WISH LIST OF INDICATORS

Table 1a. Wish List of economic indicators calculated based on FADN RS data

Indicators of economic sustainability	FADN data	Indicator description
Return on Assets - ROA	SE420 / SE436	Farm net income divided by total assets.
Return on Equity - ROE	SE420 / SE501	Farm net income divided by net worth.
Return on Sales - ROS	SE420 / (SE131 + SE605)	Farm net income divided by total income.
Current ratio	SE465 / SE495	Current assets divided by short-term loans of farm.
Fixed assets to total assets ratio	SE441 / SE436	Fixed assets divided by total assets of farm.
Equity to fixed assets ratio	SE501 / SE441	Net worth divided by fixed assets of farm.
Total output per annual working unit	SE131 / SE010	Total output divided by total labour input expressed in annual working units.
Total output per utilized agricultural area	SE131 / SE025	Total output divided by utilized agricultural area expressed in hectares.
Gross Farm Income per annual working unit	SE410 / SE010	Gross farm income divided by total labour input expressed in annual working units.
Gross Farm Income per utilized agricultural area	SE410 / SE025	Gross farm income divided by utilized agricultural area expressed in hectares.
Farm Net Value Added per annual working unit	SE425	Farm net value added divided by total labour input expressed in annual working units.
Farm Net Value Added per utilized agricultural area	SE410 / SE025	Farm net value added divided by utilized agricultural area expressed in hectares.
Farm Net Income per annual working unit	SE420 / SE010	Farm net income divided by total labour input expressed in annual working units.
Farm Net Income per utilized agricultural area	SE420 / SE025	Farm net income divided by utilized agricultural area expressed in hectares.
Farm Net Income per family working unit	SE430	Farm net income divided by unpaid labour input expressed in annual working units.
Technical Efficiency	SE131; SE436; SE025; SE010; SE275	Output – input relation. On the output side is total output value; on the input side: total assets value, total utilized agricultural area, total labour input, total intermediate consumption.
Total Factor Productivity	SE135; SE206; SE256; SE436; SE025; SE010	Output – input relation. On the output side is aggregated value that contains total output crops and crop production, total output livestock and livestock production and other output; on the input side: total assets value, total utilized agricultural area, total labour input.
Opportunity Cost Approach	SE420; SE016; SE021; SE501; SE447; SE025; SE030	Farm net income divided by reference income. The reference income is the sum of opportunity costs of own factors of production (labour, capital and land).

Table 2a. Wish List of environmental indicators calculated based on FADN RS data

Indicators of agri-environmental sustainability	**FADN data**	**Indicator description**
livestock density	SE120	Density of ruminant grazing livestock: average number of LU of bovines, sheep and goats per hectare of forage UAAa. SE120 = SE080-(SE100+SE105)/SE071
fertilizers use	SE296; SE297; SE298; SE025	Total amount of nitrogen, phosphorus and potassium (N, P_2O_5 i K_2O) in kg per hectare of UAA. (SE296+SE297+SE298)/SE025
forest area (woodland area)	SE075	Woodland = Woodland area, forests, poplar plantations, including nurseries
legumes area	legumes area in "production" sheet	Soybean, legumes, peas, broad beans and sweet lupine are separately collected and the sum of their areas of one farm can be an indicator of legumes. Sum of area under these crops per hectare of UAA multiple 100 (%).
crop protection use	SE300; SE025	Total cost of plant protection products, traps and baits, bird scarers, anti-hail shells, frost protection, etc. per ha of UAA. SE300:SE025
energy cost	SE345; SE131	Total cost of motor fuels and lubricants, electricity, heating fuels divided with total output multiple 1000. SE345/SE131*1000
water use	cost of water in "supply" sheet	Total cost of water use for all agricultural purpose (including irrigation) per 1000 RSD of total output. water cost/SE131*1000
Meadows and pastures, permanent grassland	SE028 (for 2020 i 2021) for (2015-2019) in "production" sheet area of pastures, meadows, permanent grassland and fallow.	Sum of extensive pastures, meadows and pastures (excluding extensive pastures), permanent grassland out of use, fallow without and with subsidies areas per ha of UAA * 100 (%).
environmental-friendly farming	SE621; SE605	Share of environmental subsidies in total subsidies (%). SE621/SE605*100
biodiversity	Shannon Diversity Index area under all plant species in "production" sheet	Shannon's index accounts for both abundance and evenness of the species present. The proportion of species i relative to the total number of species (pi) is calculated, and then multiplied by the natural logarithm of this proportion (lnpi). The resulting product is summed across species, and multiplied by -1. The lowest value is 0 (monoculture). Higher values indicate higher levels of biodiversity.
greenhouse gas emissions	livestock species (SE086, SE095, SE100) (livestock unit converted to livestock number with conversion coefficients); Nitrogen fertilizers in "supply" sheet; Fuel amount in "supply" sheet	CH4 from enteric fermentation (IPCC 2006, equation 10.19 i 10.20 (Vol. 4) N_2O emissions = nitrogen fertilizers consumption*emission coefficient (0,0117)*molecular weight ratio (44/28) CO_2 emissions = fuels and lubricants amount * coefficient of CO_2 emissions per liter of fuel (2694,9 g CO_2/l diesel oil) Total GHG emissions (CO_2-eq)= CH4 emissions*25+N_2O emissions*298+CO_2 emissions

Table 3a. Wish List of social indicators calculated based on FADN RS data

Indicators of social sustainability	**FADN data**	**Indicator description**
Gender of the farm manager	Holder/Manager - gender and Manager/not holder - gender	FADN data distinguishes between male and female farm managers. It is important here to identify and consider all those managers who may not be the holders of the farm.
Age of the farm manager	Gender of the farm manager	FADN data shows the year of birth of the farm manager, which means it is necessary to calculate the age. It is important here to identify and consider all those managers who may not be the holders of the farm.
Agricultural training	Gender of the farm manager	FADN data distinguishes between three levels of agricultural training for farm managers. The first category includes managers who rely solely on practical experience. The second category consists of managers who have completed basic training in agricultural production. The third category comprises managers who have full training in agricultural production, which corresponds to theoretical training in the form of agricultural schools and/or biotechnology faculties or similar types of training. It is important here to identify and consider all those managers who may not be the holders of the farm.

Tabela 4a. Wish List of agrarian policy indicators calculated based on FADN RS data

Indicators of agrarian policy	FADN data	Indicator description
Share of subsidies in the farm net income	SE605; SE420	Ratio of total received subsidies (excluding investment subsidies) to the net income of the farm, where the net income represents the profit remaining for the agricultural producer and their family after covering all costs.
Share of subsidies in the total production value	SE605; SE131	Ratio of total received subsidies (excluding investment subsidies) to the total production value, where the total production value includes the sum of the value of crop production and crop products, livestock production and livestock products, and other products and services.
Subsidies received per unit of capacity	SE605; SE025; SE080	Subsidies received (excluding investment subsidies) per unit of capacity (hectare or livestock unit). Subsidies received per hectare of utilized agricultural area: SE605/SE025 or subsidies received per livestock unit: SE605/SE080.
Share of subsidies in total revenue	SE605; SE131; SE406	Indicator related to subsidies is presented as the ratio of current subsidies to total revenue. Current subsidies for farms include direct government support such as milk premiums, direct payments per hectare, refunds for fuel and fertilizer, fixed payments per livestock unit, and other direct payments. On the other hand, total revenue represents all income related to agricultural production, thus including the sum of total subsidies received (current subsidies + investment subsidies) and the value of production. Since high values of investment subsidies significantly increase the total income of the farm in the current year, the portion of total subsidies related to investment subsidies is represented as a 20% share of the total value of investment subsidies (depreciation rate for machinery).