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STRATEGY FOR IMPROVING AGRICULTURAL
AND RURAL STATISTICS

Determining the Menu of Indicators and a Core Set of Indicators for Agricultural and Rural Statistics

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Introduction

For the countries that are part of the region South Eastern Europe (Albania, Bosnia and Herzegovina, Croatia, Macedonia, Montenegro, Serbia), agriculture and rural development are an important part of their economy. That is also confirmed by the data according to which the participation of agriculture in GDP ranges from 5% in Croatia to 18.9% in Albania. The participation of the rural population in the total population is significantly high – more than 50% in Albania and Bosnia and Herzegovina and 34% in Macedonia or almost 40% in Montenegro.

In order to support the development of agriculture and rural areas in these countries, detailed, relevant and comparable agricultural and rural statistics are necessary.

Country	Population in 2007 (projected) in 000	Participation of Agriculture in GDP (in%)	Rural population in 2007 (%)
Albania	3190	18.9	53.9
Bosnia and Herzegovina	3935	5.3	53.1
Croatia	4555	5.0	43.1
Macedonia (TFYR)	2038	9.3	33.6
Montenegro	598	6.9	39.6
Serbia	9858	8.7	49.2

Source of data: World Statistics Pocketbook, United Nations, New York,2009

In separate countries of the region are conducted and disseminated agricultural statistics with different scope and on different level, and we can say that these statistics have a long tradition. But, in order to define the direction in which can be expected the development of the agricultural and rural statistics in this region, we must take in consideration the condition of the censuses of agriculture as the most comprehensive

source of data on agriculture, but also as an important source of data for organising quality sample frame and statistical farm register.

Census of Agriculture in some of the countries (Albania, Croatia, Macedonia) was carried out for the first time in about three decades. In others it is in the process of preparation (Serbia and Montenegro). Bosnia and Herzegovina has in plan to carry it out, too.

1. Main features of agricultural statistics in Republic of Macedonia

The Statistical System in Macedonia is centralized. The State Statistical Office of the Republic of Macedonia (SSO) is responsible for all agricultural statistics. The Ministry of Agriculture, Forestry and Water Economy is in charge of calculation of Farm Accountancy Network (FADN), establishment and maintenance of an administrative farm register, food safety, irrigation and establishment of Payment Agency.
The main features of agricultural statistics could be defined as:
•The agricultural statistics in the State Statistical Office (SSO) are being conducting since 1945;
•SSO is responsible for most of the agricultural statistics in the country. Ministry of Agriculture, Forestry and Water Economy is in charge of calculation of Farm Accountancy Network (FADN), establishment and maintenance of an administrative farm register, food safety and irrigation;
•SSO carries out: 29 surveys of which 22 are annual, 2 quarterly, 5 monthly;
•The Agricultural Census was conducted in 2007 meeting the international requirements;
•The most detailed agricultural statistics / census data are available on the web site of the SSO in a form of a data-ware house;
•Statistical farm register is in the process of establishing;
•National law on agricultural and rural development was adopted in 2007.

2. Analysis of the Menu of indicators for agriculture and rural development from the country perspective

Thus defined menu of indicators shows that in order calculate separate indicators it is required a properly established system of national statistics.
Analysis of the separate groups of indications enables to identify the possibilities and limitations for determination of separate indicators.

Indicator	Availability/Last published data	Data sources
Sector-wide indicators for agriculture and rural development		
Gross Domestic Product (GDP)	Yes,	SSO (different statistics)
GDP growth from Agriculture value added	Yes,	SSO (different statistics)
Public spending on agriculture, subsidies and infrastructure	Yes,	Program for financial support of agriculture and rural development approved from the Government
Public spending on rural infrastructure including health and education	No,	
Investment in capital stock	Yes,	Data sources: SSO, Annually survey for Gross Fixed Capital Formation (GFCF)
Demographics of agricultural and rural population	Yes,	Census of Agriculture
Gender	Yes	Census of Agriculture
Percent of rural children that are underweight compared to national level	No,	
Percent of rural children that are stunted compared to national level	No,	
Rural poor as a percent of total poor population	Yes	Household Budget Survey
Rural Hungry as a percent of total poor population	No	
Change in Land Cover and use	No	
Food production index, food security	Yes	Agricultural statistics
Trade-imports and exports	Yes	Trade statistics

After the analysis of available data from different sources (sample surveys, agricultural census, different estimations, surveys of agricultural enterprises), it is concluded that 9

indicators can be produced from the list of Sector-wide indicators for agriculture and rural development. Five of the indicators from that list could not be calculated under actual conditions. In order to enable determination of these indicators, appropriate preparations for introducing new surveys are required
(Percent of rural children that are underweight compared to national level,
Percent of rural children that are stunted compared to national level) or reorganizing and introducing of new content in already existing socio-economic surveys).

Indicator	Availability/Last published data	Data sources
Indicators for sub-sectors of agricultural and rural development		
Productivity of Crop production as measured by crop yields	Yes	Census of Agriculture, Agricultural statistics
Crop balances	Yes, Partially (lack of some data)	Surveys of agricultural enterprises, Trade statistics, HBS
Livestock productivity as measured by value added	Yes, Partially (lack of some data)	Surveys of agricultural enterprises, HBS
Livestock and poultry Balances by species	No	
Productivity of Capture Fish production	No	Fishery survey
Productivity of aquaculture	No	
Fish balances	No	
Forestry balances	No	
Commodity prices	Yes,	Price Statistics
Consumer prices	Yes	Price Statistics
Early warning	No	

The amount of data that is collected for some sub-sectors is limited. Surveys of agricultural enterprises have to be better organized regarding the content and coverage.

Indicator	Availability/Last published data	Data sources
Climate change, land and environment		
Change in proportion of land area covered by forests, rate of deforestation	Yes, Partially	Census of Agriculture, Ministry responsible for forestry
Percent of land and water area formally established as protected areas	No	
Irrigated land as percent of total cropland	Yes	Census of Agriculture,
Productivity of irrigation	No	
Withdrawal of water for agriculture as a percent of total water withdrawal	Yes	Survey of aquaculture enterprises
Change in soil loss from watersheds	No	
Affect of inputs on the environment	Yes	Census of Agriculture, Ministry of environment
Habitats and ecosystem	No	

Available data for calculation of indicators for climate change, land and environment are limited and mostly taken from the Census of Agriculture as a source. In collaboration with corresponding ministries specific surveys have to be introduced (habitats and ecosystem) and improved the surveys from agricultural enterprises.

Indicator	Availability/Last published data	Data sources
Agricultural and rural economy		
Agricultural and rural Labor	Yes,	Agricultural Census, LFS
Rural household income	Yes/Partially	HBS
Percent of rural population using services of formal banking institutions	No	
Change in sales of agro enterprises	No	

In the calculation of the indicators relative to agricultural and rural economy the data from LFS and HBS can be used, while considering the differences in definitions used is comparison with administrative data for the categories: employed, income, wages.

Particular attention is to be paid to the informal and nonstandard employment having the highest participation just in agriculture.

3. Analysis of the core set of indicators for development of agricultural and rural statistics

Analysis of available data from different sources (sample surveys, different estimations, surveys of agricultural enterprises) shows that limited number of indicators can be produced annually from the list of core set.

In order to ensure regular annual calculation of the core set of indicators it is important to:

-Establish a master sample frame and integrated database;
-Introduce new variables in existing surveys (crop and aqua production surveys);
-Increase sample size in income survey and
-Improve rural statistics in general term.

4. Conclusions

In most of the countries in the region is similar situation regarding the available data for calculation of the core indicators for agricultural and rural development.

National capacity and availability of agricultural and rural statistics, could be enhanced by establishing:

1.Integrated Data Base;

2.Master Sample Frame for Agriculture (The analysis of the data obtained on the basis of a sample, for which sample frame were the data from the censuses of population, show that these data are not the best frame for the surveys in agriculture. This is confirmed also by the data of the post-census surveys conducted after the censuses of population, which proved that the agriculture data collected during the censuses of population, are of a lowest quality. After conducting the Census of Agriculture, 2007, a new frame for selection of sample for the surveys in agriculture was established. The use of this sample frame for sample selection till now shows that it is of a much more quality than the data obtained from the censuses of population. But, after two years of using this frame there is a need of updating the data. The problems that can be expected are: under-coverage and over-coverage. These problems can be overcome by establishing the statistical farm register or by establishing or using other data sources for updating the census results. In the SSO, a statistical business register has been established, and in the process of establishing is the statistical farm register. According to the SSO plans, by establishing the statistical farm register and its connecting to the statistical business register there would be provided conditions for establishing of a Master Sample Frame);

3.Linkage between the different sources of data;

4.Precise scope, coverage and periodicity of the agricultural statistics;

5.Better coordination between different units in the SSO in the process of planning of annual working program and

6.Consultations with others producers of agricultural statistics regarding the methodological issues and preparing of new specific surveys especially in the areas: forestry, environment and climate change.