the enterprises are small according to the classification of the enterprises provided in the Law on Trade Company[60] (OG 28/04, 84/05, 25/07). The main sub-sectors of the food processing industry include production of bread and bakery products, production of fruit and vegetable juices, production of mineral water and other beverages, pasta production and confectionary production.

Table I - 36 Structure of companies producing food and beverages (2000-2003)

Size of the companies	2000	2001	2002	2003
Small	1,535	1,327	1,498	1,494
Medium	35	38	19	39
Large	12	13	36	21
Total	**1,582**	**1,422**	**1,553**	**1,554**

Source: Economic institute, State Statistical Office

The degree of utilization of the installed capacity is 30%-60%, pointing to unused potential of the industry, which reduces profitability.

Table I - 37 Food and beverages installed and used capacities (2000-04)

Food & Beverages	qty	2000	2001	2002	2003	2004
Installed production capacities	hl	10,985,706	11,124,694	11,797,297	12,463,014	12,500,000
	t	1,219,711	1,192,320	1,349,308	1,430,527	1,500,000
Capacities used	hl	52.9%	64.9%	53.7%	50.2%	60%
	t	43.7%	41.8%	42.0%	38.3%	35%

Source: Economic Institute, State Statistical Office, 2004 estimation

[60] Small enterprises are enterprises which in last two fiscal years, respectively in first year of the work they met at least two from the criteria as follow: 1. average number of employees, according to work per hour is up to 50 employees and 2. Annual income to be less than 2.000.000 euro in MKD equivalent amount, total turnover to be less than 2.000.000 euro in MKD equivalent amount and 3. Balance sheet to be less than 2.000.000 euro in MKD equivalent amount.

1.4.12.2. Agro processing industry

Before the break-up of the former SFRY, the processing industry in the Republic of Macedonia has always played an important role as a raw material purchaser and exporter of processed products into the Western Balkan regions as well as to the EU. The Republic of Macedonia was a major agricultural supplier for the whole Yugoslavian federation. At its peak, the industry employed about 25,000 full time staff, most in vertically integrated production, processing and marketing operations. The 30 largest AKs[61] and Co-ops employed more than 80% of this labour force.

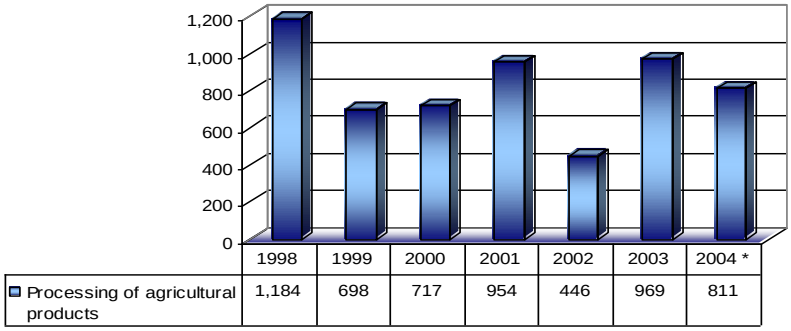
At independence, the country inherited a very large agro-processing sector, while its domestic market fell to only 2 million people. Many agro processing enterprises had sufficient production and processing capacity to provide food products for larger market.

Over the last 10 years, the sector was affected by political changes and, during the course of the privatisation process the AKs has had problems in adapting to the new market situation. The privatization process of these enterprises was initiated in the late 90's and has been very slow and dominated by management and employee buyouts which deprived them of essential capital and management skills while entering into market adjustment period. However, a limited but growing number of new, smaller, private-sector agro-enterprises have now developed alongside the privatized AKs. In contrast to the AKs, they tend to be business-and market-oriented with a focus on profit and growth. Most of the former AKs are now insolvent and struggling to survive.

In terms of the production structure of processing facilities for agricultural products, in the country there is mainly processing of fruits and vegetables, wine grapes, and milk and meat. At the same time, these processing capacities are the main purchasers of local raw material at the same time being affected by the weaknesses in the supply chain and the quality of the primary produce.

[61] Typically, the AKs were developed as vertically integrated production and processing complexes with an average of 1,140 ha of arable land. The average cooperative had 106 ha. These enterprises ranged from relatively small, intensive operations such as egg and table poultry production, to extensive arable farms of several thousand hectares. The AKs were generally highly mechanized with a substantial labor force, were located on favorable soils, and benefited from extensive irrigation investment.

Figure I - 8 *Value of processed agriculture products (wine excl.) in MKD mill. (1998-2004)*



	1998	1999	2000	2001	2002	2003	2004 *
Processing of agricultural products	1,184	698	717	954	446	969	811

Source: State Statistical Office, "Economic accounts for agriculture"

The value of processed products in the period 1998-2004 has experienced a fluctuating trend, as a result of the seasonal character of agricultural production. These points to the fact that the industry for processing agricultural products is characterized by a low technological basis (i.e. lack of adequate storage facilities to overcome the seasonal effect) and a lack of raw materials needed for production continuity.

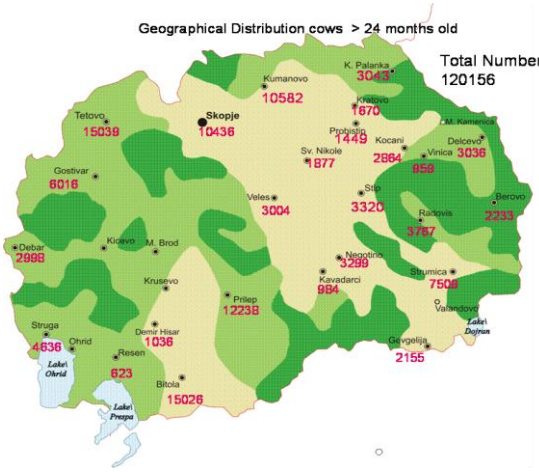
According to the results of the survey made by the State Statistical Office on the business trends in the agro processing industry for the period December 2003-December 2004, the following factors were identified as limits to the increased capacity utilization and adequate economic activity of the industry: lack of raw materials, lack of equipment, low domestic consumption, insufficient foreign demand, vague regulations and uncertain economic environment, as well as financial problems. According to the survey, financial problems and insufficient foreign and domestic demand, supplemented by vague regulations and uncertain economic environment, can be identified as reasons for 75% and 80% of lack of utilization of capacity in 2003 and 2004, respectively.

It is a common weakness across the agro-processing industries and across all agriculture as well, that there is a complete lack of serious, reliable and transparent data.

It cannot be stressed highly enough that every nation needs current and reliable data. This is true in the country where there is an urgent need that a Marketing Information Service be created to collect data from enterprises on a regular - preferably monthly – basis enabling the industries and enterprises themselves as well as Government and the Administration to make rational decisions on well-founded data. This should be high on the list of priorities to be created.

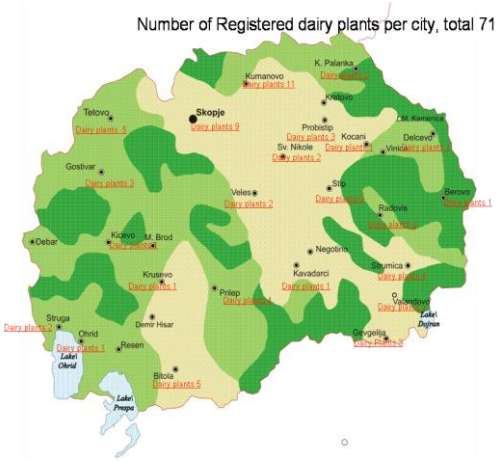
The State Statistical Office is responsible for collection and analysis of all statistical data in the country.

1.4.12.3. Dairy industry



The number of officially registered dairy factories at the veterinary inspection is of 71 units. According to EC-definitions, maybe 10% of them are of medium and small size. The rest is on micro level. The smallest daily average raw milk processing is 40 litres at a capacity of 500 litres. However, the smallest daily average raw milk processing capacity is 200 litres with an average processing of 170 litres. Consequently, the utilisation rate depends not at the size of the processing unit. The large dairies are running depending on the availability of raw milk almost at 80% to 100% of their capacity, which is acceptable.

The geographical distribution of the dairies is matching with the number of cows in the regions. However, in terms of economies of scale in the dairy processing and due to the good road system not more then one to three dairy factories are needed in the country. On the other hand, the two largest dairy factories are producing between 12 and 21 different products each in different sizes of packing. Therefore, the cost savings by economies of scale are not used in any way at the moment in the country.



The total milk production in line 7 + 8 fluctuates by up to +4% to -4% around the 5–year average. The cow milk production fluctuates by up to +8% to -6% around the six –year average (line 1 + 2). The sheep milk production in line 4 + 5 fluctuates by up to +13% to -8% around the six –year average. In years with a high cow milk production are the sheep milk production low and the other way around. The sheep milk production season starts end of January and ends in June / July. There is no statistic available about goat milk. Most of the few goats are milked together with the ewes.

Table I - 38 Development of cow- and sheep-milk production (2001-2005).

Year	2001	2002	2003	2004	2005	Average
Cow milk (tonnes)	200,904	198,431	191,533	212,898	197,464	203,408
Cow milk relative	99%	98%	94%	105%	97%	100%
Cow milk share	81%	79%	78%	82%	80%	82%
Sheep milk (tonnes)	47,486	51,626	52,466	47,876	48,700	46,607

Sheep milk relative	101%	110%	112%	102%	121%	100%
Sheep milk share	19%	21%	22%	18%	20%	18%
Total milk (tonnes)	248,390	250,057	243,999	260,774	246,164	250,016
Total milk relative	99%	100%	98%	104%	98%	100%

Source: SSO

The sheep milk has about double fat- and protein- content as the cow and the goat milk. The price of the milk depends in the country on the fat content. Therefore is the price per kg fat or protein is the same for the dairies do not matter from what origin the milk is. The product output per kilo milk depends on the fat- or the protein- content per kilo milk. For example, is the protein content 7.2% (sheep milk) instead, 3.6% (cow milk) than the cheese output is also the double from sheep milk as from cow milk. Moreover, most of the processing costs in the dairies depend only on the quantities of used raw milk, independent of the fat- and protein- content of the raw milk. Therefore, the dairies prefer to process sheep milk as long as they can sell the sheep- milk products.

Table I - 39 Milk purchase fluctuation per month (2005)

Milk purchase	Bitola Dairy (%)	Udovo Dairy (%)	Strumica Dairy (%)
January	83%	76%	85%
February	83%	76%	85%
March	90%	76%	85%
April	97%	114%	96%
May	104%	114%	106%
June	111%	114%	117%
July	118%	133%	117%
August	118%	133%	117%
September	111%	114%	106%
October	104%	95%	106%
November	97%	76%	96%
December	83%	76%	85%
Average	**100%**	**100%**	**100%**

Source: Sub-sector analysis results, (financed by the EU, managed by the EAR), 2005

The number of officially registered dairy factories at the veterinary inspection amounts to 84. The smallest daily raw milk processing is 40 litres at a capacity of 500 litres and the smallest daily raw milk capacity is 200 litres with a processing of 170 litres. The large dairies are running depending on the availability of raw milk almost at 80% to 100% of their capacities per shift, which is acceptable. It is therewith clear that the utilisation rate, which is very important for dairies, is an individual problem. Consequently, individual assessments are necessary but to realize only a short visit to all registered dairies would take alone at least 7 weeks. A detailed list of the 84 registered dairies is presented in Annex 7.

The raw milk processing capacity of the country's dairy factories is lying between 200 tonnes and 0.2 tonnes a day. But the market shares in terns of turnover on wholesale level over the

- largest 2 dairies amounting to 39.4%
- largest 5 dairies amounting to 53.7%
- largest 9 dairies amounting to 59.6%

The traditional dairy products in the country are drinking milk, UHT- milk, different local cheeses, non-fruit yoghurt and sour milk. For the country's dairies, the biggest international competition is on UHT-milk, where:

- Slovenia has a market share of 21.0% on UHT 3.2% fat
- Meggle has a market share of 24.8% UHT 0.5 litre packaging;
- Croatia has a market share of 12.9% on UHT 0.5% fat

It is well known that Croatia and Slovenia are very active in those market segments in the Balkans. Nevertheless, the local brand IMB has market shares for UHT milk in the country varying between 74.7% and 51.9% depending on fat contend and packing size.

On the other traditional dairy products in the country like pasteurized milk, set cow yoghurt, set sheep yoghurt, cow kashkaval, sheep kashkaval, soft goat cheese, soft cow cheese and soft sheep cheese, the international market shares are either zero or less than 4%.

The country's dairies do not yet offer modern products or products with high profit rates like Gouda, Edamer, Brie, Camembert, sweet fruit yoghurts, puddings etc. Therefore, those sub- markets are more or less completely in the hands of foreign dairies. The reason is that those products need a good hygienic raw milk quality, which is not yet available in the country. Nevertheless, more the 50% of the marked grow will take place in the aforementioned sub- markets.

The country's dairy exports consisted by circa 90% of pasteurized sheep milk exports to Greece. We estimate the value of the sheep milk exports at 1,700,000 € to 2,200,000 €. The country's dairy exports are marginal compared with the estimate the total the country's dairy marked volume at wholesale price level of circa 105,000,000 €.

Table I - 40 Dairy exports (2004-06)

Year	**2004**	**2005**	**2006**
Raw sheep milk export to Greece (kg)	1,850,030	5,911,560	2,985,982
in %	88%	90%	90%
Total dairy exports in kg	**2.113.681**	**6.583.951**	**3.311.417**

Source: *Veterinary Inspection*

The framework of the free trade agreements gives the country's dairies free entrance to all international dairy markets, if the products do meet the taste, the price level and the hygienic standards of the export markets. However, the export will remain reduced as long as the hygienic standards and control systems like HACCP etc. are not developed.

Considerations should be put on the possibilities to increase the export of traditional dairy products, especially soft white cheese from sheep-, goat-, or cow- milk.

The logistic between the dairy factories and wholesalers/ retailer is often weak. The dairies often do not deliver products in time and partly without cooling trucks. The dairies and some small wholesalers deliver the products directly to the shops and supermarkets. Only the three biggest dairies have their own distribution centres in Skopje, the main market. The dairies are virtually in the function of wholesalers. Therefore, they dairies could be supported with e.g. cooling trucks for dairy products.

The large wholesalers are mostly internationally working trading companies, which are specialized, neither in dairy products nor in food. Yet they represent the market entrance for the global dairy players like Danone, Meggle or Nestle. Those are not yet present in the country with own structures. The access of the recognised international companies for milk production in the country can provide connection for the country's dairy industry to the international market and suitable transfer of know-how can boost the sectors modernisation.

Supermarket chains do not have their own distribution centres yet, but they all increase the numbers of selling points. Therefore, the supermarkets will became more and more important for the dairy product sales.

The country's dairy industry was protected by import taxes until June 2006. This induced relative high consumer prices for dairy products and a lower consumption than to be expected at lower prices. The high protection[62] of the dairy industry caused low rates of technical progress of the dairy industry. Therefore, the sector suffers now under the following drawbacks:

- The cost / price per litre raw milk is high because the milk yield per cow / eve is low.
- The hygienic quality of the raw milk is still very bad; therefore, high profitable, modern dairy products cannot be produced from it.
- The cost prices in the dairy production are too high because of not competitive dairy production management and
- The existence often of small and partly outdated dairy factories with low utilisation rates.

[62] The country agreed in the Stabilization and Association Agreement (SAA) and various other bilateral and multilateral free trade agreements including the country's full membership to WTO in April 2003. Those agreements with the neighbouring countries and WTO accession in 2003 offer enhanced export opportunities to the country's agriculture and food processors but also facilitate a rapid dismantling of previous high levels of protection of the domestic market. The average tariff on food imports from the EU went from 28% in 2002 to 9.6% in 2007 and will fall to 6.4% in 2011. Producer prices are expected to drop by 13% - 20% by 2011. The country negotiated low Aggregate Measures of Support with the WTO.

- The dairy marketing is weak especially in small dairies.

At the moment there are hardly any dairy in the country that can fulfil the EU requirements. The experts estimations are that at least 50% of the dairies will not be able to succeed in upgrading their process, facilities and management to reach EU accreditation. However, there are also other opinions in the country about that item. A correct audit should finish the speculations as soon as possible. This should be a precondition for the development and adoption of the sector- and company- strategies.

The State Veterinary Service will conduct a thorough audit and classification of all dairy processing industry facilities according to EC standards. The results will be agreed with the enterprises and for those facilities that have a future, a realistic time frame has to be agreed in which the improvements must be successfully executed. This will serve as basis for a strategic development plan whereby all plants and facilities will be classified according to what they have to do in order to gain EU accreditation.

1.4.12.4. Meat industry

Before independence, the meat production and meat-processed products were grouped together in the so-called Agro Kombinats centrally planned and strategically located around the nation. Large industrial grouping of prime and secondary agro-processing phases. Large facilities with high installed capacities was the order of the day, resulting in high volume production and “standard” and conform products as designated by the central authorities. There were two “Meat Kombinats” in the country – MIK and Gostivar - in which all activities and products were produced. These had relatively high installed capacities and made a complete range of meat products including canned products.

Large capacity slaughterhouses were part of the centrally planned “Meat Kombinats”. Line speeds of 60 pigs / hr and 12 beef / hr are examples of the installed capacity with accompanying cooling and cold store facilities. Some were constructed in the 60’s. Others between the 70’s and the early 80’s and those built in the 80’s had “state of the art” technology at that moment having relatively good equipment, mainly supplied by Slovenia. Their history and further development is typical of most of Eastern Europe, where the political changes that took place resulted in the collapse of the economic order and complete disarray in most industries. The meat-slaughtering sector was no exception, and virtually all facilities ceased functioning, with the consequent deterioration of infrastructure and equipment.

The privatisation of these previous “Kombinats” ended around 2000 and a few facilities re-started with new owners. The previous facilities had seen no investment since the collapse of the previous political system and consequently, a very hard struggle stood in front of the few new owners attempt to slaughter, produce and market meat and meat products in very poor and difficult conditions, both in the factories as in the commercial field. The two former Kombinats slaughtering facilities are at presently working - one for pig slaughter and the other lamb.

There are officially 21 slaughterhouses registered by the Veterinary Inspection Service - of which 7 are licensed for lamb export (Annex 8). The slaughterhouses that are operating in the country vary in age but the vast majority were constructed 20 – 30 years ago. They were well equipped for that time and had significant capacities. Now they are outdated and largely inefficient. They no longer meet international standards of hygiene, product and personnel flows, and infrastructure. The technology used is old and equipment likewise. The production of pigs without skin is a relic of former times when pigs were so fat that this was the only way to "get rid of the excess fat" into the rendering processes. They do not meet the latest specifications for facilities for waste disposal and wastewater treatment.

The meat-processing sector faced similar situation as of slaughterhouses as both productions were united vertically into the Kombinats. The meat products range was dictated by the State, as were the "recipes", formulation and ingredients. Therefore, the same products could be found all over the nation and conformity. Between 50 – 80 different meat products from one Kombinat was not unusual. However, following the political change, these facilities deteriorated, were starved of investment and practically all stopped production. They were finally privatised in the late 90's and a few courageous owners re-started a few of the facilities, using the meats provided by a very limited number of slaughtered animals in their facilities. All previously state owned facilities are now privately owned or non- functioning / bankrupt.

The meat-processing sector is in a state of change. From small and sometimes primitive beginnings in the 1990's, the sector is now becoming well established and an important sector of the meat industry. Fine new facilities have / are being created in good industrial locations including connections to the municipal water treatment system. Their immediate future seems assured with steady development as spending power increases, the competition will become more professional and their technologies will develop more sophisticated and added value products. This above scenario is true for about 5-6 enterprises based in Skopje.

The major weakness concerns two other groups. There is another smaller group of enterprises that have not reached the level of the "leaders" in the market and these companies need to develop their businesses in conditions that are based on EU standards and directives. Some of these enterprises have plans to purchase land for future factory development. They realise that if they want to remain in this industry, only EU approved plants will be allowed to operate. This leaves them little choice but to invest in new facilities, or certainly try to upgrade their facilities to the acceptable standards.

There is a third group of processors who will be unable to meet the necessary criteria. They may not posses the financial power or are unwilling to accept large debt in order to finance new facilities. Many of these small enterprises find themselves in poor locations, often in urban housing areas where they started their businesses, and will be forced to move at high expense. Many of these players in this last category will probably have to cease operating in the foreseeable future.

The majority of machinery/equipment seen in the meat processing sector is a mixture of brand new and some a little older but of quite acceptable

standards. The machinery was almost entirely produced in Western Europe, the home of good meat industry equipment.

As with slaughterhouses, the Veterinary Inspectorate will need to inspect all meat-processing facilities and establish their position concerning conformity to the required EU standards for meat processing facilities. The same form of categorisation will be required (e.g. A, B, C, D) and clear written instructions given to each establishment as to its responsibilities and requirements regarding the upgrading of present facilities or the agreement of new investments plans.

1.4.12.5. Fruit and vegetable processing industry

There are around 50 F&V processors in the country. Approximately one-half or around 50% are canning facilities only, while the rest is combined facilities, drying and freezing capacities. Other 6-7 large companies produce fruit juice along several small-scale, usually family-owned, factories. 26 companies out of the above 50 are members of the Association of Processors.

The overall production of processed fruit and vegetables, including canned, dried and frozen products, range from 120,000 to 130,000 tonnes of final products per year.

In general, the processing factories of horticultural products are located in the production areas. Horticultural processing factories are primarily based in the South-East of the country, Strumica and Gevgelija regions (7 and 10 factories respectively), followed by the Central regions (Kavadarci, Negotino and Veles, 8 factories).

Processing of vegetables is predominant business activity of the industry, encompassing around 80-90% of the overall production. In regards to the typical products of the industry, the same are mentioned in following table.

Table I - 41 Processing and main products

Production process	Main products
Frozen F&V	Pepper, sour cherries
Dried F&V	Pepper onions, leek, carrots, tomatoes
Canned F&V	Ajver (of pepper), roasted pepper, lutenica (of pepper), djuvec (of mixed vegetables), pickled mixed vegetables (gherkins, chilly peppers, cabbage, red beet), pealed tomatoes, pasteurized sour cherries, preserved sour cherries in alcohol, mixed fruits (compotes, marmalades)
Concentrates and pastes	Tomato, apple

Source Fruit and Vegetable Processing Industry and its Influence on Job Creation (SIDA)

Majority of F&V processors (85%) are micro and small enterprises (up to 50 full time employs) while the rest or 15% are categorized as medium size enterprises (50-250 employees). There is no large size company processor of F&V in the country (more than 250 employees). The main reason for this trend is a result of very seasonal business activity of the enterprises and engagement of a seasonal labour. The number of labour forces that are employed by the sector is increasing (+29% in 2006 compared to 2005,

considering permanent staff only). Engagement of seasonal workers is increasing too.

A general characteristic about the F&V processing industry is the low level of utilisation of installed production capacity. The average utilisation in 2005 amounted to 27% and approximately 36% in 2006. The overall installed capacity for processing of F&V is around 122.000 t of final output. The increased utilisation of the production capacity in 2006 is mainly a result of better access to raw materials and prolonged season.

The F&V processing sector is very export oriented. The EU market being the most important for the domestic processed product is very demanding in terms of food safety and food quality standards. Therefore, around 50% of the processing facilities have implemented HAACP, half of them are HACCP certified, while another 4 companies already implemented and are certified in accordance with ISO 22 000 food safety standard.

Overall utilization of the existing capacity is estimation up to 50% of the total. Usually F&V processing plants are operated 1 shift/day, though in season they can work at 2 shifts/day and even 2.5 shifts/day.

The companies do not face major problems when it comes to organising transport. They organise the local transport of fresh produce themselves by engaging private or rented trucks. Processed products are exported ex-factory (FOB) i.e. buyers usually organize and pay for the transport, or producers are organizing transportation and delivery of the products. For the domestic market, in most of the cases processors transport and deliver the products to their clients. Typical transportation costs for delivery of the products to selected destinations (for regular 20 Tonnes lorry) are presented in following table.

Table I - 42 Transportation costs to selected destinations

Destination	Price (€)
Belgrade (Serbia)	800.00
Zagreb (Croatia)	1,100.00
Ljubljana (Slovenia)	1,200.00
Munich (Germany)	1,800.00 - 2,000.00
Hamburg (Germany)	2,800.00

Source: Fruit and Vegetable Processing Industry and its Influence on Job Creation (SIDA)

If Lorries equipped with cooling/refrigeration systems are used, transportation prices are typically 15-20% higher. A production cost template related to the canning process is provided in following table.

Table I - 43 Production costs in the canning industry

Input	Costs (as part of total in %)
Raw materials	30
Labour	20
Packaging	20
Energy	10
Administration	5
Mark up	15
Total	100

Source: Fruit and Vegetable Processing Industry and its Influence on Job Creation (SIDA)

According to the above calculation, energy, raw materials and packaging are the main costs accounting up to 60% of the total costs. Marketing costs are not mentioned since companies are treating this issue individually. In general, marketing budgets are very low. The F&V processing sector is highly dependant on the domestic production and supply of agricultural products[63]. High tariffs and complicated procedures for imports of fresh produce for processing purposes leaves the industry to rely almost exclusively on arrangements with private farmers, enterprises and cooperatives involved in primary production and intermediaries – traders that supply the industry. Contract farming is rarely applied as an efficient mechanism that regulates the production and supply of raw materials to the industry. In addition, the prices vary heavily, depending on the demand for fresh produce in the region and over or under production in the country. This acts as a serious impediment that prevents the industry to reach its full potential and to conclude larger export contracts. As a result, there is weak integration within the market chain. According to the sector, on average only 15-20% of the quantities needed by the industry are contracted and delivered by the producers/traders. These contracts not necessarily are formal, meaning that oral agreements between the parties are also present.

The rest of the quantities are obtained on ad-hoc basis typically just before or during high processing season. Lack of cooling and storing facilities within the industry is another major obstacle that prevents better organisation, planning and execution of the production plans. According to the available information, the industry buyout of fresh F&V in 2005 was around 50-55 thousand tonnes. The industry reported a significant increase (+25-30%) of the quantities acquired by the processors in 2006.

Through its well-developed and growing system of symmetrical and asymmetrical array of free trade agreements, the country's potential biggest market by far – almost 60% of its trading volume, both exports and imports – is the European Union. Its position is comparable to the Czech Republic in

[63] The value of processed products in the recent years has experienced a fluctuating trend, because of the seasonal character of agricultural production. This trend highlights the low technological level of the industry for processing agricultural products, particularly due to a lack of adequate storage facilities to overcome the seasonal effect and of sufficient raw materials needed for production continuity.

that more than 75% of its international trade is conducted with either the European Union or with the USA. In light of this, the country may have access to well over 60 million consumers in the region – from Turkey to Slovenia, not only in the former republics of Yugoslavia. In this frame, good potential also exists for export of horticultural products that have a long tradition in the country.

The international market of processed fruit and vegetables lies at a maturity stage where competition is high, trading margins are low and prices progressively tend to reduce. On the contrary, the domestic market is still in a growing phase, therefore containing good potentialities for further expansion[64]. In fact, apart from export, the domestic market for processed F&V is growing. The changes in the lifestyle of the population (longer working hours, less possibilities and/or time for preparation of home made processed products) and the growing position of the supermarkets are the major reasons for this observed trend, which is particularly apparent in Skopje and other larger towns in the country.

However, the F&V processing industry is very export oriented. On average around 75% of the overall production is exported. The main export destinations for processed products are EU market (Germany in particular) and regional markets (Serbia, Croatia, etc.).

Table I - 44 Exports of processed horticultural products (2004)

Year: 2004	Quantity (in '000 T.)	Value (in million. €)
Total production	25,7	-
Total export	19, 7	18, 1
EU	9,3	9,9
Serbia & Montenegro*	6,5	4,4
Australia	1,1	1,0
Croatia	1,0	0,9
Bosnia and Herzegovina	0,7	0,6
USA	0,4	0,5

Source: Fruit and Vegetable Processing Industry and its Influence on Job Creation (SIDA)
*The data are for 2004 for Serbia and Montenegro

According to the official statistics and individual research, quantities produced in the country and exports show positive trend for the period 2003-2005, as presented in the following table.

[64] Due to this, the product innovation in the domestic market is still led by processing factories, with a minor contribution of horticultural growers as these latter, at this stage, are primarily being required to increase production in order to keep abreast of the expected sales growth. The domestic primary producers shall likely contribute more to product innovation as soon as the domestic market enters a maturity stage and/or the exports are even more oriented to EU markets than the current – although not minor - share.

Table I - 45 Production and export of processed fruits and vegetables (2003-05)

Year	Total production (tonnes)	Total export (tonnes)	Value of export (€)
2003	≈ 21.000	15.467	15.151.342
2004	≈ 25.700	19.681	18.037.611
2004/2003	+ 4.700	+ 4.214	+ 2.886.269
2005	≈ 28.200	21.443	21.962.327
2005/2004	+ 2.500	+ 1.762	+ 3.924.716

Source Fruit and Vegetable Processing Industry and its Influence on Job Creation (SIDA)

As it could be seen from the above, the processed products have relatively low export value (on average around 1kg. per one €). This categorises the processed goods as “commodity” rather than products with added value.

Due to favourable weather conditions, the production season in 2006 has been extended throughout November and even December, allowing more quantities to be produced. In addition, the season is characterized with more raw materials on offer for the industry, estimating that production in 2006 will be record high.

Currently, domestic processors seem to be heavily dependant on intermediate dealers for the sales of their outputs to small retailers, whereas they are directly supplying multi-purpose retailers. Indeed, the highest share of produce marketed (from 60% to 90%, according to Consultant’s estimates) is sold to wholesalers, with the remaining share sold directly to retailers. In consideration of the restructuring that is taking place within the retail distribution –with multi-purpose retailers increasing steadily the share of food demand they manage to control, it is becoming more and more urgent to establish direct linkages also with multi-purpose retailers operators. Indeed, this would allow curtailing intermediaries’ margins and securing a market that shows the highest rates of business growth among food retailers.

The basic regulations covering the EU Common Market Organisation (CMO) for fresh F&V, processed F&V, and a system of Community aids granted to certain citrus fruits were laid down in 1996, although the basic regulation has been subjected to a number of amendments since 2000. For fresh products, the system is characterised by support to Producer Organisations (POs) under Operational funds as well as and intervention measures through market withdrawals compensated with Community funds. Processed products are guided by a system based on direct aids to producers according to national thresholds with penalties if processed volumes increase beyond fixed limits.

The share of total F&V production controlled by Pos in the EU is close to 50%, which is a positive development but still below of that considered as desirable, taking into account increasing concentration at retail level. However, the existing system has been ineffective in protecting producers from surplus, market disturbances and periodical price crises. Processing aids have been helpful in proving the agro-food industry with European raw materials. Nevertheless, for some products, the processing industry has become an outlet for surplus in the fresh market.

The EU F&V market is facing the challenge of (i) strengthening the POs by increasing their size, in particular in those regions where their presence is still weak; (ii) continuing to improve quality and environmentally friendly production; (iii) transforming market withdrawals into a mechanism used by PO for crisis management; and (iv) guaranteeing supplies to the agro-food industry. These are the challenges set forth in the reforms of the CMo for F&V in the EU.

The functioning of the common market for F&V within EU is, therefore, to be structured around clear mechanisms regulating relationships between concerned parts (producers and processors) and their role. These mechanisms are centred on a clear definition of the subjects involved (producers, both single and associated, and processors); the way they should relate each other; their obligations (in terms of amounts committed, ways to fix minimum, referential prices and procedures to be followed for payment of these prices) and between POs and their members.

As for the country, the situation encountered is no better than the one described for the fresh sector. No POs processing its own production does still exist in the country. Furthermore, the canning sector appears to be very little structured, with processors often struggling to get their own supplies from domestic producers. No common mechanism is in place to orient the setting of (minimum) prices for traded goods and for providing guidance to operators.

The F&V processing sector has a major need to establish direct linkages with the primary producers. Indeed, in this way, processors can have guarantees not only on consistency of supplies and security of procurement (both in quantity and quality terms), but can also avoid unnecessary, costly mediations.

In fact, shortage and inconsistency of supply of raw material is identified as major impediment for further growth of the country's processing sector

As underlined through the investigation in the country the canning sector has started to link up more firmly with the primary production sector, either through vertical integration or through direct contracting.

Despite some positive examples, the development of the F&V processing and producing sectors in the country is hindered by several factors, among which:

- lack of cash money by processors to procure their supplies. These cash shortcomings make producers to be reluctant to deliver their supplies to processors unless the latter can be paid cash. This state of affairs originates from negative experiences that producers had during past years, when they could not receive payment for what they delivered or were paid much later than expected;
- a tendency, usually by farmers, to breech contracts when market conditions are more favourable then those agreed in the contracts they stipulated with processors;
- the reluctance, among growers, to introduce new varieties/products to better fit processor’s needs; and
- the uneasiness, due to their financial constraints, of processors to advance money to producers for purchasing production inputs.

1.4.12.6. Wine industry

In the country there are currently 50 registered wineries located in the main vine growing regions (see Annex 15).

During the last few years, the number of new private wineries (mainly small and medium-sized plants) has considerably grown: during 2007, 5 new wineries are in process of registration.

These wineries tend to be started and managed by investors originating from outside of the wine sector: among the 50 registered wineries in 2007, 14 were created by investors having businesses outside of the wine sector. These investors tend to focus on production of bottled and higher quality wines, through strict control of variety selection, vineyard management and harvesting, transport and delivery practices. They also invest in sophisticated processing, bottling and marketing technologies and compete on both the domestic and international markets.

However, due to the high number of individual grape growers and potential competition generated by the excess of grape supply, ownership of vineyards is not a priority where according to the data presented in Annex 11, quite a low number of wineries have a direct control over their vineyards.

In December 2005, an association named “MakVino” has been created (with the assistance of Wine Cluster Project of the USAID) with the aim to organise the wine processing industry, promote the country's wines and assist in defining a wine strategy. So far, this association only gathered 11 companies out of the 50 registered.

The installed capacity of the country's wine cellars amounts to 1.574 million hl in 2007 with around 50% of utilised capacity.

Among the 50 registered wineries, 44 have between 50 to 50,000 hl capacity, 3 have between 51,000 and 150,000 hl capacity and 3 wineries have between 151,000 and 500,000 hl capacity.

In 2003, this capacity was reported (VMMS Report) to be over 2 million hl with only 28 registered companies (compared with 50 in 2007) demonstrating that the evolution of the country's wine industry is moving toward smaller entities, but in larger number.

According to the conducted inquiries by the VMMS Project, bottling lines have an installed bottling capacity of 650,000 hl[65]. These are insufficient to cover the whole domestic production.

According to climatic characteristics and EU classification, the country is considered as III -C-b vine growing zone (and has adopted the oenological rules that apply for this zone). The main particularity for this zone is that the wines may be acidified but not enriched, which corresponds to the former legislation and current practice of wine making in the country.

White wines produced in the country generally have low acidity, liveliness and have no “terroir” characteristics. The white wines are produced of Smederevka, Chardonnay and Sauvignon.

[65] Source VMMS project experts (2005)

Among the 50 wineries officially registered, only 11 have adopted HACCP standard and 7 have ISO standards. It should be emphasised that according to the new law on Food Safety, it will be an obligation for all the wineries to adopt HACCP standard by 2009.

1.5. FISHERIES

From the viewpoint of the national economy, fishery has a very small share in the GDP of only 0.1% in (2006). The employment in the fishery sector is also at a very low level, with an annual average of 170 employees in 2004 (21 women). Jobs in the fishery sector are related to fish catching, activity in fish hatcheries and fish farms, as well as fishery related services. According to the 2004 labour survey, conducted by the State Statistics Bureau, the total workforce in the fishery sector is estimated at 442 people (0.1% of total employments), out of which half are with secondary education, and only 72 with higher education. According to the survey, 78 of the employed workers are women.

Out of the total area of the country, about 56,000 ha are suitable for fishing. Of this, 46,700 ha are natural lakes, 6,400 ha are artificial lakes, 2,200 ha are rivers and 700 ha are fisheries. Economic fishery is fresh waters is primarily conducted in the three natural lakes – Ohrid, Prespa and Dojran as well as some accumulations. Sports fishery is conducted in all water areas.

Fishery is regulated under the Law on Fishery (1993), which regulates commercial fishery, sports fishery and production of fish. The fishery sector is under the jurisdiction of MAFWE, as an authorized institution that issues concession licenses to commercial companies and sports fishing associations, as well as approval for installation of fish farms and defining the maximum capacity of the facilities. Concessions are issued for a period of 5 years, and the concessionaire is expected to develop a protection plan, to improve and use the fish resources during the concession period. Sports fishery is allowed on the lakes based on a subsidiary agreement between fishing associations and the concessionaire. The National Agricultural Inspectorate is responsible for monitoring and control of activities in accordance with the Law on Fishery.

The production of fish in the country is conducted by means of commercial fishing in natural lakes and production of fish in artificial fishponds. The amount of fish caught in open waters is constantly dropping, while the production of fresh fish in artificial fishponds is increasing. In 2004, the amount of fish produced in fishponds was about 75% of the total amount caught. Most of the fish caught is trout (711 tonnes in 2004) and carp (248 tonnes).

There is no official restriction on the amount of fish caught, while the regime to use the fish fund from waters available for fishing is done based on annual programmes, which take into consideration the biological characteristics of the available fish species for reproduction, and the fishing is in proportion with the natural birth rate.

Sports' fishing on waters available for fishing is restricted to certain number of days in the year, with a restriction of fishing equipment used. The strictest control is for fishing trout.

The fish produced in fish hatcheries is sold in the market as fresh unprocessed fish. Fresh fish is typically sold in the local market through retail stores or directly to restaurants. Demand for the more important fish types such as Ohrid trout and eel and Dojran and Prespa carp surpasses the supply, and this market relation results in a higher price per kilogram.

According to official statistics, an average household annually consumes 19.5 kg fresh or frozen fish, and 2.8 kg of fish products. According to certain analyses, the consumption of fish and fish products per capita is estimated at about 6-8 kg annually, which is a very small amount in comparison with consumption in other EU countries (about 20 kg per capita annually).

The country is a net importer of fish and fish products. Total imports of fish and fish products in the period of 2000 – 2006 have been marked by constant growth. In 2004, the import of fish and fish products increased by about 7%. The majority of the imported fish and fish products in 2004 were frozen sea fish with about 50% share of the total import value; followed by canned fish (whole or pieces) about 38%; and fresh fish about 6%. The remaining 6% include fish fillets, shellfish, molluscs, smoked fish, and caviar. The biggest share in the value of fish product imports in 2004 were imports from Argentina (23.2%), from where we mainly import frozen hake, followed by Croatia and Spain with 10% share in the value of import of fish and fish products respectively (mainly canned fish), Greece with 5.5% share, and Bulgaria, Serbia and Montenegro as suppliers of the country's market with fresh water fresh fish.

Table I - 46 Import of fish and fish products, in € million (2000-06)

	Description	2000	2001	2002	2003	2004	2005	2006
1	Total import of agriculture products	281	268	314	292	338	348	367.4
2	Total import of fish and fish products	7.24	7.17	9.29	9.15	10.65	12.68	15.86
3	% of import of fish and fish products in total	2.58 %	2.67 %	2.96 %	3.13 %	3.15 %	3.64 %	4.32 %

Source: State Statistical Office, 2007, SITC classification of trade

As in other transition economies, the socio-political changes in the last decade had negative implications on the fishing sector with the introduction of market conditions and the reduced role of the government because of the chronic lack of financial resources due to the budget deficit. This has resulted in an insignificant role of the fishery sector in the overall economy, if we set aside its social and environmental role and the potential for development of fishing tourism.

MAFWE support to fishery is provided through the annual Programme for Development of Agriculture. Starting from 2004, funding was allocated for increasing the fish fund through stocking fishing waters with endemic fish species and for certain measures related to the development of scientific

projects for promotion of fishery. In 2005, the total amount disbursed for the sector was around MKD 4.65 million (equivalent to €76 thousand). In 2006, no funds are allocated for this sub-sector.

Table I - 47 Agriculture Support Programme (Planned and realized, 2004-2006)

year	Planned	Realized
2004	3,000,000	2,700,000
2005	3,800,000	4,650,000

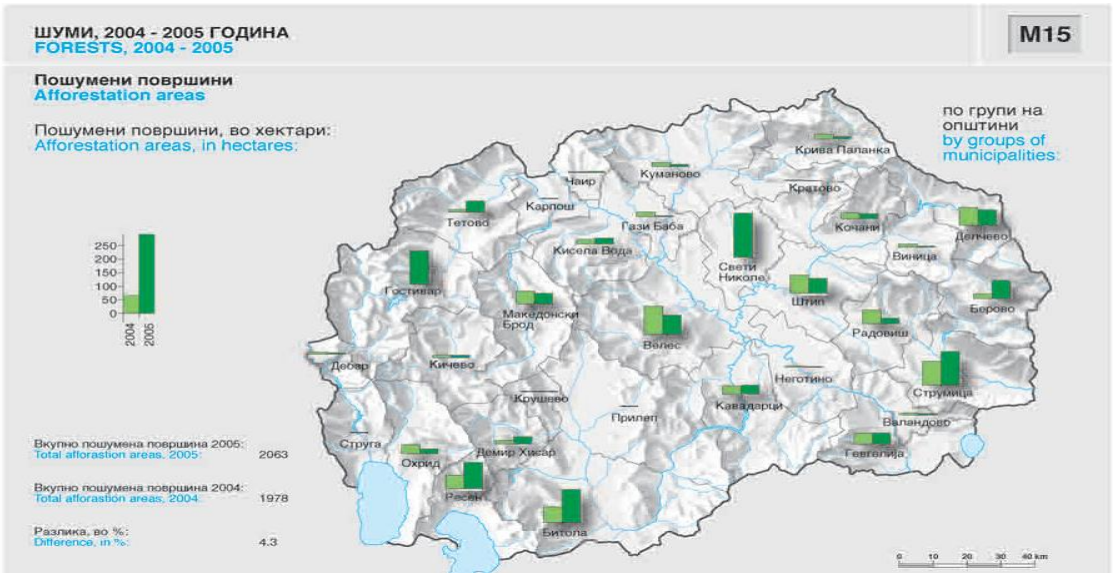
Source: MAFWE Support programmes 2004-2005

MAFWE is drafting a new Law on Fishery and Aqua crops, which would cover resource management, inspection and control, structural and market policy and information distribution in accordance with EU policy in this area.

1.6. FORESTRY

1.6.1. Forestry Resources

The area classified as forestland is approximately 1.16 million ha (45% of the total the country's territory) out of which forests proper are 947,653 ha (37.2%). The forest species are for 82% deciduous, 12% coniferous and 6% mixed. According to growth, 29% of the forests are categorized as high and 71% as low forests, and therefore only one third of forests are suitable to be used as a source of raw materials for the wood processing industry.



Source SSO Yearbook 2006.

The total wood mass is 74,343,000 m³. and the total annual growth 1,830,000 m³ with average annual increase per hectare of 2.02 m³. The annual planned woodcutting mass is about 1,300,000 m³.

The state owns 90.14% of the total forest area (total wood mass is 92.2%). The private owned forests are 9.86% (94,146 ha) of the total forest area, and their portion of the total wood mass is 7.8%.

Source SSO Yearbook 2006.

The country has significant resources of other forest products: medicinal plants, wild mushrooms, forest fruits, and a diverse game. The importance of forests is emphasized by the fact that the main part of the territory of the protected areas in the country are under forest. Furthermore, forests have other very significant functions such as recreational sport, eco-tourism and recreational hunting, soil and environmental quality improvement, biodiversity conservation, erosion control and flood protection. In addition, over the last decade the role of forests in the reduction of global warming through fixation of carbon dioxide has gathered international recognition.

Therefore, forests deserve special treatment via appropriate protection systems, farming and use for the benefit of sustainable development.

The general contribution of the forest industry (primary and secondary wood processing, furniture, paper and celluloses, etc) in the GDP is 2.5-3%. The economic, social and ecological functions of forests are of significant importance to the sustainable development of society and for improving the quality of life, especially in rural and mountain areas.

The main threats and problems in forest management and governance are: extensive illegal logging, other illegal activities, forest fires that have affected nearly 100,000 ha in the last 10 years, drying of forests due to drought and climate change, insect calamities and diseases. All these lead to enormous economic and environmental losses to the sector.

Political and economic changes in the country in accordance with the EU-integration processes require prioritising and focussing on the multifunctional use of forests and their management, integrating much wider aspects where protection, biodiversity and the care of the nature and the environment are placed first.

The country is a signatory of several international agreements and conventions on forests and environmental protection, which have an impact on the forestry sector. The EU orientation of the country presupposes the harmonization of forestry policy and related environmental legislation.

1.6.2. Forestry Development plan

In 2006, a Sustainable Development Strategy for Forestry (with annexed Action Plan 2007-2009) was prepared by the MAFWE with the assistance of the Food and Agriculture Organization of the United Nations. The main directions identified in the Strategy are as follows:

1. Enlarging the forest covered area and improving the quality of the forests in accordance with the country's Spatial Plan.

2. Multifunctional forest management and sustainable development of economically viable forestry.

3. Increasing the contribution of forests and related goods and services to the quality of life in rural areas.

4. Enhancing the public and social functions of forests and forestry through the strategy for development by comprehensive valorisation of its general and social functions.

5. Raising the awareness of the environmental and social values of forests.

6. Improving the conditions for identification of the national and international funds for sector development support.

7. Harmonization of the forestry legislation with the national interests and international commitments.

In accordance with Article 69 of the Law on Forests, the Government adopted a Program for Expansion of Forest Reproduction. In 2005, the Program funded the following measures implemented by the Forestry Sector of the MAFWE:

1. Afforestation of 673 ha of bare and eroded lands covering an area of 824 ha.

2. Care of forest crops with space - on an area of 1,049 ha;

3. Rehabilitation of forests affected by fires - on an area of 138 ha;

4. Prevention of mass drying of pine forests - on an area of 19 ha;

5. During the period, a total of 462,264 seedlings of various forest types have been provided and used. Out of them 403,185 seedlings have been used for afforestation of private-owned land and 59,079 seedlings for the ecology activity "Youth for Clean Environment". Of the total quantity of seedlings, the predominant species were white pine, black pine, Arizona cypress, locust, while the remaining species were insignificant;

6. Protection of forests against diseases, pests and forest fires. MAFWE in accordance with the multi-annual cooperation with the centre for Reporting, Diagnosis, and Prognosis – department at the Forestry Faculty based on detailed analyses prepares an annual report on the health status of the forests with recommendations on the measures that should be taken to prevent spread, or eradication of certain pests. Then MAFWE submits this report to the Government.

1.7. SWOT ANALYSIS

The SWOT analysis is an organic part of the description of the country's Agro-food Sector described in the previous sections of the Plan. The SWOT analysis consists of the main findings from the general situation analysis, the evaluations on the conditions on which the programme will operate, as well as of a structured system of weaknesses and corresponding threats, the strengths and corresponding opportunities.

The SWOT has an organic relation with the analysis provided in the NARDS as well since both strategic documents complement each other towards achieving the same objectives as a common root for both analyses. More detailed analyses on some aspects of the agricultural economy that are not directly related to the measures of the IPARD Programme are elaborated in the NARDS.

Strengths, weaknesses, opportunities and threats are summarised according to following:

1. Situation in rural areas
2. Agriculture economy and of relevant sub-sectors under this Programme
3. Food Processing Sector

A summary of the principal findings is provided in Part III thus providing the context for setting out the Programme Strategy (reference Part III).

1.7.1. SWOT Analysis of the situation in Rural Areas

Socio-economic and Infrastructural situation	
Strengths	• Abundance of high quality natural environment (lakes, mountains, protected areas), attractions (landscapes, traditional villages, hunting, fishing, SPA resorts, etc) and of rich historical/cultural heritage for the development of rural, cultural, religious and agro-tourism. • Availability of raw materials (timber, region-specific products, local traditional agricultural and livestock products) • Existence of traditional skills, crafts and food production • Geographic diversity in culture, customs, traditional events • Successful pilot experiences in village re-vitalization, restoration of historical monuments and wine tourism • Labour-force from decreasing agricultural sector is open for other rural activities, for which there are available natural resources (clean environment, forest, picturesque landscape etc.);
Weaknesses	• Lower education levels of rural population • High unemployment rate and lack of alternative (off-farm) employment/income generation opportunities; • Out migration of young people; • High share of areas with unfavourable economic conditions (Economically under-developed areas); • Poor rural technical infrastructure (water supply, sewerage, waste disposal, rural roads, telephone, internet, etc) and rural social infrastructure. • Low level of production and processing innovations; underdeveloped and small-size of rural markets; • Neglected and decayed natural and cultural heritage; • Lack of integrated strategy for the support of rural economy (infrastructure, crafts, businesses, rural tourism and services); • Absence of relevant rural organisations to represent the interests of rural communities and promote training;
Opportunities	• Growing demand for well-established tourist destinations in the country is generating foreign visitors interest in rural tourism • Increased government concerns about rural/urban and regional disparities and the environment, and formulation of consistent policies • Possibilities for production and sale of high quality/typical/organic local rural produce • Strengthening of civil society institutions and increased awareness of the benefits of the cross-sectoral partnerships; • Willingness of Municipalities and of village mayors to co-operate with investors • Creation of new entrepreneurs, family businesses and additional jobs in rural areas • New important transit corridors will soon be completed

Threats	• Rural depopulation and ageing trends (out-migration of young, women and economically active population). • Unregulated rural sewerage and solid waste disposal pose serious problems to the environment. • Lack of a strong image of the country as a tourist destination/product • Deteriorating technical and social infrastructure in rural areas, and loss of traditional village landscapes • Deforestation, which leads to soil erosion and changes in environment. • Weak capacity of local authorities in local planning, cooperation and public private partnerships • Rural tourism competition from neighbouring countries (Bulgaria, Greece) • Weak interest of the general public and lack of empowerment of inhabitants in finding solutions to rural problems.

1.7.2. SWOT Analysis of Agriculture

General Agro-Food Sector Development Perspective	
Strengths	• Favourable geographical location (near the European markets, crossroads of transport routes and main European transport corridors); • Good climatic conditions for agriculture and variety of regions with diverse opportunities for agriculture production • Sufficient availability of labour, traditionally skilled in agriculture and low labour costs; • Ownership of agricultural land and assets attributed mainly to private farmers (80% of agricultural land) • Good soil quality and availability of agricultural land with 50% of the territory possessing favourable conditions (plains and valleys); • Agricultural incomes are around the national average of incomes; • At present, agriculture is not a great burden on the environment;
Weaknesses	• Non-suitable land use, farming structure is out of line with the features of cultivated areas, significant share of abandoned fallows; • Very low investment level resulting with outdated technology and low efficiency in agro-food sector • Low efficiency of agricultural activities and high degree of labour intensiveness (among highest in the South East European Countries) • Insufficient co-ordination of activities among individual agricultural enterprises and fragmentation of agri-business contacts • Obsolete agricultural production, especially in the area of use of specialised mechanisation and equipment and post-harvest activities; • Unfavourable terms for investment and working capital credits to undertake reconstruction, modernisation and new investment;

Opportunities	• Availability of EU resources (IPARD funds) and complementary increased National Agricultural Development Support Policies; • Potential for a thorough improvement via structural measures, such as land operations, producer groups, common marketing schemes • Increasing integration of producers, increasing number and potential of associations of agricultural producers • Promoting changes of production and product ranges to match increasing market and quality requirements • Growing number of SME and potential for their development and diversification of activities in agriculture • Fiscal benefits and high protection tariffs apply for agriculture sector • Strengthening of the role of extension services and research;
Threats	• Incomplete land cadastre and registry and weak land market development; agricultural land not accepted as a collateral • Lack of reliable data on farming structure (no established farm structure surveys or official farm register) • Great degree of small-scale farms, many of them producing mainly for self-subsistence and economically not viable • The existing disadvantages attributable to the lack of producer organisation may escalate as a consequence of the absence of the development of a market institutional infrastructure • Disappearing knowledge of traditional, organic production methods • The poor market position and high level of dependence of producers due to fragmented structure, long market chains and lack of marketing services including information.

1.7.2.1. SWOT Analysis of relevant sub-sectors under this Programme

Grape Production	
Strengths	• Experience and long tradition in the production of grapes and wine • Favourable climatic and agricultural conditions for grape production located in main wine growing areas; • Reputation of the country's wine quality on the regional markets and well established marketing in neighbouring and regional countries • Stable yields of wine grapes over the last 10 years (around 260,000 tonnes) • Significant local market and tourism related consumption;

Weaknesses	• The assortment of wine grape varieties is inappropriate in terms of quality and market attractiveness • A high percentage of the vineyards suffer frequent bud freezing due to inappropriate location • High planting and maintenance costs per hectare for the first three years • Obsolete cultivation practices and technical equipment • Grape sales to wineries are generally not regulated by long term contracts • Fragmentation of vineyard plots • Price of grape is determined only in relation to sugar content • The supply of vines for planting is inappropriate in terms of phyto-sanitary requirements and in terms of varieties;
Opportunities	• Increasing use of modern viticulture practices; • A cadastre system dedicated to vineyard has been established in a pilot zone and is being extended nationwide. • The development of reliable nursery stock resources and/or import procedures for grafted materials will improve vineyards • Domestic policy favouring introduction of quality vine varieties on designated areas • Legislation is being harmonised with EU Acquis • Increasing integration of producers, increasing number and potential of associations of grape producers and cooperatives;
Threats	• Unfavourable age structure of vineyards and decreasing trend of area under vineyards, which is likely to continue, since new plantings and replacements are around 2% per year of the total. • Widespread use of uncertified planting material • Huge number of small producers who are not sufficiently prepared for international markets – high production prices and no competitiveness
Fruits and Vegetables	
Strengths	• Favourable climatic and agricultural conditions for fruit and vegetable production throughout the country; • Availability of skilled labour due to tradition of specialisation in F&V production specially in production of early vegetable, at low costs • Reputation of the country's F&V fresh products quality and established marketing on neighbouring and regional countries • Domestic consumers are loyal to the local fresh F&V and build trust in the food safety and quality of the products • Protective domestic policy to support the adjustment of the sector (high protection tariff)

Weaknesses	• Majority of production is fragmented and performed on small size businesses and farms relying on household labour • Low level of investment contributing to ageing structure of fruit trees and absence of new technologies in the vegetable production • Fluctuating yields and product quality due to lack or inappropriateness of irrigation, crop protection and technology • Widespread use of non-commercial fruit varieties (apples, cherries unsuitable for storing/processing, etc). • No existing Codex of Good Agricultural Practices (GAP) • Entrepreneurial attitude is underdeveloped across the chain (conservative attitude of a great number of farmers, poor marketing skills) • Weak horizontal cooperation (farmer cooperatives and associations) leading to excess seasonal supply at low price; • Lack of modern post-harvest facilities (cooling, storing, grading, sorting and packaging) and marketing infrastructure for fresh produce. • Redundant intermediaries capturing the main marketing margin and growing pressure from distribution chains; • Absence of relevant market information and integrated Agriculture Market Information System • Weak vertical integration (farmers and processors). Poor contract enforcement both on farmers' and processors'/traders' side • Weak research and support from the extension services (especially for marketing) and lack of training and knowledge enhancement. • Complicated export procedures;
Opportunities	• Introduction of EUREPGAP on several specialised farms upgrading horticultural food safety and integrated crop management; • Growing interest and introduction of new varieties of F&V products (e.g. for table grapes, berries, sour cherries, organic fruits) • Interest of foreign companies is likely to develop into investments in processing and retailing and organize farmers' supply • Good development prospects for soft-fruits like berries, as well as sour cherry, organic fruits, peach and apple. • Good development prospects for pepper, red pepper, asparagus, early vegetables, organic vegetables, planted curative and aromatic herbs. • Increasing segmentation in the markets and supply of added-value products

Threats	• Strong competitors in export markets. Spain, China, Morocco, Turkey (vegetables) and Serbia (berries), Poland, Hungary (sour cherries). • Import liberalization, resulting in keen competition in the domestic market • Export markets are increasing their requirements for quality standards, food safety and consumer protection. • Low investment in multi-annual crops (obsolescence of fruit and grape plantations). • Imports of often uncertified fruit, grape and vegetables (potato, etc) seeds and seedlings
Dairy Farming	
Strengths	• Existence of specialised dairy farms in breeding high productive milking cows and use modern production methods • National Breeding Strategy fully operational • Abundant natural pastures and up-lands • Complementary with the field production i.e. farmers have good access to fodder crops and compound feed
Weaknesses	• Prevalent small production units and segmented dairy farms affecting the efficiency • Semi-nomadic sheep breeding affects the investments in farm buildings, milking hygiene practises • Cows and sheep breeding enterprises and holdings have problems in production technology and feeding management • Farms have insufficient knowledge about feeding practises • Low milk yield per cow / sheep (high production cost per litre raw milk) and fluctuation of raw milk quality • Most of the stables do not comply to the minimum animal welfare and hygienic practises; • Lack or inappropriate milking, feeding, cooling equipment available on-farm • Weak manure treatment practises and utilisation of energy efficient sources (e.g. biogas) • Insufficient hygienic knowledge on raw milk treatment, milking, udder and feeding
Opportunities	• Increased interest in goat breeding for milk production • The milk yield per cow / sheep can be increased through better management • Increase milk yield per cow and sheep via improved compound feeding strategies • Install milk cooling tanks and milking equipment thereby increase the milk price via the better quality of the milk • Animal I&R established for cattle farms (small ruminant registration on-going) • Scope for improvement of farm hygiene and animal welfare.

Threats	• No National system for monitoring the milk quality • Availability of live animals is weak and with decreasing trend. Weak reproduction centres for genetic material • Statistics about the country's dairy farm sector are totally insufficient • Lack of appropriate praxis-orientated advisory service • Lack of producer associations
Pig Farming	
Strengths	• Good pig herd genetics – internationally recognised company participation • Strong specialised leader pig breeders and existence of recognised pig breeders association with good co-operation/contacts with international pig breeders • Complementary with the field production i.e. farmers have good access to fodder crops and compound feed • National Breeding Strategy fully operational
Weaknesses	• Constant decreasing trend of pig numbers on the national level and single turnover focusing on single season of supply (before Christmas) • Lack of modernized stables for pigs for fattening and sows breeding according to the animal welfare and environmental standards • Lack of farm facilities and equipment for fodder storage • Extensive methods of breeding and selection, giving small effects and resulting in poor efficiency in pig farms
Opportunities	• Growing development of the domestic market for fresh pork • Domestic consumers build trust towards the domestically produced pork • Increasing support through the National Policies • Constant improvement of the favourable structure of existing specialised farms
Threats	• Continuous price fluctuations and conditions between producers, processors and in organization of transport • Meat processors unwilling to accept domestic pork (price/quality) • Cost of feed remains high compared with neighbouring countries
Poultry Farming	

Strengths	• Increased productivity (proper environment, management and equipment, etc) of specialised farms (the number of which is increasing), and good integration of these with the industry. • Egg and poultry meat enterprises are integrated from farm to market in production, • Self sufficient in egg production
Weaknesses	• Low productivity of small family poultry farms due to low productive crosses, poor nutrition (feed is maize-based and is costly for family farms), old on farm equipment. • Family owned layer farms need to be organized and integrated. • There are no marketing standards and pricing based on evaluation of carcasses on slaughter line. • Generally, the slaughtered animals are low live weight. • There are only two slaughterhouses in the country (total capacity of 2 million birds per year), which limits the development of broiler production
Opportunities	• Increasing domestic demand for poultry meat (especially fresh). • Since 80% of poultry meat is imported, this indicates that there is potential for development of the poultry sector from the perspective of the likely available market (Import substitution) • Increase of feed crop production. • Campaigns for increasing consumption of fresh poultry meat • Ostrich farming
Threats	• Without proper market regulations, there is large import of cheaper frozen poultry meat from other countries. • Egg production is pressed by un-favourable market prices. • Various Diseases and temporary market shrinking due to Avian Influenza.

1.7.3. SWOT Analysis of food processing industry

General Food Processing Sector Development Perspective	
Strengths	• Developed marketing knowledge and availability of skilled labour • Location of the processing capacities near the urban centres benefits labour mobility (availability of transport and services network) • Prominent role of the small and medium food processing enterprises as more flexible and competitive economic agents • Strong horizontal links among processors and well functioning association and Chamber of Commerce

Weaknesses	• Shortage of 'start-up' capital (low support for enterprises, shortage of information, incubators, low availability of credit); • Seasonal supply of raw materials contributing to over-capacities in the establishments • Very low investment level resulting in outdated technology and low efficiency in agro-food sector, low hygienic and quality standards, missing modern equipment for products with high value added), • Inadequate waste management • Absence of a common classification system of carcasses for slaughtered pigs (SEUROP system);
Opportunities	• Availability of EU resources (IPARD funds) and complementary increased National Agricultural Development Support Policies to bring processing industry into compliance with EU requirements and improve efficiency • Increasing urge for introduction of advanced quality standards HACCP, ISO, BRC among the food processing enterprises • Increasing integration of producers, increasing number and potential of associations of agricultural producers; • Growing number of SMES and potential for the development of small and medium sized enterprises and the diversification of activities in agriculture;
Threats	• General non-compliance of agro-food sector with EU requirements, results in limitation of export markets • The inefficient, technically outdated holdings will lose market because of the increasing operational costs due to the newly introduced standards come into force with the accession • Due to fragmented agri-business structures and lack of marketing services the market position of producers is poor, their level of dependence is high; uncertain vision of the future

1.7.3.1 SWOT Analysis of relevant sub-sectors under this Programme

Dairy Processing sector	
Strengths	• The country has a strong tradition in the production and consumption of dairy products (milk, yogurt, brined white cheese and kashkaval), both for commercial and niche (traditional) products; • Low transport costs for the country's dairies to the domestic dairy market and low marketing costs; • Consumers show loyal preferences towards domestic fresh milk and dairy products
Weaknesses	• Problems in meeting the food safety standards in the processing industry (of the total, only 1 dairy enterprise is “certified” for the EU); • Insufficient or mostly no Hygienic, ISO-certification, HACCP and waste water treatment • The marketing of the country's dairy brands is weak (advertising campaigns, rupture of stocks, vacuum packing and labeling); • Product quality and taste is often not constant and accompanied by shelf live problems; • Weak logistic link between dairy factory and wholesalers/ retailer ; • Lack of dairy processing technology management facing risks and traps in the production process because the management is based on experience and not on modern technological production methodologies; • Fluctuating quality of the raw milk affecting the shelf life; • Lack of sufficient network of equipped milk collection centres hampers the supply and quality of raw milk • Strong international competition on the domestic markets; • Problems to develop new products;
Opportunities	• Increase product supply logistic by strengthening the milk collection facilities • Restructuring of the sector by establishing modern production units and improvement of marketing to contribute to value added products • Develop new products (high profitable cheeses, sweet fruit yoghurts, puddings, etc) and branding • Improve marketing, advertising, packaging and labelling;

Threats	• Very small structured dairy farming causes high cost for milk collection and bad raw milk quality • Lack of raw milk test laboratories for daily testing • Lack of good production technology specialists • Weak food hygiene control capacity. Capacities which do not comply to the EU standards will be closed down upon accession • Strong international competition on the domestic markets (increasing import of high standard quality dairy products from regional and international markets). • Loss of consumer loyalty to the country's products due to quality variations. • High cost of milk collection and variable raw milk quality • Appearance of diseases which can influence domestic consumption and exports
Meat Industry-Slaughterhouses	
Strengths	• Emerging development of modern slaughter house capacities • Seven slaughter houses registered for EU exports (for lamb exports) • Consumer preferences weight towards domestic fresh meat products
Weaknesses	• Most of slaughter houses capacities do not comply with veterinary and hygienic conditions for food safety and EU requirements • Absence of a common classification system of carcasses for slaughtered pigs (SEUROP system) and absence of production units for value added fresh meat (especially for lamb and poultry); • Seasonality of slaughter leading to overcapacity for slaughtering but lack of slaughtering capacities for some products (poultry) • Lack of waste water treatment installations • Large number of uncontrolled slaughtering of animals (“Backyard” slaughtering) • No treatment or use of by-products obtained through the slaughtering process • No rendering capacity or organised scheme to treat the animal waste (bones and dead animals) • Weak respect to the animal welfare standards for slaughtering • There are only two poultry slaughterhouses in the country (total capacity of 2 million birds per year) insufficient to cover growing demand for fresh poultry meat.

Opportunities	• Growing domestic market for fresh meat products • Adoption of latest packaging technology and development of new products • Ability to create EU level facilities • Development "niche" products for both domestic and export markets • Ability to create new EU approved slaughtering/processing facilities • Supermarkets and internal competition will "force" sector to higher standard / quality levels
Threats	• Regional producers increase their market share for fresh meat • Overcapacities preclude the efficiency leading towards low accumulation of capital for investment • Appearance of diseases which can influence domestic consumption and exports • Capacities which do not comply to the EU standards will be closed down upon accession
Fruit and Vegetable Processing Industry	
Strengths	• The country's F&V processing sector is export oriented. • Products enjoy high reputation on regional and international markets; • There are around 50 F&V processors in the country. • A strong association of F&V processors is established. • Processing factories of horticultural products are located in production areas • Most of the seasonal workers are from rural areas, skilled in handling agricultural products • Around 50% of the processing facilities have implemented HACCP, and 25% are HACCP certified, while another 8% are certified ISO 22 000 (food safety standards).
Weaknesses	• Majority of F&V processors (85%) are micro and small enterprises (up to 50 full time employees) while the rest are medium size enterprises (50-250 employees). • Emphasized seasonal business activity of the enterprises • There is little vertical integration within the chain (only 15-20% of the quantities needed by the industry are contracted and delivered by the producers/traders) • Overcapacity in cooling and storing facilities as a result of weak execution of production plans and seasonal supply of raw materials • Lack of internal and external quality traceability systems and at reception

Opportunities	• The demand for processed products is growing on international as well on the domestic market; • Promotion of micro and small enterprises (they have higher demand for full-time labour and greater flexibility in employment of part-time seasonal labour) • Greater collaboration with producers to ensure an adequate supply at the right time; • Develop mechanisms to increase current under utilisation of the capacities that in return, would allow rapid expansion with minimum capital requirements; • Develop preferential/grant schemes aiming to support for the industry; • Provide strong marketing and promotional support to the exporters of processed F&V; • Identify, promote and facilitate model(s) for improved multi stakeholders' dialogue (companies, producers associations, MAFWE, MoE etc.).
Threats	• Low level of utilisation of installed production capacity (average utilisation 36% in 2006). • The EU market is very demanding in terms of food safety and quality standards. • Further trade liberalisation and competition. • The F&V processing sector is highly dependant on the domestic production/supply of agricultural products. (high import tariffs and complicated procedures for imports of fresh produce for processing) • Prices of raw materials vary heavily. • Access to capital and shortages of raw materials affecting growth of the industry
Wine Industry	
Strengths	• The country has long tradition for winemaking benefiting from climatic and geographical advantages. • The vineyard areas are suitable for growing internationally renowned grape varieties (Cabernet, Chardonnay, etc…). • The country has "autochthonous" varieties (Stanusina) and well known regional reputation for the wine quality; • Increasing number of wineries: 28 in 2003 – 43 in 2006. 4 to 5 additional new wineries should open during beginning of 2007. • A Wine Producer Association has been created (MakVino). • 11 companies have adopted HACCP standards. • 70% of total production is exported. • The country has a free trade agreement with EU as well as different non-EU countries.

Weaknesses	• Wine export is predominantly (92%) done in bulk • Three companies are contributing with around 80% of the national wine exports. • Lack of modern equipment for filtration, stabilisation, bottling and labelling. • No price differentiation between grape quality (only based on sugar level). • Tourism in wine region is only planned for Tikvesh region, but infrastructure needs to be improved. • Lack of vineyard integration weakens the HACCP implementation. • Lack of marketing knowledge and misuse of Collective brand and Private Brand.
Opportunities	• Domestic market is undeveloped and could absorb, in the future, a larger quantity of quality wines • To differentiate the wine sector with marketing practises, the development of autochthonous and regional varieties and updated wine production technologies • Increase of bottled wine for both domestic and export markets. • Tourism in wine region is developing (Tikvesh wine route). • National legislation on wine is being aligned with the EU Acquis
Threats	• Imports of quality wines from neighbouring and international markets at competitive prices • Imports of bottles and corks (no local production) • The current legislation on the wine quality system and hierarchy could create confusion among foreign wine buyers • The wineries which do not comply with the Law on Food Safety will be closed down therefore affecting the market

1.8. EX ANTE EVALUATION

1.8.1. Executive Summary

A. Scope of Ex-Ante Evaluation

This ex-ante evaluation of the draft IPARD Programme was carried out by a team of three evaluators over an eight-week period in June-August 2007. The evaluation was carried out in parallel with the finalisation of the draft IPARD programme and during the evaluation period comments and recommendations from the evaluation team were provided to the team preparing the IPARD programme. The evaluation has been carried out in accordance with the Terms of Reference provided to the evaluators and with reference to the EC Guidelines for ex-ante evaluations. Jho;ih

The findings, conclusions and recommendations in this Final Report are based on an extensive evaluation of the drafts of the IPARD Programme provided to the mission on July 12th and 25th [66] and consideration of a wide range of relevant documents including sector studies and other National Plans – in particular the NDP and NARDS. The evaluation team met and discussed relevant issues with a wide range of relevant people who are involved in developing and implementing agriculture and/or rural development programmes and projects in the country. An extensive field trip was also undertaken to meet with possible programme beneficiaries and to asses the relevance of the proposed programme in the context of the actual situation in rural areas.

B. Draft IPARD Programme – Design and Purpose

The draft IPARD Programme is designed to address identified problems in agriculture and rural development that are inhibiting development and proposes solutions by way of measures that are designed to address problem issues with particular reference to improving competitiveness, and accelerating alignment with relevant EC policies. The proposed measures are governed by the requirements and limitations of EC Regulations 1085/2006 (IPA) and 718/2007 (implementation of IPA).The focus of the programme is the provision of capital grants towards the cost of equipment and facilities. It is expected that the availability of grants will prompt farmers, processors and rural entrepreneurs to invest in equipment and facilities that otherwise they might not do. This is understandable and will help to establish interest and enthusiasm around the programme and inject momentum into the reform process. However, this emphasis on capital investment should not overshadow other important necessary investments and actions needed, especially in regard to improving horizontal and vertical integration, and improving farming and business skills.

D. Main Conclusions

D.1 General

The IPARD Programming exercise and the programme is a thorough, understandable and logical document that meets most of the requirements of the EC for Rural Development plans.

[66] IPARD Programme evaluation was Parts I, II and III dated 12th July with updates on 25th July as part of an evolving programming process. The Technical Measure Fiches (i.e. the most recent available within Ex Ante mission time constraints) were in the draft dated 12th July.

The link between objectives, gaps and proposed measures is logical given the requirement to focus measures within the parameters allowed by the governing EC regulations. A number of important areas of the programme are still incomplete – these include a description of the implementing arrangements (including monitoring and evaluation), lessons learned, and training strategy.

D.2 Part 1 - Analysis of the current situation

The analysis of the current situation including SWOT analysis is generally comprehensive and adequate in terms of determining issues to be addressed and priorities. The analysis builds on sector studies and other strategic planning documents, particularly the NARDS. Some weaknesses in the analysis are noted. The SWOT could be improved so that there is a clearer link between the analysis and the problems identified. Prioritisation of issues to be tackled could be improved with justification for prioritisation. The overall conclusion of the evaluators is that the description/analysis in Part 1 of the programme provides a good overview and understanding of the challenges for developing the agricultural and broader rural economy. The analysis of sub-sectors is generally good and is consistent with sub-sector studies and the SWOT analysis. The analysis of the broader rural economy in terms of its potential for development is not as strong as for the agriculture and processing sectors; this is mainly due to the lack of an in-depth study and the absence of reliable data. More discussion on infrastructural deficits and a clearer identification of problems would be recommended. Regional disparities could also be more clearly analysed and some justification made for any regional prioritisation for the planned measures.

The Main Recommendations in respect of the Analysis of the Current Situation are:

1. At the end of the description of each sector and sub-sector a short paragraph be inserted that would summarise the key issues that need to be addressed and the perceived priority in terms of overall objectives. This would improve the link between the sector analysis and the SWOT.
2. Section 1.6 (SWOT) should be revised to show more clearly the causal relationship between the situation analysis, identified needs and the proposed measures. In particular the “problems to be tackled” should be more explicit. It is recommended the Strategic objectives are referred to immediately after the SWOT (i.e. still in Part II) as a natural conclusion of the SWOT and a link into Part III.

D.3 Part 2 National Governance Context

This part provides a description and review of the relevant national legislation and policies, government supports to agriculture, the international co-operation projects and the National Strategy for Integration of the country into the EU. The legal and institutional framework and priorities in relation to the environment are also elaborated. Overall this part is comprehensive with a very detailed listing of priorities at the end of each section. These priorities elaborate on the policy or legal issues that need to be addressed in each sector or sub-sector. Section 2.4 on current national support policies is detailed but would be strengthened by a concluding paragraph that would summarise the proposed reforms of the current support policies and the steps that are underway to align the support measures more closely with the CAP.

While Part 2 is quite comprehensive it lacks a concluding synthesis that would show how policy and legislative reforms combined with government programmes will drive sustainable

rural development in the country. In this section, some of the issues appearing in the SWOT analysis could be elaborated so that there is a more direct link with Part 3.

Recommendations

3. A concluding paragraph should be included in paragraph 2.4 that summarises the reforms underway of the current support policies and the steps planned to align the support measures more closely with the CAP.
4. It is recommended that identified priorities that have implications for the IPARD programme should be highlighted and where possible an indication given of any progress or action already underway.
5. A concluding synthesis of Part 2 should be included to provide a clearer link between Parts 1, 2 and 3.
6. A section on lessons learned should be included. This should be analytical and particularly refer to any lessons drawn from the current RD programmes.

D.4 Strategy and objectives of the IPARD Programme

Part 3 provided the overall strategy for rural development, details of available measures, the target groups and the strategic planning process of the IPARD programme. This is then linked to the objectives of the Programme that are set in the context of the higher level objectives outlined in the NDP and NARDS. Later in the Technical Fiches objectives at measure level are provided that are consistent with the objectives at strategic level. This part of the document is quite clear in setting out the strategic objectives of the programme and the links with higher level objectives on the one hand and objectives at measure level on the other. However the general objectives of the IPARD plan could be clarified further and emphasise competitiveness.

Main Recommendation

7. Competitiveness should be emphasised in the general objective.

D.5 Selected Measures

The IPARD Programme proposes three measures – two under Priority Axis 1 and one under Priority Axis 3. The measures selected are considered to be appropriate, relevant and coherent and are consistent with the earlier analysis and identified problems. The two measures selected under Priority Axis 1 complement each other quite well and should have a strong impact on modernisation of agriculture and food sectors. The measure selected under Priority Axis 3 is relevant to the overall objective of diversification of the rural economy. This is important in the context of structural reform of agriculture and the likelihood of substantial reduction in the numbers employed directly in primary agriculture.

While the selected measures are consistent with the overall objectives and reasonably well designed there are some areas for improvement. The expected impact of the measures should be more explicit in the measure fiches while the specific objectives could be reworded so that the specific expected results of the measure (and sub-measures) can be seen. Eligibility and selection criteria should be reassessed in some areas. For measures 1.1 and 1.2 the selection criteria is quite limited and does not use the business plan in any meaningful way. Some of the weightings in the selection criteria should also be reassessed to ensure that

the weightings reflect priorities. The allocation of 35% of funding for poultry under measure 1.2 is surprisingly high given that the analysis section does not suggest that it is a special priority or its competitiveness is soundly based.

For measure 3.1 the specific objectives should be re-examined to closer resemble the emphasis in Priority Axis 3 in IPA on wider rural development, including both farm and non-farm economic activities. Currently the emphasis is skewed towards on-farm diversification. It is also recommended to better justify or reassess the geographic areas eligible for farm-based rural tourism support as it currently seems too narrow. The selection criteria should be adjusted to better reflect the general objective and to encourage good uptake of proposals by suitably qualified rural entrepreneurs capable of making a real difference to local rural economies.

Main Recommendations

8. A short piece on the expected impact of each measure should be included in the measure fiches.
9. The selection criteria should aim to take account of the business plans that support the applications and also the weightings should be reassessed.
10. The allocation of 35% of funding under measure 1.2 to poultry should be better justified in the analysis or else the allocation be reassessed.

D6. Training

Article 181 (2) of 718/2007 requires that beneficiary countries shall prepare a training strategy. This strategy will identify training needs and establish criteria for the selection of training providers. The successful implementation of this programme is highly dependent on the availability of appropriate training courses and facilities. This training needs to be delivered in a flexible and imaginative way that takes account of the needs of beneficiaries. It cannot be institution led, it should be pluralistic in its approach (i.e. involving private and public sector delivery) and any training strategy must take account of this.

Recommendations

11. The training strategy should ensure that there is a broad range of training providers reflecting the diversity of IPARD. Training should be managed by a body independent of any of the training providers and should be pluralistic in delivery.
12. Mitigation actions against adverse environmental effects should include awareness and training activities in relation to environmental standards to secure cross-compliance and minimum standards.

E. Environmental Considerations

The IPARD Programme implementers and beneficiaries will need to pay particular attention to developments that will to some extent impact on water quality and use, waste management, biodiversity, land management, the natural and built environment, etc. Compliance with national standards and movement towards EU standards, many of them newly introduced, will be important conditions of the various projects to be implemented under the three measures.

In the remaining period of programme finalisation attention should be given to better describing the rationale for defining the objectives for Measures 1 and 2 and 3 for the

environmental context. Currently neither the strategy in Part III or the technical measure fiches adequately describe the rationale for proper care and attention to the environment within programme development, and the possible perceived contradictions between the goals of improved competitiveness and improved environmental compliance. This brief addition should include a note that the costs of compliance with environmental standards will not directly lead to increased competitiveness, but will indirectly open access to higher value markets that require compliance with exacting environmental standards.

A further recommendation for the first financial period (2007-09) includes setting up formal coordination structures with the MoEPP on screening applications for environmental compliance including decisions relating to the need for Environmental Impact Assessments (EIAs) and spatial development considerations.

Recommendations:

13. Include a brief addition to both the Strategy in Part III of the programme and technical fiches for all three measures on the rationale for environmental compliance and its relationship to wider competitiveness.
14. Set up functional coordination structures with MoEPP for screening applications for environmental compliance, including decisions relating to the need for EIAs and also for spatial development considerations.

F. Programme Implementation and Monitoring and Evaluation

Full details of the structures, processes and procedures for programme implementation were not yet completed at the time of this evaluation. Nevertheless substantial work has been done on planning for programme implementation and there would seem to be a good understanding of what is necessary in order to meet all EU requirements. Some important work remains especially further consultation with social partners, planning for promotion and publicity of the programme and the establishment of monitoring structures (including committees).

In relation to the establishment of M&E systems work on this will proceed over the coming months with the assistance of TA. This will concentrate on defining suitable monitoring indicators and systems for collection of monitoring data. In this regard the evaluators suggest that the first steps in M&E are very practical and simple. It is considered much better to establish simple systems that work and can be built on rather than some elaborate system that is unworkable. Initial M&E data should try and collect data relevant to each sub-measure (measure component) that will show if the specific objective of the measure is being achieved. At the same time when designing systems for M&E some consideration should be given to establishing processes for measuring impact. This may involve setting up some simple socio-economic surveys in pilot areas. Farmer and business registration systems, particularly including programme beneficiaries, should be an integral part of the M&E system.

Recommendations:

15. Systems to develop M&E should be established at sub-measure level but in a simple way that can be built on.
16. It may be possible to collect useful baseline data in the application form. This should be kept in mind during the planning for implementation. Farmer and business registration systems should be included in the M&E system.

17. Monitoring committees should be broadly representative of all Rural Development interests and not confined to government or solely agricultural organisations. Social inclusion, partnership and consultation are assumed in 3.5 but not described. A small descriptive addition should be included on what structures are anticipated to feed into the Monitoring Committee.

G. Other issues

The longer term development of agriculture and the rural economy is a major challenge that will require significant investment and radical and innovative policies. IPARD will contribute to this but will not provide all the investment or all of the solutions. Thus any evaluation of IPARD has to be carried out in the context of overall development plans – national and regional. Successful implementation of IPARD will depend not just on the programme design (the subject of this ex-ante evaluation) but on progress in other areas such as training and on the availability of private sector investment funds. The total public funds allocation of €25.3 million for the period 2007-2009 must be matched by funds from the beneficiaries of €24.3. It is expected that much of this will come from credit sources but lending to the agriculture sector at present is low and characterised by high interest rates and demanding security requirements. This is an issue that needs to be tackled prior to the implementation of IPARD, otherwise uptake under the various measures will be low or else confined to people who are already financially strong.

Recommendation:

18. Steps should be taken to present the IPARD programme to financial institutions during the planning phase with a view to these institutions designing financial packages that would facilitate potential beneficiaries.