

Chapter 7. Global biodiversity finance: a preliminary update

This chapter presents recent estimates of public and private expenditures on biodiversity, both domestic and international. It draws on multiple datasets including the OECD's Policy Instruments for the Environment database and Creditor Reporting System, and country reports to the Convention on Biological Diversity. The chapter also presents estimates of public finance flows that are potentially harmful to biodiversity, such as fossil fuel subsidies and some agriculture and fisheries support.

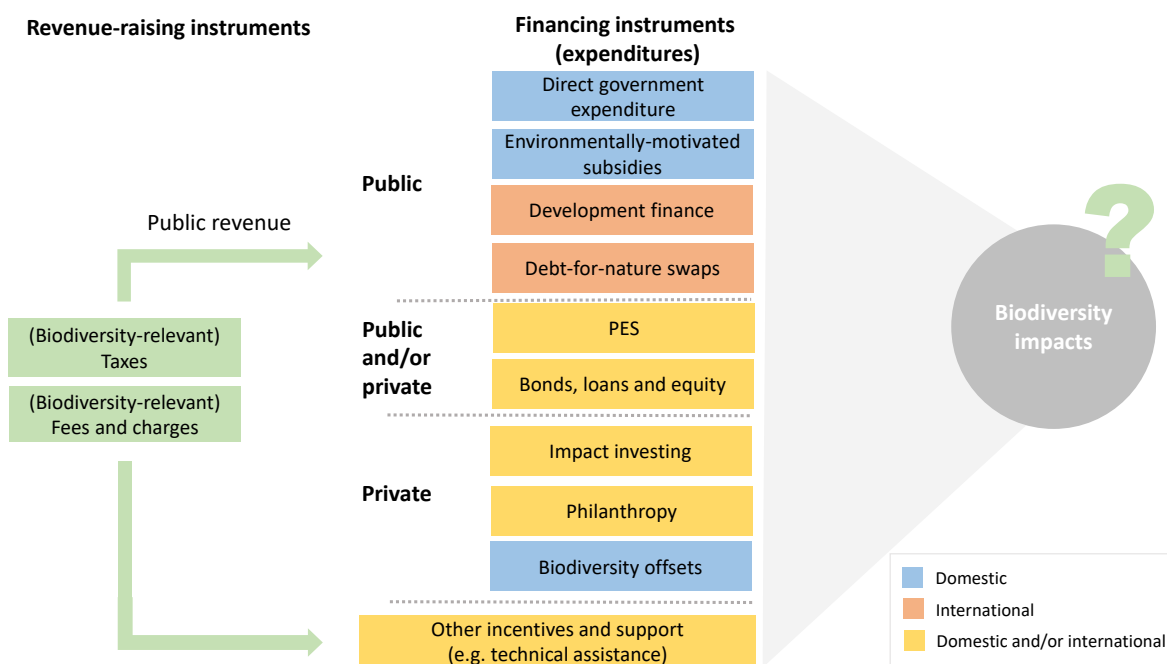
7.1. A conceptual framework for biodiversity finance flows

The global finance needed to meet the 20 Aichi Biodiversity Targets by 2020 has been estimated at about USD 150-440 billion (US dollars) per year (CBD High-Level Panel, 2014^[1]). Global finance flows for biodiversity were estimated at about USD 52 billion in 2010 (Parker et al., 2012^[2]). While acknowledging some uncertainties in these estimates, it is clear that a major gap in the finance needed to halt biodiversity loss exists.

The finance for biodiversity stems from several sources, both public and private, and can be domestic or international (Figure 7.1). Governments can influence both public and private finance flows for biodiversity, including through economic instruments such as payments for ecosystem services and biodiversity offsets. Figure 7.1 depicts the revenue-raising instruments available to government (e.g. taxes, fees and charges), as well as the financing instruments for biodiversity available to the public and private sectors.

Revenue-generating instruments such as biodiversity-relevant taxes, fees and charges also provide incentives for biodiversity conservation and sustainable use. If earmarked for biodiversity purposes, such revenue can also create finance flows for biodiversity.

Figure 7.1. An initial conceptual framework for biodiversity finance and other types of incentives and support



Note: Biodiversity-relevant bonds can include both private and public finance (if the issuer is public, e.g. sovereign bonds), and can also be a subset of impact investing.

Data reported to the OECD Policy Instruments for the Environment (PINE) database indicates that biodiversity-relevant taxes (such as taxes on pesticides) generate revenue estimated at USD 7.4 billion annually (2012-16 average) in OECD countries (OECD, 2018^[3]). While some countries included information on whether or not the revenue from these taxes is earmarked for biodiversity-relevant purposes, the data are not currently comprehensive enough to provide robust estimates of finance flows from such taxes to biodiversity.

Revenue raised from biodiversity-relevant fees and charges, as reported to the OECD PINE database, is estimated at USD 2.29 billion annually (2012-16 average) (OECD, 2019^[4]). Of the total number of biodiversity-relevant fees and charges that are currently reported in the PINE database, 42% also include data on revenue. These instruments include entrance fees to natural parks, and hunting and fishing permit fees. Based on a preliminary assessment, a large proportion of this revenue is likely to be channelled towards biodiversity-related activities.

The OECD PINE database also tracks information on biodiversity-relevant tradable permits, such as individually transferable quotas for fishing. Tradable permits that are auctioned, and whose revenue is earmarked for biodiversity-relevant purposes, also constitute a finance flow for biodiversity. Existing data in PINE is currently limited and will be extracted in the OECD follow-up work to this report.

7.2. Finance flows for biodiversity

The multiple data sources currently available on finance flows for biodiversity are non-comprehensive and sometimes overlapping. Moreover, data for various types of finance flows are not yet collected and reported in a consistent and comparable way. With these important caveats in mind, this preliminary analysis provides estimates on biodiversity finance flows, based on the categories in Figure 7.1. Section 7.2.1 discusses the data available on finance flows to biodiversity as reported to the CBD Clearing House Mechanism, whereas section 7.2.2 examines the data available based on other data sources identified. A summary of the estimated finance flows for biodiversity identified here is provided in Table 7.4 below.

7.2.1. Finance flows as reported to the Convention on Biological Diversity Clearing House Mechanism

Parties to the Convention on Biological Diversity (CBD) are requested to report on their finance for domestic biodiversity-related activities. According to the CBD Clearing House Mechanism (CHM), data on annual financial support to domestic biodiversity-related activities has been reported by 74 governments. Forty-seven of these governments reported expenditures for 2015, which amounted to USD 48.96 billion (in 2015) (SCBD, 2019^[5]).¹

This finance estimate does not include the European Union, which allocated EUR 11.2 billion to biodiversity-related activities in 2015, covering central government budgets, and including both direct and indirect expenditures. Further analysis is needed to determine whether this finance flow is not also reflected in the data reported by individual EU Member States to the CBD CHM. The domestic finance estimates reported in the CBD CHM also do not include Ireland, which recently conducted a National Biodiversity Expenditure Review.² Biodiversity expenditures are estimated at EUR 1.49 billion over 2010-15, i.e. EUR 250 million per year (Morrison and Bullock, 2018^[6]).³

There exist some important considerations and caveats in terms of what the data reported to the CBD CHM does – and does not – include. Domestic biodiversity expenditures include finance received by international sources (referred to as extra-budgetary; see Table 7.1), but not finance provided to other countries. The data reported may include finance from all sources (including private/market) but must include, at a minimum, central government. Italy, for example, includes government budget from both the central and state/provincial levels, and covers both direct and indirect expenditures. Canada includes data from a broader number of sources, including private finance. The estimates for private finance cover user fees (e.g. park fees and licences) as well as business expenditures. The data reported are therefore not consistent and comparable across countries.⁴ Reporting rates are also still low (40% of all Parties to the CBD) (CBD, 2018^[7]).

Table 7.1. Domestic expenditure sources and categories reported in the CBD CHM

Number provided covers:	Number of countries	
	Expenditures directly related to biodiversity	Expenditures indirectly related to biodiversity
Government budgets – central	70	41
Government budgets – state/provincial	25	17
Government budgets – local/municipal	22	14
Extra-budgetary	24	15
Private/market	16	10
Other (non-governmental organisations, foundations, academia)	30	17
Collective action of indigenous and local communities	6	3

Source: (SCBD, 2019^[5])

7.2.2. Finance flows as reported in other data sets

Subsidies beneficial to biodiversity

According to the currently available data in the OECD PINE database, biodiversity-relevant positive subsidies amount to USD 0.89 billion per year (2012-16 average, current prices). Of the total number of biodiversity-relevant positive subsidies reported in the database, only 57% also provide information on the finance flows associated with these subsidies (OECD, 2019^[4]).

A subset of government domestic expenditure is government support to agriculture that is considered potentially beneficial to biodiversity, totalling an estimated EUR 2.6 billion per year in OECD countries (OECD, 2018^[8]).⁵ The data are reported in a consistent and comparable manner. This amount includes support provided through the US Conservation Reserve Programme (which is also included in the estimate of finance flows from selected payments for ecosystem services [PES] provided in Table 7.2 below, and therefore leads to double-counting).⁶

Official development assistance and other flows

The OECD also tracks data on official development assistance (ODA) from its OECD Development Assistance Committee members through the Creditor Reporting System (CRS). The most recent estimates are provided below (OECD, 2019^[9]).

It is important to note that the bilateral biodiversity-related ODA is likely to be different from what the Parties have reported as “extra-budgetary” in their domestic biodiversity-relevant activities (Table 7.1). For example, the data below are commitments (rather than disbursements). In addition, these funds could presumably be used to provide technical assistance to partner countries (for example), rather than to add to partner government resources that are spent and accounted for in national budgets.

- ODA: bilateral biodiversity-related ODA amounted to USD 7.83 billion in 2017 (commitments, current prices).
- ODA: Multilateral biodiversity-related ODA amounted to USD 2.57 billion in 2017 (commitments, current prices). This estimate is based on reporting from EU institutions, the Global Environmental Facility and the International Development Association.
- Multilateral development banks (MDBs): data on finance for biodiversity from MDBs, such as the European Bank for Reconstruction and Development, the European Investment Bank, the World

Bank, the International Finance Corporation and the Asian Development Bank, are not yet reported in a consolidated manner available (unlike, for example, finance for climate change).

- Other official flows (OOF) amounted to USD 146 million in 2017 (commitments, current prices). This estimate is based on reporting from two members.

Debt-for-Nature Swaps

Debt-for-Nature swaps are another way that – in effect – mobilise finance for biodiversity. According to Sommer, Restivo and Shandra (2019_[10]), US debt-for-nature swaps cancelled approximately USD 1.8 billion owed by 21 low- and middle-income nations, and generated USD 400 million for conservation. In comparison, debt-for-nature swaps carried out by all other high-income nations totalled USD 1 billion of debt cancelled and generated about USD 500 million for conservation. Further analysis is needed to determine whether the finance mobilised and reported by Sommer, Restivo and Shandra (2019_[10]) would constitute double counting with the data reported to the OECD CRS database on bilateral biodiversity-relevant ODA.

Private finance flows for biodiversity

In addition to public finance flows, achieving transformative change for biodiversity action will require mobilising private finance flows for biodiversity action at pace and scale. Economic instruments, such as PES and biodiversity offsets, are one way to engage the private sector directly in biodiversity conservation and sustainable use. Biodiversity offsets mobilise an estimated USD 4.8 billion per year (2016 data), globally (Bennett, Gallant and Ten Kate, 2017_[11]).

Finance for biodiversity channelled through ten large national PES schemes alone are estimated at approximately USD 12 billion per year (Table 7.2).⁷ These larger PES schemes highlighted in Table 7.2 generally combine both public and private finance for biodiversity. It is estimated, however, that more than 300 PES schemes are in place globally, including many privately financed programmes. The OECD is currently working to incorporate PES schemes into the OECD PINE database in order to better track finance from PES schemes, including whether the source of finance is public, private, or a combination of both.

Other opportunities to mobilise private finance flows are also available. For example, OECD institutional investors alone manage USD 55 trillion in assets (OECD, 2018_[12]).⁸ Governments are keen to leverage private capital, notably from institutional investors, to support the climate goals under the Paris Agreement. What is needed now is more ambitious action to mobilise financial actors⁹ to steer private finance flows towards biodiversity action.

A variety of investment strategies are available for investors and other financial organisations to mainstream biodiversity considerations across asset classes and investment types (e.g. listed or unlisted equity, loans, fixed income – including bonds – and infrastructure) and investment management strategies (e.g. passive index investing or active management). Available investment strategies include: active ownership and engagement, divestment, exclusionary screening in the due diligence process, best-in-class investing tailored to biodiversity, investment in thematic funds, or direct investment in sustainable businesses that have a positive impact on biodiversity and ecosystem services (e.g. in natural infrastructure), including through impact-investing strategies.¹⁰

According to Hamrick (2016_[13]), the total private capital committed to conservation investments between 2004 and 2015 amounted to USD 8.2 billion. Hamrick (2016_[13]) defines conservation investing as “intentional investments in companies, funds, and organisations with the goal of generating both a financial return and a measurable environmental result”.

Table 7.2. Finance mobilised by ten large Payment for Ecosystem Service programmes

Country	Name of programme	Year introduced	Objectives	Finance mobilised
Australia	Environmental Stewardship Programme	2007	Biodiversity conservation, habitat restoration, nationally threatened species	USD 5.19 million per year (2007-17 average)
Brazil	Green Grants programme (Bolsa Verde)	2011	Sustainable use of protected areas, improved environmental management and poverty reduction	USD 33.8 million (2011-13 average)
China	Sloping Land Conversion Programme (Grain for Green)	1999	Reducing soil and water erosion by targeting and converting marginal farmland to forest or grassland	USD 4.9 billion per year on average (USD 69 billion by end of 2014)
China	Natural Forest Conservation Programme	1998	Protection and restoration of natural forests	USD 4.7 billion in 2015
Costa Rica	<i>Pago por Servicios Ambientales</i>	1996	Carbon storage, hydrological services, protection of biodiversity and landscapes	USD 42.4 million in 2012
Ecuador	<i>Socio Bosque</i>	2008	Forest conservation, carbon storage	USD 7.9 million in 2015
Mexico	Biodiversity PES	2003	Forest conservation, biodiversity conservation	USD 22.3 million in 2016
Mexico	Payments for Hydrological Services	2003	Forest conservation, hydrological services	USD 28.2 million in 2016
United States	Conservation Reserve Programme	1985	Wildlife-habitat benefits, water-quality benefits, on-farm soil-retention benefits	USD 1.8 billion in 2017
United States	Catskills	1997	Hydrological services, habitat restoration, environmentally friendly farming	USD 167 million per year

Note: Finance for PES can include both private and public finance. Data on PES, including finance flows, are not yet collected in a consolidated way. The OECD is currently working to incorporate PES into the OECD PINE database. The new information will be available in the second phase of the OECD work for the G7.

Source: (Ansell, Gibson and Salt, 2016^[14]) (Viana, n.d.^[15]) (Liu and Lan, 2015^[16]) (Bryan et al., 2018^[17]) (American Farm Bureau Federation, 2019^[18]) (Schwarzer, Van Panhuys and Diekmann, 2016^[19]) (SEMARNAT, n.d.^[20]) Impact investing strategy

Although still a niche investment strategy, impact investing has been gaining momentum, contributing to the effort to achieve the Sustainable Development Goals and address social, environment and governance issues. According to Principles for Responsible Investment data, more than 450 investors allocated USD 1.3 trillion to impact investments worldwide in 2016 (UNEP Finance Initiative and United Nations Global Compact, 2018^[21]).

The Annual Impact Investor Survey 2018 identified USD 6.98 billion assets under management allocated for “conservation”, based on 226 investor responses. Total impact-investment assets under management (across all categories) by these 226 investors are estimated at USD 228 billion (Mudaliar, Bass and Dithrich, 2018^[22]).

Biodiversity-relevant bonds

While investors have yet to mainstream biodiversity and broader environmental considerations across all asset classes and investment types (despite progress in finance for climate change), bonds are another

potential source of private finance for biodiversity.¹¹ Since the inception of the green bond market, annual green bond issuance has grown rapidly at the global level, from USD 37 billion in 2014 to USD 168 billion in 2018, thanks to the diversification of issuer sectors, countries and targeted projects such as the 2019 Climate Bonds Initiative. In fact, cumulative green bond issuance over the past ten years has passed the USD 500 billion mark.

While green bonds are rapidly scaling up, they focus primarily on climate change and seldom include biodiversity-relevant finance. The finance flows from biodiversity-relevant bonds are, however, a tiny fraction of climate-relevant bonds. Sustainability bonds, environmental bonds and impact bonds may also be relevant to biodiversity. A preliminary review and analysis of the publicly available information (through websites) suggests which bonds may be relevant to biodiversity (Table 7.3)

Table 7.3. Examples of biodiversity-relevant bonds

	Company	Finance
Green bond	Klabin, Brazilian paper company	Claims USD 53 million for Sustainable Forest Management (SFM) (forestry); USD 61.3 million SFM (certification); USD 5.6 million (native forests) USD 2.6 million (ecological parks)
Green bond	Stora Enso, Finland	Published a Green Bond Framework which includes projects related to Forest Stewardship Council and Programme for the Endorsement of Forest Certification-certified forests among its eligible categories, signalling its intention to enter the market
Green bond	France (government)	16% of EUR 9.7 billion for biodiversity conservation (outstanding at the end of 2017) Sovereign Green OAT, i.e. EUR 1.55 billion
Environmental impact bond	Louisiana Coastal Master Plan (project)	USD 40 million for coastal-protection investment
Environmental impact bond	DC Water	USD 25 million for building storm-water run-off infrastructure
Social and sustainable bond	Danone	EUR 300 million partly for “sustainable” agriculture
Sustainable bond	PT Royal Lestari Utama (Barito Pacific and Michelin)	USD 95 million “sustainable” rubber-joint venture in Indonesia
Sustainability awareness bond	European Investment Bank (EIB)	EUR 500 million for sustainable water projects

Source: (Klabin, 2018^[23]) (Enso, 2018^[24]) (Agence France Trésor, 2017^[25]) (EDF, 2018^[26]) (TLFF, 2018^[27]) (EIB, 2018^[28]).

Philanthropy

According to the most recent estimates, finance flows from philanthropy (i.e. private foundations) for biodiversity-related activities totalled USD 380 million in 2017 (commitments, current prices). This estimate is based on data reported to the OECD CRS database by 14 foundations, including the Arcus Foundation, the C&A Foundation, the Children’s Investment Fund, the David & Lucile Foundation, the Ford Foundation, the Gordon and Betty Moore Foundation and the MAVA Foundation.

Other biodiversity funds

A number of biodiversity-relevant funds also exist, which mobilise finance from the public and private sector. The OECD has started initial work to develop a biodiversity fund inventory (OECD Biodiversity Fund Inventory [BFI] database). To date, more than 120 funds intended for the conservation of species and ecosystems have been identified. Another 20 funds or so are climate funds that also target biodiversity-relevant aspects (e.g. directly or through the Reducing Emissions from Deforestation and Forest Degradation initiative). The publicly available data are not sufficient to provide a robust estimate of the finance flows for biodiversity at this time.

7.3. Overview of estimated finance flows for biodiversity

Given the lack of comparable and consistent data on the subject, and based on the review conducted to date, it would be premature and misleading to provide an aggregate estimate of global finance flows for biodiversity. A summary of the estimates discussed above, however, is provided in (Table 7.4).

Table 7.4. Estimated finance flows for biodiversity

Type of finance	Amount per year	Notes
Public		
	47 governments: USD 48.96 billion in 2015	Includes ODA in some cases. Methods are not harmonised.
Domestic budget	Ireland: EUR 250 million per year (average 2010-15) European Union: EUR 11 billion in 2015	EU covers central budget (direct and indirect expenditures)
ODA – bilateral	USD 7.83 billion in 2017	Commitments, current prices
ODA – multilateral	USD 2.56 billion in 2017	Commitments, current prices
OOF	USD 145 million in 2017	Bilateral and multilateral. Reporting is limited
Multi-lateral Development Banks	Not available	
Debt-for-nature swaps	USD 900 million	Possible double counting with ODA?
(Other) Biodiversity funds		More than 120 biodiversity-relevant funds identified. Very little data available on finance
Biodiversity-relevant positive subsidies	USD 0.89 billion 2012-16 average	Current prices
Potentially beneficial flows from government support to agriculture	EUR 2.6 billion (OECD countries)	Includes U.S. CRP which is also included in the PES estimate below
Private		
Philanthropy/foundations	USD 380 million in 2017	Commitments, current prices (biodiversity marker). Based on 14 foundations
PES	USD 12 billion	10 large PES programmes
Biodiversity offsets	USD 4.8 billion in 2016	
Biodiversity-relevant fees and charges	USD 2.29 billion (2012-2016 average)	Current prices
Impact investing for “conservation”, i.e. conservation assets under management	USD 6.84 billion (assets under management) in 2017	Based on survey of 226 impact investors
Private equity and debt finance	N/A	e.g. Mirova Althelia

Note: Adding these numbers would likely lead to significant double counting in some cases. *Green/blue bonds can be part of impact investment; bonds can also be issued by public issuers, i.e. sovereign bonds.

Source: (SCBD, 2019^[5]) (Morrison and Bullock, 2018^[6]) (EU, 2019^[29]) (OECD, 2019^[9]) (Sommer, Restivo and Shandra, 2019^[10]) (OECD, forthcoming^[30]) (OECD, forthcoming^[30]) (OECD, 2019^[4]) (OECD, 2018^[8]) (OECD, 2018^[3]) (Bennett, Gallant and Ten Kate, 2017^[11]) (OECD, 2019^[4]) (Mudaliar, Bass and Dithrich, 2018^[22])

7.4. Potentially environmental harmful finance flows

Any estimates on finance flows for biodiversity should be considered together with the available estimates on potentially environmentally harmful flows. The estimates suggest high government support and subsidies to activities with significant environmental footprints (Table 7.5).

Table 7.5. Subsidies to activities with significant environmental footprints are large and costly

	Country coverage	USD billion per year
Support measures for fossil fuels	Global	370 in 2015
Water use and treatments	Global	450 in 2012
Support to agricultural production potentially environmentally harmful	OECD countries	100 in 2015
Support to fisheries	OECD countries	7 in 2015
	Global (including fuel subsidies)	35 in 2009

Note: Support to agricultural production potentially environmentally harmful has been calculated by the OECD Secretariat based on OECD (2016^[31]) producer and consumer support database and using methodology outlined in OECD (2013^[32])

Source: (OECD, 2018^[33]) (IMF, 2015^[34]) (OECD, 2016^[31]) (OECD, 2017^[35]) (Sumaila et al., 2016^[36])

Based on conservative estimates of subsidies that are harmful to biodiversity (covering fossil-fuel subsidies, which contribute to climate change and thus indirectly to biodiversity loss, and government support to agriculture that is potentially environmentally harmful), government support that is potentially harmful to biodiversity outweighs finance flows for the conservation, sustainable use and restoration of biodiversity by a factor of 10.

Such support, including subsidies, can – and must – be reformed. Several countries have taken action in this regard. Switzerland, for example, has reformed its agricultural policy to ensure that current subsidies target more biodiversity-friendly purposes (OECD, 2017^[37]). Chapter 8 discusses opportunities to scale up action for biodiversity.

References

- Agence France Trésor (2017), *Green OAT Allocation and Performance Report for 2017*, Ministère de l'Économie et des Finances, République Française. [25]
- American Farm Bureau Federation (2019), *USDA Resumes Conservation Reserve Program Enrollment*, <https://www.fb.org/market-intel/usda-resumes-conservation-reserve-program-enrollment> (accessed on 2 August 2019). [18]
- Ansell, D., F. Gibson and D. Salt (2016), *Learning from agri-environment schemes in Australia: Investing in biodiversity and other ecosystem services on farms*, The Australian National University, Acton, <https://www.researchgate.net/publication/302885108> (accessed on 2 August 2019). [14]
- Bennett, G., M. Gallant and K. Ten Kate (2017), *State of Biodiversity Mitigation 2017: Markets and Compensation for Global Infrastructure Development*, http://www.forest-trends.org/wp-content/uploads/2018/01/doc_5707.pdf. [11]
- Bryan, B. et al. (2018), "China's response to a national land-system sustainability emergency", *Nature*, Vol. 559/7713, pp. 193-204, <http://dx.doi.org/10.1038/s41586-018-0280-2>. [17]
- CBD (2018), *Decision 14/22. Resource mobilization. Decision adopted by the Conference of the Parties to the Convention on Biological Diversity. CBD/COP/DEC/14/22*. [7]
- CBD High-Level Panel (2014), *Resourcing the Aichi Biodiversity Targets: An Assessment of Benefits, Investments and Resource needs for Implementing the Strategic Plan for Biodiversity 2011-2020. Second Report*. [1]
- EDF (2018), *Financing resilient communities and coastlines: How environmental impact bonds can accelerate wetland restoration in Louisiana and beyond*, <http://edf.org/environmental-impact-bond>. [26]
- EIB (2018), *EIB issues first Sustainability Awareness Bond*, <http://www.eib.org/en/press/all/2018-223-eib-issues-first-sustainability-awareness-bond.htm> (accessed on April 2019). [28]
- Enso, S. (2018), *Green Bond Framework*, <http://www.storaenso.com/en/investors/stora-enso-as-an-investment/debt-investors/green-bonds> (accessed on April 2019). [24]
- EU (2019), *Eurostat: General government expenditure by function (COFOG)*, <http://appsso.eurostat.ec.europa.eu/nui/submitViewTableAction.do>. [29]
- Hamrick, K. (2016), *State of Private Investment in Conservation 2016: A Landscape Assessment of an Emerging Market*, Ecosystem Marketplace. [13]
- IMF (2015), *Is the Glass Half Empty or Half Full? Issues in Managing Water Challenges and Policy Instruments*, <https://www.imf.org/external/pubs/ft/sdn/2015/sdn1511.pdf>. [34]
- Klabin (2018), *Klabin Green Report 2018: Use of Proceeds Release*, http://ir.klabin.com.br/fck_temp/1020_5/file/Klabin_GreenBond_English.pdf. [23]
- Liu, Z. and J. Lan (2015), "The Sloping Land Conversion Program in China: Effect on the Livelihood Diversification of Rural Households", *World Development*, Vol. 70, pp. 147-161, <http://dx.doi.org/10.1016/J.WORLDDEV.2015.01.004>. [16]

- Morrison, R. and C. Bullock (2018), *A National Biodiversity Expenditure Review for Ireland*. [6]
- Mudaliar, A., R. Bass and H. Dithrich (2018), *2018 Annual Impact Investor Survey*, [22]
https://thejiin.org/assets/2018_GIIN_Annual_Impact_Investor_Survey_webfile.pdf.
- OECD (2019), *Biodiversity: Finance and the Economic and Business Case for Action*. [39]
- OECD (2019), "Creditor Reporting System: Aid activities", *OECD International Development Statistics* (database), <https://dx.doi.org/10.1787/data-00061-en> (accessed on 26 April 2019). [9]
- OECD (2019), *Database on Policy Instruments for the Environment (PINE)*, [4]
<https://pinedatabase.oecd.org/>.
- OECD (2018), *OECD Companion to the Inventory of Support Measures for Fossil Fuels 2018*, [33]
 OECD Publishing, Paris, <https://dx.doi.org/10.1787/9789264286061-en>.
- OECD (2018), *Producer Support Estimate (PSE)*, <https://stats.oecd.org/>. [8]
- OECD (2018), *Survey of Large Pension Funds and Public Pension Reserve Funds, 2016*, [12]
<http://dx.doi.org/www.oecd.org/finance/survey-large-pension-funds.htm>.
- OECD (2018), *Tracking Economic Instruments and Finance for Biodiversity*, [3]
<http://www.oecd.org/environment/resources/Tracking-Economic-Instruments-and-Finance-for-Biodiversity.pdf>.
- OECD (2017), "Support to fisheries: Levels and impacts", *OECD Food, Agriculture and Fisheries Papers*, No. 103, OECD Publishing, Paris, <https://dx.doi.org/10.1787/00287855-en>. [35]
- OECD (2017), *The Political Economy of Biodiversity Policy Reform*, OECD Publishing, Paris, [37]
<https://dx.doi.org/10.1787/9789264269545-en>.
- OECD (2016), "Agricultural support estimates (Edition 2016)", *OECD Agriculture Statistics* [31]
 (database), <https://dx.doi.org/10.1787/83ff9179-en> (accessed on 23 May 2019).
- OECD (2013), *Policy Instruments to Support Green Growth in Agriculture*, OECD Green Growth [32]
 Studies, OECD Publishing, Paris, <https://dx.doi.org/10.1787/9789264203525-en>.
- OECD (forthcoming), *OECD Biodiversity Fund Inventory*. [30]
- Parker, C. et al. (2012), *The Little Biodiversity Finance Book: A guide to proactive investment in natural capital (PINC)*, Global Canopy Programme (GCP). [2]
- SCBD (2019), *The Clearing-House Mechanism of the Convention on Biological Diversity: Information Submission Service*, <https://chm.cbd.int/search/financial-analyzer>. [5]
- Schwarzer, H., C. Van Panhuys and K. Diekmann (2016), "Protecting people and the environment : lessons learnt from Brazil's Bolsa Verde, China, Costa Rica, Ecuador, Mexico, South Africa and 56 other experiences", *ILO Working Papers*, [19]
<https://ideas.repec.org/p/ilo/ilowps/994903813402676.html> (accessed on 2 August 2019).
- SEMARNAT, G. (n.d.), *Recursos forestales*, [20]
http://dgeiawf.semarnat.gob.mx:8080/approot/dgeia_mce/html/01_ambiental/forestales.html
 (accessed on 2 August 2019).

- Sommer, J., M. Restivo and J. Shandra (2019), “The United States, Bilateral Debt-for-Nature Swaps, and Forest Loss: A Cross-National Analysis”, *The Journal of Development Studies*, pp. 1-17, <http://dx.doi.org/10.1080/00220388.2018.1563683>. [10]
- Sumaila, U. et al. (2016), “Global fisheries subsidies: An updated estimate”, *Marine Policy*, Vol. 69, pp. 189-193, <http://dx.doi.org/10.1016/j.marpol.2015.12.026>. [36]
- TLFF (2018), *PT Royal Lestari Utama - Indonesia’s first sustainable natural rubber plantation. Tropical Landscapes Finance Facility*, <http://tlffindonesia.org/rlu-transaction/>. [27]
- UNDP (2018), *The BIOFIN Workbook 2018: Finance for Nature*, United Nations Development Programme. [38]
- UNEP Finance Initiative and United Nations Global Compact (2018), *Principles for Responsible Investment*. [21]
- Viana, J. (n.d.), *Leveraging Public Programmes with Socio-economic and Development Objectives to Support Conservation and Restoration of Ecosystems: The Price-Support Policy for Socio-biodiversity derived products and the green grant programme of Brazil*, Commissioned by the Secretariat of the Convention on Biological Diversity, <https://www.cbd.int/ecorestoration/doc/Brazil-case-study-Final-Version-20150114.pdf> (accessed on 2 August 2019). [15]

Notes

¹ This aggregate number reflects a correction from Austria (personal communication with the CBD National Focal Point).

² Following the approach of the United Nations Development Programme (UNDP)’s Biodiversity Finance Initiative (BIOFIN) (UNDP, 2018_[38])

³ Another source of data that may be useful for domestic biodiversity-relevant expenditures is the Classification of Functions of Government (COFOG), which includes a category for “biodiversity and landscape”.

⁴ An initial review of the data provided to the CBD CHM indicates that only about half of the countries provide specific information for each of the finance categories they include. It is therefore not possible to identify which fraction of the total finance reported is due only to domestic government budget, for example.

⁵ This is a proxy, which focuses on two categories of government support – namely, support with environmental constraints that is for long-term retirement of resources and specific non-commodity outputs (this does not include cross-compliance).

⁶ There may also be double counting of data on PES by Costa Rica; this is not clear, however, owing to the way in which the data have been reported to the OECD PSE database.

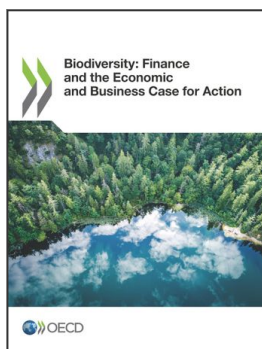
⁷ The OECD is currently developing a survey to obtain additional information on PES schemes and the finance they channel, to circulate to OECD and partner countries. Initial results are expected in late 2019 or early 2020. The data will be integrated into the OECD PINE database.

⁸ Including asset owners (pension funds, pension reserve funds and insurance companies), but excluding asset managers and investment funds. Information derived from data gathered from OECD global pension statistics, institutional investor asset databases, and data collected through the survey (for the total investment in reserve funds).

⁹ Including asset owners, asset managers, investment funds, banks, capital markets, financial regulators and supervisors, international financial institutions and investee corporations.

¹⁰ See Annex for more information on the available investment strategies.

¹¹ Note that bonds can be issued as part of various investment strategies, including impact investing.



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