## Main MS comments on the impact indicators and the Commission reaction

| 1) Agricultural entrepreneurial income | |
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| **MS Comments** | **Commission reaction** |
| Concerns about using in the calculation only family (non-salaried) labour (as opposed to using also salaried labour) (EE, HU). | The indicator aims at showing the income an entrepreneur obtains from agriculture as opposed to income obtained from salaried work. |
| Non-agricultural income is not factored in, and the indicator does not account of for differences in land ownership structure across farms (PL). | Non-agricultural income cannot be factored in as there is currently no data in Eurostat on this issue. |
| The comparison with the rest of the economy is problematic as the two working populations differ at least with respect to their level of education and location (DE). | Over time, the comparison with the rest of the economy allows to highlight evolution in trends and potential differences between the trend for agriculture and other sectors. |
| Eurostat as data source provides only figures on MS level. Since regions and agricultural branches can differ vastly regarding hired labour – especially regarding legal forms of enterprises where all labour is calculated as hired workers - the indicator is of limited value for analysis that is more detailed and for comparisons. A complementary analysis on FADN database is recommended in order to deliver more differentiated information (DE). | Indeed, an indicator as such does not give a complete picture and might need to be complemented with other information, e.g. originating from the FADN database. |
| Calculation Method: The use of FTE in "comparable" countries is viewed as highly problematic as the countries for which FTE is available are not representative for the entire group. As data on gross wages and working hours is available on Eurostat for most countries (nama_nace_06_e) it is more appropriate to base the comparison on the entrepreneurial income (DE). | The total number of hours which go into a full time equivalent (considered that an entrepreneur farmer is putting into his activity) is not given in the national accounts. If such reference would be given, the gross wage per hour could be used as an alternative means of calculation of the FTE. |
| As for the delay in data collection, it is suggested to use the terminology Y-1 instead of Y+1 to indicate one year delay (also for all other indicators using data with one year delay) (SE). | The indicator fiche has been changed accordingly. |

| 2) Agricultural factor income | |
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| **MS Comments** | **Commission reaction** |
| Agricultural factor income is less vulnerable to different legal forms of enterprises and therefore better suited for comparisons (DE). | Agricultural factor income data gives information about income which is used to remunerate borrowed/rented production factors besides own production factors. This indicator should be divided by salaried labour and not by non-salaried labour. However, since this indicator cannot show the actual income obtained from agriculture as an entrepreneur, it needs to be complemented with the indicator 1 (agricultural entrepreneurial income). |
| Besides the indicators reflecting the speed of growth, the proportions on which they are based should also be analysed. It is particularly important in case of income indicators where the speed of growth alone does not reflect the real situation (EE). | Data in real terms is considered and presented whenever it is available. Moreover, evidently the individual elements underlying the indicator values need to be taken into account when interpreting the indicator value. |
| The data of unpaid manpower is available only the case of agriculture. The size of the unpaid manpower isn't measurable exactly (HU). | Non-salaried AWU is used only in the case of agriculture to indicate the actual income obtained by a farmer from agriculture as an entrepreneur. |

| 3) Agricultural productivity | |
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| **MS Comments** | **Commission reaction** |
| Recommendation to split into agricultural sectors (SE). | While this proposal would indeed improve the value of the information, it is difficult to implement, given the lack of data (especially on the input side) differentiated by agricultural sector. Where Member States have more detailed data, they are welcome to use them in their analyses. |
| Clarify the calculations: better description, specify the geographical level, use unit of labour instead of unit of support payment (SE, SI, EE). | Currently, the only geographical level at which sufficient data are available to calculate total factor productivity is the Member State.<br>Support payments do not enter into the calculations. |

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| | For more detailed information, see for example http://faculty.arts.ubc.ca/ediewert/union.pdf |
| Potential problem concerning data collection and quality. It might be better to leave the method of analysis and data collection to each MS (SE). | To enable an evaluation of the CAP for the EU as a whole, a harmonized approach is needed for all Member States. |
| The way the indicator is presented it cannot handle productivity differences with regard to increasing economies of scale, decreasing returns to scale and constant returns to scale (SE). | This is correct. However, adding these components would greatly complicate the analysis (see for example http://128.118.178.162/eps/em/papers/0410/0410010.pdf for a decomposition of the Fisher TFP index). |

| **4) EU commodity price variability** | |
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| **MS Comments** | **Commission reaction** |
| Consider inclusion of other commodities such as eggs (DE, SE) and protein crops (BE), rapeseed and ethanol (DE) and specify which particular product is to represent a given group (cheese, poultry, etc.) (PL). | The agricultural commodities to be examined are those for which Member States send weekly prices to EC through AMIS. Eggs are now included. For ethanol, EC does not collect prices. Individual products should be identified according to the Combined Nomenclature code. |
| The inclusion in the list of processed food product (sugar, butter, milk powder) might involve problems with comparisons between MS and markets, moreover not all listed products are subjected to commodity exchange quotations (PL). | As regards the comparison of the EU and world price, attention will be paid to compare EU and world prices on the representative markets. |
| Consider recommendation to compare price volatility at different stages of trade (farm gate, food/wholesale, retail) (PL). | Retail price evolution is observed through the indicator no 5.<br>Remark: Eurostat through its Food Price Monitoring Tool allows for a price comparison (under a form of indices) of selected agricultural products at different stages. This tool is still under development and presents the inconvenient of price reporting on quarterly basis (the 3 monthly data indicated in the database includes the same value as the quarterly data). |

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| There are no concerns about other plausible factors affecting the price variability (e.g. global trends and business cycle) (SE) | This indicator measures price volatility, i.e. price movements over time and represents a signal in case of market disturbances. Evidently, the indicator and the reasons behind its evolution need to be interpreted |
| Better explain the relationship between the indicator and the objective (DE) | Explained in the comments/caveats at the end of the indicator sheet |

| **5) Consumer price evolution of food products** | |
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| **MS Comments** | **Commission reaction** |
| Consumer prices depend on several factors, thus it is not obvious how policy impacts will be measured (HU). | True; however this indicator should not be interpreted separately from the indicator no. 4 which shows the developments in the agricultural commodities prices. |
| Information about retail prices or foreign trade feature a delay of over one month (PL). | This is correct for the international trade data; consumer price indices are available in Eurostat around the 17-19th of the month that precedes the reference month. |

| **6) Agricultural trade balance** | |
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| **MS Comments** | **Commission reaction** |
| It is suggested using terms of trade instead of trade balance. It seems that a comparison of the EU and world export and import prices of particular agricultural commodities would be more important that fixing the balance of foreign trade turnover in order to assess the EU's advantages in the global market (PL). | Taking a proposed suggestion of comparing import and export prices by sector raises the issues of which products to take into account and what prices (especially given a large variance of prices within EU and different qualities of products). It could be done for commodities; however the strength of European agriculture should be in higher value added products, where price competitiveness is not the only factor. An indicator with EU and world prices is proposed separately. |

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| What means agricultural trade? Only raw products or also processed? What about tropical products or protein foodstuffs (DE)? | The definition is that used in DG AGRI agricultural trade statistics, based on WTO definition, (for definition see http://ec.europa.eu/agriculture/statistics/trade/2011/annex3_en.pdf). It includes processed and tropical products, because processed products play an important part in agricultural value chains and all food exports and imports are part of the European food system. |
| Consider including self-sufficiency rate in % (production/internal consumption). Instead of trade balance [to assess food security] (BE, DE). | Agricultural trade balance takes into account a wide range of food products and indicates the competitiveness of EU agriculture, thus its economic viability. Self-sufficiency ratio, calculated for a particular product, does not show the viability of the whole sector but, in a market-oriented and open economy, indicates whether this product is more or less profitable than alternatives for European farmers. In addition, self-sufficiency ratios could only be calculated for certain basic commodities, which would neglect the role of high value added products and the quality of traded products. |
| Add mass balance as indicator ("not influenced" by price changes) (DE). | At an aggregate level the changes in total mass of production are very difficult to interpret. However, the effect of price inflation should be taken into consideration when interpreting the trade balance indicator To aid further interpretation of the indicator, the contribution of unit values and volume changes to the change of value of trade could be analyzed for the products with the highest dynamics – as already done in DG AGRI MAP publications on EU trade (see graph 8 and 9 in MAP "Agricultural trade in 2011" http://ec.europa.eu/agriculture/trade-analysis/map/05-2012_en.pdf). |

| **7) GHG emissions from agriculture** | |
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| **MS Comments** | **Commission reaction** |
| A more serious and complex methods should be applied if we would like to estimate punctually this indicator (HU). | This indicator draws on an official submission by MS to the UNFCCC, so it is "serious". However, the Commission has already pointed out the caveats of the indicator, particularly when using low tier level method (based on |

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| | activity data and global emission factors). In this case, the resulting GHG emission estimates do not necessarily mirror the effects of the mitigation measures supported by the CAP. The method of calculation (tier level) of the different components (emission sources) of the indicator greatly varies between the MS. |
| Not clear whether this indicator is measured through statistical and/or mathematical modelling (e.g. does the methodology account for new production technologies which actually could reduce emissions) (SE)? | It is measured through statistical data and emission coefficients (usually coming from research). Only tier 3 method involves the use of models and data tailored to the national circumstances. Methodologies for GHG emission estimates should follow IPCC guidance, but need not be identical across MS.<br><br>The Commission acknowledges that the inventory's guidelines were developed to have transparent and simple inventories at national scale and not to assess strategies to reduce emissions. The use of higher tier levels for the calculations would allow factoring, at least partly, the effects of technological improvements and policy developments. Inventories are progressively improved by MS. |
| Are MS supposed to submit each year data on how the change in agricultural land use or cultivation technologies influences GHG emissions?<br><br>Estonia, does not collect relevant data each year. Cultivated and drained organic soils are a remarkable source of GHG and the share of those soils is big in Estonia (the characteristics of those soils are not monitored. Thus, a well operating peat soil monitoring system should be created to consider the need to collect data on GHG emissions) (EE). | The indicator not only covers emissions within the "agriculture" inventory, but also emissions and removals of carbon dioxide (CO2), and emissions of methane (CH4) and nitrous oxide (N2O) from agricultural soils (grassland and cropland), reported the 'Land Use, Land Use Change and Forestry' (LULUCF) inventory. Emissions from drained organic soils included into the categories "cropland" or "grassland" will be included. |
| Due to data constraints on historic technology distribution the indicator will primarily respond to changes in activity levels. The Impacts of the CAP on GHG emissions can only be depicted in the national reports for the UNFCCC if the data on the location of land use and livestock husbandry, as well as location and extent of relevant measures in pillar I and II are made accessible to the authorities calculating the national | IPCC guidance allows MS to report GHG emissions from agriculture and emissions and removals from agricultural soils (LULUCF) according to different level of tiers. Tier 1 is based on the use of activity data (e.g. agricultural production statistics) and global emission factors. Tier 2 follows the same approach but applies nationally defined emission factors. Tier 3 involves the use of models and higher order inventory data tailored to the |

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| inventories (DE). | national circumstances. Methodologies for GHG emission estimates should follow IPCC guidance, but need not be identical across MS.<br><br>In particular when using low tier level, GHG emission estimates do not necessarily mirror the effects of all mitigation measures that are supported by the CAP. This would require a high level of stratification of activity data, and corresponding information on emission factors, which often is not available. As a result, GHG emission estimates have a high level of uncertainty.<br><br>MS are encouraged to improve GHG inventories towards higher tier levels, which would allow demonstrating the effects of technological improvements.<br><br>It is recognised that data limitations limit the level of information in some MS for this indicator. However, the situation should improve over time as inventories become better developed. |

| **8) Farmland birds index** | |
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| **MS Comments** | **Commission reaction** |
| The FBI is not based on occurrence of birds (which means presence/absence data) – the index rather monitors abundances and the changes of it (AT). | The FBI is a composite index that measures the rate of change in the abundance of common bird species at selected sites, i.e. relative abundance. Population trends are derived from the counts of individual bird species at census sites and modeled as such through time. It is therefore a good indicator to measure the rate of change in the abundance of common bird species at selected sites. |

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| EUROSTAT data are not directly transmitted by MS thus they are not well updated (latest data come from 2008) (HU, EE). | Data are indeed not transmitted by MSs but collected at national level by a network of volunteer ornithologists coordinated within national schemes. National data are collected and checked by the European Bird Census Council (EBCC) and are only transmitted to Eurostat well after the composite EU index is elaborated.<br><br>However data are in principle regularly available on annual basis with a delay of 2/3 years. At the moment data are published for the period 1990-2008. Data for 2009 and 2010 are still not available for problems occurred within the funding system to the organizations which collect and process data, but this problem should be solved and not repeated in the future. |
| The justification of selecting species which are common for the whole continent doubtful. Variability of agricultural landscape generates variability of habitats, it seems justified to take account of this specificities in the birds' based indicator (PL).<br><br>A customised selection of birds at the national level overcomes these problems. Therefore we propose to allow selection of species dependent on farmland characteristic for each country. The selection should only be restricted to the EU list of the 118 common birds (AT). | National common farmland bird indices, as computed by the EBCC, are based on a so called "EU list of 37 species", from which each country select the species to monitor their farmland birds. It means that the species on the list constitute a maximum, from which the countries select only the species relevant to them on the basis of the specificities of their landscape and habitats. Once established the species chosen should remain stable over time, unless solid justification is provided.<br><br>However it should be noted that, some countries publish national bird indices based on a different selection of species than the one used for the EBCC computations, leading to confusion because both are called "national FBI index".<br><br>Eurostat has asked the EBCC to consider using the species in the national FBIs as published by each country as the basis for the composite EU FBI. Even now, there is only one species that is common to all the countries in the scheme, the Skylark Alauda arvensis. The problem seems to be that the EBCC needs the data to cover at least 50% of the European population before a species can be included in the European species' trends and indicators. The solution Eurostat sees could be to exclude the data for species where this is not fulfilled from the calculation of the composite EU FBI. |

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| The potential climate changes can lead to expansion of southern species, this phenomenon would confirm sustainable asset management, or the contrary? (PL). | Expansion of the range of southern species has indeed already been observed in tree and bird species. This point clearly indicates that all indicator values need careful interpretation. |
| In order to use the FBI as an impact indicator, it is necessary to integrate the sampling design according to the measure whose impact should be assessed. As for RC measures, it is also necessary to have georeferenced archives of the active measures thus they can be associated to georeferenced bird surveys (IT). | The proposal seems to be too complex: setting up a sampling design and a georeferenced system according to the measures is excessively costly and time consuming. Moreover, impact indicators have to capture impacts of the CAP policy as a whole and against its general objective; linking impact indicators to measures can be considered by MSs in the context of specific evaluations.<br><br>Moreover, this would be possible only if the surveys were done in collaboration with geo-referenced surveys, such as LUCAS or national forest inventories, to monitor e.g. high nature-value farming or high nature-value forestry. France already collects the bird count data geo-referenced and is producing separate FBIs for the mediterranean, continental and atlantic sub-regions. |
| Clarify the fiche in order to prevent MSs from different interpretations (relevant list to be used, methods to select the relevant species, method of calculation…) (HU, PL). | The methods for developing the indicator is described in the EBCC website in detail, http://www.ebcc.info.<br><br>It should be noted that the European Commission and in particular Eurostat only publish FBI data, check their quality and give feedback to the data providers but does not elaborate the indicator.<br><br>A lot of useful information is in A best practice guide for wild bird monitoring schemes (2008) by P. Vorisek et al. text from p. 24 was quoted in the first reaction above. |
| Develop additional indicators to improve evaluation of impacts on biodiversity and indicators dealing with agricultural landscape for recreation (SE). FBI indicator would be stronger if other groups of organisms which feature less mobility were considered as well (e.g. insects) (PL). | For simplification purposes of the system, only the FBI is proposed as common impact indicator. This is considered the best indicator available at the moment in terms of data availability at EU level.<br><br>In the context of evaluation of RDPs, MSs are welcome to consider other indicators that can be relevant for issues at stake. |

| 9) HNV Farming | |
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| **MS Comments** | **Commission reaction** |
| The definition of the term HNV differs highly between MS. It would be better if it could be replaced with a set of quantitative and qualitative indicators of public goods coupled to agricultural land, such as existence and preservation of landscape features (SE). | There is a common definition of HNV (sub-divided into three types), used inter alia in the AEI indicator set. It is not the definition which varies between Member States, but the methods and data used to assess the area corresponding to the definition. |
| The lack of a common method – limited usefulness of inter-MS comparisons for this indicator (may be a useful trend indicator within a country or region). Recommend to make it optional indicator for those MS with well-defined methods and data sources for HNV (IE). | Inter-MS comparisons are not the purpose of this indicator.<br><br>Use of a range of data and methods, instead of one prescribed method is appropriate because of the different types of data, and physical/ecological situations existing within Member States. Basing assessment only on methods which could be applied everywhere (which means using data sets which are available everywhere) would limit the quality of the assessment to an unacceptable degree. Where high quality data is available, Member States should be able to use it. (This is similar to the GHG emissions, where MS can use the highest tier they have data for, we do not impose Tier 1 on everyone because it is the only level available EU-wide).<br><br>Data and methods used should be documented in a transparent fashion.<br><br>This indicator highlights trends in HNV. It is not intended for direct comparisons of the amount of HNV between MS, but can be used to compare trends. For this, it is important that the same methods are used consistently within a territory.<br><br>It is one of the few indicators directly related to biodiversity, and with environmental issues becoming an ever more important justification for CAP expenditure, it is not realistic to make it optional. |

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| CORINE approach to the estimation of HNV farming (EEA HNV mapping) cannot be used for Estonia, as it is not adequate for the estimation of HNV agricultural areas and their changes. The RDP 2007–2013 ongoing evaluator has developed better methods for HNV estimates and we would like the EU to use it for Estonia.<br><br>Is it possible to change the baseline indicator level later? We would first establish the baseline level according to Natura-methods and later once new methods developed calculate the corresponding baseline (EE). | We fully recognize that the CORINE data and methodology does not provide an accurate or adequate assessment of HNV farming when used alone. Particular weaknesses are that it does not take farming systems into account, does not distinguish well between semi-natural extensive land and abandoned arable land, and the scale of analysis misses significant areas of actual or potential HNV farming.<br><br>For these reasons Member States are strongly encouraged to use other data and methods.<br><br>However, CORINE data, when combined with other data sources and methods, can make a useful contribution to the assessment of HNV farming in some territories.<br><br>Assessment of the extent and quality of HNV farming is the responsibility of the Member States not the Commission.<br><br>As one of the main uses of the HNV indicator is to identify trends in biodiversity status, it is important that consistent methodology is used over time. This does not mean that more accurate or complex methods cannot be developed, but that if the methodology is changed, the HNV assessments should be recalculated also for the baseline year. |
| Risk of lack of data comparability. Suggest to use as a basis the implementation of agri-environmental schemes in each MS, or to link the two elements with each other (PL).<br><br>There is no sense in reporting HNV indicator annually: variability shall be rather small; in case of considering agri-environmental schemes it is justified. | Comparability is not the purpose.<br><br>See comment above. It is indeed important to monitor the implementation of agri-environment schemes, but this monitoring forms part of the output and result indicators for Pillar 2. The HNV indicator is an impact indicator, assessment and analysis of which, in conjunction with the output and result indicators, enables estimation of the CAP's contribution to supporting biodiversity. Thus it is important to include all these parameters within the M&E system, and to link them in the analysis.<br><br>It is not proposed that the HNV indicator should be reported annually. For RD purposes, three points during the period are foreseen: a baseline value |

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| | for 2013, and assessments to be used for the analysis required for the enhanced Annual Implementation Report in 2019, and the ex-post evaluation of the RDP. These values will also then be used as appropriate for cross-cutting or thematic evaluations.<br><br>A mid-term update should be sufficiently ambitious. |
| HNV belonging within Natura 2000 area is only a partially true assumption (PL). | Assessment based only on the UAA within NATURA 2000 areas indeed is likely to miss significant areas of HNV farmland and therefore to underreport the true situation. For this reason MS are strongly encouraged to develop more sophisticated methods of HNV assessment. |
| Due to regional variations, regional collection levels are desirable (PL). | Agree. Regional assessment is required for MS with regional RDPs. In other MS, particularly the larger countries and/or those with significant regional variations, it is also strongly recommended |
| The proposed calculation method is highly problematic for various reasons.<br><br>First, both indicators [*two default approaches as defined in the indicator fiche*] refer only to the quantity and not the quality of the area.<br><br>Second, a change in the indicator value is rather unlikely as the area of Natura 2000 areas is fixed and the extent and distribution of land use types due only moderately change over time.<br><br>Third, it is by no means ascertained that areas defined as agricultural land by remote sensing (CORINE) are promoted by the CAP.<br><br>Fourth, the land cover classes of CORINE comprise areas of very different biological value. As the indicator in the proposed form has a low informative value, if MS provide better data, these should be used instead of the default approach used by the COM (DE).<br><br>If MS have better data on HNV farming they can be used these should be used instead of the default approach used by the COM. | The Commission is not proposing a calculation method for this indicator. Instead, the common definition is used, with MS using appropriate data and methods to assess HNV within their territory.<br><br>The fiche highlights the significant weaknesses of the only two approaches for which EU level data is currently available (CORINE and NATURA). These weaknesses are the main reason why a common approach and method has not been adopted for this indicator, in contrast to most of the other impact indicators.MS are strongly encouraged to use the best data available to them, combined with appropriate methods, to identify both the extent and condition of HNV farmland as precisely as possible.<br><br>We agree, strict delimitations like Natura or CLC are static over long periods of time, difficult to observe changes and understand the reasons.<br><br>Default approaches are not promoted. The idea is that MS should develop on the basis of guidance documents their own methodologies using best available data. |

| 10) Water abstraction in agriculture | |
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| **MS Comments** | **Commission reaction** |
| The amount of irrigation water used in a particular year may not be representative for normal circumstances because it depends on the wheatear conditions. (AT, HU, DE).<br><br>The attribution of the indicator (water abstraction to the share of freshwater abstraction) is more plausible to the objective than just the abstraction rate (but water abstraction to groundwater recharge or water use efficiency would be a better alternative for the sustainable use of water).<br><br>The data on water abstraction should be supplemented by information on wells whether there is a change in ground water level or soil samples (salinization) (DE). | The volume of water abstracted in the short term and in a given year can be influenced by meteorological conditions. However the objective of the impact indicators is to monitor the medium-long term impact of the CAP on the environment and thus the indicator proposed represents a valid and objective measure of the actual pressure of agriculture on water resources. Water abstraction by agriculture provides in fact an indication of the potential for water scarcity problems.<br><br>As suggested by some MSs and by DG ENV, this information can be effectively complemented by indicators on water scarcity which also take into account availability of water resources and problems of water stress. MSs may use this additional and combined information in the context of specific evaluations, thus to maintain the common indicators system as simple as possible. As suggested by DG ENV, the indicator Water Exploitation Index Plus can be used in specific evaluations. In addition, EEA is working on water balances and water accounts as supplement to assess pressures related to irrigation.<br><br>The share of agriculture in total freshwater abstraction is also mentioned in the fiche as complementary indicator to be calculated from data collected within the OECD/ESTAT Joint Questionnaire. |
| An indicator of number of consumers (e.g. households) at risk of water deficit due to irrigation could be more relevant (SE). | See comment above.<br><br>Moreover, reliable data are not available from statistics and on a regular basis. |
| Agriculture is not the biggest user of water resources in Poland (the share of agriculture and forestry in water abstraction appr. 10% ).<br><br>We suggest considering complementing indicator: | MSs can take into account peculiarities of each country in the context of specific evaluations, where the proposed indicators and/or others can be assessed to consider the specific context of each MS. National sources can be used. The information reported through the common impact indicators aims at monitoring the effects of the CAP measures on water resources and |

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| A) the volume of water abstraction in agriculture (for irrigation purposes) per the total crop yield ($m^3$/tonnes)<br><br>B) the volume of water abstraction in agriculture (for irrigation purposes) per the irrigated crop yield ($m^3$/tonnes). (PL). | the environment and the change compared with the baseline situation. |
| Data sources are not clear. Member States data are not comparable due to different estimation methods. Survey data is available only in long intervals. Regional data not available! Data for Austria are not available in Eurostat (AT). | The objective is not to compare MSs data but to assess the change in the impact on water resources from the baseline situation in each MS. Availability of data from the 2 proposed sources (see indicator fiche) should improve in the future, thanks to the improving collaboration between Eurostat and MSs. MSs are directly responsible for the quality of data transmitted to Eurostat. |
| Data on irrigation water are unimportant for Estonia as irrigation is rarely used (EE). | See comment above. |

| **11) Water quality** | |
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| **MS Comments** | **Commission reaction** |
| Monitoring this aspect with simple indicators is still difficult. The pesticides to be followed should be defined. The indicators should be linked to those applied in monitoring relating to the Water Framework Directive. (FI) | DG Environment and the European Environment Agency are working closely with MSs on streamlining data on water quality from different sources: the WISE-SOE, the Water Framework Directive and the Nitrate Directive Reporting. Data provided via WISE (EEA) might be for the future combined with data coming from the Nitrate Directive (which reflect more the impact of agriculture). No details (timing, etc) are known for the moment, it is a work in progress. The streamlining of reporting depends very much on Member States commitment to ensure good reporting. |
| Difficult since for the Gross Phosphorus Balance no statistical data are available (?) (SI). | Data on the Gross Phosphorus Balance are available in ESTAT website (AEIs database at http://epp.eurostat.ec.europa.eu/portal/page/portal/agri_environmental_indicators/data/database) from 2001 to 2008 and the situation should also improve in the near future thanks to the improving collaboration between |

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| | the Commission and MSs on data collection for the Agri-environmental indicators.<br><br>Next data collection for the period 2009-2011 is expected in September 2013. In the future, data should be reported by MSs every 2 years. The streamlining of reporting depends very much on Member States commitment to ensure good reporting. |
| As regards Pesticides in Freshwater, it is not practically indicated in Estonia. It could be possible to estimate pollution by pesticides but the analyses are extremely expensive (EE) | MSs can take into account peculiarities of each country in the context of specific evaluations, where additional indicators can be assessed to consider the specific context of each MS. National sources can be used.<br><br>The proposed common impact indicator on the Pollution by pesticides currently suffers from the poor availability of data across MSs. Data on pesticides are less robust than for nitrates. National sources often have a more detailed assessment (e.g. French State of Environment, or Germany) and they should be explored to support the overall assessment of pesticide pressure. The situation should however improve in the future and much more harmonized data should be partly available from the WFD monitoring system. |
| The chemicals concentration in water is not exclusively caused by agricultural activities so that caution should be exercised when interpreting this indicator (DE, HU, EE). Measuring the nitrate concentrations in groundwater and in surface waters is thus only of limited suitability. It would be better to assess the potential for input reduction (e.g. on the basis of nitrogen balance surpluses), because there is a considerable delay, for instance, between modified fertilisation management and measurable changes in the groundwater. The Nmin value is more appropriate for other measures.(DE) | True, data reported by MSs to the EEA on nitrates and pesticides reflects chemical concentrations in groundwater and rivers which does not derive only from agriculture but also from other source, in particular waste water (even though the large majority comes from agriculture). As for nitrates, data from the Nitrate Directive Reporting system is in principle more directly linked to agricultural drivers (not for all MSs: some of them have reported all water quality monitoring sites).<br><br>The indicator on Gross nutrient Balance (GNB and GPB) (proposed in the indicator fiche) is in fact a good alternative to the indicators related to the concentration of nitrates in freshwater. ESTAT is working to improve data availability (quality, geographic level (NUTS 2), etc.) for the GNB in the context of Agri-environmental indicators. |

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| Data source: The calculation of indicator is largely dependent on input data such as mineral fertilizer; a common database and methodology is necessary to compare the indicator regionally (at least NUTS 3) and over time to link the input data to pollutant levels in freshwater bodies at least at the watershed level. Manure transportation between MSs can also play a role (DE). | This observation is correct. However the database on the use of inputs (e.g. mineral and organic fertilizers) available at the moment is quite poor. Nevertheless the Commission is making efforts to improve data availability through various instruments such as the FADN and the FSS.<br><br>The indicator on GNB which is proposed is calculated and reported by MSs on the basis of a common methodology developed by ESTAT and the OECD and described in the GNB Handbook OECD/Eurostat Handbook on Gross Nitrogen Balance and Gross Phosphorus balance. An updated version of the handbook is under development. |
| The first option in current conditions would be the best solution [nutrient and phosphorus balances](PL). | Yes, the Gross Nutrient Balance indicators (GNB and GPB) are the first option. |

| **12) Soil quality** | |
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| **MS Comments** | **Commission reaction** |
| 1) Only a monitoring of duration of at least ten years enable to evaluate the carbon status of a soil.<br><br>2) LUCAS data only are able to give an impression of the status quo, with no possibility of detailed interpretation.<br><br>3) Another possible option of judging the soil carbon status would be the use of numerous data per area, but, even in this case, only the analyses of subsequent periods enabled to assess the development of the soil status.<br><br>4) Carbon stocks are very difficult to assess correctly as the volume of the soil is part of the calculation. An estimation of the volume would cause an even increased deviation of the results.<br><br>5) Without detailed knowledge of the soil, the site characteristics and the management any interpretation of the carbon content does not make sense | The future of the LUCAS survey is under discussion between the Commission (ESTAT and MSs). Depending on the outcome of the discussion the module on soil will be repeated and data available in the next future. Data on soil won't be certainly collected at an annual basis but likely with a frequency of 5-10 years in order to be able to assess the long-term change of the carbon status of soil for the CAP impact indicator.<br><br>If Member States suggest a densification of the LUCAS sampling points in order to fulfill a specific soil need, constructive discussion is welcome in the framework of the definition of a long term strategy on Land Cover and Land Use statistics.<br><br>In addition, if MSs have better data from national source, they can use them. National data might however not be comparable due to different methodologies used at national level. |

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| at all.<br><br>We suggest using a set of parameters: Acidity (eventually in combination with the cation exchange capacity), nutrient status and the carbon content. Additional information regarding the site has also to be available (AT). | The proposed indicator will be renamed as "Soil organic matter". It is more appropriate to talk about "organic matter" rather than "organic carbon" because the former has its focus on soil fertility and soil functions in general, whereas the latter has its focus on climate change only.<br><br>The composite indicator "Soil quality index" elaborated by the JRC in the context of the Agro-environmental indicators does take into account a much more complete set of soil parameters by means of the 4 sub-indicators developed: Productivity index, Fertilizer response rate, Production stability index, Soil environmental services index. However this indicator has not been proposed as CAP impact indicator since it is based on modeling and estimations from different sources and parameters and thus cannot be measured directly.<br><br>If MSs want to use the results of this indicator or other parameters and methodologies elaborated at national level, they can use it in specific evaluations. The impact indicator has to be simple and might be complemented with additional information in ad-hoc evaluations. |
| A frequent sampling of the SOC content is not necessary due to slow moving nature of changes of the SOC. If the regular LUCAS surveys on land use and cover area are supplemented with detailed practices on agricultural land use (minimum tillage, application of organic fertilizer, straw remaining on field, catch crops…) the changes in SOC can be calculated with a reasonable accuracy (DE). | See comment above. |
| LUCAS is not reliable as a data sources (EE, FI, EI, HU) and cannot be used for annual reports. Potential additional existing sources at national level should be explored with Member States – does it mean national impact indicators or what is the reason for looking for additional sources (EE)? | See comment above.<br><br>Moreover, there is no obligation to report impact indicators every year. |
| Difficult to use the indicators proposed to establish a general indicator which comprises all targets and all types of agricultural lands because, f.i., high soil nutrient content may be a positive thing in terms of fertility but a | See comments above.<br><br>MSs can take into account peculiarities of each country in specific evaluations, where the proposed indicators and other indicators may be |

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| negative thing for nutrient loading. High soil organic carbon content, in turn, may indicate a good soil structure and efficient use of nutrients, but it may also mean organic soil whose cultivation causes significant levels of greenhouse gas emissions (FI). | assessed to consider the specific context of each MS. |
| Consider including heavy metal content and degree of subsoil compaction as they are important and more or less irreversible aspects of soil quality (SE). | Heavy Metals are already included in the LUCAS soil 2009 survey. Results should be available by end of 2013. As for subsoil compaction, they can be included in next LUCAS soil survey, if considered appropriate. |

| 13) Soil erosion | |
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| **MS Comments** | **Commission reaction** |
| Due to different quality of input data and or modelling approaches, national evaluations may obtain different results regarding the spatial extent and amount of soil erosion. Therefore an evaluation at the European level (where the data are much coarser than at the national level) may only indicatively address this problem (AT). | True, if MSs have better data and national sources they can use them also in specific evaluations. However, national data might not be comparable due to different methodologies used at national level. |
| The evaluation is based on an EU wide model and it is hard to imagine how the steps undertaken by the MS can be depicted in the model (e.g. cropping restrictions in sensitive areas, buffer strips,) without a significant temporal delay. Various MS have developed better estimates and monitoring schemes in particular for the GAEC (1, 4, 5) and delimited sensitive areas (e.g. for DE specific estimates are available for the each LPIS geometry). The use of the IACS would be much more straightforward. Alternatively, an enhanced version of the LUCAS survey could be used (DE). | See comment above.<br>The Commission and MSs can explore/propose the possibility to include new parameters for assessing soil erosion in the LUCAS survey. The future of this survey is under discussion between the Commission and MSs (See comments on soil quality).<br>It will be essential to develop better data sources for this indicator. |
| It is not understandable why wind erosion is excluded (DE). | The indicator elaborated by the JRC currently only considers Soil erosion by water. However other forms of erosion (for example, gully erosion and wind erosion) are indeed important and should be considered in the future. It is among the objectives of DG JRC and DG ENV to develop a wind erosion indicator, a model and a pan-European erosion dataset. |
| Will the USLE model also suit? (USLE and RUSLE are relatively similar) (EE). | Data provided for the indicator are based on the RUSLE model which is a modification of the original USLE. This model approach has been considered appropriate for application at European level and it is based on the input datasets available. |

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| Due to the fact that factors such as landscape, soil cover or probability of certain intensity of rain are relatively constant and available in Poland with sufficient resolution, the possibility of applying RUSLE model depends only on the frequency of collection of data on crop structure and cultivation and spatial resolution of the data. This factor is highly important and it seems that it cannot be substituted with an analysis based on Corine2000 land use layers, due to a need to differentiate among a few crop groups, and in particular in relation to root plants where a broad distance between crop beds results in a significant portion of soil being left uncovered and unprotected against erosion (PL). | This is a pan-European assessment and should be applied in all countries. If those input dataset exist in Poland, they may not exist in other EU countries. JRC's modeling approach is based on the input layers that are available for all the EU MSs. However, the objective is the continuous development of the model in the near future taking into account not only CORINE but also High Resolution Imagery and agricultural practices data. |

| **14) Rural employment rate** | |
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| **MS Comments** | **Commission reaction** |
| Overall, many concerns expressed regarding the new definition of rural areas in the fiches. The EU definition should be explained and clarified. | See "General Commission comments regarding the concept of rural areas"[i]. |
| NUTS 2 is not an appropriate level of aggregation on Swedish data. NUTS 2 is not related to the functional regions which may cause a problem when discussing rural employment rate (SE). | See "General Commission comments regarding the concept of rural areas" [i]. |
| MS may have defined their rural areas in accordance with their national situation, and in a different manner to the OECD, Eurostat or other methodologies. It is very important that if this is the case, they can report on these rural indicators in accordance both with their Programme's definition and with the provision in the current CMEF which states that: "Where data corresponding to the delimitation of rural areas used for context related baseline indicator n°1 "Designation of rural areas" are not available, a best approximation at a higher geographical level should be provided" (IE, EE). | See "General Commission comments regarding the concept of rural areas" [i]. |

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| This indicator is perfect to measure the rural employment rate, but the effect of the CAP I pillar measures is not obvious. Beside this indicator a complementary ration of agricultural employees in rural areas could be used (HU). | Impact indicators are meant to cover the policy as a whole (both pillars) at the level of general objectives. Under the objective of balanced territorial development, the employment rate in rural areas is a key indicator. Employment in the primary sector (agriculture, forestry and fishing) is an important supplementary indicator but does not take into account any diversification of the rural economy. |
| Delimitation of rural and urban areas based on statistical databases is limited and burdened with vast simplification errors. Assuming that this reservation can be accepted, the exclusion of population aged 18-20 is unjustified, especially in rural areas (more detailed comments still included) (PL). | See "General Commission comments regarding the concept of rural areas"[i].<br>Concerning population age, both indicators (15-64 and 20-64) could be kept (Eurostat provides data to calculate both ratios). |
| Data are available on EUROSTAT but only at NUTS2 level. The proposed methodology to calculate the NUTS 3 level refers to different areas according to their density of population. This does not match with the Italian territorial division. Even using national sources, it is not possible to find data for the required age class (24-64) (IT). | See "General Commission comments regarding the concept of rural areas" [i].<br>Concerning population age, both indicators (15-64 and 20-64) could be kept (Eurostat provides data to calculate both ratios). ( |
| The new urban-rural typology proposed by the Commission at NUTS 3 level is not relevant for BE : 33,5% of land area and 8,6 % of population categorized in predominantly rural region. In this case, the value of the proposed impact indicators will not show the effects of the CAP measures on the entire territory concerned. One possible alternative could be the utilization of the proportion (33%?) of the average population density in the Member State or in the region. How to provide flexibility for MS since the proposed indicators are available in Eurostat database only following the new urban/rural typology (BE)? | See "General Commission comments regarding the concept of rural areas" [i]. |

| **15) Degree of rural poverty** | |
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| **MS Comments** | **Commission reaction** |

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| Rural poverty is not only determined by income; there are many aspects that play a role: Job opportunities in a region, wages paid, social / physical infrastructure (child and elderly care facilities), mobility options. The indicators to be used should capture a) income poverty, b) physical (infrastructure) poverty and c) social exclusion in rural areas. In this respect it would certainly be useful to refer to the EU-SILC indicators as a reference (AT, PL, IT). | Indeed, there are many aspects of poverty. The Europe 2020 strategy identifies three indicators to define poverty and social exclusion. These indicators are the at-risk-of-poverty rate, the severe material deprivation rate and the share of people living in households with very low work intensity. They reflect the many factors underlying poverty and social exclusion, as well as the diversity of challenges for Member States. The data provided by Eurostat (EU-SILC) combine these three indicators into a single value, which we propose to use for this impact indicator. Please find the detailed calculation method in this document (page 93): http://epp.eurostat.ec.europa.eu/portal/page/portal/income_social_inclusion_living_conditions/documents/tab/Tab/Working_paper_on_EU_SILC_datasets.pdf |
| This indicator is defined as share of persons aged 0+ . This implies that children are included. It is not wrong to emphasize children living in "poverty" but it is in fact the parents who have incomes. Children do not have an income but are instead a part of a household whih can be defined as living in poverty (SE). | Eurostat uses "equivalised disposable" income for this indicator and applies an equivalisation factor calculated according to the OECD-modified scale, which gives a weight of 1.0 to the first person aged 14 or more, a weight of 0.5 to other persons aged 14 or more and a weight of 0.3 to persons aged 0-13.<br><br>Please see further statistical concepts and definitions: http://epp.eurostat.ec.europa.eu/cache/ITY_SDDS/EN/ilc_esms.htm |
| There is no special aim of both pillars to reduce rural poverty. Should MS with regional programming develop their own database or should they use the MS-indicator delivered by EUROSTAT (DE)? | The Europe 2020 strategy promotes social inclusion, in particular through the reduction of poverty, by aiming to lift at least 20 million people out of the risk of poverty and social exclusion. While the highest absolute number of people at risk of poverty and social exclusion is found in densely populated (urban) areas of the EU, poverty and social exclusion in thinly populated (rural) areas is a widespread phenomenon throughout the EU.<br><br>The Eurostat indicator (People at risk of poverty or social exclusions) at national level with the calculation mentioned in the indicator fiche (taking into account the thinly populated areas) is used. If a MS can have this indicator at regional-programme area it would be an asset.<br><br>See database of "People at risk of poverty or social exclusion by degree of |

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| | urbanization" (ilc_peps13) here:<br>http://epp.eurostat.ec.europa.eu/portal/page/portal/income_social_inclusion_living_conditions/data/database |
| This EUROSTAT data is comfortable, because it is up-to-date and relative reliable, but it isn't using the generally applied category for the definition "rural". The connection between the degree of rural poverty and CAP I. pillar measures is not automatic. This effect should be separated from other impacts (HU). | There is no single, universally preferred definition of rural areas, nor is there a single rural definition that can serve all policy purposes. EU-SILC survey uses a definition based on population density and the data are available concerning the level of urbanization of the local administrative unit (LAU2) of the respondent. For the purpose of our indicator, we assume that thinly populated areas (with less than 100 inhabitants/km2) roughly correspond to rural areas. |
| Population concentration or the designated low density areas are problematic for some countries (according to fiche it is an area with less than 100 persons/km2) (EE, BE).<br>It is important to agree on a uniform definition of rural areas. The proposal (population density of less than 100 inhabitants/km2 as rural area) is good, but at what level this is to be determined (PL)? | Since the data are taken from EU-SILC, this database includes information at the level of urbanization/population density of any given area. See answer above. |
| In Poland, a relative poverty line is represented by an amount of 50% average monthly expenses. In case of poor people the amounts of their incomes and expenses are similar, but expenses are a more reliable indicator of a real life standard of families than the incomes declared, because expenses are less often underrepresented in relation to incomes. (PL). | The statistical concepts and definitions (and existing indicators) of Eurostat should be followed because of consistency and comparability. |
| A basic indicator should include a comparison of degree of poverty to EU-27 average and average EU-27 rural areas. Comparisons to MS average values [shall be regarded] as complementary. It would be advisable to present income as (€) amounts (PL). | The degree of rural poverty can be compared to the overall EU-27/28 average, to the respective national average and/or to the average for intermediate and/or urban areas in a MS or in the EU. |

| 16) Rural GDP per capita | |
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| **MS Comments** | **Commission reaction** |
| NUTS 3 is not an appropriate level of analysis (see comments on indicator 14) (SE). | See "General Commission comments regarding the concept of rural areas" [i]. |
| The connection between the rural GDP per capita and CAP I. pillar measures is not automatic. (HU) | Repeated below |
| The new urban-rural typology proposed by the Commission at NUTS 3 level is not relevant for BE: 33,5% of land area and 8,6 % of population categorized in predominantly rural region. In this case, the value of the proposed impact indicators will not show the effects of the CAP measures on the entire territory concerned. One possible alternative could be the utilization of the proportion (33%?) of the average population density in the Member State or in the region (BE). | See "General Commission comments regarding the concept of rural areas" [i]. |
| The definition of a rural area does not correspond to the definition serving as the basis for the calculation of the Eurostat relevant indicator (EE). | See "General Commission comments regarding the concept of rural areas" [i]. |
| The connection between rural GDP per capita and CAP I. pillar is not automatic. This effect should be separated from other impacts (HU). | Impact indicators are meant to cover the policy as a whole (both pillars) at the level of general objectives. Under the objective of balanced territorial development, the rural GDP is a key indicator. Clearly, other factors also influence this indicator, which therefore cannot be seen in isolation. Evaluators should try to identify other important developments when analyzing trends in rural GDP. |
| Individual sub-regions are classified as rural or urban areas on the basis of the prevailing nature of their economy. In practice, the main criterion is population density. The classification criteria and the empirical basis are very simplified. The evaluation of organisms that are so large (66 units in Poland) frequently involves oversimplification and fails to reflect the economic or social content of certain phenomena. | See "General Commission comments regarding the concept of rural areas" [i]. |

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| The Nomenclature of Territorial Units for Statistical Purposes (NTS) created for Poland does not define individual sub-regions as rural or urban. Applying the NUTS 3 level as the unit for Poland's delimitation into rural and urban areas is too much of a simplification (PL). | |
| PPS compensate for price differences between MS but not for the partly significant price differences within a MS between rural and urban areas, therefore a rural area can achieve a comparable living standard to urban areas at significantly lower levels of PPS per capita. In addition, the GDP at local level is normally not a measurement but an estimate based on national averages and regionalized weighting factors (based on location of firms, employed people by sector,). Furthermore, in countries with a decentralized settlement structure the estimates do barely account for the redistribution effect of commuters. This can lead to the impression of relative poor rural areas near agglomeration centres, which contradicts any practical experience. It is better to relate GDP to employed persons within a region because this illustrates the relative regional competiveness. | While the proposed indicator may not be perfect, there are currently no PPS conversion factors at regional level. The proposed indicator of GDP per employed person within a region will be further investigated. |

[i] **General Commission comments regarding the concept of "rural areas"**

• The "rural" dimension has been included in some of the indicators proposed for the CAP M&E. Then, it is important to agree on a common definition of rural areas that can be used for all EU Member States and for a maximum number of indicators for which the distinction between rural and urban areas is included. It has to be assumed that any classification used based on statistical information will imply a simplification of the reality, more in some countries/regions than in others, and that a classification will only be useful if statistical data can be provided (by the Member State) for the units defined.

• The European Commission prepared a typology of predominantly rural, intermediate and predominantly urban regions based on a variation of the OECD methodology. This typology is based at the NUTS level 3 – each NUTS 3 is classified as urban, intermediate or rural depending on the share of rural population and the size of the cities. Statistical data are aggregated by type of region to obtain a national value. A detailed explanation of how this typology is built is provided in Chapter 14 of the Eurostat regional yearbook 2012 (http://epp.eurostat.ec.europa.eu/portal/page/portal/product_details/publication?p_product_code=KS-HA-12-001-14). The

classification of each NUTS 3 into urban, intermediate or rural (NUTS 2006) can be found here: https://circabc.europa.eu/d/a/workspace/SpacesStore/da816923-58b7-49f6-9dbe-7b8c5bc70284/nuts3_typology.xls.

- Using this typology has several advantages…
  - it can be applied to all EU Member States, and is revised every time the NUTS classification is updated or a new population grid becomes available;
  - it has been adopted by several DGs (DG AGRI, DG REGIO, Eurostat) and is already used to build datasets and in several reports;
  - an increasing number of datasets are available in Eurostat at NUTS level 3. This will allow creating "rural" indicators using these datasets, indicators that will be comparable as they are all built at the same geographical level.

- … but also a number of problems:
  - the classification of urban/rural regions using Commission methodology is problematic for some Member States where it does not reflect the reality of the country;
  - some countries don't have predominantly rural regions;
  - some important datasets based on surveys (Labour Force Survey, SILC (poverty statistics)) are not available at NUTS level 3 and basic data cannot be aggregated at this level (as samples are only defined at NUTS level 2). But they provide data by degree of urbanization (thinly/intermediate/densely populated areas) at LAU2 level, and these data can be aggregated to obtain a national value ("rural" will then mean "thinly populated"). The new LAU2 classification, based on the same criteria used at NUTS level 3 classification, contribute to reduce the bias due to the different geographical aggregation.

- The use of a unique methodology becomes then difficult for the reasons explained. Then, in the case of the indicators at national level, the proposal of DG AGRI for the M&E of the CAP is to continue using the Commission's typology for urban/rural areas based on NUTS level 3 for all indicators for which data are available at that statistical level (Population, Regional Economic Accounts and Tourism). In the case of LFS and SILC data, Eurostat has recently made available MS and EU aggregates by degree of urbanisation: the use of this classification would be preferable for the indicators using these data sources.