



ENVIRONMENTAL PERFORMANCE OF AGRICULTURE IN OECD COUNTRIES SINCE 1990:

ITALY Website Information

This Website Information is related to the OECD publication (2008) *Environmental Performance of Agriculture in OECD countries since 1990* which is available at:
<http://www.oecd.org/tad/env/indicators>

ITALY: WEBSITE INFORMATION

1. National Agri-environmental Indicators Development

- Trisorio, A. (ed) (2004), *Measuring Sustainability: Indicators for Italian Agriculture*, Istituto Nazionale di Economia Agraria (INEA), Ministry for Agricultural and Forestry Policies, Rome, Italy, http://www.inea.it/ops/pubblica/rapporti/rappsost_ing.pdf

The volume, published by the National Institute of Agricultural Economics (INEA), is aimed at measuring the progress of Italian agriculture towards sustainability. It presents a set of indicators of agro-sustainability allowing for simultaneous assessment of social, economic and environmental aspects. Relationships with the other sectors of the economic system, and the complex articulation (and differentiation) at the territorial level with special attention to rural areas are taken into account.

The economic dimension mainly refers to the: a) efficient use of resources, including the profitability and productivity of the agriculture sector; b) competitiveness, especially as regards the sector's contribution to the nation's wealth, and the process of capital accumulation within it; and c) viability of farms, related to the potential for farms to survive in the market, including the diversification of sources of income within farming families.

The social dimension refers to equity meant as "equal opportunity", both territorially (between rural and non-rural areas) and sector-wise (between agriculture and other economic sectors), between men and women in the sector. The issues considered under this heading are opportunities for use and farmers' access to resources and social services, and the human capital and its characteristics.

The environmental dimension concerns management and conservation of natural resources. The analysis is based on a list of environmental objectives of political relevance:

1. protection of water resources taking into consideration: a) the quantitative aspect, with special emphasis on management (type of technology used for irrigation, types of supply sources, etc.) and use of water resources; b) the qualitative aspect, relating to possible pollution of water resources (balance of nutrients, leaching, etc.);
2. protection of soil, showing the pressure brought to bear by activities such as livestock raising, the use of fertilisers, plant protection products, and other polluting substances;
3. combating climate change, measuring the quantity of principal emissions from agriculture and energy consumption (which is responsible for part of emissions);
4. protection of the landscape, mainly assessed by using "indirect" or proxy indicators that show agriculture's impact through changes in form and structure of the landscape (concentration and intensification of farming, for example);
5. biodiversity conservation, addressing diversity of species and diversity of ecosystems.

Analysis of the indicators was made both by geographical area and by administrative region. The length of the time series is not uniform for all indicators, but varies according to availability of data and type of indicator. The data used come exclusively from official sources.

In order to facilitate international comparisons of results, indicators have been classified using the DPSIR framework (Driving force, Pressure, State, Impact, Response) that make up the causal chain in the relationships between agriculture and the three dimensions of sustainability under consideration. This model has been extended from the environmental to the social and economic dimensions.

The complexity of the relationships among the three dimensions has been analysed through the dashboard of sustainability. Using the metaphor of a vehicle's instrument panel in terms of sustainability, the "dashboard" method provides an efficient representation of the complexity of the issue of sustainability and of the impossibility of resulting in a univocal assessment.

Four appendices close the report. The *first* provides tables for each indicator, with the time series of data shown by area and region. In some cases, in addition to the time series of the indicator shown in the format, data will be shown relative to alternative indicators of the issue under analysis. In the *second*, illustration is made of the method of calculation used for elaborating each indicator, with information about data (source, length of time series). The *third* presents a survey of political documents of the European Union having to do with sustainable agriculture and rural development. Also highlighted are references to the ecological, economic and social dimensions of sustainable agriculture and rural development. The *fourth* offers a list of websites that deal with sustainable development, with emphasis on agriculture and rural development.

To verify the sustainability of Italian agriculture over time, this report will be updated periodically.

- APAT, *Environmental Data Yearbook, Rome, Italy*, http://www.apat.gov.it/site/en-GB/APAT/Publications/Environmental_Data_Yearbook/default.html

The *Environmental Data Yearbook* is a point of reference in the frame of the tools for environmental information, fruit of the united activity of the Agencies System APAT-ARPA-APPA. It improves every year, developing new tools for data acquisition and mechanisms of environmental reporting. The Yearbook has become the largest and most integrated collection of environmental data currently published in Italy. Responding to one of its more important institutional tasks, that of coordinating the collection and dissemination of environmental information, the Agency is engaged in continuously building up its large and qualified database and translating it into a publication that can be effectively used by a broad range of users. Decisive for achieving this objective is the consolidated and synergic relationship between APAT and the Environment Agencies of the Italian regions and autonomous provinces.

The first five chapters (Agriculture and Forestry, Transport, Tourism and Manufacturing) represent the core of the publication dedicated to the industry sectors, obviously examined in terms of their interrelation with the environment and, primarily, in accordance with the DPSIR assessment framework, whereby driving forces (D) exert pressures (P) on the environment and determine a response (R).

Chapters 6 to 15 feature the indicators relating to environmental conditions, which are described primarily in terms of the current state (S) and future trends of the environmental resources, both qualitatively and quantitatively, the pressures (P) that tend to change this state and the resulting impact (I) on human beings and the ecosystem as a whole. These chapters include the Atmosphere, Biosphere, Hydrosphere, Geosphere, Waste, Ionizing and Non-Ionizing Radiations, Noise, Natural Risk and Anthropogenic Risk.

Each chapter features an overview of the principal relevant environmental issues, broken down into specific themes. For each theme have seen selected a small number of significant indicators, from among the overall set described in greater detail in the Yearbook. In the case of the Biosphere, for example, we focus on 4 main themes: biodiversity, monitoring the level of threat for animal and plant species; the effects of climate change, based on the variations to glacier fronts; protected areas, measuring their extension; wetlands, in terms of the pressures interfering with their conservation; forests, representing the current state and trends of forests and the extent of forest fires; and landscapes, in terms of protection measures.

Chapters from 16 to 19 primarily concern the indicators relating to the key (institutional and other) activities and projects aimed at preventing, monitoring and rehabilitating situations of environmental deterioration, and, therefore, primarily falling with the response (R) category. Chapter 16 describes the Environmental quality of organisations, enterprises and products. Chapter 17, which has been further broadened, contains information on Monitoring and control measures, with respect to activities of progress verification and worsening reporting in the environmental field. Chapter 18 is dedicated to Promoting and spreading an environmental culture and has been further consolidated in the last edition. Chapter 19 is an innovation. After a first part dedicated to Sustainable land management planning (which includes the new indicator on the implementation status of regional plans and programmes) there is a section dedicated to the delicate relationship between the Environment and health (which includes the new indicator on the exposure of children to outdoor airborne atmospheric matter - PM10).

The quality of information may be determined based on the elements as follows:

- relevance: compliance of the indicator with the information demand relating to environmental issues.
- accuracy: this can be given by elements, such as data comparability, reliability of information sources, indicator coverage, data validation.
- comparability over time: completeness of the time series, consistency of the methodology in time.
- comparability across space: number of regions represented, use of the same or similar methodologies, reliability within the region itself.

Each component (relevance, accuracy, comparability over time and across space) is given a grade from 1 to 3 (1 = no problem, 3 = maximum reservations). The result of the sum with equal weight of the grades given to relevance, accuracy, comparability over time and across space, defines the quality of information, according to the following ranking table.




Definition of information quality

Grade	Quality of information	Sum
★ ★ ★	HIGH	Between 4 and 6
★ ★	MEDIUM	Between 7 and 9
★	LOW	Between 10 and 12

With regard to the determination of the current “State and Trend”, two cases have been taken into account:

- availability of benchmark targets set out in regulations and programmes, relating, for example, to GHG emissions, proportion of separate waste collection, or per capita waste production;
- no available benchmark targets.

In case (a) the following grading rules apply:

	the targets will reasonably be achieved, based on the indicator trend
	the indicator is moving in the right direction, but the targets will hardly be achieved within the established timeframe
	all other cases

In case (b), a judgement is expressed based on personal experience, on the knowledge of the subject-matter, and on equivalent benchmarks (targets) drawn from literature or by consulting experts.

2. Databases

- APAT (2004), *Italian Greenhouse Gas Inventory 1990-2001*, Rome, Italy, http://www.apat.gov.it/site/_contentfiles/00137600/137625_rapporti%2042-2004%20greenhouse.pdf
- Catalogo SINANET delle fonti di dati ambientali: http://www.sinanet.apat.it/it/sinanet/serie_storiche_emissioni
- National Inventory Report 2007 http://www.apat.gov.it/site/en-GB/APAT/Publications/Altre_Pubblicazioni.html
- Ministero delle politiche agricole alimentari e forestali, Banca dati fitofarmaci e sostanze attive: <http://www.sian.it/fitovis/>

- Istituto Nazionale di Economia Agraria (INEA) (2007), *Italian Agriculture in Figures 2007*, Ministry for Agricultural, Food and Forestry Policies, Rome, Italy, <http://www.inea.it/pdf/itaconta2007/itaconta07ing/itaconta07ing.pdf>
- Istituto Nazionale di Economia Agraria (INEA), Farm Accountancy Data Network, farm management data, <http://www.inea.it/rica/index.html>
- Istituto Nazionale di Statistica, ISTAT: http://www.istat.it/dati/db_siti/
- Banca dati tecnica e legislativa sui fitofarmaci: <http://fitogest.imagelinenetwork.com/>
- Banca dati del Ministero della Salute sui Prodotti fitosanitari: http://www.ministerosalute.it/fitosanitariwsWeb_new/FitosanitariServlet
- CRA-PAV, Prodotti fitosanitari utilizzabili in agricoltura biologica: <http://www.ispave.it/fpdb/bancadatiologica/ricerca.asp>
- Dichiarazioni di vendita dei prodotti fitosanitari, Sistema Informativo Agricolo Nazionale, SIAN: <http://www.sian.it/farmaven/>
- Registro dei fabbricanti di fertilizzanti, MIPAAF: http://www.politicheagricole.gov.it/NR/rdonlyres/es2c6yarod6debjnmucjfvotsh77cz3cmn4b4td4eycqcxn3ko4nio57ggnahw7be7ynitvfiooxjlfai75joxtd6la/20080213_Elenco_SAG_fertilizzanti.pdf
- Registro dei fertilizzanti, MIPAAF (forthcoming 2008)
- Federazione Italiana dell'Industria Alimentare, FEDERALIMENTARE: http://www.federalimentare.it/banche_dati.asp
- Ente Nazionale Sementi Elette, ENSE: <http://www.ense.it/>

3. Websites

Ministries

- Ministero delle politiche agricole alimentari e forestali, (Ministry for Agricultural, Food and Forestry Policies), MIPAAF: <http://www.politicheagricole.it>
- Ministero dell'Ambiente e della Tutela del Territorio e del Mare, (Ministry of Environment and for the Protection of Territory and Sea), MATTM: <http://www.minambiente.it>
Portale Cartografico Nazionale: <http://www.pcn.minambiente.it/PCN/>
- Ministero dell'Università e della Ricerca, (Ministry of University and Research), MiUR: <http://www.miur.it>

Regions and autonomous Provinces

- Regione Valle d'Aosta: Agricoltura: http://www.regione.vda.it/agricoltura/default_i.asp
- Regione Piemonte, Agricoltura: <http://www.regione.piemonte.it/agri/index.htm>
Ambiente: http://www.regione.piemonte.it/sez_tem/ambiente/ambiente.htm
Istituto per le Piante da Legno e l'Ambiente, I.P.L.A. S.p.a.: http://www.ipla.org/index_f.htm
- Regione Lombardia, Agricoltura: <http://www.agricoltura.regione.lombardia.it/>
Ambiente: <http://www.ambiente.regione.lombardia.it/>
Ente Regionale per i Servizi all'Agricoltura e alle Foreste, ERSAF: <http://www.ersaf.lombardia.it/default.aspx>
- Provincia Autonoma di Trento, Agricoltura: <http://www.trentinoagricoltura.it/>
Ambiente: <http://www.provincia.tn.it/argomenti/ambiente/>
- Provincia Autonoma di Bolzano, Agricoltura: <http://www.provincia.bz.it/agricoltura.htm>
Ambiente: <http://www.provincia.bz.it/ambiente.htm>
- Regione Veneto, Agricoltura e Foreste: <http://www.regione.veneto.it/Economia/Agricoltura+e+Foreste/>
Ambiente e Territorio: <http://www.regione.veneto.it/Ambiente+e+Territorio/>
Azienda Regionale per i settori Agricolo, Forestale e Agro-alimentare: <http://www.venetoagricoltura.org/>
- Regione Friuli Venezia Giulia, Agricoltura: <http://www.regione.fvg.it/rafvgeconomiaimpres/areaArgomento.act?dir=/rafvge/cms/RAFVG/AT4/ARG4/>

Ambiente e territorio:

<http://www.regione.fvg.it/rafv/territorioambiente/areaTematica.act?dir=/rafv/cms/RAFVG/AT9/>

- Regione Liguria, Agricoltura: <http://www.agriligurianet.it>
Ambiente: <http://www.ambienteinliguria.it>
- Regione Emilia-Romagna: <http://www.ermesagricoltura.it/>
- Regione Toscana, Agricoltura: <http://www.rete.toscana.it/sett/agric/>
Ambiente e territorio: <http://www.rete.toscana.it/sett/pta/index.shtml>
Agenzia Regionale per lo Sviluppo e l'Innovazione nel Settore Agricolo-forestale, ARSIA: <http://www.arsia.toscana.it/>
- Regione Marche, Agricoltura: <http://www.agri.marche.it/>
- Agenzia Servizi Settore Agroalimentare delle Marche, ASSAM: <http://www.assam.marche.it/>
- Regione Umbria, Agricoltura e foreste: <http://www.agriforeste.regione.umbria.it/>
Ambiente: <http://www.ambiente.regione.umbria.it/>
Agenzia Regionale Umbra per lo Sviluppo e l'Innovazione in Agricoltura, ARUSIA: <http://www.arusia.umbria.it/>
- Regione Lazio, Agricoltura: <http://www.assagri.it/>
Ambiente: <http://www.regione.lazio.it/web2/contents/ambiente.php>
Agenzia Regionale per lo Sviluppo e l'Innovazione dell'Agricoltura del Lazio, ARSIAL: <http://www.arsial.it/portalearsial/default.htm>
- Regione Abruzzo, Agricoltura: <http://www.regione.abruzzo.it/agricoltura/>
Ambiente <http://www.regione.abruzzo.it/portale/index.asp?modello=ambTer&servizio=lllbl&stileDiv=sxDx&template=default&tom=5&msv=canali1>
Agenzia Regionale per i Servizi di Sviluppo Agricolo, ARSSA <http://www.arssa.abruzzo.it/>
- Regione Molise, Agricoltura: <http://siar.molise.it/>
Ente Regionale di Sviluppo Agricolo per il Molise: <http://www.ersam.molise.it/>
- Regione Campania, Agricoltura: <http://www.sito.regione.campania.it/agricoltura/home.htm>
Ambiente: <http://www.sito.regione.campania.it/ambiente/regionecampania.htm>
- Regione Puglia, Agricoltura: http://www.regione.puglia.it/index.php?page=macroaree&opz=disparee&at_id=1
Ambiente: http://www.regione.puglia.it/index.php?page=macroaree&at_id=2&opz=disparee
Servizio sviluppo agricolo: http://www.regione.puglia.it/index.php?page=temi&opz=disptemi&te_id=39&at_id=1
- Regione Basilicata, Agricoltura: <http://www.regione.basilicata.it/dipagricoltura/>
Ambiente: <http://www.regione.basilicata.it/dipambiente/>
Agenzia Lucana di Sviluppo e di Innovazione in Agricoltura, ALSIA: <http://www.alsia.it/>
- Regione Calabria, Agricoltura e foreste: <http://www.assagri.regione.calabria.it/>
Agenzia Regionale per lo Sviluppo e per Servizi in Agricoltura, ARSSA: <http://151.99.144.4/regcal/arssa/index.asp>
- Regione Sardegna, Agricoltura: <http://www.regione.sardegna.it/regione/assessorati/agricoltura/>
Sardegna Agricoltura (formerly ERSAT): <http://www.sardegnaagricoltura.it/>
- Regione Sicilia, Agricoltura e Foreste: <http://www.regione.sicilia.it/Agricolturaeforeste/Assessorato/index.htm>
- Territorio e Ambiente: <http://www.regione.sicilia.it/territorio/>

Environmental Agencies System: APAT-ARPA-APPA

- Agenzia per la Protezione dell' Ambiente e per i servizi tecnici, APAT: <http://www.apat.gov.it/site/en-GB/default.htm>
- Agenzia Regionale per la Tutela dell' Ambiente dell' Abruzzo, ARTA Abruzzo: <http://www.artaabruzzo.it/>
- Agenzia Regionale per la Protezione dell' Ambiente di Basilicata, ARPAB: <http://www.arpab.it/>
- Agenzia Regionale per la Protezione dell' Ambiente della Calabria, A.R.P.A.CAL: <http://www.arpacal.it/>

- Agenzia Regionale Protezione Ambientale della Campania, ARPAC: <http://www.arpacampania.it/>
- Agenzia Regionale Prevenzione e Ambiente dell'Emilia-Romagna, ARPA Emilia-Romagna: <http://www.arpa.emr.it/>
- Agenzia Regionale Prevenzione e Ambiente del Friuli Venezia Giulia, ARPA FVG: <http://www.arpa.fvg.it/>
- Agenzia Regionale Protezione Ambientale del Lazio, ARPALAZIO: <http://www.arpalazio.it/>
- Agenzia Regionale per la Protezione dell'Ambiente Ligure, ARPAL: <http://www.arpal.org/>
- Agenzia Regionale per la Protezione dell'Ambiente della Lombardia, ARPA LOMBARDIA: <http://www.arpalombardia.it/>
- Agenzia Regionale per la Protezione Ambientale delle Marche, ARPAM: <http://www.arpa.marche.it/>
- Agenzia Regionale per la Protezione Ambientale del Molise, ARPA Molise: <http://www.arpamolise.it/>
- Agenzia Regionale per la Protezione Ambientale del Piemonte, ARPA Piemonte: http://www.arpa.piemonte.it
- Agenzia Regionale per la Protezione Ambientale della Puglia, ARPA Puglia: <http://www.arpa.puglia.it/>
- Agenzia regionale per la protezione dell'ambiente della Sardegna, ARPAS: <http://www.sardegnaambiente.it/arpas/>
- Agenzia regionale per la protezione dell'ambiente della Sicilia, ARPA Sicilia: <http://www.arpa.sicilia.it/>
- Agenzia Regionale per la Protezione Ambientale della Toscana, ARPAT: <http://www.arpat.toscana.it/>
- Agenzia Regionale per la Protezione Ambientale dell'Umbria, ARPA Umbria: <http://www.arpa.umbria.it/>
- Agenzia regionale per la protezione dell'ambiente della Valle d'Aosta, ARPA Valle d'Aosta: <http://www.arpa.vda.it/>
- Agenzia Regionale per la Prevenzione e Protezione Ambientale del Veneto: ARPAV: http://www.arpa.veneto.it
- Agenzia Provinciale per la Protezione dell'Ambiente della Provincia Autonoma di Bolzano, APPA Bolzano: <http://www.provincia.bz.it/agenzia-ambiente>
- Agenzia Provinciale per la Protezione dell'Ambiente della Provincia Autonoma di Trento, APPA Trento: <http://www.appa.provincia.tn.it/>

Public research institutions

- Istituto nazionale di statistica, ISTAT: <http://www.istat.it>
- Istituto Nazionale di Economia Agraria, INEA: <http://www.inea.it>
- Istituto di Servizi per il mercato agricolo alimentare, ISMEA: <http://www.ismea.it>
- Consiglio per la Ricerca e la sperimentazione in Agricoltura, CRA: www.entecra.it
- Centro di ricerca per l'Agrobiologia e la Pedologia, CRA-ABP: <http://www.issds.it>
- Centro di ricerca per lo studio delle Relazioni tra Pianta e Suolo, CRA-RPS: <http://www.isnp.it>
- Centro di ricerca per la Patologia Vegetale, CRA-PAV: <http://www.ispave.it>
- Consiglio Nazionale delle Ricerche, CNR: <http://www.cnr.it>
- Ente per le Nuove Tecnologie, l'Energia e l'Ambiente, ENEA: <http://www.enea.it>
- Istituto nazionale per la Fauna Selvatica, INFS, <http://www.infs.it>
- Ente Nazionale Risi: <http://www.enterisi.it/index.jsp>
- Istituto Nazionale di Ricerca per gli Alimenti e la Nutrizione, INRAN: <http://www.inran.it/>

Sectoral organisations

- Coldiretti, Area ambiente e territorio: <http://www.coldiretti.it/aree/ambiente.asp>
- Confederazione Italiana Agricoltori, CIA: <http://www.cia.it/cia/>
- Associazione Italiana Allevatori, AIA: <http://www.aia.it/>

- Associazione Italiana per l'Agricoltura Biologica, AIAB: <http://www.aiab.it/home/>
- Associazione Nazionale Bieticoltori, ANB: <http://www.anb.it/>
- Consorzio Olivicolo Italiano, UNAPROL: <http://www.unaprol.it/>

Non-governmental environmental organizations

- Lega Italiana Protezione degli Uccelli, LIPU_Birdlife ITALIA: <http://www.lipu.it/>
- WWF Italia: <http://www.wwf.it/client/render.aspx>
- Legambiente: <http://www.legambiente.eu/>

Miscellaneous

- Divisione ambiente e territorio (ISMES, formerly ENEL): <http://www.cesi.it/>
- Governo dell'Ambiente e Informazione Ambientale, GAIA: <http://www.regione.piemonte.it/ambiente/sina/gaia/>
- Clearing House Mechanism on Desertification for the Northern Mediterranean Region: <http://www.clemdes.net/>
- Comitato Nazionale per la Lotta alla Siccità e alla Desertificazione: www.cnlsd.it/index.htm
- DIS Database. A DataBase Application developed by NRD (Nucleo di Ricerca sulla Desertificazione) in collaboration with the DESERTLINKS and LADA projects: <http://nrd.uniss.it/dis/index.php>