



**For Official Use**

**COM/TAD/CA/ENV/EPOC(2010)26**

Organisation de Coopération et de Développement Économiques  
Organisation for Economic Co-operation and Development

**16-Jun-2010**

**English - Or. English**

**TRADE AND AGRICULTURE DIRECTORATE  
ENVIRONMENT DIRECTORATE**

**Joint Working Party on Agriculture and the Environment**

**ENVIRONMENTAL PERFORMANCE OF AGRICULTURE AT A GLANCE:  
PROGRESS REPORT ON PREPARING THE 2ND EDITION**

**28-30 June 2010  
OECD Conference Centre  
Paris, France**

*This document is submitted for DISCUSSION and GUIDANCE under Item 9b) of the Draft Agenda of the 30th session of the Joint Working Party on Agriculture and the Environment.*

Contact person:  
Kevin PARRIS  
Email: kevin.parris@oecd.org

**JT03285687**

Document complet disponible sur OLIS dans son format d'origine  
Complete document available on OLIS in its original format

**NOTE BY THE SECRETARIAT**

This document provides a progress report on preparing the 2<sup>nd</sup> edition of *Environmental Performance of Agriculture at a Glance*, planned for 2011, which is being undertaken in co-operation with Eurostat. Section 7 of the Report provides some questions to JWP Delegates to guide the Secretariat in the completion of the Report. This activity is mandated under the 2009-10 Programme of Work (Output Area 3.2.3 Agriculture and Fisheries Sustainability, Monitoring Agri-environmental Performance).

**ACTION REQUIRED:** The proposals for completing the 2<sup>nd</sup> edition of *Environmental Performance of OECD Agriculture at a Glance* are submitted to the JWP for **DISCUSSION** and **GUIDANCE**.

**ENVIRONMENTAL PERFORMANCE OF AGRICULTURE AT A GLANCE:  
PROGRESS REPORT ON PREPARING THE 2<sup>ND</sup> EDITION**

**1. Background**

1. In 2008 OECD published the Report *Environmental Performance of Agriculture in OECD countries since 1990* and the accompanying summary report *Environmental Performance of Agriculture At a Glance* (see the OECD website at [www.oecd.org/agriculture/env/indicators](http://www.oecd.org/agriculture/env/indicators)). The Joint Working Party on Agriculture and the Environment (JWP) agreed under the JWP 2009-2010 Work Programme to undertake a 2<sup>nd</sup> edition of the summary report *At a Glance*.

2. In the process of preparing the 2<sup>nd</sup> edition of *At a Glance* this document addresses the following questions:

1. What will be the structure and content of the 2<sup>nd</sup> edition of *At a Glance*?
2. How will the data for the Report be collected?
3. What will be requested from OECD countries?
4. How will the OECD Secretariat interact with the OECD Working Group on Environment Information and Outlooks, Eurostat and the FAO?
5. What are the next steps and key dates?
6. In the final section 7, JWP Delegates are invited to address a set of questions to provide guidance to the Secretariat to complete the Report.

**2. What will be the structure and content of the 2<sup>nd</sup> edition of *At a Glance*?**

3. The ***proposed structure*** of the 2<sup>nd</sup> edition of *At a Glance* (Annex 1), will be broadly similar to that published for the 1<sup>st</sup> edition (Annex 2). The main difference between the two editions will be the absence of individual country sections, which for the 1<sup>st</sup> edition was able to draw on the country chapters in the *Main Report*, but this will not be available in the preparation of the 2<sup>nd</sup> edition. The other important proposed changes to the structure of the 2<sup>nd</sup> edition include additional sections covering:

1. ***The major policy and market drivers impacting on agri-environmental performance***: This section would provide a brief overview of the key policy and market drivers that have influenced agri-environmental trends across OECD countries, drawing on the OECD *Agricultural Policies in OECD Countries Monitoring and Evaluation* and *OECD-FAO Agricultural Outlook* reports.
2. ***Use of indicators for policy monitoring and evaluation***: This section would provide examples of how AEIs are being used in:
  - i. *OECD studies*, for example, in regular country reviews (*Environmental and Economic country reviews*); and outlook reports (*Agricultural and Environmental Outlook* reports); and in theme specific policy studies (e.g. report *Sustainable Management of Water Resources in Agriculture*).

- ii. *Member countries*, for example in presentations at the OECD Workshop on *Agri-environmental Indicators*, 23-26 March, 2010, Leysin, Switzerland [Agenda Item 9a, COM/TAD/CA/ENV/EPOC(2010)25], such as for **Switzerland**, *Agri-environmental monitoring: a Tool for evaluation and support of decision-making for Swiss agricultural policy*, Brigitte Decrausaz, Office fédéral de l'agriculture, Switzerland; and **Canada**, *Using Agri-Environmental Indicators in Decision-Making: Examples from Canada and Issues to Consider*, Sarah Kalf, Agriculture and Agri-food Canada, Canada.
  - iii. *International Organisations*, for example, two reports have recently drawn on the OECD nutrient balance indicators, including the 2010 Convention of Biological Diversity Secretariat report, *Global Biodiversity Outlook* ([www.cbd.int/GBO3](http://www.cbd.int/GBO3)), and the 2009 European Environment Agency report *Progress towards the European 2010 biodiversity target* ([www.eea.europa.eu/publications](http://www.eea.europa.eu/publications)).
  - iv. *Research community*, for example, the citation of the 1<sup>st</sup> edition in journal articles, such as the *Journal of Environmental Management*<sup>1</sup> and *Ecological Economics*<sup>2</sup>, as well as some papers presented at the OECD Workshop on *Agri-environmental Indicators*, 23-26 March, 2010, Leysin, Switzerland.
3. **Assessment of indicator qualities according to established OECD criteria:** In the *Environmental Performance of Agriculture in OECD countries since 1990* an assessment was made to determine the extent to which the AEIs in the report met the general OECD indicator criteria of policy relevance; analytical soundness, measurability and ease of interpretation (see pages 25-26). It is proposed to provide a similar assessment of the AEIs that will be included in the 2<sup>nd</sup> edition of *At a Glance*.
4. In terms of the **content and coverage** of the 2<sup>nd</sup> edition there are two main changes compared to the 1<sup>st</sup> edition:
1. **Country coverage:** OECD membership has now been enlarged to include **Chile**, and membership is expected soon for the three Accession countries - **Estonia, Israel, Slovenia**<sup>3</sup>. Eurostat AEI data covers the EU 27, which includes some countries that are neither OECD member nor Accession countries including: Bulgaria, Cyprus, Latvia, Lithuania, Malta, and Romania.
  2. **Coverage of indicators:** The AEIs listed in Annex 3 are those agreed by the JWP and the OECD Working Group on *Environmental Information and Outlooks* (WGEIO) for inclusion in the 2<sup>nd</sup> edition. This list of indicators is shorter than those in the 1<sup>st</sup> edition (Annex 4) and covers only those indicators for which there is complete country coverage and the quality of primary data enables cross country comparisons to be made. The main AEI areas not covered in the 2<sup>nd</sup> edition include: soil erosion, water quality, and agricultural genetic diversity. While farm environmental management indicators are not included in the OECD list in Annex 3, they will be part of a Eurostat/OECD questionnaire to be sent to all OECD countries and discussed next.

---

<sup>1</sup> Pham Van Hoi, Arthur P.J. Mol and Peter J.M. Oosterveer (2009), "Market governance for safe food in developing countries: The case of low-pesticide vegetables in Vietnam", *Journal of Environmental Management*, Vol. 91, pp.380-388.

<sup>2</sup> Viet-Ngu Hoang and D.S. Prasada Rao (2010 in Press) "Measuring and decomposing sustainable efficiency in agricultural production: A cumulative energy balance approach, *Ecological Economics*

<sup>3</sup> The JWP was presented three document concerning agri-environmental indicator development in Chile [COM/TAD/CA/ENV/EPOC/ACS(2009)1]; Estonia [COM/TAD/CA/ENV/EPOC(2009)19] and Slovenia [COM/TAD/CA/ENV/EPOC(2009)20]. For Israel see chapter 3 "The "Environmental Performance of Agriculture" in *OECD Review of Agricultural Policies Israel* (published 28 June 2010).

3. ***Eurostat is using a questionnaire to request priority AEIs for the EU27***, for which no other EU-wide sources are available (Annex 5), covering:
  - i. tillage practices;
  - ii. water abstractions for agriculture;
  - iii. land use changes (entries and exits of agricultural land use to/from other uses);
  - iv. production of renewable energy by agriculture;
  - v. nitrogen/phosphorus inorganic fertiliser per treated areas of different crops; and,
  - vi. gross nutrient (nitrogen and phosphorus) balances (using a separate questionnaire).

5. The Eurostat questionnaire will also include certain AEIs suggested by OECD, although these are not priority issues for the European Commission at this stage (Annex 5), covering:

1. environmental farm management: nutrient management plans, soil nutrient testing, integrated pest management, vegetative cover, soil conservation practices; and,
2. agriculture's use of groundwater in total national utilisation.

### **3. How will the data for the Report be collected?**

6. Collection of primary data to calculate indicators will draw from three sources (see Annex 6):
  1. OECD/Eurostat Secretariats will pre-fill data for some indicators that are already collected by other international organisation (e.g. UNFCCC) and the nutrient balances.
  2. WGEIO's Joint *OECD/Eurostat Questionnaire on the State of the Environment* for some indicators (e.g. water use).
  3. Eurostat AEI questionnaire responses (described in section 2 above and see Annex 5) already circulated to the EU 27 member states, but not yet circulated to non-EU countries.

### **4. What will be requested from OECD countries?**

7. The main tasks for OECD member countries requested by the OECD/Eurostat Secretariats in collecting the data to calculate AEIs will be to:

1. Seek verification of all the AEIs by OECD member countries, especially where the Secretariats have drawn data from international sources.
2. Assist in the calculation of the nutrient balances.
3. Complete the Eurostat AEI questionnaire (described in section 2 and see Annex 5) being sent to for all OECD countries.

### **5. How will the OECD Secretariat interact with the OECD Working Group on Environment Information and Outlooks, Eurostat and the FAO?**

8. In data collection, calculation and quality control of the AEIs the interaction between different Secretariats will be as follows:

1. ***Joint OECD/Eurostat Working Group on Environment Information and Outlooks*** (WGEIO) Questionnaire: the two OECD Directorates concerned with the AEIs (Trade and Agriculture Directorate, TAD) and the WGEIO questionnaire (Environment Directorate) will interact to exchange information, with TAD taking the lead role.

2. **Eurostat**, will take responsibility for collecting and processing AEIs for the EU27 member states, plus **Norway** and **Switzerland**; while the OECD Secretariat will take responsibility for the remaining OECD member countries (**Australia, Canada, Chile, Iceland, Israel, Japan, Korea, Mexico, New Zealand, Turkey and the United States**).
3. **FAO**, does not have a formal role in providing data for the 2<sup>nd</sup> edition of *At a Glance*, but the OECD and Eurostat Secretariats are reinforcing cooperation with FAO so as to lay the basis for longer term harmonisation of AEI data collection internationally, in particular, to avoid countries being burdened with the same data requests from several international organisations. However, data in common to FAO, OECD and Eurostat, for example agricultural land area, will be reviewed together to ensure consistency of international data.

#### **6. What are the next steps and key dates?**

9. The **next steps and key dates** to complete the Report over 2010 and 2011 are as follows:
  - **July – October**: OECD/Eurostat complete data pre-fill
  - **November – February**: Bilateral consultation with countries to verify data
  - **March – May**: Completion of Report
  - **Late June** (dates to be confirmed): JWP meeting to declassify the report.

#### **7. Questions to JWP Delegates to guide the Secretariat in the completion of the Report**

10. JWP Delegates are invited to consider the following questions to help the Secretariat complete the 2<sup>nd</sup> edition of *At a Glance*.
  1. Do you agree with the proposed structure and content of the Report shown in Annex 1?
  2. Are you satisfied with the proposed process of collecting data, including the request to non-EU27 to complete the Eurostat AEI questionnaire (Annex 5)?
  3. Is the proposed timing to complete the Report feasible?

**ANNEX 1:**  
**2<sup>ND</sup> EDITION, *ENVIRONMENTAL PERFORMANCE OF AGRICULTURE AT A GLANCE*,**  
(To be published 2011)

**TABLE OF CONTENTS**

**HIGHLIGHTS AND OVERVIEW**

- The major policy and market drivers impacting on agri-environmental performance
- Overall agri-environmental performance (summary of Section 1 below)
- Agri-environmental performance in specific areas (summary of the sub-section in Section 1 below).

**1. SUMMARY OF OECD AGRI-ENVIRONMENTAL TRENDS SINCE 1990**

- 1.1. Agricultural production and land (including area under transgenic crops)
- 1.2. Nutrients (nitrogen and phosphorus balances)
- 1.3. Pesticides (use)
- 1.4. Energy (direct farm energy use, renewable energy)
- 1.5. Water (water use)
- 1.6. Air (ammonia, methyl bromide (ozone depletion) and greenhouse gases)
- 1.7. Biodiversity (species, habitat)
- 1.8. Farm Environmental Management (nutrients, pests, soils, organic farming)

**2. USE OF INDICATORS FOR POLICY MONITORING AND EVALUATION**

- 2.1. OECD studies
- 2.2. Member countries
- 2.3. International organisations
- 2.4. Research community

**3. INDICATORS: SOURCES, LIMITATIONS AND ASSESSMENT BY INDICATOR CRITERIA**

- 3.1. Data sources
- 3.2. Caveats and limitations to the indicators
- 3.3. Assessment of indicator qualities according to established OECD criteria

**ANNEX 2:**  
**1<sup>ST</sup> EDITION, ENVIRONMENTAL PERFORMANCE OF AGRICULTURE AT A GLANCE,**  
(published 2008 see [www.oecd.org/agriculture/env/indicators](http://www.oecd.org/agriculture/env/indicators))

**TABLE OF CONTENTS**

**HIGHLIGHTS**

- Overall agri-environmental performance
- Agri-environmental performance in specific areas
- Caveats and limitations
- Matching indicator criteria

**1. SUMMARY OF OECD AGRI-ENVIRONMENTAL TRENDS SINCE 1990**

- 1.1. Agricultural production and land
- 1.2. Nutrients (nitrogen and phosphorus balances)
- 1.3. Pesticides (use and risks)
- 1.4. Energy (direct farm energy use)
- 1.5. Soil (water and wind soil erosion)
- 1.6. Water (water use and water quality)
- 1.7. Air (ammonia, methyl bromide (ozone depletion) and greenhouse gases)
- 1.8. Biodiversity (genetic, species, habitat)
- 1.9. Farm Management (nutrients, pests, soil, water, biodiversity organic)

**2. SUMMARY OF OECD COUNTRY ENVIRONMENTAL PERFORMANCE SINCE 1990**

This section provided key trends for each of the 30 OECD Member countries



**ANNEX 3:  
COVERAGE OF AGRI-ENVIRONMENTAL TO BE INCLUDED IN THE 2<sup>ND</sup> EDITION OF  
ENVIRONMENTAL PERFORMANCE OF AGRICULTURE AT A GLANCE<sup>1</sup>**

Theme	Indicator Title	Indicator Definition <sup>2</sup> .
<b>I. Water</b>	<b>Water use</b>	1. Quantity and share of agricultural water use in total national water utilization
<b>II. Air and Climate Change</b>	<b>Ammonia</b>	2. Quantity and share of agricultural ammonia (NH <sub>3</sub> ) emissions in national total ammonia emissions
	<b>Methyl Bromide</b>	3. Quantity of methyl bromide use in terms of tonnes of ozone depleting substance equivalents <sup>3</sup>
	<b>Greenhouse Gases</b>	4. Quantity and share of agricultural greenhouse gas emissions in national total greenhouse gas emissions
<b>III. Biodiversity</b>	<b>Wild Species Diversity</b>	5. Populations of a selected group of breeding bird species that are dependent on agricultural land for nesting or breeding
<b>IV. Agricultural Inputs</b>	<b>Nutrients</b>	6. Gross balance of the quantity of nitrogen inputs (e.g. fertilisers, manure) into and outputs (e.g. crops, pasture) from farming per hectare of agricultural land
		7. Gross balance of the quantity of phosphate inputs (e.g. fertilisers, manure) into and outputs (e.g. crops, pasture) from farming per hectare of agricultural land
	<b>Pesticides</b>	8. Quantity of pesticide use (or sales) in terms of active ingredients
	<b>Energy</b>	9. Quantity and share of direct on-farm energy consumption in national total energy consumption
	<b>Land</b>	10. Area and share of total agricultural land in total national land area
		11. Area and share of the main agricultural land use types (i.e. arable crops, permanent crops and pasture) in total agricultural land
		12. Area and share of land under organic farming in total agricultural land
		13. Area and share of land under transgenic crops in total agricultural land <sup>3</sup>

1. The indicators and their definitions are taken from OECD *Environmental Performance of Agriculture in OECD countries since 1990*, see pp. 29-30 ([www.oecd.org/agriculture/env/indicators](http://www.oecd.org/agriculture/env/indicators)).

2. Trends over time for all indicators.

3. These indicators are not included in the Eurostat AEIs, see Annex 5.

**ANNEX 4: LIST OF INDICATORS USED IN THE 1<sup>ST</sup> EDITION OF AT A GLANCE**

<b>Theme</b>	<b>Indicator Title</b>	<b>Indicator Definition</b> (trends over time for all indicators)	
<b>I. Soil</b>	<b>i. Soil Erosion</b>	1. Area of agricultural land affected by water erosion in terms of different classes of erosion, <i>i.e.</i> tolerable, low, moderate, high and severe.	
		2. Area of agricultural land affected by wind erosion in terms of different classes of erosion, <i>i.e.</i> tolerable, low, moderate, high and severe.	
<b>II. Water</b>	<b>ii. Water use</b>	3. Agricultural water use in total national water utilization.	
		4. Agriculture's use of groundwater in total national groundwater utilization.	
		5. Area of irrigated land in total agricultural land area.	
	<b>iii. Water Quality</b>	6. Nitrate and phosphate contamination derived from agriculture in surface water and coastal waters.	
		7. Monitoring sites in agricultural areas that exceed recommended drinking water limits for nitrates and phosphorus in surface water and groundwater (nitrates only).	
		8. Monitoring sites in agricultural areas that exceed recommended drinking water limits for pesticides in surface water and groundwater.	
		9. Monitoring sites in agricultural areas where one or more pesticides are present in surface water and groundwater	
	<b>III. Air</b>	<b>iv. Ammonia emissions, acidification and eutrophication</b>	10. Share of agricultural ammonia emissions in national total ammonia (NH <sub>3</sub> ) emissions
		<b>v. Methyl bromide use and ozone depletion</b>	11. Agricultural methyl bromide use expressed in tonnes of ozone depletion potential.
<b>vi. Greenhouse gas emissions and climate change</b>		12. Gross total agricultural greenhouse gas emissions (carbon dioxide, methane and nitrous oxide), and their share in total greenhouse gas emissions.	

<b>IV. Biodiversity</b>	<b>vii. Genetic diversity</b>	13. Plant varieties registered and certified for marketing for the main crop categories ( <i>i.e.</i> cereals, oilcrops, pulses and beans, root crops, fruit, vegetables and forage).
		14. Five dominant crop varieties in total marketed production for selected crops ( <i>i.e.</i> wheat, barley, maize, oats, rapeseed, field peas and soyabeans).
		15. Area of land under transgenic crops in total agricultural land.
		16. Livestock breeds registered and certified for marketing for the main livestock categories ( <i>i.e.</i> cattle, pigs, poultry, sheep and goats).
		17. Three dominant livestock breeds in total livestock numbers for the main livestock categories ( <i>i.e.</i> cattle, pigs, poultry, sheep and goats).
		18. Livestock ( <i>i.e.</i> cattle, pigs, poultry and sheep) in endangered and critical risk status categories and under conservation programmes.
		19. Status of plant and livestock genetic resources under <i>in situ</i> and <i>ex situ</i> national conservation programmes.
	<b>viii. Wild Species Diversity</b>	20. Wild species that use agricultural land as primary habitat.
		21. Populations of a selected group of breeding bird species that are dependent on agricultural land for nesting or breeding.
	<b>ix. Ecosystem Diversity</b>	22. Conversion of agricultural land area to (land exits) and from (land entries) other land uses ( <i>i.e.</i> forest land; built-up land, wetlands, and other rural land).
		23. Area of agricultural semi-natural habitats ( <i>i.e.</i> fallow land, farm woodlands) in the total agricultural land area.
		24. National important bird habitat areas where intensive agricultural practices are identified as either posing a serious threat or a high impact on the area's ecological function.
<b>V. Farm Management</b>	<b>x. Nutrient Management</b>	25. Number (area) of farms (agricultural land area) under nutrient management plans.
		26. Farms using soil nutrient testing (agricultural land regularly sampled and analysed for nutrient content).
	<b>xi. Pest Management</b>	27. Arable and permanent crop area under integrated pest management.
	<b>xii. Soil Management</b>	28. Arable land area under soil conservation practices.
		29. Agricultural land area under vegetative cover all year.
	<b>xiii. Water Management</b>	30. Irrigated land area using different irrigation technology systems.
	<b>xiv. Biodiversity Management</b>	31. Agricultural land area under biodiversity management plans.
	<b>xv. Organic Management</b>	32. Agricultural land area under certified organic farm management (or in the process of conversion to an organic system).

<b>VI. Agri-cultural Inputs</b>	<b>xvi. Nutrients</b>	33. Gross balance between the quantities of <b>nitrogen</b> (N) inputs (e.g. fertilisers, manure) into, and outputs (e.g. crops, pasture) from farming.
		34. Gross balance between the quantities of <b>phosphorus</b> (P) inputs (e.g. fertilisers, manure) into, and outputs (e.g. crops, pasture) from farming.
	<b>xvii. Pesticides</b>	35. Pesticide use (or sales) in terms of tonnes of active ingredients.
		36. Risk of damage to terrestrial and aquatic environments, and human health from pesticide toxicity and exposure.
	<b>xviii. Energy</b>	37. Direct on-farm energy consumption in national total energy consumption.

Source: OECD (2008), *Environmental Performance of Agriculture in OECD Countries since 1990*, Paris, France, [www.oecd.org/agriculture/env/indicators](http://www.oecd.org/agriculture/env/indicators)

**ANNEX 5:**  
**OVERVIEW OF EUROSTAT AEIS AND THE AEIS INCLUDED IN ITS QUESTIONNAIRE**

AEI N°	DATA USER	SPECIFIC DATA NEEDS	IN THE QUESTIONNAIRE?	POTENTIAL EU SOURCES FOR DATA	DATA SOURCES TO BE USED AT EU LEVEL
1	European Commission	AEI 1 - Agri-environmental commitments			Administrative reports to DG AGRI
	OECD	UAA under nutrient management plans	✓	MS reports to AGRI	
	OECD	UAA under Integrated Pest Management	✓	MS reports to AGRI	
	OECD	Farms using soil nutrient testing	✓	None identified	
2	European Commission	AEI 2 - Agricultural areas under Natura 2000			MS reports to ENV/EEA
3	European Commission	AEI 3 - Use of environmental farm advisory services and farmers' training level			FSS, Administrative reports to DG AGRI
4	European Commission	AEI 4 - Area under organic farming *			DG AGRI, FSS, Farm to Fork (Reg. 834/2007)
5	European Commission	AEI 5 - Mineral fertiliser consumption		FAOSTAT, EFMA	
6	European Commission	AEI 6 - Consumption of pesticides *		ECPA	
7	European Commission	AEI 7 – Irrigation			FSS
8	European Commission	AEI 8 - Energy use *			Energy statistics, FADN
9	European Commission	AEI 9 - Land use change *	✓	CORINE Land cover, LUCAS	
10	European Commission	AEI 10 - Cropping/Livestock patterns			FSS
11.1	European Commission	AEI 11,1 - Soil cover			FSS + Footprint project ?
	OECD	UAA under vegetative cover all year	✓	FSS, crop statistics	
11.2	European Commission	AEI 11,2 - Tillage practices	✓	None identified, only SAPM in future	
	OECD	UAA under soil conservation practices	✓	None identified	
11.3	European Commission	AEI 11,3 - Manure storage			FSS

12	European Commission	AEI 12 - Intensification			FADN
13	European Commission	AEI 13 - Specialisation			FSS
14	European Commission	AEI 14 - Risk of land abandonment			Indicator under development
15	European Commission	AEI 15 – Gross Nutrient Balance* (nitrogen and phosphorus)	✓		Separate data collection
16	European Commission	AEI 16 - Risk of pollution by Phosphorus			Separate data collection
17	European Commission	AEI 17 - Pesticide risk			Indicator under development
18	European Commission	AEI 18 - Ammonia emissions*			UNECE / EMEP, EEA
19	European Commission	AEI 19 – Greenhouse gas emissions*			UNECE / EMEP, EEA
20	European Commission	AEI 20 - Water abstraction*	✓		OECD - Eurostat JQ, Water pilot projects
	OECD	Agriculture's use of groundwater in total national utilisation	✓		OECD - Eurostat JQ, Water pilot projects
21	European Commission	AEI 21 - Soil erosion			Data from the JRC
22	European Commission	AEI 22 - Genetic diversity			FAO
23	European Commission	AEI 23 - High nature value farmland			Indicator under development
24	European Commission	AEI 24 - Production of renewable energy	✓		DG AGR studies, energy statistics
25	European Commission	AEI 25 - Population in farmland birds*			Pan-European Common Bird Monitoring project
26	European Commission	AEI 26 - Soil quality			European soil database, CLC, LUCAS, Fertiliser surveys
27.1	European Commission	AEI 27,1 - Water quality- Nitrate pollution			EEA, EIONET
27.2	European Commission	AEI 27,2 - Water quality- Pesticide pollution			EEA, EIONET
28	European Commission	Landscape -State and diversity			Indicator under development

\* Eurostat indicator included in the OECD set of AEIs, see Annex 3.

**ANNEX 6:  
SOURCES OF DATA FOR THE OECD AGRI-ENVIRONMENTAL INDICATORS**

Indicator title/definition (see Annex 3 for full definitions)	International Organisations	OECD Questionnaire on the State of the Environment
1. Water use		✓
2. Agricultural ammonia emissions in total ammonia emissions <sup>1</sup>	UNECE/EMEP <sup>3</sup>	
3. Methyl bromide use <sup>1</sup>	UNEP <sup>4</sup>	
4. Agricultural greenhouse gases in total greenhouse gases <sup>1</sup>	UNFCCC <sup>5</sup>	
5. Populations of a selected group of breeding bird species that are dependent on agricultural land for nesting or breeding	BirdLife International	
6. Gross balance of nitrogen <sup>2</sup>	OECD Secretariat with member countries	
7. Gross balance of phosphate <sup>2</sup>	OECD Secretariat with member countries	
8. Pesticide use <sup>2</sup>		✓
9. On-farm energy consumption	IEA <sup>6</sup> + National Sources	
10. Share of total agricultural land area in total national land area	FAO + National Sources	
11. Share of the main agricultural land use types	FAO + National Sources	
12. Share of land under organic farming in total agricultural land area	IFOAM <sup>7</sup>	
13. Share of land under transgenic crops in total agricultural land area	ISAAA <sup>8</sup>	

Indicator definitions are provided in Annex 3. Not all OECD countries can provide data for some indicators (e.g. breeding birds) or in some cases the indicator is not relevant (e.g. methyl bromide).

1. Indicator drawn from an international database as part of the monitoring requirements for International Environmental Agreements
2. OECD is engaged in a cooperative project with Eurostat to develop these indicators.
3. UNECE/EMEP: United Nations Economic Commission for Europe/European Monitoring and Evaluation Programme [www.emep.int/](http://www.emep.int/)
4. UNEP: United Nations Environment Programme Ozone Secretariat <http://ozone.unep.org/>
5. UNFCCC: United Nations Framework Convention on Climate Change <http://ozone.unep.org/>
6. International Energy Agency
7. IFOAM: International Federation of Organic Agriculture Movements [www.ifoam.org](http://www.ifoam.org)
8. ISAAA: International Service for the Acquisition of Agri-biotech Applications [www.isaaa.org](http://www.isaaa.org)