

Working document

**Complementary Result Indicator fiches
for Pillar II**

06/06/2014

Draft list of complementary result indicators

Focus Area	Complementary result indicators
FA 1A <i>Fostering innovation, cooperation, and the development of the knowledge base in rural areas</i>	
FA 1B <i>Strengthening the links between agriculture, food production and forestry and research and innovation, including for the purpose of improved environmental management and performance</i>	
FA 1C <i>Fostering lifelong learning and vocational training in the agriculture and forestry sectors</i>	
FA 2A <i>Improving the economic performance of all farms and facilitating farm restructuring and modernisation, notably with a view to increase market participation and orientation as well as agricultural diversification</i>	Change in Agricultural output on supported farms/ AWU
FA 2B <i>Facilitating the entry of adequately skilled farmers into the agricultural sector and, in particular, generational renewal</i>	
FA 3A <i>Improving competitiveness of primary producers by better integrating them into the agri-food chain through quality schemes, adding value to agricultural products, promotion in local markets and short supply circuits, producer groups and organisations and inter-branch organisations</i>	
FA 3B <i>Supporting farm risk prevention and management</i>	
FA 4A <i>Restoring, preserving and enhancing biodiversity, including in NATURA 2000 areas, and in areas facing natural or other specific constraints, and high nature value farming, as well as the state of European landscapes</i>	
FA 4B <i>Improving water management, including fertiliser and pesticide management</i>	
FA 4C <i>Preventing soil erosion and improving soil management</i>	
FA 5A <i>Increasing efficiency in water use by agriculture</i>	Increase in efficiency of water use in agriculture in RDP supported projects
FA 5B <i>Increasing efficiency in energy use in agriculture and food processing</i>	Increase in efficiency of energy use in agriculture and food-processing in RDP supported projects
FA 5C <i>Facilitating the supply and use of renewable sources of energy, of by-products, wastes and residues and of other non food raw material for purposes of the bio-economy</i>	Renewable energy produced from supported projects

<i>Focus Area</i>	<i>Complementary result indicators</i>
<i>FA 5D Reducing greenhouse gas and ammonia emissions from agriculture</i>	Reduced emissions of methane and nitrous oxide Reduced ammonia emissions
<i>FA 5E Fostering carbon conservation and sequestration in agriculture and forestry</i>	
<i>FA 6A Facilitating diversification, creation and development of small enterprises, as well as job creation</i>	
<i>FA 6B Fostering local development in rural areas</i>	
<i>FA 6C Enhancing accessibility use and quality of information and communication technologies (ICT) in rural areas</i>	

DEFINITIONS IN THE FICHES

Indicator Name
<i>Title of the indicator which will be used in implementing regulation/guidance documents.</i>
Indicator code
<i>Alphanumeric identifier.</i>
Target indicator
<i>Identification of whether the indicator is a target indicator?</i>
The related priority
<i>Identification of the priority to which the indicator is linked as defined in the Pillar II intervention logic.</i>
The related focus area
<i>Identification of the focus area to which the indicator is linked as defined in the Pillar II intervention logic.</i>
Definition
<i>Concise definition of the concept, including if the indicator already exists, e.g. AEI, EUROSTAT indicator.</i>
Unit of measurement
<i>Unit used to record the value (e.g. ha, tonnes, €, %)</i>
Methodology/formula
<i>Identification of what is needed to transform data from the operation database into value for the indicator.</i>
Data required for the individual operation
<i>Data required from the operation database in order to calculate the relevant indicator (e.g. area of solar panels, ha of trees planted per species...). The Units of measurement of these outputs should be specified.</i>
Data source/location of the data
<i>Identification of where the data for the indicator comes from, links or other references to data sources (e.g. in EUROSTAT specifying exact tables, FAO, World bank) AEI definitions, regulations establishing indicators, etc</i>
Point of data collection
<i>Point(s) in time at which data is collected (e.g. operation/project approval, completion or during evaluation activities).</i>
Frequency
<i>In principle this would be annual. If annual is not adequate, please specify.</i>
Delay
<i>Delay between data collection and data aggregation (where external statistical data is used).</i>
Means of transmission to Commission
<i>Identification of the way in which the data is made available to the Commission (e.g. submitted with enhanced AIR in 2019 or quarterly/annual electronic submission).</i>
Comments/caveats
<i>Comments concerning interpretation of the indicator for monitoring and evaluation purposes and its caveats, if appropriate. Mention of context indicators specifically linked to this indicator (or required for its calculation).</i>

Indicator Name	Change in agricultural output on supported farms/ AWU *
Indicator code	R2
Target indicator	No
The related priority	P2 Enhancing farm viability and competitiveness of all types of agriculture in all regions and promoting innovative farm technologies and the sustainable management of forest
The related focus area	2A Improving the economic performance of all farms and facilitating farm restructuring and modernisation, notably with a view to increase market participation and orientation as well as agricultural diversification
Definition	Change in output per Annual Work Unit in RDP supported projects
Unit of measurement	€/AWU
Methodology	<p>Evaluators will survey a sample of completed operations in relation to this focus area and establish the changes in the value of output and labour input due to the implementation of the projects.</p> <p>An appropriate sample will be selected based on project and beneficiary characteristics included in the operations database.</p> <p>The indicator value will be calculated using data from the survey (e.g. farm accounts information, changes in labour use).</p> <p>It is the net effect of RDP support which should be assessed. Since many other factors can influence this indicator value (commodity prices, weather etc.), the sample of supported projects/beneficiaries should be compared with a sample of similar enterprises which did not receive support in order to assess the net effect of the aid. Information for this control group could be selected from FADN, national census data, FSS or other appropriate sources.</p> <p>Results obtained from the survey should then be extrapolated to population level in order to calculate the indicator value i.e. the net change in output linked to RDP support. The total value should reflect the contribution of projects flagged as contributing to the Focus Area, both as main and secondary objective. Detailed guidance on the methodology to be used will be provided, including on the use of control samples, and accounting for farm diversification projects.</p>
Data required	<p>Identification and basic characteristics (size, type) of projects with a competitiveness component (from the operations database)</p> <p>Information from the completed project on the situation before and after project implementation (output, labour input).</p>
Point of data collection	<p>Relevant projects will be identified from application forms, and will be visible in the operations database. Relevant projects fall into two categories:</p> <ol style="list-style-type: none"> 1. Those accepted under Focus Area 2A where the main objective is facilitating farm restructuring. These are directly linked to P2A 2. Those whose main objective is linked to another focus area (e.g. renewable energy, water efficiency) but which also have an impact on farm restructuring and competitiveness. These are identifiable from the operations database using the "secondary effects" field. <p>Information on completed projects to be collected from beneficiaries by evaluators. Control groups: FADN, national census data, FSS</p>

Frequency	Three times during the programming period: 2016; 2018; ex-post
Means of transmission to Commission	Enhanced AIR 2017 Enhanced AIR 2019 Ex-post evaluation report
Comments/caveats	<p>It is proposed that the Evaluation Plan drawn up as part of each RDP should provide for the results of the RDP to be assessed using this indicator and appropriate methodology (for which guidance will be provided) in order to ensure input for the enhanced AIRs in 2017 and 2019 (so that these reports can assess progress towards achieving the objectives of the programme as required by Article 44 (3) and (4) of the CPR), and to provide a final assessment at the end of the programming period.</p> <p>This indicator is intended to capture the increase in competitiveness on farms receiving RDP support. This can be achieved either through increasing output for the same use of resources, or maintaining output levels but reducing the resources required to produce them. Labour is used as the resource unit for comparison because it is often the key variable within farming systems, closely linked to providing adequate household income. For example reducing the farm labour requirement can free labour for off-farm employment or diversification.</p> <p>The results obtained can be analysed and presented in various ways to show for example the effects on different types of farms, or to compare the efficiency of different types of project.</p> <p>Income per labour unit would provide a more accurate indication of change in the standard of living, but it was considered important to select an indicator which could be easily calculated, both for the supported sample and the control group, thus output was selected.</p>

Indicator Name	Increase in efficiency of water use in agriculture in RDP supported projects
Indicator code	R13
Target indicator	No
The related priority	P5 Promoting resource efficiency and supporting the shift towards a low carbon and climate resilient economy in agriculture, food and forestry sectors
The related focus area	5A Increasing efficiency in water use by agriculture
Definition	Increase in efficiency of water use in agriculture in RDP supported projects The indicator is related to AEI 7 (Irrigation) and AEI 20 (water abstraction)
Unit of measurement	Change in m ³ water used/standard unit of output
Methodology	Evaluators will survey a sample of completed operations in relation to this focus area and establish the changes in water use and output, and hence the increase in efficiency of water use, through implementation of the projects. An appropriate sample will be selected based on project and beneficiary characteristics included in the operations database. The indicator value may be calculated directly from data from the survey (e.g. crop output and water consumption) and/or may be combined with other information (e.g. standard output values or coefficients for water consumption of different irrigation technologies), in order to calculate indicator values. The same output values should be used for the before and after calculations to avoid distortions due to commodity price variability. Results obtained from the survey should then be extrapolated to population level in order to calculate the indicator value i.e. the increase in efficiency of water usage. The total value should reflect the contribution of projects flagged as contributing to the Focus Area, both as main and secondary objectives. Detailed guidance on the methodology to be used will be provided, in particular to ensure a viable and consistent approach to aggregation of data.
Data required	Identification and basic characteristics (size, type) of projects with a water saving/efficiency component (operations database) Information from the completed project on the situation before and after project implementation (technology used, size of infrastructure, water use, output) Standard output value figures for different crops (FADN); coefficients for water use of different irrigation technologies
Point of data collection	Relevant projects will be identified from application forms, and will be visible in the operations database. Relevant projects fall into two categories: 1. Those accepted under Focus Area 5A where the main objective is increasing water efficiency. These are directly linked to P5A 2. Those whose main objective is linked to another focus area (e.g. farm restructuring) but which also have an impact on water efficiency. These are identifiable from the operations database using the "secondary effects" field. Information on completed projects to be collected from beneficiaries by evaluators.
Frequency	Three times during the programming period: 2016; 2018; ex-post
Means of transmission to Commission	Enhanced AIR 2017 Enhanced AIR 2019 Ex-post evaluation report

Comments/caveats	It is proposed that the Evaluation Plan drawn up as part of each RDP should provide for the results of the RDP to be assessed using this indicator and appropriate methodology (for which guidance will be provided) in order to ensure input for the enhanced AIRs in 2017 and 2019 (so that these reports can assess progress towards achieving the objectives of the programme as required by Art. 44(3) and (4) of the CPR), and to provide a final assessment at the end of the programming period.
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Indicator Name	Increase in efficiency of energy use in agriculture and food processing in RDP supported projects
Indicator code	R14
Target indicator	No
The related priority	P5 Promoting resource efficiency and supporting the shift towards a low carbon and climate resilient economy in agriculture, food and forestry sectors
The related focus area	5A Increasing efficiency in energy use by agriculture and food processing
Definition	Increase in efficiency of energy use in agriculture and food processing in RDP supported projects The indicator is related to AEI 8 (Energy use)
Unit of measurement	Tonnes of Oil Equivalent (T.O.E)/standard unit of output
Methodology	Evaluators will survey a sample of completed operations in relation to this focus area and establish the changes in energy use and output, and hence the increase in efficiency of energy use, through implementation of the projects. An appropriate sample will be selected based on project and beneficiary characteristics included in the operations database. The indicator value may be calculated directly from data from the survey (e.g. output and energy consumption) and/or may be combined with other information (e.g. standard output values or coefficients for energy consumption of different production technologies), in order to calculate indicator values. The same output values should be used for the before and after calculations to avoid distortions due to commodity price variability. Results obtained from the survey should then be extrapolated to population level in order to calculate the indicator value i.e. the increase in efficiency of energy usage. The total value should reflect the contribution of projects flagged as contributing to the Focus Area, both as main and secondary objectives. Detailed guidance on the methodology to be used will be provided, in particular to ensure a viable and consistent approach to aggregation of data.
Data required	Identification and basic characteristics (size, type) of projects with an energy saving/efficiency component (operations database) Information from the completed project on the situation before and after project implementation (technology used, energy use, output) Standard output value figures for different crops (FADN); coefficients for energy consumption of different production technologies; coefficients for conversion of various energy sources to T.O.E. (e.g. Directive 2009/28/EC; International Energy Agency: http://www.iea.org/interenerstat_v2/energy_unit.asp)
Point of data collection	Relevant projects will be identified from application forms, and will be visible in the operations database. Relevant projects fall into two categories: 1. Those accepted under Focus Area 5B where the main objective is increasing energy efficiency. These are directly linked to P5B 2. Those whose main objective is linked to another focus area (e.g. farm restructuring) but which also have an impact on energy efficiency. These are identifiable from the operations database using the "secondary effects"

	field. Information on completed projects to be collected from beneficiaries by evaluators.
Frequency	Three times during the programming period: 2016; 2018; ex-post
Means of transmission to Commission	Enhanced AIR 2017 Enhanced AIR 2019 Ex-post evaluation report
Comments/caveats	It is proposed that the Evaluation Plan drawn up as part of each RDP should provide for the results of the RDP to be assessed using this indicator and appropriate methodology (for which guidance will be provided) in order to ensure input for the enhanced AIRs in 2017 and 2019 (so that these reports can assess progress towards achieving the objectives of the programme as required by Art. 44(3) and (4) of the CPR), and to provide a final assessment at the end of the programming period. This indicator is not intended to capture the production of renewable energy, which is accounted for separately under Priority 5C.

Indicator Name	Renewable energy production from supported projects
Indicator code	R15
Target indicator	No
The related priority	P5 Promoting resource efficiency and supporting the shift towards a low carbon and climate resilient economy in agriculture, food and forestry sectors
The related focus area	5C Facilitating the supply and use of renewable sources of energy, of by products, wastes, residues and other non-food raw material for purposes of the bio-economy
Definition	Capacity created and energy generated in RDP supported renewable energy projects, expressed in tonnes of oil equivalent (T.O.E.) The indicator is related to AEI 24 (renewable energy production)
Unit of measurement	Tonnes oil equivalents (T.O.E.) (All projects are converted into T.O.E, but for electricity production. Watts are also recorded since some reporting requirements use Watts)
Methodology	Evaluators will survey a sample of completed operations in relation to this focus area and establish the renewable energy capacity created, and the renewable energy generated, through implementation of the projects. An appropriate sample will be selected based on project and beneficiary characteristics included in the operations database. The indicator value may be calculated directly from data from the survey (e.g. actual figures for energy generation) and/or may be combined with other information (e.g. coefficients such as those included in Directive 2009/28/EC), in order to calculate indicator values. Results obtained from the survey should then be extrapolated to population level in order to calculate the indicator value i.e. the amount of renewable energy generated. The total value should reflect the contribution of projects flagged as contributing to the Focus Area, both as main and secondary objectives. Detailed guidance on the methodology to be used will be provided.
Data required	Identification and basic characteristics (size, type) of projects with a renewable energy component (operations database) Information from the completed project (technology used, capacity, energy generated) Coefficients for conversion to T.O.E (e.g. Directive 2009/28/EC; International Energy Agency : http://www.iea.org/interenerstat_v2/energy_unit.asp)
Point of data collection	Relevant projects will be identified from application forms, and will be visible in the operations database. Relevant projects fall into two categories: 1. Those accepted under Focus Area 5C where the main objective is the creation of renewable energy. These are directly linked to P5C 2. Those whose main objective is linked to another focus area (e.g. farm restructuring or energy efficiency) but which include a renewable energy component. These are identifiable from the operations database using the "secondary effects" field. Information on completed projects to be collected from beneficiaries by evaluators.
Frequency	Three times during the programming period: 2016; 2018; ex-post
Means of transmission to Commission	Enhanced AIR 2017 Enhanced AIR 2019

	Ex-post evaluation report
Comments/caveats	It is proposed that the Evaluation Plan drawn up as part of each RDP should provide for the results of the RDP to be assessed using this indicator and appropriate methodology (for which guidance will be provided) in order to ensure input for the enhanced AIRs in 2017 and 2019 (so that these reports can assess progress towards achieving the objectives of the programme as required by Art. 44(3) and (4) of the CPR), and to provide a final assessment at the end of the programming period.

Indicator Name	Reduced emissions of methane and nitrous oxide
Indicator code	R18
Target indicator	No
The related priority	P5 Promoting resource efficiency and supporting the shift towards a low carbon and climate resilient economy in agriculture, food and forestry sectors
The related focus area	5D Reducing GHG and ammonia emissions from agriculture
Definition	Reduced emissions of greenhouse gas and ammonia from agriculture in RDP supported projects The indicator is related to AEI 19 (GHG emissions)
Unit of measurement	CO ₂ Equivalent
Methodology	Evaluators will survey a sample of completed operations in relation to this focus area and establish the changes in emissions of methane and nitrous oxide due to the implementation of the projects. An appropriate sample will be selected based on project and beneficiary characteristics included in the operations database. The indicator value will be calculated using a combination of data from the survey (e.g. changes in livestock numbers, husbandry practices, manure storage/handling technology) and standard emission factors to transform the activity data into emission savings. Results obtained from the survey should then be extrapolated to population level in order to calculate the indicator value i.e. the reduction in emissions of methane and nitrous oxide. The total value should reflect the contribution of projects flagged as contributing to the Focus Area, both as main and secondary objectives. Detailed guidance on the methodology to be used will be provided, including standard coefficients.
Data required	Identification and basic characteristics (size, type) of projects with a GHG reduction component (operations database) Information from the completed project on the situation before and after project implementation (scale, management practices, technology used) Coefficients for GHG emissions related to specific management practices, production technologies etc Absolute net GHG emissions (CH ₄ and N ₂ O) are reported in tonnes of CO ₂ equivalent. GHG are accounted on the basis of their global warming potential (GWP) over a 100 year period. GWP values are taken from IPCC(2007) CO ₂ =1; CH ₄ = 25; N ₂ O=298 Emission factors are obtained from national emission inventories or from specific research projects.
Point of data collection	Relevant projects will be identified from application forms, and will be visible in the operations database. Relevant projects fall into two categories: 1. Those accepted under Focus Area 5D where the main objective is reducing GHG and ammonia emissions. These are directly linked to P5D 2. Those whose main objective is linked to another focus area (e.g. farm restructuring) but which also have an impact on GHG emissions. These are identifiable from the operations database using the "secondary effects" field. Information on completed projects to be collected from beneficiaries by evaluators.
Frequency	Three times during the programming period: 2016; 2018; ex-post
Means of transmission	Enhanced AIR 2017

to Commission	Enhanced AIR 2019 Ex-post evaluation report
Comments/caveats	It is proposed that the Evaluation Plan drawn up as part of each RDP should provide for the results of the RDP to be assessed using this indicator and appropriate methodology (for which guidance will be provided) in order to ensure input for the enhanced AIRs in 2017 and 2019 (so that these reports can assess progress towards achieving the objectives of the programme as required by Art. 44(3) and (4) of the CPR), and to provide a final assessment at the end of the programming period.

Indicator Name	Reduced ammonia emissions
Indicator code	R19
Target indicator	No
The related priority	P5 Promoting resource efficiency and supporting the shift towards a low carbon and climate resilient economy in agriculture, food and forestry sectors.
The related focus area	5D Reducing greenhouse gas and ammonia emissions from agriculture.
Definition	Reduced emissions of ammonia from agriculture in RDP supported projects The indicator is related to AEI 18 (Ammonia emissions from agriculture)
Unit of measurement	Tonnes of ammonia
Methodology	Evaluators will survey a sample of completed operations in relation to this focus area and establish the changes in emissions of ammonia due to the implementation of the projects. An appropriate sample will be selected based on project and beneficiary characteristics included in the operations database. The indicator value will be calculated using a combination of data from the survey (e.g. changes in livestock numbers, husbandry practices, manure storage/handling technology) and standard emission factors/coefficients to transform the activity data into emission savings. Results obtained from the survey should then be extrapolated to population level in order to calculate the indicator value i.e. the reduction in emissions of ammonia. The total value should reflect the contribution of projects flagged as contributing to the Focus Area, both as main and secondary objectives. Detailed guidance on the methodology to be used will be provided, including standard coefficients. As far as practicable, emissions should be estimated using a methodology compatible with that applied in the national inventory.
Data required	Identification and basic characteristics (size, type) of projects with an ammonia reduction component (operations database) Information from the completed project on the situation before and after project implementation (scale, management practices, technology used). Coefficients for ammonia emissions related to specific management practices, production technologies, etc. Absolute net ammonia emissions (NH ₃) are reported in Tonnes of ammonia, (<i>The total could also be broken down by subcategory to match national data collection: Inorganic N-fertilizers; Cattle dairy; Cattle non-dairy; Swine; Laying hens; Broilers; Other.</i>) Standard emission factors are obtained from guidance sources such as the EMEP/EEA Air Pollutant Emission Inventory Guidebook http://www.eea.europa.eu/publications/emep-eea-guidebook-2013 , national emission inventories or from specific research projects.
Point of data collection	Relevant projects will be identified from application forms, and will be visible in the operations database. Relevant projects fall into two categories: 1. Those accepted under Focus Area 5D where the main objective is reducing GHG and ammonia emissions. These are directly linked to P5D 2. Those whose main objective is linked to another focus area (e.g. farm restructuring) but which also have an impact on ammonia emissions. These are identifiable from the operations database using the "secondary effects" field. Information on completed projects to be collected from beneficiaries by evaluators.
Frequency	Three times during the programming period:

	2016,2018, <i>ex post</i>
Means of transmission to Commission	Enhanced AIR 2017 Enhanced AIR 2019 <i>Ex-post</i> evaluation report
Comments	It is proposed that the Evaluation Plan drawn up as part of each RDP should provide for the results of the RDP to be assessed using this indicator and appropriate methodology (for which guidance will be provided) in order to ensure input for the enhanced AIRs in 2017 and 2019 (so that these reports can assess progress towards achieving the objectives of the programme as required by Art. 44(3) and (4) of the CPR), and to provide a final assessment at the end of the programming period.