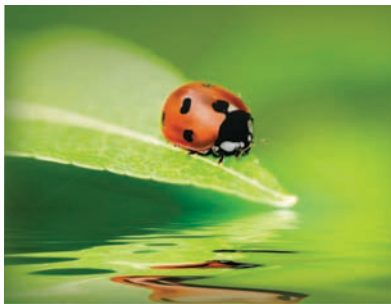




Recent OECD work on

Biodiversity





OECD 2011



OECD Work on Biodiversity



Biodiversity in the International Context



Economic and Policy Analysis of Biodiversity

- Biodiversity Indicators, Valuation and Assessment
- Economic Instruments, Incentives and Market Creation
- Biodiversity Finance, Development and Distributional Issues



Sector-Specific Analysis

- Biodiversity and Climate Change
- Biodiversity and Water
- Biodiversity and Agriculture
- Biodiversity and Fisheries
- Biodiversity and Biotechnology



Recent Publications and Reports

Acronyms



OECD Work on Biodiversity

Biodiversity is fundamental to sustaining life, providing critical ecosystem services such as food provisioning, water purification, flood and drought control, nutrient cycling, and climate regulation, amongst many others. These services are essential to support human well-being and economic growth. Yet despite the significant economic, social and cultural values of biodiversity and ecosystem services, biodiversity worldwide is being lost, and in some areas at an accelerating rate.

The Organisation for Economic Co-operation and Development (OECD) has been working on the economics and policies related to biodiversity for nearly two decades. The OECD supports governments by providing the analytical foundation required to develop policies that promote the conservation and sustainable use of biodiversity. Such policies must be environmentally effective, economically efficient, and distributionally equitable. A central challenge in responding to biodiversity loss and degradation is the integration of policy objectives related to mainstreaming biodiversity into economic development strategies and sectoral policies.

In the wake of the economic crisis, the OECD is also looking at how measures that governments are taking to spur economic growth can best be formulated so that they support – or at least, do not work against – the objectives of moving towards a green, low-carbon and biodiversity-rich economy. The OECD is in a unique position to assist countries in putting biodiversity conservation and sustainable use policies on a solid economic footing consistent with green growth. Work on biodiversity is underway across the OECD, engaging government representatives from a wide range of Ministries. This brochure provides an overview of the recent and ongoing OECD work on biodiversity.

The OECD is a multi-disciplinary inter- governmental organisation, tracing its roots back to the post-World War II Marshall Plan. Today, it comprises 33 member countries and the European Commission, committed to democratic government and the market economy, with the major emerging economies increasingly engaged in the work. A unique forum, the OECD provides the analytical capacity and comparative data to assist governments in evaluating and exchanging policy experiences and to identify, recommend and promote cost-effective policy practices.

Biodiversity in the International Context



Biodiversity is defined as the “variability among living organisms from all sources, including, *inter alia*, terrestrial, marine, and other aquatic ecosystems, and the ecological complexes of which they are part: this includes diversity within species, between species and of ecosystems” (CBD, 1992).

The three ultimate objectives of the 1992 UN Convention on Biological Diversity (CBD) are:

- i. the conservation of biological diversity;
- ii. the sustainable use of its components; and
- iii. the fair and equitable sharing of the benefits arising out of the utilisation of genetic resources.

In 2002, Parties to the CBD adopted a Strategic Plan ‘to achieve by 2010 a significant reduction of the current rate of biodiversity loss at the global, regional and national level as a contribution to poverty alleviation and to the benefit of all life on Earth’ (the 2010 target; Decision VII/30). This target was subsequently endorsed by the World Summit on Sustainable Development and incorporated as a target under

the Millennium Development Goals. It is widely acknowledged however, that the 2010 biodiversity target has not been met.

Recognizing the importance of this global environment problem, and in the run-up to the tenth meeting of the Conference of Parties (COP-10) of the CBD in October 2010, in Nagoya, Japan, the United Nations General Assembly declared 2010 as the International Year of Biodiversity.

CBD COP-10 brought together 193 Parties and led to the successful agreement on a Revised Strategic Plan and on new biodiversity targets for 2020, on a Strategy for resource mobilisation, on a financial mechanism, and on an international regime for Access and Benefits Sharing (ABS) (i.e. for the fair and equitable sharing of the benefits arising out of the utilisation of genetic resources).

The OECD’s work supports the work of the UN CBD.



Economic and Policy Analysis of Biodiversity

Economic and policy analysis by the OECD focuses on the valuation of biodiversity, and the use of economic instruments, incentives and the creation of markets to promote the conservation and sustainable use of biodiversity and associated ecosystem services.

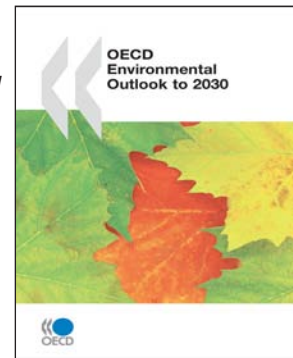
The OECD has also been actively contributing to The Economics of Ecosystems and Biodiversity (TEEB), the so-called 'Potsdam Initiative', which was endorsed by G8+5 Leaders at the Heiligendam Summit on 6-8 June 2007.

Biodiversity Indicators, Valuation and Assessment

Biodiversity indicators and economic valuation enable the quantifiable assessment and comparison of biodiversity

benefits across space and time. This is essential for the design and implementation of effective biodiversity policies. The OECD's work evaluates best practice in the use of biodiversity indicators and valuation for policy, and regularly provides economic and environmental analysis of biodiversity trends and outlooks, including modelling-based analysis.

The *OECD Environmental Outlook to 2030* identified biodiversity as one of the four critical environmental priorities for the coming two decades. Main drivers of the projected global loss are land use change (especially from infrastructure and conversion



of natural lands to agriculture, such as deforestation), unsustainable use of natural resources (especially forestry and fisheries), invasive alien species, global climate change, industrial and agricultural pollution, and desertification. Work is now underway to prepare the next *OECD Environmental Outlook*, which is due in 2012. Biodiversity will feature as one of the four thematic chapters, along with Climate Change, Water and Human Health.

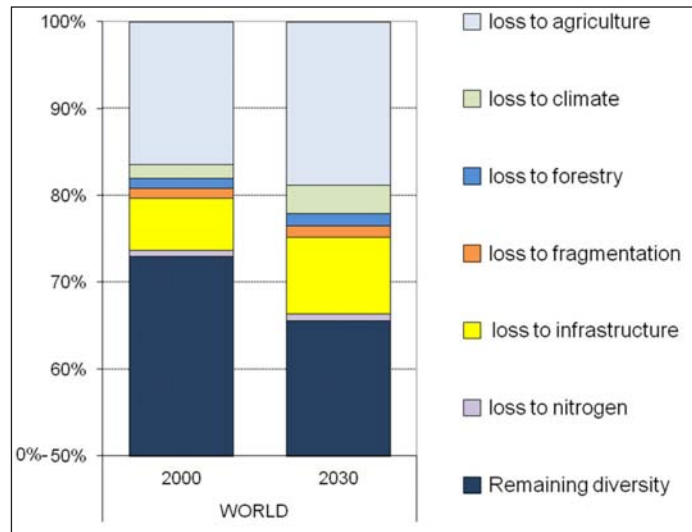
DID YOU KNOW

...that the Outlook projects that, without renewed efforts to halt the loss of biodiversity, a further 10% of biodiversity (measured in Mean Species Abundance) will be lost by 2030, from 2000 levels.

Due to the ecological complexity and multi-dimensionality of biodiversity and associated ecosystem services, metrics and indicators for biodiversity are critical to assess trends, establish business-as-usual baselines, quantify benefits, target biodiversity expenditures and enable the assessment of policy interventions over time. Indicators for biodiversity are needed at both the international and national level.

Work is currently underway to examine lessons learned from indicators applied in different types of economic instruments

Sources of losses in mean species abundance to 2030



Source: *OECD Environmental Outlook, 2008.*

such as Payments for Ecosystem Services (PES), biodiversity offsets and tradeable conservation obligations.

Environmental performance data of OECD member countries are published on the OECD website. The *OECD Environmental Data Compendium 2008*, provides data on

inter alia (i) the state of wildlife resources (ii) the uses of wildlife resources and related pressures from human activities, and (iii) the management of wildlife resources.



Other OECD work relevant to biodiversity are the country-specific *Environmental Performance Reviews* (EPRs), which include chapters on Nature Management. The EPRs examine actions taken by countries to meet both domestic objectives and international commitments, including in the area of nature and biodiversity management. Recent country reviews include Japan, Greece, and Ireland. The nature chapters in the third cycle of reviews will focus on cost-effective ways to fund protection measures and approaches to better integrate biodiversity and other policies (e.g. for water management, agriculture, and forestry).

Key links:

www.oecd.org/env/biodiversity

www.oecd.org/env/outlookto2030

www.oecd.org/env/indicators

www.oecd.org/env/countryreviews

Economic Instruments, Incentives and Market Creation

The local, regional, and global public good benefits of biodiversity are often undervalued in the market. This leads to excess biodiversity loss and degradation. The OECD's work analyses how market and government failures can be addressed through the use of cost-effective policy mechanisms to ensure the conservation and sustainable use of biodiversity, ecosystem services and other natural resources.

OECD's long-standing work on economic incentives, valuation techniques, and market creation resulted in the adoption, in 2004, of an OECD Council Recommendation on the use of economic instruments in promoting the conservation and sustainable use of biodiversity. A 2008 "Report on the Implementation of the 2004 Council Recommendation on The Use of Economic Instruments in Promoting the Conservation

and Sustainable Use of Biodiversity” takes stock of the economic instruments that have been introduced or further strengthened since the adoption of this Recommendation. Aiming to support policy makers in understanding the recent trends and developments in the use of economic instruments for biodiversity management and to identify priority issues in the years to come, the report provides an overview of what economic instruments are more commonly used for particular policy objectives and across different areas, as well as when and where economic instruments are less frequently applied, thus identifying where further progress is needed.

A new publication *Paying for Biodiversity: Enhancing the Cost-Effectiveness of Payments for Ecosystem Services* (OECD, 2010) identifies

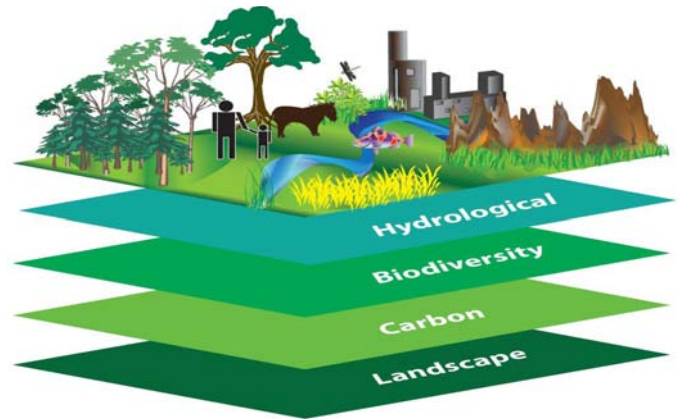


good practice in the design and implementation of PES programmes so as to enhance their environmental effectiveness at a lower economic cost. Drawing on theory and more than 30 case studies across both developed and developing countries, the following questions are addressed:

- Why are PES useful and how do they work?
- How can they be made most environmentally and cost-effective?
- What are the different potential sources of finance for PES programmes, and how can they be secured?
- What are the lessons learned from existing PES programmes and insights for future programmes, including international PES?

Multiple ecosystem services

Bundling ecosystem services, where possible, can help to make PES more cost-effective



Source: OECD, 2010.

An expert workshop on this issue was convened in March 2010.

The OECD is also currently undertaking work on Green Growth and Biodiversity as input to the broader OECD horizontal work to develop a Green Growth Strategy. Green Growth refers to promoting economic growth and development while reducing pollution and greenhouse gas emissions, minimising waste and inefficient use of natural resources, maintaining biodiversity, and strengthening energy security, including through reducing dependence on fossil fuel imports.

Key links:

www.oecd.org/env/biodiversity/pes

www.oecd.org/greengrowth

Biodiversity Finance, Development and Distributional Issues

The conservation and sustainable use of biodiversity also requires finance and investment from the public and private sector. OECD's work considers how financial flows can be scaled-up, whilst enhancing the cost-effectiveness of existing biodiversity financing. The distributional implications of biodiversity policies (which create both winners and losers) are also critical, as are the linkages between biodiversity and development.

Much of the global biodiversity is located in developing countries where the costs of conservation and sustainable use are particularly hard to bear. Moreover, international financing for biodiversity is needed to help internalise the global public good benefits provided. A forthcoming report on "International Financing for Biodiversity: Innovative Approaches and Persistent Challenges" (OECD, 2011) examines underlying principles for effective biodiversity finance and proceeds to review three case studies – bio-prospecting, conservation concessions and biodiversity offsets – to derive insights on how international finance mechanisms for biodiversity conservation can be better designed.

DID YOU KNOW

...that there are more than 300 PES programmes implemented worldwide and that five national PES programmes alone are channelling more than USD 6.5 billion annually?

This report builds on discussions at an OECD expert workshop “Innovative International Financing for Biodiversity Conservation and Sustainable Use” convened in July 2009. Issues discussed included: (i) existing financing gaps and the need for an international financing mechanism for biodiversity; (ii) how to scale-up existing financing for biodiversity conservation and sustainable use; (iii) how to enhance the cost-effectiveness of biodiversity financing, including via targeting; and (iv) lessons learned and how to move forward.

Though biodiversity policies can create significant public benefits and contribute to social well-being, their implementation often benefit different groups to a greater or lesser degree. The source of these so-called distributive effects lies in the policies’ objectives, and the choice and implementation of policy instruments. Distributive effects influence the viability of biodiversity policies. Significant negative impacts on specific groups can lead to policies being derailed, even if they make a large number of people better off. With sufficient planning, however, potential problems can be identified and their effect assessed: strategies can be developed to manage the distribution of impacts and ensure buy-in from negatively affected groups.

Combining analysis and a wealth of case studies, the 2008 publication, *People and Biodiversity Policies: Impacts, Issues and Strategies for Policy Action* offers concepts and tools for addressing distributive issues within a biodiversity policy context. It aims to help policy makers put together strategies for anticipating distributive impacts across different groups; and for selecting processes and instruments that manage distributive impacts without compromising conservation and sustainable use objectives.



Natural capital constitutes a quarter of total wealth in low-income countries. OECD’s 2008 book, *Natural Resources and Pro-Poor Growth: The Economics and Politics*, demonstrates that natural resources can contribute to growth, employment, exports and fiscal revenues. It emphasises the need to focus on the political challenges of natural resource management for long-term pro-poor economic growth, by encouraging policies for the sustainable management of resources.

The OECD also tracks bilateral aid in support of biodiversity. The developed countries that signed the three Rio Conventions in 1992 committed themselves to assist developing countries in the implementation of these Conventions. Since 1998 the OECD Development Assistance Committee (DAC)¹ has monitored aid targeting the objectives of the Rio Conventions through its “Creditor Reporting System” (CRS) using the so called “Rio markers” including the Rio Marker on Biodiversity. Biodiversity-related aid is defined as activities that promote at least one of the three objectives of the CBD.



In 2010, the OECD DAC developed and endorsed a Policy Statement on “Integrating Biodiversity and Associated Ecosystem Services into Development Co-operation”. It outlines 30 key actions that international donors can do to help halt the loss of biodiversity and associated ecosystems.

Key links:

www.oecd.org/env/biodiversity/financing

www.oecd.org/env/biodiversity/people

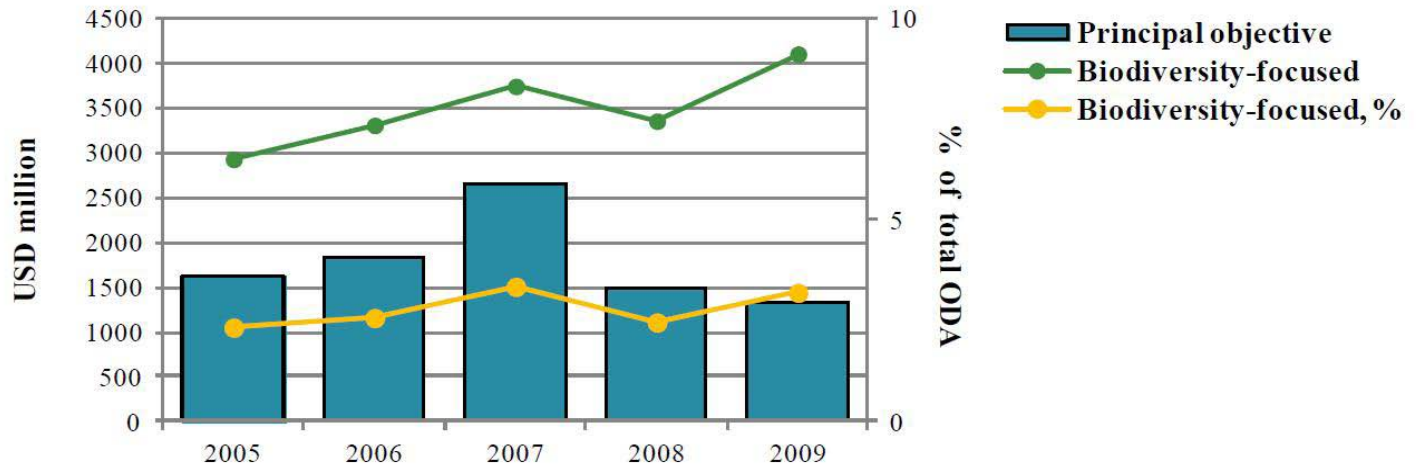
www.oecd.org/dac/stats

www.oecd.org/dac/environment

DID YOU KNOW ...that in 2009, the 24 OECD DAC members allocated USD 4.1 billion for biodiversity-related aid (representing 3.2% of total ODA in 2009).

¹ The OECD DAC is an international forum of 24 members: 23 donor governments and the European Commission.

Biodiversity-related ODA
 2005-2009, commitments, USD million, constant 2008 prices



Source: OECD-DAC, 2010.



Sector-Specific Analysis

Many of the drivers of biodiversity loss and degradation are often determined by decisions that are made outside the domain of Environment Ministries. Better policy coherence is needed at both the national and international level to help mainstream biodiversity into cross-sectoral policies. OECD work examines linkages between biodiversity and climate change, water, agriculture and fisheries, as well as biotechnology.

Biodiversity and Climate Change

Biodiversity and climate change are intrinsically linked. Climate change will have significant impacts on biological diversity (e.g., shifting the distributional location of some

ecosystems as well as altering their composition, including via impacts on invasive species) and thus will also significantly affect the quantity and quality of the services provided by ecosystems. It is therefore essential to recognise the role of biodiversity in climate change mitigation and adaptation strategies, through, *inter alia*, carbon sequestration such as REDD-plus and ecosystem-based adaptation, whilst taking action to minimise the adverse effects to biodiversity as a result of climate change.

A 2009 OECD working paper on “Promoting Biodiversity Co-Benefits in Reducing Emissions from Deforestation and Forest Degradation (REDD)” examines how biodiversity co-benefits in REDD can be enhanced, both at the design and implementation level. It discusses potential biodiversity implications of different REDD design options that have been

put forward in the international climate change negotiations and examines how the creation of additional biodiversity-specific incentives could be used to complement a REDD mechanism, so as to target biodiversity benefits directly.



This paper builds on discussion at an OECD expert workshop on “Capturing the Carbon and Biodiversity Benefits for Reducing Deforestation: Linkages, Synergies and Limitations”, held in March 2008.

Previous work at the OECD has examined the implications of climate change and adaptation opportunities in critical ecosystems such as Mount Kilimanjaro in Tanzania and the Sundarbans in Bangladesh.

Key links:

www.oecd.org/env/biodiversity

www.oecd.org/env/ccxg/redd

www.oecd.org/env/cc/adaptation

Biodiversity and Water

Water management has an important impact on the biodiversity of (fresh) water ecosystems. An OECD project on the financing of water resources management is analysing, among other issues, how ecosystem management as a water management tool can be considered and funded, alongside water infrastructure and water governance needs, in national water policy and practice.

According to the 2010 OECD book *Sustainable Management of Water Resources in Agriculture*, over-exploitation of water resources by agriculture in certain areas is damaging ecosystems by reducing water flows below minimum flow (stock) levels in rivers, lakes and wetlands, which is also detrimental to recreational, fishing and cultural uses of these ecosystems.

All OECD countries use a combination of support payments to farmers and regulatory instruments to encourage the

conservation and restoration of on-farm aquatic ecosystems (e.g. wetlands, ponds). There has also been progress in lowering overall agricultural support levels and in decoupling support from production and inputs. This is beginning to encourage more efficient use of water, better adaptation to water scarcity, and lower off-farm pollution. More integrated and coherent policy approaches in agriculture, are also beginning to take shape. The restoration of land in flood plains by planting trees, for example, has helped to reduce flood impacts, improved water quality, and led to co-benefits, such as restoring biodiversity and sequestering greenhouse gases. Further progress in this area is needed.

Key links:

www.oecd.org/water

www.oecd.org/agr/env

Biodiversity and Agriculture

Agriculture is the major land and water user in OECD and non-OECD countries. As such it closely impacts on biodiversity. An OECD 2008 publication entitled *Environmental Performance of Agriculture in OECD Countries Since 1990*, shows that there have been mixed impacts on biodiversity as measured by a range of indicators.



Although agriculture plays a relatively minor role in most OECD countries in terms of its contribution to GDP and employment, a wide range of government policies provide significant support in many OECD countries. Support to farmers in OECD countries has fallen in the last two decades as measured by the percentage Producer Support Estimate (PSE) , from 37% of farmers' total receipts in 1986-88 on average to 23% in 2006-08. In total it amounted to an estimated USD 265 billion in 2008. Such policies can have important effects on biodiversity associated with agricultural activities.

Over recent decades, as a consequence of policy reform in many OECD countries, there has been some shift away

from production-linked support (decoupling) which has thus enabled the sector to respond to a greater extent to market signals, with potentially positive implications for biodiversity. Nevertheless, production-linked support still predominates. The effect of policies and policy reform on biodiversity is, however, complex and varies across and within countries. Policies to subsidise inputs (such as water) or outputs (such as price support) can maintain or increase production above what would otherwise be the case, using greater amounts of inputs that have harmful environmental effects. This can contribute to loss of biodiversity as well as water pollution from greater use of fertilisers and pesticides (and from manure run-off due to higher numbers of livestock), soil erosion, and increased greenhouse gas emissions. In some regions however such policies can maintain production, farming systems and practices that are associated with the preservation of environmentally sensitive land or valued ecosystems and biodiversity.

Not all forms of agricultural support are environmentally-harmful, and some support measures are targeted to the achievement of specific environmental objectives, including biodiversity. Some support, for example, pays for research and development, information and advice, food inspection services

or the provision by farmers of non-marketed environmental services, such as biodiversity, flood and drought control, sinks for greenhouse gases and carbon storage. In some countries income support is conditional on the respect of environmental and other regulations.

Key links:

www.oecd.org/agriculture/crp

www.oecd.org/agriculture/env/indicators



Biodiversity and Fisheries

The oceans are home to an extraordinarily rich and diverse marine life. The marine environment is under severe pressures including from climate change and fisheries in particular. Maintaining marine biodiversity as rich and sustainable as

possible is important for food and for the provision of marine ecosystem services.

The OECD is undertaking work on the economic, social and environmental issues and challenges of rebuilding fisheries. In 2009, a workshop on “The Economics of Rebuilding Fisheries” (Rhode Island, May 2009) was hosted where economists, biologists, fisheries managers and policy makers discussed best practices in rebuilding fisheries across OECD countries. The results have been published as *The Economics of Rebuilding Fisheries: Workshop Proceedings*.

Key links:

www.oecd.org/fisheries



Biodiversity and Biotechnology

Modern biotechnology offers a wide range of new products in the fields of industry, health and agriculture. Agricultural applications, or even for forestry and animal breeding, can lead to the use of new varieties with traits which offer improvements in yield or, for example, the decreased use of pesticides through characteristics such as pest resistance. In the future, other traits such as drought resistance, flood resistance, soil salinity tolerance, or even carbon assimilation could play a role in the context of adaptation to climate change.

However these innovations – new varieties of plants, trees, animals or micro-organisms – should only be used after taking into account their potential negative impacts on the environment, including biodiversity. Such biosafety concerns are widely recognised and many countries have a system in place to ensure environmental safety, especially with respect to transgenic crops. The Series of “OECD Consensus Documents” developed on the biology of major crops and trees, introduced traits, as well as micro-organisms aims to provide practical tools for national authorities when dealing with environmental risk and safety assessment.

The “OECD Consensus Documents” are currently used by many countries within the context of their biosafety assessment systems. Tropical species (e.g. rice, sugarcane, cassava, bananas) have been considered more and more frequently in the OECD work for fulfilling needs for a large range of ecosystems and biodiversity situation in developed countries as well as developing economies.

The basis for the improvement of crops plants and agricultural animals depends upon access to a wide range of genetic resources. The loss of biodiversity could compromise the potential for obtaining improved varieties which could adapt to changing conditions. Biodiversity conservation is therefore crucial for the efficiency of future breeding work.

Key links:

www.oecd.org/biotrack





Publications and Reports

OECD (2011), "Green Growth and Biodiversity". Forthcoming.

OECD (2011), "International Financing for Biodiversity: Innovative Approaches and Persistent Challenges". Forthcoming.

OECD (2010), *Paying for Biodiversity: Enhancing the Cost-Effectiveness of Payments for Ecosystem Services*, OECD Publishing. DOI: 10.1787/9789264090279-en.

OECD (2010), *Sustainable Management of Water Resources in Agriculture*, OECD Publishing. DOI: 10.1787/9789264083578-en.

OECD (2010), *Policy Statement on Integrating Biodiversity and Associated Ecosystem Services into Development Co-operation*.

OECD (2009), "Promoting Biodiversity Co-Benefits in REDD" [ENV/WKP(2009)6], OECD Environment Working Papers, No. 11. DOI: 10.1787/220188577008.

OECD (2009), *Natural Resources and Pro-Poor Growth: The Economics and Politics*, OECD Publishing. DOI: 10.1787/19900988.

- OECD (2008), *Environmental Performance of Agriculture in OECD Countries since 1990*, OECD Publishing.
DOI: 10.1787/9789264040854-en.
- OECD (2008), *Environmental Performance of Agriculture at a Glance*, OECD Publishing.
DOI: 10.1787/9789264046788-en.
- OECD (2008), *People and Biodiversity Policies: Impacts, Issues and Strategies for Policy Action*, OECD Publishing. DOI: 10.1787/9789264034341-en.
- OECD (2008), "Report on Implementation of the 2004 Council Recommendation on the Use of Economic Instruments in Promoting the Conservation and Sustainable Use of Biodiversity", [ENV/EPOC/GSP/BIO(2008)1/FINAL].
- OECD (2008), *The OECD Environmental Outlook to 2030*, OECD Publishing.
DOI: 10.1787/9789264040519-en.
- OECD (2004), Council Recommendation on "The Use of Economic Instruments in Promoting the Conservation and Sustainable Use of Biodiversity", [C(2004)81].
- OECD (2004), *Handbook of Market Creation for Biodiversity: Issues in Implementation*.
DOI: 10.1787/9789264018624-en.
- OECD (2003), *Harnessing Markets for Biodiversity: Towards Conservation and Sustainable Use*.
DOI: 10.1787/9789264099241-en.
- OECD (2003), "Perverse incentives in biodiversity loss" [ENV/EPOC/GSP/BIO(2003)2/FINAL]
- OECD (2002), *Handbook of Biodiversity Valuation: A Guide for Policy-Makers*. DOI: 10.1787/9789264175792-en.
- OECD (2001), *Valuation of Biodiversity Benefits: Selected Studies*. DOI: 10.1787/9789264195844-en.
- OECD (1999), *Handbook of Incentive Measures for Biodiversity: Design and Implementation*.
DOI: 10.1787/9789264173903-en.



Acronyms

CBD	Convention on Biological Diversity
COP	Conference of the Parties
EPR	Environmental Performance Review
ODA	Official Development Assistance
OECD	Organisation for Economic Co-operation and Development
PES	Payments for Ecosystem Services
REDD-plus	Reducing Emissions from Deforestation and Forest Degradation, and the Role of Conservation, Sustainable Forest Management and the Enhancement of Carbon Stocks, in Developing Countries
TEEB	The Economics of Ecosystems and Biodiversity

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