EU Agri-Environmental indicators and the Rural Development CMEF indicators (Common Monitoring and Evaluation Framework): a coherent system of analysis

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Agri-environmental indicators of the EU

Objectives:
- To assess the interaction between agriculture and environment;
- To monitor the integration of environmental concerns in the CAP at Regional, National and EU level.


At the beginning of this exercise, the Commission listed a set of 35 potential indicators (IRENA project).
Structure of the agri-environmental indicators

**Driving forces**

**Input use**
- Mineral fertilizer consumption
- Consumption of pesticides
- Irrigation
- Energy use

**Land use**
- Land use change
- Cropping/Livestock patterns

**Farm management**
- Farm management practices

**Trends**
- Intensification / extensification
- Specialization
- Risk of land abandonment *

**Pressures and benefits**

**Pollution**
- Gross nitrogen balance *
- Risk of pollution by phosphorus
- Pesticide risk
- Ammonia emissions
- Greenhouse gas emissions *

**Resource depletion**
- Water abstraction
- Soil erosion
- Genetic diversity

**Benefits**
- High nature value farmland *
- Production of renewable energy *

* can help for the CMEF indicators

agricultural DPSIR model
Structure of the agri-environmental indicators

State/Impact

Biodiversity and habitats

- Population trends of farmland birds *

Natural resources

- Soil quality
- Water quality – Nitrate pollution *
- Water quality – Pesticide pollution *

Landscape

- Landscape – state and diversity

Response

Public policy

- Agri-environmental commitments
- Agricultural areas under Natura 2000

Technology and skills

- Farmers training and use of environmental farm advisory services

Market signals and attitudes

- Area under organic farming *

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agricultural DPSIR model
Common Monitoring and Evaluation Framework (CMEF) indicators

- CMEF indicators concern Rural Development programming period 2007-2013 and they are compulsory;
- To assess progress towards Community and National objectives in terms of sustainable agriculture;
- To improve the performance of the RD Programmes;
- The indicators are not exclusively targeted on the environment, but emphasis is given to this objective;
- Indicators are structured as follows: baseline, output, result and impact indicators;

**Environmental Baseline Indicators related to objectives**

- **Biodiversity:** population of farmland birds
- **Biodiversity:** high nature value farmland *
- **Biodiversity:** tree species composition
- **Water quality:** gross nutrient balances
- **Water quality:** pollution by nitrates and pesticides *
- **Soil:** areas at risk of soil erosion
- **Soil:** organic farming *

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Climate change: production of renewable energy from agriculture and forestry *
Climate change: UAA devoted to renewable energy
Climate change / air quality: gas emissions from agriculture

Environmental Baseline Indicators related to context

- Land cover
- Less favoured areas
- Areas of extensive agriculture
- Natura 2000 area
- Biodiversity: protected forest
- Development of forest area
- Forest ecosystem health
- Water quality
- Water use *
- Protective forests concerning primarily soil and water

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Common Monitoring and Evaluation Framework (CMEF) indicators

Environmental Output Indicators

- **Vocational training and information actions** (maintenance and enhancement of landscape and protection of environment): - number of participants – number of training days *
- **Use advisory services**: - number of farmers supported *
- **Meeting standards based on Community legislation**: - number of beneficiaries
- **Natura 2000 payments and payments linked to the Water Framework Directive**: - number of supported holdings – supported agricultural land
- **Payments to farmers in less favoured areas**: - number of holdings – supported agricultural land
- **Agri-environmental payments**: - number of holdings receiving support – total area under support – number of contracts – number of actions related to genetic resources. (and Non-productive investments).
- **Conservation and upgrading of the rural heritage**: - number of rural heritage actions supported – volume of investments

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Environmental Result Indicators – improving the environment and the countryside through land management

Area under successful land management contributing to:
- Biodiversity and high nature value farming/forestry *
- Water quality
- Climate change
- Soil quality
- Avoidance of marginalisation and land abandonment

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Common Monitoring and Evaluation Framework (CMEF) indicators

Environmental Impact Indicators

- Reversing biodiversity decline
- Maintenance of high nature value farmland and forestry *
- Improvement of water quality
- Contribution to combat climate change

AEI and CMEF indicators are a coherent package:
- Some data of the CMEF indicators could be used for agri-environmental indicators
- The agri-environmental indicator system covers a wider range of issues, but in a less region-specific manner
- The agri-environmental indicators can be a useful complement to the CMEF in evaluating the RD Programmes

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Use of the indicators to improve the CAP

**CMEF indicators:**

**Monitoring:** one of the purposes of the CMEF indicators is to provide information on the progress of the implementation of the Programme; The commitments and the annual expenditure in comparison with the objectives. For a possible adjustment of the Programme;

**Evaluation:** another purpose is to proceed with evaluation in connection with the environmental objectives and comparing result and impact indicators against baseline indicators (e.g., farmland birds, number of hectares of HNV farmland committed, Ktonnes of biomass produced). Mid-term and Ex-post evaluation. To modify RD Programmes, but also to orientate the forthcoming programming policy of the EC and National Administrations;

CMEF indicators focus more on the interaction policy/environment.

**AEI:** more in depth environmental evaluation with a periodical compilation (every three years);

They focus more on the interaction agriculture/environment.
Conclusions

- **Agenda 2000** > integration of the “sustainable agriculture” concept in the CAP;
- **Beginning of the IRENA indicators project** to monitor the integration of the environmental concerns in the CAP > in 2006 results of the IRENA indicators;
- **Use of the AEI in policy decisions**

- Some indicators (simplified) were taken into account before the IRENA results (to prepare RD programming period 2000-2006 and CAP reform of 2003): Farmland birds, pasture land, agri-environmental surface, mineral fertilizer and pesticide consumption, intensification/extensification, specialisation/diversification, marginalisation (land abandonment).
Conclusions

- General information coming from AEI was used in the last modification of the CAP, the “Health Check” reform;
- Four environmental priorities were identified in the modification of the RD Regulation: « climate change, renewable energy, water management, biodiversity »;
- In this context useful information can be provided about the irrigated surface and water used by the agricultural sector on total water consumption and about the general state of biodiversity.
- In the near future the AEI and CMEF indicators will be used with more intensity to assess the state of the environment, in parallel with their continuous improvement and fine-tuning.