

Financing for Development in Support of Biodiversity and Ecosystem Services

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FINANCING FOR DEVELOPMENT IN SUPPORT OF BIODIVERSITY AND ECOSYSTEM SERVICES

Anna Drutschinin and Stephanie Ockenden

ABSTRACT

This paper considers the key financing challenges and opportunities for realising both biodiversity conservation and sustainable development objectives. It considers the full range of possible sources, from public and private, domestic and international sources, but has a focus on public resources. The first part of this paper examines trends in bilateral commitments of official development assistance (ODA) targeting biodiversity objectives, drawing on OECD development assistance committee (DAC) creditor reporting system (CRS) statistics. The paper also discusses the effectiveness of these finance flows in achieving long-lasting results. The second part of the paper explores how development co-operation can support partner countries to mobilise and access other sources of finance for biodiversity, through mechanisms such as environmental fiscal reform, payments for ecosystem services, market creation mechanisms for green products, and conservation trust funds. Support can target the development of knowledge, technical skills, and strengthen governance and legal institutions. The paper concludes with suggested areas for further research to gain a deeper understanding of biodiversity-related development finance.

Keywords: Biodiversity; ecosystem services; development assistance; development finance; development co-operation; development policy; natural resource management

JEL Classification: O2 Development Planning and Policy; Q Agriculture and Natural Resource Economics

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EXECUTIVE SUMMARY

Meeting biodiversity and development challenges requires scaled-up financing from all sources

Mobilising sufficient finance for biodiversity and ecosystem services has been, and will remain, one of the key challenges to realising both biodiversity conservation and sustainable development objectives, in particular the targets under the Convention on Biological Diversity (CBD), the Millennium Development Goals (MDGs), and in future the post-2015 Sustainable Development Goals. Measurement challenges make it difficult to put a precise number on the global biodiversity finance gap. The literature suggests there could be up to an order of magnitude shortfall compared to current biodiversity-related finance flows. Filling the finance gap for biodiversity and ecosystem services will require scaling up finance from all sources, public and private, domestic and international.

Bilateral ODA to biodiversity has been rising over time, but less is known about other sources

Total bilateral official development assistance (ODA) commitments to biodiversity reached USD 5.6 billion on average per year over 2011-13, from USD 3.7 billion per year over 2005-07. Driving this rise is the increasing integration of biodiversity considerations into activities with other primary objectives, and an increasing focus on activities targeting synergies between biodiversity and climate change actions. Multilateral flows, e.g. from the Global Environment Facility and World Bank, are estimated to be more than double bilateral flows (Miller, 2014), however these are not yet comprehensively tracked. Non-DAC provider countries are estimated to contribute over 13% of global gross development co-operation in 2013 (OECD, forthcoming a), however the amount targeting biodiversity remains unknown.

Mainstreaming biodiversity into development priorities will help deliver effective outcomes

Effective development co-operation entails determination and ownership of development priorities by partner countries, achieving lasting positive results, inclusive development partnerships between provider and partner countries, and mutual transparency and accountability, as laid out in the Paris Declaration on Aid Effectiveness (2005) and the Busan Declaration on Effective Development Co-operation (2011). In the context of action on biodiversity, the effectiveness of biodiversity-related development finance and broader environmental safeguards need to go hand-in-hand: ensuring the protection of biodiversity and people's livelihoods are maximised, while negative environmental and social impacts are minimised. For positive results to be long lasting, biodiversity considerations must be mainstreamed into national, sector and local strategies, plans, policies and budgets, so that biodiversity considerations become embedded in the country's institutional and policy framework.

Development co-operation and finance can support partner countries to mobilise, channel and access biodiversity finance

A range of biodiversity finance mechanisms exist for use in a domestic context. These include environmental fiscal reform, payments for ecosystem services, market creation mechanisms for green products and conservation trust funds, all of which mobilise and help to channel finance and investment in biodiversity. Development co-operation can support partner countries to build the knowledge and technical skills necessary for the effective design, implementation and enforcement of these mechanisms, and to develop underlying skills (e.g. in economic valuation of ecosystem services, sustainable land and water management, and measurement, monitoring and evaluation). Well-functioning governance and legal institutions, and multi-stakeholder engagement, are also crucial and can be supported through development co-operation.

There is a need for further research to deepen understanding of biodiversity finance

While there is comprehensive data available on bilateral ODA targeting biodiversity, the picture remains incomplete for multilateral development finance flows, non-DAC development finance flows, and private flows. Also, while a lot of attention is dedicated to monitoring the volume of finance flowing to biodiversity, there is less attention to understanding the drivers of the effectiveness of finance at achieving positive biodiversity and development outcomes. Further work could look at expanding data coverage on biodiversity-related development finance, assessing how well finance is being targeted, and the different features and drivers of effectiveness of each biodiversity finance mechanism in achieving both biodiversity and development objectives.

I. INTRODUCTION

Finance needs to be scaled up from all sources to meet both biodiversity and development challenges

1. Biodiversity and ecosystem services¹ are essential for achieving resilient and lasting development outcomes, including poverty reduction (MA, 2005; CBD, 2010; UNGA, 2012; OECD, 2013a). They provide, inter alia, food, fuel, clean air and water, and contribute to human health, local livelihoods and economic development. The poor are disproportionately dependent on biodiversity and ecosystem services due to their inability to purchase or access substitutes (Billé et al., 2012; Turner et al., 2012; Roe et al., 2011; Roe, 2010; CBD, 2009; OECD, 2008). Mobilising sufficient finance for biodiversity and ecosystem services has been, and will remain, one of the key challenges to realising both biodiversity conservation and sustainable development objectives, in particular the targets under the Convention on Biological Diversity (CBD), the Millennium Development Goals (MDGs), and in future the post-2015 Sustainable Development Goals (CBD, 2014a; CBD, 2012a; CBD, 2008;). Finance for biodiversity will need to scaled-up to meet both biodiversity and development challenges, from public and private, domestic and international sources.

2. The first part of this paper examines trends in bilateral commitments of official development assistance (ODA) drawing on the OECD Development Assistance Committee (DAC) Creditor Reporting System statistics. It shows that ODA commitments to biodiversity have, on the whole, been rising over the past decade, with an increasing focus on activities targeting synergies between biodiversity and climate change mitigation, climate change adaptation, and desertification. ODA is concentrated in activities related to environmental policy support, technical assistance and capacity building; and in the water supply and sanitation, agriculture and forestry sectors. However, it appears to not yet be fully exploiting synergies and linkages with other sectors such as health or tourism.

3. The second part of the paper explores how development co-operation can support partner countries to mobilise and access other sources of finance for biodiversity. While ODA will remain an important source of biodiversity finance for developing countries, a broad range of sources will be necessary to fill the biodiversity finance gap. ODA needs to act as a catalyst and to support the design and implementation of biodiversity policies and finance mechanisms in developing countries, such as environmental fiscal reform, markets for green products, payments for ecosystem services and conservation trust funds, and to facilitate the integration of biodiversity considerations into national, sectorial and local policies, plans and budgets. This paper identifies the capacity needs and challenges associated with the four mechanisms above, and highlights how development co-operation can and is addressing these.

There is a considerable shortfall in global finance in support of biodiversity

4. Estimating the gap between current finance in support of biodiversity and ecosystem services and the level of finance needed to achieve existing biodiversity-related targets and goals demonstrates the scale at which biodiversity-related finance needs to increase. Estimates providing an indication of the approximate magnitude of the financing gap are informative for policy makers and evidence-based decision making.

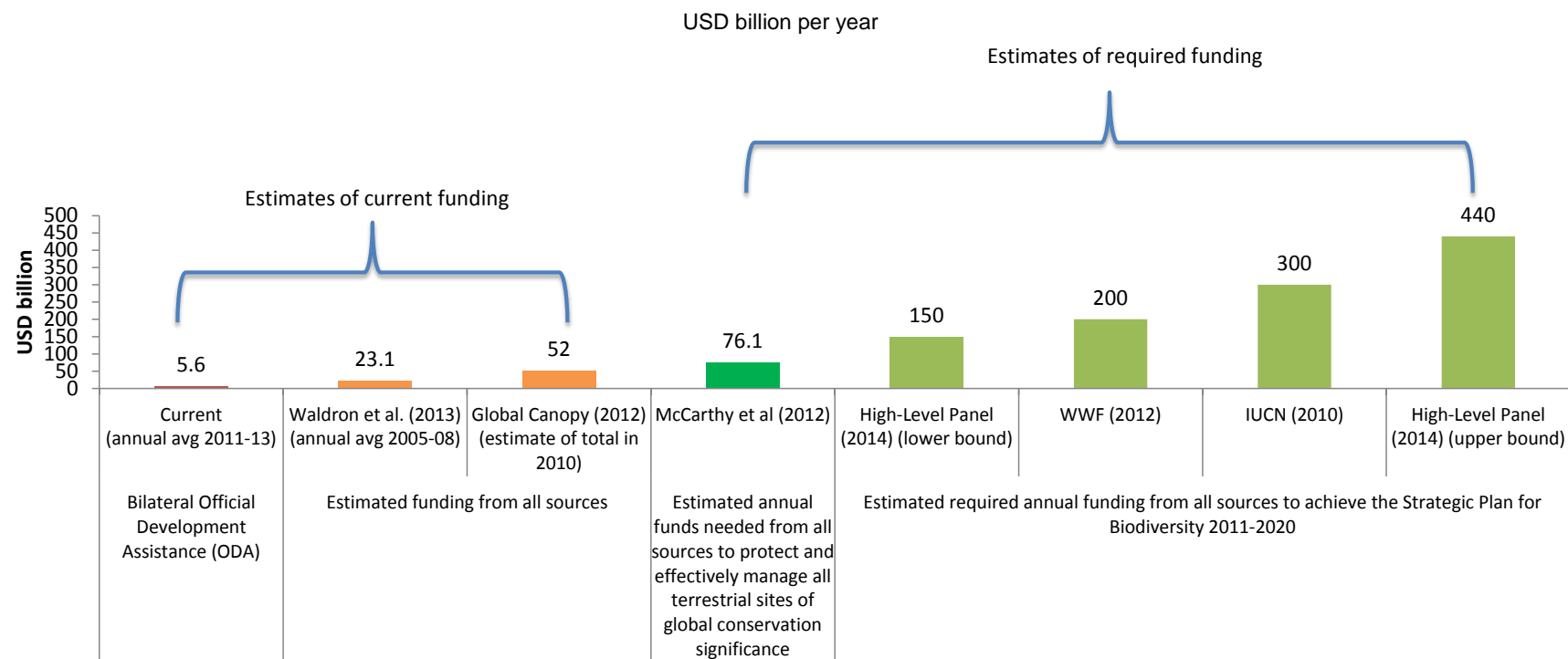
5. Estimating both financial needs to achieve the existing goals and targets for biodiversity², and measuring and monitoring current finance flows to biodiversity from all sources, is difficult due to the lack of a comprehensive, standardised tracking and measurement system and limited data availability (OECD, 2012a). This stems inter alia from the fact that there is no established, consistent definition as to what constitutes spending on biodiversity across all sources (Waldron et al., 2013) and pertains to measurement and monitoring from the local to the global level.

6. While measurement challenges make it difficult to put a number on the global biodiversity finance gap, the literature does provide some initial estimates. These vary widely, reflecting the partial data available and range of uncertainties, but all suggest that the shortfall of finance for biodiversity globally is up to an order of magnitude greater than current finance flows, as is illustrated in Figure 1. Studies to date have not estimated the shortfall of finance for biodiversity in developing countries alone.

7. Estimates of current finance (public and private, domestic and international) flowing to biodiversity globally are few, partial and vary in scope; Waldron et al. (2013) estimate public finance flows from all countries have been USD 23.1 billion on average per year over 2005-08, while Parker et al. (2012) put the estimate at USD 52 billion in 2010, based on public and some private flows. Bilateral ODA is one source of public finance flows to biodiversity, and the only one dedicated to developing countries only. Bilateral biodiversity-related ODA is reported to range from USD 2.1 billion to USD 5.6 billion per year over 2011-13 (OECD DAC Statistics, February 2015).

8. The resource requirements for all countries to achieve the 20 Aichi Targets in the 2011-2020 Strategic Plan for Biodiversity are estimated to be between USD 150 billion and USD 440 billion per year (CBD, 2012c)³. The estimate by McCarthy et al. (2012) roughly maps to an estimate of annual funds needed to achieve Strategic Goal B (Reduce the direct pressures on biodiversity and promote sustainable use) and Strategic Goal C (Improve the status of biodiversity by safeguarding ecosystems, species and genetic diversity) of the Strategic Plan, encompassing Aichi Targets 5 to 13.

Figure 1. Illustration of current finance flowing to biodiversity and future financing required for the biodiversity conservation and sustainable use in all countries



Note: Each estimate of current finance to biodiversity and of biodiversity finance needs has been calculated drawing on different sources, using different methodologies and in different contexts. Accordingly this figure provides only an illustration of the range of the financing gap. For more details on these sources and methods of calculation, please see Annex 2.

Source: Authors' compilation of data from: OECD DAC Statistics (2015), "Biodiversity-related Development Finance", February 2015; Waldron et al. (2013), "Targeting global conservation funding to limit immediate biodiversity declines", PNAS, Vol. 110., No. 29, pp. 12144-12148; Parker et al. (2012), The Little Biodiversity Finance Book, Global Canopy Programme, Oxford; McCarthy et al. (2011), "Financial Costs of meeting Global Biodiversity Conservation Targets: Current Spending and Unmet Needs", Science, Vol. 388, pp. 946-949; CBD (2012b), Report of the High-Level Panel on Global Assessment of Resources for Implementing the Strategic Plan for Biodiversity 2011-2020, UNEP/CBD/COP/11/INF/20; IUCN (2010), Discussion note to accompany IUCN's position paper on the Convention on Biological Diversity (CBD) Strategic Plan 2011-2020: Target 20, Information Paper, IUCN; WWF (2012), "Governments make good progress on marine, slow on finance at Hyderabad biodiversity meet".

There is an international mandate to increase the volume and effectiveness of international biodiversity finance

9. Developed country Parties to the Convention on Biological Diversity (CBD) have committed to help developing country Parties to conserve, sustainably use and equitably share the benefits of biodiversity through, inter alia, the provision of finance, research and training, and technology transfer.⁴ Finance is also an important element of the Strategic Plan for Biodiversity 2011-2020, where Aichi Target 20 states that financial resources mobilised from all sources should be increased substantially by 2020 (CBD, 2010). Under the CBD, preliminary targets for resource mobilisation were established in 2012,⁵ and revised targets were adopted in 2014.⁶ These targets include doubling total biodiversity-related international finance flows to developing countries by 2015,⁷ developing national financial plans for biodiversity, reporting domestic biodiversity expenditures, funding needs, gaps and priorities (see Annex 2), and mobilising domestic financial resources from all sources. Progress towards these targets and their adequacy will be reviewed in 2016 at CBD COP13.⁸

10. Increasing and strengthening support for biodiversity and ecosystem services in developing countries extends beyond the CBD finance targets. In order to truly achieve the conservation and sustainable use of biodiversity and ecosystem services, development co-operation providers have long been encouraged by the CBD and the OECD to mainstream biodiversity and ecosystem services into their development co-operation activities and to support biodiversity mainstreaming in partner countries (CBD, 1992; CBD, 2008; OECD, 2010a). Going forward, the integration of biodiversity and ecosystem services considerations into the Sustainable Development Goals (SDGs) and the post-2015 framework for development reinforces the need for an integrated and holistic approach to biodiversity financing.⁹

11. The CBD and, more broadly, the development community, place emphasis not only on the quantity of development finance provided for biodiversity and ecosystem services, but also on how it is delivered, and its effectiveness in achieving its intended results. The CBD calls for the doubling of biodiversity-related international finance by 2015 to happen “through a country-driven prioritization of biodiversity within development plans in recipient countries”.¹⁰ This is in line with the recommendations of the Intergovernmental Committee of Experts on Sustainable Development Financing¹¹ and the development co-operation principles enshrined in the Paris Declaration on Aid Effectiveness (2005), the Accra Agenda for Action (2008), the Global Partnership for Effective Development Co-operation agreed in Busan (2011). These principles apply to all development co-operation and development finance, beyond biodiversity.

The OECD DAC is the primary source of data on biodiversity-related development finance

12. Official development finance is composed of both official development assistance (ODA) and other official flows (OOF). These are delivered through a variety of bilateral and multilateral channels.¹² The OECD DAC statistical system collects data on biodiversity-related official development finance, identified through use of the biodiversity “Rio marker” (see Box 1). Activity level detail is reported by members of the OECD DAC, collected within the Creditor Reporting System (CRS) and made publically available online. The data is monitored, including through quality controls and reviews. The completeness of the data on biodiversity-related development finance varies across sources. Bilateral biodiversity-related ODA is systematically reported by 28 OECD DAC members,¹³ whereas multilateral flows and other official flows (non-concessional finance) for biodiversity are not yet fully identified or reported within the DAC statistical system.¹⁴ Work is underway to improve the coverage and quality of data on biodiversity-related bilateral and multilateral flows within the OECD system (see Annex 3).

Box 1. Using the OECD DAC Rio markers to measure and monitor biodiversity-related development finance

The “biodiversity” Rio marker is one of five environmental policy markers used to identify and capture information on every bilateral development finance activity that targets biodiversity. Each activity reported is screened and marked as either (i) targeting the Convention on Biological Diversity as a ‘*principal*’ objective or a ‘*significant*’ objective, or (ii) not targeting the objective. These environmental policy markers indicate providers’ policy objectives in relation to each development finance activity. Activities marked as having a “principal” objective would not have been funded but for that objective; activities marked “significant” have other prime objectives but have been formulated or adjusted to help meet the relevant environmental concerns. The level of ODA targeting biodiversity as a “principal” objective can be considered to be the lower bound of ODA to biodiversity, and the sum of ODA targeting biodiversity as a “principal” objective and “significant” objective can be considered to be the upper bound. Reporting started in 1998, and has been mandatory since 2007.

13. The current modernisation of the DAC’s development finance statistics – notably the modernisation of the ODA measure and broader measure of total official support for sustainable development (TOSSD) - will also apply to biodiversity-related development finance flows from 2018. The new statistical measure of TOSSD is under development, and the ultimate parameters will be finalised once the post-2015 agenda has been agreed. This modernised framework will provide a structure for the categorisation, measurement and monitoring of development finance covering a range of international sources and channels of official finance (concessional and non-concessional, bilateral and multilateral), including private finance mobilised where work is underway to better capture the effort of the official sector in catalysing private sector investment and other categories of international flows such as export credits within the DAC statistical system. These new statistical measures will impact how biodiversity-related official development finance flows are monitored from 2018 onwards. The analysis presented below is based on data collected in the existing system.

While modest in volume, ODA has a critical role to play in supporting biodiversity in developing countries

14. Bilateral and multilateral ODA is an important source of finance for developing countries, and for the poorest of countries it comprises the largest share of external finance flows for development (Stenson, 2014; Development Initiatives, 2013). In 2011-13, 4% of bilateral ODA from OECD DAC members supported biodiversity. While there are many sources of biodiversity finance (domestic and international, public and private), some estimate that ODA remains the most significant source of finance for biodiversity in many low and lower middle income countries (Waldron et al., 2013). This is partly because these countries typically allocate little domestic budget resources to biodiversity. In addition to directly filling a finance gap, biodiversity-related ODA has a critical role to play in building the capacity of partner countries (OECD 2012b), where “smarter” ODA can mobilise and increase finance for biodiversity including domestic public resources and private investment.

15. The following section of the paper focuses on bilateral biodiversity-related ODA commitments from OECD DAC members, where data is comprehensive. Focusing on bilateral ODA however presents a partial picture of biodiversity-related development finance as it excludes multilateral ODA, other official flows and flows from non-DAC countries. These other components of development finance are discussed in the next section.

Notes Section I:

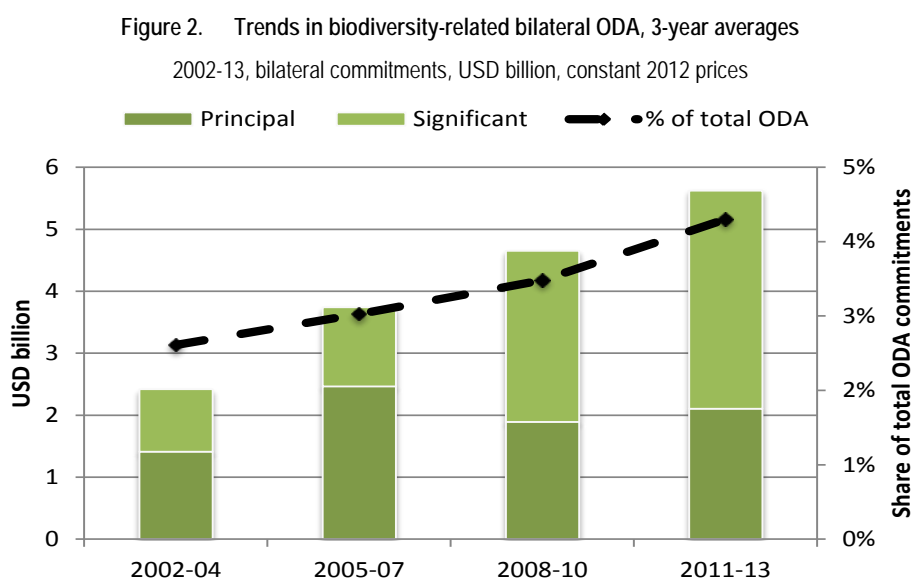
- 1 Although research is ongoing regarding the link between biodiversity and ecosystem services (Mace et al., 2012), biodiversity has been shown to be key for the delivery of a large number of ecosystem services (Elmqvist et al., 2010; Cardinale et al., 2012). This paper therefore considers biodiversity and ecosystem services as going hand-in-hand, and addresses both together.
- 2 As laid out in the Strategic Plan for Biodiversity 2011-2020 and its associated 20 Aichi Targets – see CBD (2010).
- 3 These estimates come from the first report of the High Level Panel established to cost the resource requirements for achieving the 2011-2020 Strategic Plan for Biodiversity. However, the report cautions that “these resource requirements neither should nor could be met by biodiversity finance alone”, and that “there is potential for considerable synergies among the [Aichi] Targets” (which were not factored into these calculations) (CBD, 2012c). Building on more detailed evidence, the second report states that “the Panel’s first phase estimates may have been rather conservative for some targets” (CBD, 2014b).
- 4 See Article 20 of the CBD, and COP11 Decision XI/4 and COP 12 Decision XII/3.
- 5 COP 11 Decision XI/4
- 6 COP 12 Decision XII/3
- 7 To work towards the calculation of the baseline, countries have been asked to provide data for 2010 or the most recent year prior to that. If specific annual data is not available, countries are encouraged to provide the best estimate of an average figure for a range of years (e.g. 2006-2010) (CBD, 2012d).
- 8 Based on information provided by Parties through the Financial Reporting Framework, including their respective identified resource needs, and taking into account their absorption capacities (COP12 Decision XII/3).
- 9 Under current draft proposals biodiversity and ecosystems considerations are represented through two stand-alone goals (on marine and terrestrial biodiversity) and well as being integrated under a number of other relevant goals (e.g. water). Proposal available here: <http://sustainabledevelopment.un.org/sdgsproposal.html>
- 10 CBD COP 12 Decision XII/3
- 11 To see the nine precepts of the Committee of Experts’ recommended strategic approach, see <https://sustainabledevelopment.un.org/content/documents/4588FINAL%20REPORT%20ICESDF.pdf>.
- 12 Definitions and explanations are in Annex 3.
- 13 Slovenia is also a DAC member but is not yet applying the biodiversity marker.
- 14 To date, only France has reported biodiversity-related OOF.

II. ANALYSIS OF DEVELOPMENT FINANCE TO BIODIVERSITY¹⁵

Total bilateral biodiversity-related ODA and biodiversity mainstreaming are increasing over time

16. Total bilateral biodiversity-related ODA commitments by OECD DAC members have increased on average over the past decade, reaching USD 5.6 billion per year on average in 2011-13, capturing over 4 000 individual development finance activities per year. This represents 4% of total bilateral ODA commitments, both in terms of volume and the number of activities committed (Figure 2). The level of ODA targeting biodiversity as a principal objective is USD 2.1 billion in 2011-13, considered as a “lower bound” of ODA to biodiversity (while the total estimate includes ODA targeting biodiversity as both a principal and significant objective). The overall growth in bilateral biodiversity-related ODA is mainly due to the increase in ODA targeting biodiversity as a “significant” objective, which almost quadrupled between 2007 and 2013. This reflects that providers are increasingly integrating biodiversity considerations into development co-operation activities with other primary objectives.

17. OECD DAC members are increasingly targeting environmental synergies and co-benefits with their ODA; for example, the proportion of total biodiversity-related ODA targeting multiple environmental objectives increased from an average of 46% over 2005-07 to 79% over 2011-13. Providers are particularly looking to exploit the synergies and co-benefits between biodiversity, climate change mitigation and climate change adaptation; 76% of biodiversity-related ODA in 2011-13 also targets climate objectives. Synergies also exist between biodiversity objectives and non-environmental development objectives such as health and food security. Exploiting synergies with other objectives is essential in order to both increase finance to biodiversity and to understand and promote the role of biodiversity within a broader development context. Going forward, this holistic, integrated approach will continue to be important in integrating biodiversity considerations into the implementation of the post-2015 development agenda.



Notes:

1. In analysing commitments, we recommend looking at trends over at least three years, in particular to smooth fluctuations from large multi-year projects programmed in a given year, such as observed in 2010. While bilateral commitments to biodiversity do fluctuate year-on-year, disbursement figures show a smooth upwards trend in biodiversity-related ODA year-on-year.

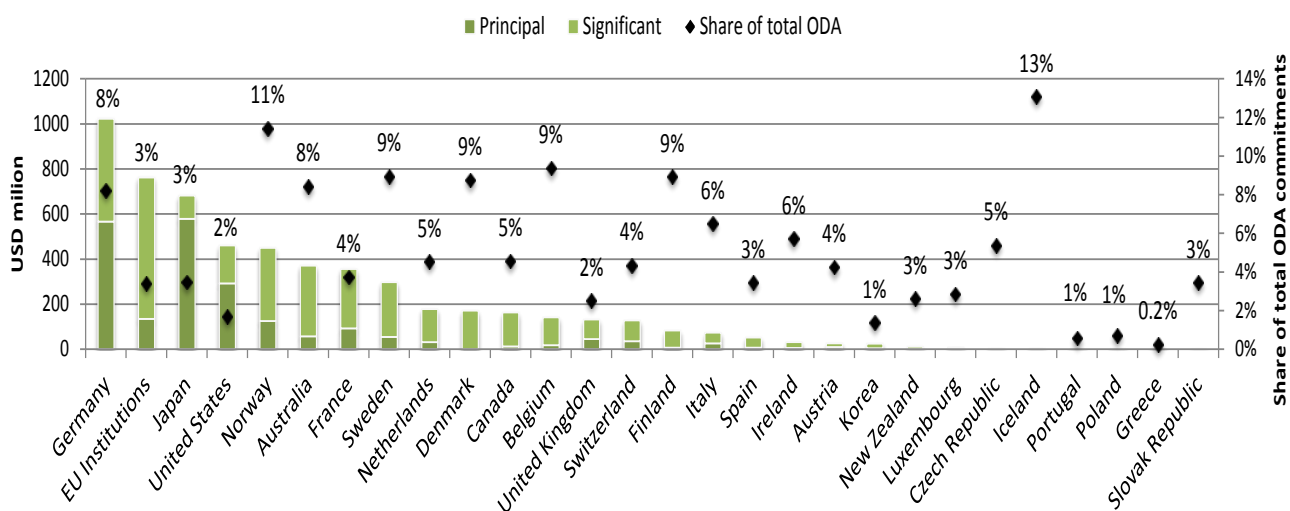
2. The Rio markers are descriptive rather than strictly quantitative. They allow for an approximate quantification of financial flows targeting the objectives of the Rio conventions. Biodiversity-related finance as reported by Parties to the CBD is often based on, but may not be directly comparable to, Rio marker data.

Source: OECD DAC Creditor Reporting System, January 2015

Germany, EU Institutions and Japan are the largest providers of bilateral biodiversity-related ODA

18. Germany, EU Institutions and Japan together provided 44% of total biodiversity-related ODA in 2011-13 (Figure 3). These three DAC members are also within the top 5 bilateral providers of total ODA. Japan, Germany and the United States are the top providers of ODA targeting biodiversity as a principal objective. Iceland and Norway appear to place the highest relative priority biodiversity, dedicating 13% and 11% of their total ODA portfolios to biodiversity respectively.

Figure 3. Biodiversity-related ODA by DAC member
Annual average 2011-13, bilateral commitments, USD million, constant 2012 prices



Notes:

- As a full DAC member and a provider of official development assistance (ODA) in its own right, the European Union is considered as a DAC country for the purposes of reporting and presentation of data. Core ODA contributions from EU member states to the EU Institutions are separate and not reflected in individual EU countries bilateral ODA commitments to biodiversity, therefore there is no double counting.
- The Slovak Republic and Poland, as new DAC members, only started reporting on Rio markers in 2013. Figures illustrated above represent 2013 values only for these members. Slovenia is also a DAC member but is not yet applying the biodiversity marker.

Source: OECD DAC Statistics, January 2015

Bilateral biodiversity-related ODA is primarily delivered as grants channelled through governments

19. ODA may be delivered through grants – which do not need to be repaid – or concessional loans which are repaid (on softer than market terms). In general, grants are more likely to be provided to least developed countries, and to support capacity building type of activities, whereas loans may be more appropriate for (upper) middle income countries which may be in a stronger position to repay them. For example, over 2011-13, 90% of ODA committed to least developed countries was committed as grants, whereas over 40% of ODA to middle income Countries was committed as loans.

20. The share of grants as a development finance instrument to deliver biodiversity-related ODA has been increasing over time (83% grants in 2011-13 versus 48% grants in 2005-07). This is roughly in line with total ODA, though its grants share has been moving in the opposite direction (78% grants in 2011-13 versus 88% grants in 2005-07). There may be a number of reasons for the increasing use of grants in biodiversity-related ODA, including the rising attention of OECD DAC members to supporting capacity building (see paragraph 25), and also the increase in the share of biodiversity-related ODA targeting multi-country and regional activities and international funds, programmes and research – estimated to be 35% in 2011-13 versus 14% in 2005-07 – both of which are supported largely through grants contributions.

21. OECD DAC members have a choice of numerous channels through which to deliver biodiversity-related ODA.¹⁶ For example, ODA can be channelled through provider or partner country governments, through non-governmental organisations, through universities and research institutions, through multilateral development banks and institutions, and more. Over 2011-13, at least 53% of bilateral biodiversity-related ODA was channelled through the public sector – i.e. provider governments, recipient governments, or third party governments. At least half of this was channelled directly through recipient country governments as the first implementing partner, but that overall share could be higher. About 19% was delivered on the ground by international, national and local non-governmental organisations (NGOs), and a further 17% was channelled through multilateral development banks and UN agencies for “earmarked” projects (this is separate and additional to providers’ core contributions to these institutions). The remainder was delivered through multiple channels including universities and research institutions, public-private partnerships and regional community secretariats.

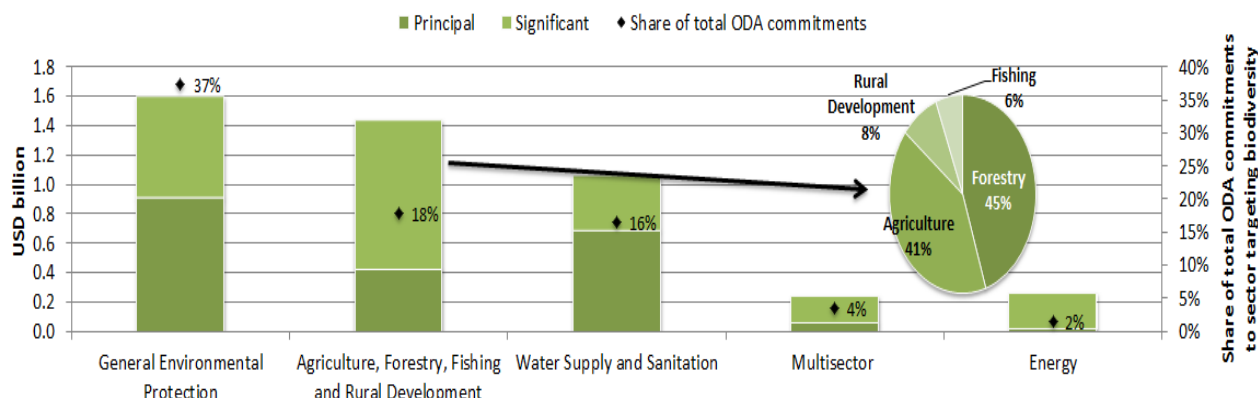
Biodiversity-related ODA is concentrated in few sectors

22. Biodiversity-related ODA is heavily concentrated in the general environment protection,¹⁷ agriculture, forestry, fishing and rural development, and water supply and sanitation sectors, with these sectors receiving 82% of total biodiversity-related ODA commitments in 2007-13 (Figure 4). Looking at biodiversity-related ODA as a proportion of total ODA to each sector can indicate the degree of biodiversity mainstreaming that is occurring. The top sectors for biodiversity mainstreaming are general environmental protection (37%), agriculture, forestry, fishing and rural development (18%), water supply and sanitation (16%) and tourism (11%).

23. While increasing the degree of biodiversity mainstreaming across all sectors and activities is important, there are some areas where there may be room for improvement. Biodiversity objectives are considered in a very low proportion of total ODA to industry (3%), mining (1%) and transport (0.1%), which are sectors that may negatively impact biodiversity, and therefore should consider biodiversity in their operations. There may also be opportunities for synergies between biodiversity and other development issues to be further exploited; for example, only 0.5% of ODA targeting the health sector has a biodiversity objective. The exploitation of synergies between biodiversity and food security appears to be slightly higher; 11% of ODA targeting agriculture and 26% of ODA targeting fishing has a biodiversity objective over 2007-13. However, these statistics illustrate the need to link biodiversity more strongly with core development objectives in order to better promote biodiversity conservation and sustainable use.

Figure 4. Top 5 sectors receiving bilateral biodiversity-related ODA

Annual average 2007-13, bilateral commitments, USD billion, constant 2012 prices



Source: OECD DAC Statistics, January 2015

Estimated bilateral support for capacity building is increasing over time

24. Partner countries have identified a lack of capacity as a key barrier to implementing measures for biodiversity conservation and sustainable use; indeed, lack of capacity is a barrier for developing countries in addressing all environmental challenges (OECD, 2012b). Support is needed, for example, to monitor and collect information on the degradation of biodiversity and ecosystem services, to make the economic case for greening development, for cross-sectoral co-ordination, for designing and enforcing plans and policies, and more (OECD, 2012b).

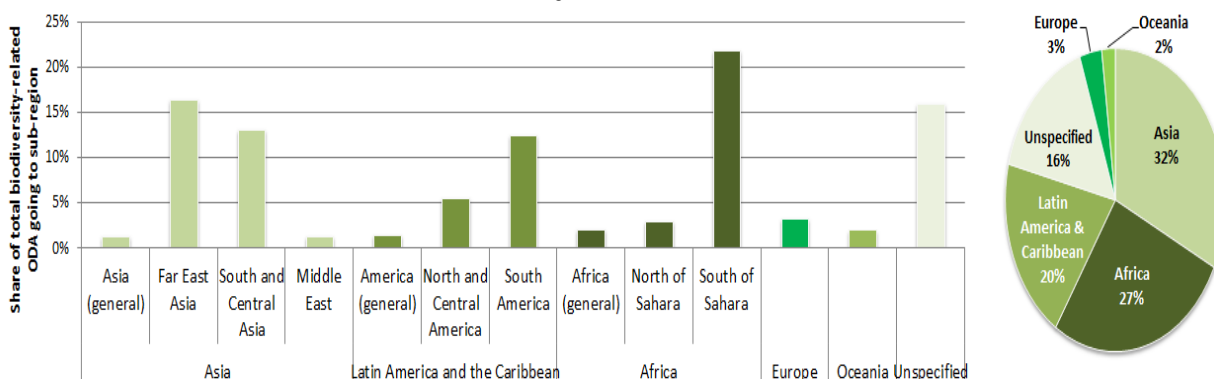
25. However, estimated bilateral support for capacity building has been increasing over time,¹⁸ rising from USD 0.9 billion per year in 2005-07 to USD 2.4 billion per year in 2011-13, representing a rise in the share of capacity building in total bilateral biodiversity-related ODA from 24% to 43%. This share ranges across regions, estimated to be over a third in Africa to over a half in Europe and Oceania, and is higher in Middle Income Countries than in Least Developed Countries and other Low Income Countries. In 2011-13, 71% of capacity building support targeted biodiversity as a significant objective, suggesting that biodiversity was integrated into broader capacity building activities. Most capacity building ODA is delivered through grants (90%), which may be more adapted to these activities.

26. The majority of estimated bilateral biodiversity-related ODA supporting capacity building in 2011-13 targets policy and administrative management (83%), particularly in the areas of environmental policy and forestry policy. ODA also supports policy and administrative management in the water, agriculture, fishing, trade and tourism sectors. Only 8% supports biodiversity-related research, education and training, and the remainder supports institutions and financial services.

Asia receives the highest volume, South America stands out in relative terms

27. Asia received the highest share of bilateral biodiversity-related ODA in 2007-13 (32%), followed by Africa (27%) with a further fifth going to Latin America and the Caribbean (LAC) and the remainder to Europe, Oceania and activities that cannot be broken down by region (e.g. supporting international research and events) (Figure 5). Looking at sub-regions, South America stands out as receiving a significantly higher share of biodiversity-related ODA (13%) than of total ODA (3%) (Figure 5). This may be partly driven by Brazil being the third highest country recipient over 2007-13, accounting for 6% of biodiversity-related ODA alone (Figure 6). Completing the top five recipients are India, Viet Nam, The People's Republic of China (China) and Indonesia, all of which have consistently been high recipients of biodiversity-related ODA since 2007.

Figure 5. Regional distribution of bilateral biodiversity-related ODA
Annual average 2007-13, bilateral commitments



Source: OECD DAC Creditor Reporting System, January 2015

28. South America is also the region where biodiversity is the most mainstreamed into development co-operation portfolios; on average, 14% of total ODA to South America targeted biodiversity over 2007-13 (the second highest region is Far East Asia, 7%). At the country level, six of the top ten countries with the highest share of biodiversity to total ODA are located in Latin America and the Caribbean (Figure 7).

Figure 6. Top 10 partner countries by volume of biodiversity-related ODA

Annual average 2007-13, bilateral commitments, USD million, constant 2012 prices

Country	USD million	Share of total biodiversity-related ODA
India	339	7%
Viet Nam	296	6%
Brazil	290	6%
China	234	5%
Indonesia	135	3%
Ethiopia	100	2%
Kenya	89	2%
Turkey	86	2%
Peru	80	2%
Bolivia	67	1%

Source: OECD DAC Creditor Reporting System, January 2015

Figure 7. Top 10 partner countries by share of biodiversity-related ODA in total ODA

Annual average 2007-13, bilateral commitments

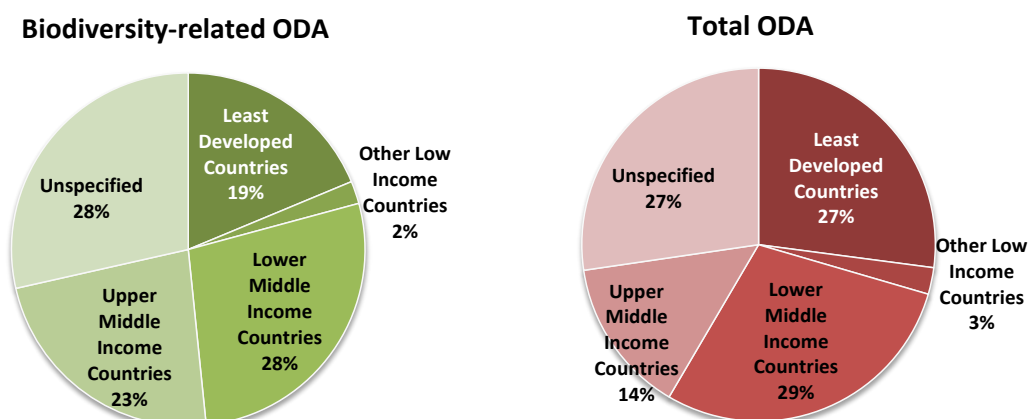
Country	Share of total ODA received that is biodiversity-related
Panama	45%
Guyana	34%
Brazil	30%
Azerbaijan	27%
Gabon	13%
Bolivia	13%
Peru	12%
Ecuador	12%
China	12%
Mauritius	11%
AVERAGE	4%

Source: OECD DAC Creditor Reporting System, January 2015

29. The focus of bilateral providers on Latin America and the Caribbean over 2007-13 (especially South America), particularly from Germany, Norway and Japan and in the areas of general environmental protection, water and forestry, may reflect that the LAC region has been identified as a high priority for investment in biodiversity. This finding comes from a range of studies and is related to its concentration of biodiversity hotspots¹⁹ (Myers et al., 2000), its endemic species density (Joppa et al., 2013) and its concentration of priority areas for adaptation of agriculture and biodiversity in the face of climate change (Hannah et al., 2013). Providers' focus on the LAC region may also indicate that these countries are placing a high priority on biodiversity in their development policy and planning, and that development co-operation providers are aligning with this priority.

30. Small island developing states (SIDS) and least developed countries (LDCs) are identified within CBD text as being priorities for international biodiversity finance.²⁰ One way to look at the priority providers are placing on biodiversity in their assistance to a country is to calculate the share of total bilateral ODA committed that targets biodiversity-related objectives. This gives an indication of the mainstreaming of biodiversity considerations into bilateral development co-operation to that country (but does not reflect financing that SIDS may receive from regional programmes or multilateral funds). When comparing across countries, almost two thirds of SIDS had a level of mainstreaming of biodiversity into total bilateral ODA received that is below the global average over 2007-13. However, there is significant variation across countries - Guyana and Mauritius are notable exceptions (Figure 7), as are Saint Kitts and Nevis, Jamaica and the Maldives, which have a level of biodiversity mainstreaming into total ODA received of just under 11%. Turning to LDCs, Figure 8 illustrates that they receive a lower share of biodiversity-related bilateral ODA than of total ODA from OECD DAC members (19% vs. 27%). Conversely, upper middle income countries (Upper MICs) receive a larger share of biodiversity-related ODA than of total ODA (23% vs. 14%). However, the study of ODA flowing to SIDS and to LDCs is incomplete because of the relatively large share of biodiversity-related ODA and total ODA that is "unspecified", and also the unknown level of flows from multilateral sources. To date, limited data and information on these activities mean that the total level of ODA targeting SIDS and LDCs is uncertain. Furthermore, in line with international principles of effective development co-operation, ODA should be delivered in line with priorities set by the partner country; if SIDS and LDCs are not prioritising biodiversity in their national plans and strengthening their country systems to support biodiversity activities, providers may be less able to focus their assistance on biodiversity.

Figure 8. Distribution of biodiversity-related ODA by income group
Annual average 2007-13, bilateral commitments



Source: OECD DAC Creditor Reporting System, January 2015

Biodiversity-related development finance from multilateral sources and non-DAC countries could be significant

31. Multilateral flows provide significant support for biodiversity, and have been estimated to be more than double bilateral ODA flows (Miller, 2014). One example is the Global Environment Facility (GEF), which mobilised USD 12.9 billion for biodiversity from 1991-2012, composed of USD 3.4 billion provided by national governments (including DAC members), and leveraged USD 9.5 billion as co-finance (GEF, 2012). Over 2014-18 (the sixth replenishment period) of the GEF, USD 1.4 billion will be allocated to the biodiversity focal area, making biodiversity the single largest focal area of the GEF. Turning to the World Bank, while it doesn't specifically track flows to biodiversity, its lending in environment and natural resources management increased from USD 2.7 billion in financial year (FY) 2008 to USD 6.1 billion in FY 2011, before falling to USD 2.5 billion in 2013 (CBD, 2014d).

32. Biodiversity-related development finance from non-DAC countries, such as China and Brazil, may also be important. While these flows are increasingly captured in OECD DAC statistics, none of these countries use the biodiversity Rio marker to report on biodiversity-related flows except for the United Arab Emirates, which reported to have committed USD 9.5 million to biodiversity over 2011-13. To give an idea of the magnitude of non-DAC development co-operation, a forthcoming study by the OECD DAC Secretariat finds that 27 non-DAC countries provided around USD 23.5 billion of gross development co-operation in 2013, which is more than 13% of the global total (OECD, forthcoming a).

33. France is the only country currently reporting on biodiversity-related other official flows (OOF) (i.e. non-concessional developmental flows), which totalled USD 114 million over 2007-13. This demonstrates that non-concessional finance flows for biodiversity are increasing in importance, but that this is an area where there are also significant financing and data gaps.

The effectiveness of biodiversity-related development finance is as important as its volume

34. The quantity of development finance provided, while important, is not an indication of its effectiveness in achieving biodiversity and development objectives. The international development co-operation community has agreed through the Paris Declaration on Aid Effectiveness (2005), the Accra Agenda for Action (2008) and the Busan Declaration on Effective Development Co-operation (2011) that effective development co-operation entails determination and ownership of development priorities by partner countries, a focus on achieving lasting positive results, inclusive development partnerships between provider and partner countries, and mutual transparency and accountability. In the context of biodiversity and development, development co-operation can be made more effective

by: rigorously identifying and managing trade-offs and synergies; supporting strong governance, institutions and legal frameworks; ensuring open, multi-stakeholder dialogue; working with and compensating local communities that may be negatively affected by interventions; adopting a precautionary approach; adopting a landscape or ecosystem approach; and pursuing policy coherence for development. Rigorous monitoring and evaluation processes can then be used to measure effectiveness, although the extensive geographic scale of biodiversity and ecosystem services and the long-time scales needed to see results pose specific challenges (Drutschinin, Casado-Asensio et al., 2015).

35. For positive results to be long lasting, it is essential that biodiversity considerations be mainstreamed into national, sectorial and local strategies, plans, policies and budgets, so that biodiversity becomes embedded in the country's institutional and policy framework (OECD, 2012a; Drutschinin, Casado-Asensio et al., 2015). Lasting positive results also require long-term, sustainable and diverse sources of finance. To this end, ODA can be used in a "smart" way to support the design and implementation of biodiversity policies and finance mechanisms in partner countries (OECD, 2013c), which is further explored in the following section of the paper.

Notes Section II:

- 15 This analysis is complementary to routine statistics produced by the OECD DAC Secretariat, including on biodiversity-related ODA. For more information, including the OECD data visualisation portal on biodiversity-related ODA, see www.oecd.org/dac/stats/biodiversity.htm.
- 16 The delivery channel is the first implementing partner, which has implementing responsibility over the funds, and is normally linked to the provider by a contract or other binding agreement, and is directly accountable to it (OECD, 2013b).
- 17 "General Environment Protection" covers activities concerned with conservation, protection or amelioration of the physical environment without sector allocation. The category comprises ODA to: environmental policy and administrative management; biosphere protection; site preservation; flood prevention/control; environmental education/training; environmental research; and a specifically-coded "biodiversity" sub-sector which covers the conservation, protection or amelioration of natural reserves and actions in the surrounding areas, and other measures to protect endangered or vulnerable species and their habitats.
- 18 There is not a specific code for capacity building in the OECD DAC CRS. It has been estimated in this paper based on biodiversity-related activities that target policy and administrative management, research, education and training, public/financial institutions and access to financial services, statistical capacity building and agricultural extension.
- 19 A biodiversity hotspot, as defined by Myers et al. (2000), is an area where exceptional concentrations of endemic species are undergoing exceptional loss of habitat.
- 20 For example, see CBD COP 12 Decision XII/3 paragraph 1(a), 2014.

III. LEVERAGING AND CATALYSING OTHER FORMS OF FINANCE²¹

Development co-operation can support the identification, design and implementation of other biodiversity policy instruments that generate finance

36. The magnitude of the estimated finance gap for biodiversity and ecosystem services emphasises the need for official development finance to catalyse and leverage other sources of finance - public and private, domestic and international. The public sector can be harnessed by increasing domestic revenues through, for example, environmental fiscal reforms (e.g. the removal of harmful subsidies) that generate then allocate more public finance to biodiversity and ecosystem conservation and use. Environmental fiscal reforms that introduce taxes, fees and charges on natural resource use, in order to internalise negative externalities on biodiversity and ecosystems can also catalyse and mobilise private sector finance. Other biodiversity policy instruments such as payments for ecosystem services (PES) and biodiversity offsets can also mobilise finance from the private sector (OECD, 2010b; OECD 2013c). ODA supporting funds dedicated to biodiversity and ecosystem services, such as Conservation Trust Funds, may also encourage co-financing from both the public and private sectors. Finally, ODA can support producers in partner countries to access markets for green products, which provide an incentive to use biodiversity-friendly production practices through a price premium for their products.

37. Partner countries are already implementing many biodiversity policy instruments that mobilise finance; for example, a review by the CBD of the implementation of the Strategy for Resource Mobilisation found that 59 developing countries have implemented fiscal reform measures, 63 have developed some form of payments for ecosystem services and 51 have established some form of markets for green products (CBD, 2014c). However, for these instruments to be effective, it is important that the right instrument is selected, reflecting country circumstances and context, that appropriate governance frameworks are in place, and that there is the necessary technical and institutional capacity in place to successfully design and implement the instrument (OECD, 2013c). These are elements that development co-operation providers can and are supporting, and there is scope for this support to grow, considering the increased focus on domestic resource mobilisation for biodiversity in partner countries.²² The following sections explore the more specific capacity needs and enabling conditions for four mechanisms, namely environmental fiscal reform, payments for ecosystem services, conservation trust funds, and markets for green products, focusing on increasing domestic public and private finance, and provide examples of how development co-operation can and is supporting these.²³

Identifying opportunities

38. Countries require capacity to fully identify their environmental challenges and priorities and their related funding and capacity gaps. A lack of capacity can make it difficult for countries to pinpoint their most salient environmental challenges, and to identify the instruments best suited to their domestic context to address these challenges (OECD, 2012b; OECD DAC ENVIRONET, 2012; Waldron et al., 2013). A broad policy mix comprised of regulatory approaches and economic, information and voluntary instruments is needed to most effectively address the biodiversity challenge. The appropriate policy mix will depend on the nature of the environmental problem and the drivers of loss, the socioeconomic, cultural and political circumstances of the country or sub-region, and the level of governance and institutional capacity (OECD, 2013c).

39. Development co-operation can provide technical assistance to help countries identify biodiversity funding needs, gaps, opportunities, context-appropriate financial mechanisms, and complementary instruments to form the policy mix best suited to country circumstances (OECD, 2012b; UNDP, 2014). The “Biodiversity Finance Initiative” is an example of this technical assistance in action (Box 2).

Box 2. The Biodiversity Finance Initiative (BIOFIN)

BIOFIN is a USD 15 million programme implemented by the United Nations Development Programme (UNDP), with financial support from the European Union (EU), Germany and Switzerland. BIOFIN is working with partner countries to help them develop national resource mobilisation strategies for biodiversity and ecosystem services. UNDP has developed a methodology, called the "BIOFIN Workbook", which includes a thorough review of the current policy, institutional and fiscal frameworks affecting biodiversity and ecosystem services and of the impact, effectiveness, alignment and coherence of public policies and institutions. BIOFIN helps countries identify the finance gaps for biodiversity and ecosystem services, and assess what mechanisms and policies appropriate to the domestic context could be used to fill them. The programme aims to help countries fund their National Biodiversity Strategy and Action Plans (NBSAPs), thereby implementing the Strategic Plan for Biodiversity 2011-2020 and the twenty Aichi Targets at the national level. BIOFIN is currently being trialled in 19 countries across Asia, Africa and Latin America.

Source : UNDP (United Nations Development Programme) (2014), The Biodiversity Finance Initiative – An overview and key progress summary, information document, UNEP/CBD/WGRI/5/INF/13, 10 June 2014, and UNDP (2013b), "Transforming Biodiversity Finance: The Biodiversity Finance (BIOFIN) Workbook for assessing and mobilizing financial resources to achieve the Aichi Targets and to implement National Biodiversity Strategies and Action Plans", Version 3.0 Draft for Distribution, June 4, 2013.

Environmental fiscal reform

40. Integrating biodiversity and ecosystem services considerations into national budget processes provides opportunities to improve biodiversity conservation and sustainable use. Through environmental fiscal reform (EFR), fiscal instruments such as taxes and subsidies can be used to directly change behaviour (e.g. production and consumption processes) to become more biodiversity friendly, while also raising revenue. If this revenue is earmarked, this offers a source for more long term, transparent and sustainable domestic finance for biodiversity (OECD, 2013c). However, earmarking revenue may also have the disadvantage of reducing the fairness of the budgetary process through which ministries compete for funds, and of shifting the accountability and responsibility for efficient resource allocation to the managers of specific programmes or agencies (OECD, 2013c).

41. Another entry point in the national budget process to increase finance for biodiversity and ecosystem services is to change how the domestic budget is allocated, towards activities supporting the conservation and sustainable use of biodiversity (OECD, 2012b; Parker et al., 2012).

42. The following capacities and enabling conditions are needed for environmental fiscal reform (Table 1).

Table 1. Capacity needs and enabling conditions for environmental fiscal reform

Individual capacity	Organisational capacity	Enabling conditions
<ul style="list-style-type: none"> Trained economists to establish appropriate tax/subsidy rates Environmental staff have the analytical, economic and communication skills to identify and make the case to the finance/planning sector ministry decision makers for the environmental taxes/removal of perverse subsidies Skilled advocates to secure political acceptance and public support for EFR through e.g. awareness campaigns 	<ul style="list-style-type: none"> Finance ministry has tools and mechanisms to assess economic value of environmental policies Environment agencies participate in drafting budget proposals and finance ministry adopts its guidance Processes for dialogue and consultation, information dissemination and advocacy with key stakeholders (including via civil society groups) 	<ul style="list-style-type: none"> Environmental stakeholders involved in institutional process of preparing national budget Established tax system capable of levying, collecting and redistributing revenues Clear rules and principles for public expenditure management, supported by a well-functioning audit system

Source: OECD (2012b), Greening Development: Enhancing Capacity for Environmental Management and Governance, OECD Publishing, and OECD (2013c), Scaling Up Finance Mechanisms for Biodiversity, OECD Publishing.

43. A number of these conditions are often absent in all countries, but can be more acute in partner countries. The types of challenges encountered when trying to implement EFR and shift domestic budget allocation towards biodiversity-related activities include the following (OECD, 2013c; OECD, 2013d; OECD, 2012b; Dalal-Clayton and Bass, 2009):

- A lack of sufficient capacity to effectively design, implement, monitor and evaluate these measures;
- Multiple tax exemptions, tax rates that do not reflect the size of the externality that they are targeting (a challenge also encountered in developed countries);
- Incoherence with other environmental policy instruments;
- The inability to levy, collect and redistribute the revenue, in part due to the presence of a large informal sector;
- Weak governance structures and corruption, which undermine these measures;
- A lack of awareness or understanding of the importance of the environment (including biodiversity and ecosystem services) for core policy issues such as poverty reduction and economic growth;
- Difficulty in making a “business case” for biodiversity and ecosystem services due to a lack of sufficient data, information, skills and capacity.

44. Development co-operation providers can support each of the individual and organisational capacity measures identified in Table 1 to help integrate biodiversity and ecosystem services into national budget processes. The commonly encountered challenges above underline the importance of having a stable governance and institutional framework, which development co-operation providers can also support.

45. One area where providers have been focusing their efforts is in helping partner countries to develop the “business case” for increased attention to biodiversity and to communicate this to decision makers in the ministries of finance and planning. Support is provided to help Ministries of Environment use a language that is understood by the finance and planning ministries, such as presenting the economic value of biodiversity and ecosystem services, and linking biodiversity and ecosystem services to traditional government priorities such as poverty reduction, agriculture and health (OECD, 2012b; IIED and UNEP-WCMC, 2014). Technical skills supported for this include undertaking biodiversity and ecosystem service valuation studies, writing credible, technically sound budget submissions, mapping ecosystem services and developing ecosystem service indicators (IIED and UNEP-WCMC, 2013a; OECD, 2012b; IIED and UNEP-WCMC, 2014). A few specific examples are illustrated in Box 3 below.

Box 3. Supporting the business case for biodiversity

The International Institute for Environment and Development (IIED), and the United Nations Environment Programme World Conservation Monitoring Centre (UNEP-WCMC) have developed a short guide called “Developing a ‘business case’ for biodiversity – Tips and tasks for influencing government and the private sector” (IIED and UNEP-WCMC, 2014). This guide is developed on the basis of experiences shared by Botswana, Namibia, the Seychelles and Uganda in the context of the “NBSAPs 2.0 Mainstreaming Biodiversity into Development” initiative, and proposes a simple, accessible framework for countries to use as well as a list of resources to draw upon.

The Conservation Strategy Fund, financed by the United States Agency for International Development (USAID) and a range of foundations, held a course in *Economic Tools for Conservation and Infrastructure Planning in the Albertine Rift* in 2012, aimed at biodiversity practitioners from Uganda, Rwanda, Kenya, Tanzania and the Democratic Republic of Congo. This two-week course trained participants in, *inter alia*, environmental valuation, cost-benefit analysis and communication and negotiation techniques (CSF, 2014). These can all be useful for creating and communicating a business case for Environmental Fiscal Reform.

Source : IIED and UNEP-WCMC (2014), “Developing a ‘business case’ for biodiversity – Tips and tasks for influencing government and the private sector”, NBSAPs 2.0: Mainstreaming Biodiversity and Development, IIED and UNEP-WCMC, London and Cambridge; Conservation Strategy Fund (CSF) (2014), Biodiversity Understanding in Infrastructure and Landscape Development (BUILD), <http://conservation-strategy.org/en/node/1031#.U-EilPmSxHV>, last accessed 5 August 2014.

Payments for ecosystem services

46. Payments for ecosystem services (PES) are a voluntary mechanism where the user or beneficiary of a specific, well-defined ecosystem service pays the individual or community responsible for ensuring that this ecosystem service is provided. The payment is conditional upon provision of the ecosystem service (Wunder, 2005). PES have been used for carbon sequestration services, watershed services, the preservation of scenic beauty (with eco-tourism in mind) and biodiversity (Ingram et al., 2014; OECD, 2010b). It is estimated that today there are over 300 PES programmes implemented worldwide (OECD, 2010b). To produce good returns and avoid unintended negative social side effects, designing effective PES requires careful attention to specific capacity needs of local communities and to the creation of favourable enabling conditions to establish functioning PES markets (Muradian et al., 2013; TEEB, 2009). These are summarised in Table 2.

Table 2. Capacity needs and enabling conditions for payments for ecosystem services

Individual capacity	Organisational capacity	Enabling conditions
<ul style="list-style-type: none"> Land users and ecosystem beneficiaries are aware of the principles of PES and how to engage in programmes and agreements Experts (external or internal) can identify metrics and carry out assessments to inform targeting of payments for public PES programmes Land users and beneficiaries have the capacity to establish reasonable proposals (both content and price), and to monitor and measure environmental performance 	<ul style="list-style-type: none"> Tools and systems are in place to consolidate and build on existing foundation of research concerning biological patterns and processes, local environmental services and needs for conservation and sustainable use Systems are in place to ensure that payments are delivered efficiently and to the appropriate recipient, avoiding elite capture and other corruption and governance issues Institutions are present to co-ordinate small landholders who otherwise would not have access to finance 	<ul style="list-style-type: none"> Inclusion of ecosystem service provisions in sector strategies, Poverty Reduction Strategy Papers, etc. and policy coherence Legal framework in place that supports buying and selling of ecosystem services Land tenure arrangements/property rights are clear and enforceable

Source: OECD (2013c), Scaling-Up Finance Mechanisms for Biodiversity, OECD Publishing, drawing on OECD (2012b), Greening Development: Enhancing Capacity for Environmental Management and Governance, OECD Publishing.

47. Types of challenges encountered in all countries, but which may be more acute in partner countries, include the following (Ingram et al., 2014; OECD, 2013c; Muradian et al., 2013; Sandker et al., 2012; OECD, 2010b):

- Local communities lack the capacity to fully take part in PES negotiations, or negotiations are closed and opaque, leading to arrangements that may harm the rural poor;
- Local communities lack the capacity and capital for the land/resource management required for the PES programme to work;
- Governments lack the capacity to enforce the programme and to monitor and report on results over time, to see whether the programme is achieving its objectives and to improve it;
- Land tenure/property rights are not clearly defined and enforced, sometimes leading to illegal land use and appropriation which can undermine the success of the programme;
- Governments and local communities are not well-informed about how PES programmes work;
- The value of the alternative use of the land or body of water is high (e.g. mining, oil palm plantations) and is therefore difficult for a PES programme to compete with unless the community has strong intrinsic motivations to conserve and sustainably use the biodiversity and ecosystems;
- High transaction costs (e.g. multiple, complex contracts).

48. Development co-operation activities can help to address these barriers, for example in the design of programmes to disseminate information on PES to the poor, building the capacity of local institutions to design PES programmes, to negotiate PES agreements and to monitor and enforce them, providing access to inputs, credit or insurance for these programmes, training local communities in sustainable land/watershed management, and ensuring that indigenous communities and other marginalised groups are fully consulted and involved in the design and implementation process. (Ingram et al., 2014; OECD 2013c; OECD, 2010b). Box 4 presents a few examples.

Box 4. Examples of development co-operation activities supporting PES programmes

Development co-operation activities funded by the German government have been supporting PES for a number of years, particularly in Latin America. Support goes predominantly to the early stages of establishing a PES: designing, implementing and monitoring the PES, creating suitable framework conditions, clarifying property rights, ecosystem service valuation, and creating new markets (BMZ and GTZ, 2010). For example, German development co-operation supported the Peruvian Ministry of Environment and National Water Authority to implement a PES aiming to restore and conserve ecosystem services in the upper watershed areas in the department of San Martín (BMZ and GTZ, 2010). This is a biodiversity-rich area, but pressures from population growth have led to the conversion of a lot of rainforest into townships and farmland. Through multi-stakeholder consultations, it was agreed that the restoration and conservation of the area would be funded by a fee added to the water bills of local inhabitants. Local farmers agreed to refrain from certain agricultural practices in the upper watershed area, and to introduce agro-forestry systems in the lower watershed area, in return for technical assistance to develop economic alternatives. German development co-operation helped to implement this PES through public awareness building, environmental education, and capacity building in government (BMZ and GTZ, 2010).

The European Commission, through its "EU-Brazil Support Facility to Sector Dialogues", supported an intensive dialogue on PES with the Brazilian Ministry of Environment from 2011 to 2013. This dialogue took place through multi-stakeholders seminars and workshops, technical visits and videoconferences, and joint publications, to analyse and compare experiences from Brazil, Europe and other countries and to assess the possibilities of replicating and up-scaling PES. In addition to consolidating knowledge among participants from both public and private sectors, this dialogue also contributed to the elaboration of federal legislation and policy on "Pagamento por Serviços Ambientais". While the latter is still a law under review by the National Congress (PL 795/07), elements of PES are already enforced through other laws such as the Brazilian Forest Code and the National Policy on Water Resources (Diálogos Setoriais, União Europeia Brasil, n.d.).

Sources : BMZ (Federal Ministry for Economic Cooperation and Development) and GTZ (Deutsche Gesellschaft für Technische Zusammenarbeit) (2010), Biodiversity in Germany Development Cooperation, GTZ, Eschborn. The example of the EU-Brazil Support Facility to Sector Dialogues was provided by the European Commission.

Markets for green products

49. Markets for green products encompass a wide range of goods and services, including those relevant to the sustainable use of biodiversity and ecosystem services. These include those that are based on ecosystem services, such as eco-tourism, goods that have been produced using production methods that have a lower impact on biodiversity than business-as-usual (e.g. sustainably-certified timber, fish and agriculture), and goods whose consumption will have a lower impact on the environment than standard goods of that kind (e.g. biodegradable detergent) (TEEB, 2009). Such markets can be facilitated by eco-labelling and certification schemes, which inform consumers of the products' biodiversity-friendly qualities, and by green public procurement, which stimulates demand for these products (OECD, 2013c). These markets generate finance through consumers paying a price premium for these biodiversity-friendly goods and services; one study estimates that certified products alone could generate USD 10.4 billion to USD 30 billion annually by 2020 (Parker et al., 2012). This demand for biodiversity-friendly products and services provides a financial incentive for producers to adopt biodiversity-friendly production methods and approaches. The potential for growth in these markets is not unlimited, however; not all consumers will demand biodiversity-friendly products and will be willing to pay the associated price premium (OECD, 2013c).

50. For markets for green products to succeed, a number of capacities and enabling conditions are needed (Table 3).

Table 3. Capacity needs and enabling conditions for implementing markets for green products

Individual capacity	Organisational capacity	Enabling conditions
<ul style="list-style-type: none"> • Trained consultants to assist in the implementation of eco-labelling standards • Trained experts to carry out certification and accreditation • Consumer awareness and understanding of the eco-labelling landscape (e.g. through sustainable purchasing guidelines) 	<ul style="list-style-type: none"> • Consulting, certification and accreditation services to carry out certification pre-assessment, assessment, and periodic surveillance audits • Distribution channels to deliver certified products in a competitive manner (particularly for local communities marginalised from premium markets) • Co-ordination and harmonisation between standards 	<ul style="list-style-type: none"> • Green procurement policies (including public procurement policies) • Sectors characterised by strong standards and good regulatory oversight • Good practice codes for eco-labelling schemes and mechanisms to assess them

Source: OECD (2013c), Scaling-up finance Mechanisms for Biodiversity, OECD Publishing, drawing on OECD (2012b), Greening Development: Enhancing Capacity for Environmental Management and Governance, OECD Publishing.

51. However partner countries have encountered a number of challenges, including the following (OECD, 2013c; OECD, 2013d):

- A lack of financial and technical capacity can prevent producers from making high-quality products, subsequently making it difficult to qualify for eco-labelling schemes;
- Small-scale producers can lack the economies of scale needed to access these markets;
- Weak governance hinders monitoring, reporting and verification, and compliance and enforcement of the certification standards.

52. Development co-operation providers can assist partner countries to access these high-potential markets by providing start-up finance and capacity building activities. Box 5 provides some examples.

Box 5. Examples of development co-operation facilitating access to green markets

The ACDI/VOCA Agricultural Cooperatives in Ethiopia (ACE) project, funded by the United States Agency for International Development (USAID), is an example of development co-operation providers facilitating partner country access to green markets. ACE helped small-scale Ethiopian farmers to access international markets for their coffee by addressing all barriers in the value chain, such as providing technical assistance to help improve the quality of the coffee, creating cooperatives and larger cooperative "unions" to achieve the economies of scale needed to reach international markets, and improving efficiency by facilitating direct exports. As a result of the improved coffee quality and the economies of scale created by the formation of cooperatives, the Ethiopian coffee cooperatives were able to register to be certified with eco-labels. As of 2006, 24 of the Ethiopian coffee cooperatives were registered and certified by "Fair Trade," and over 70 were certified organic (Dempsey and Campbell, 2006).

The Austrian Development Agency (ADA) is partnering with the AGRANA group, a food processing company, to help small scale farmers in Michoacán, Mexico to increase the social and environmental standards of their strawberry and blackberry production in order to obtain Rainforest Alliance certification. This EUR 400 036 (about USD 545 000) project, of which ADA is providing EUR 200 000 (about USD 272 000), will provide: training for farmers and field workers in areas such as ecosystem conservation and integrated crop management; equipment to the farms such as plants and trees for reforestation; and internal capacity development to AGRANA staff so they can replicate this type of project with farmers in other countries. The project outcomes will be the implementation of sustainable agriculture methods, the active protection of the environment around the farms, and improved working conditions for 1 060 employees of 28 farms. This project accesses private sector finance for biodiversity conservation and sustainable use both directly by leveraging co-financing from the partner firm AGRANA, and indirectly by allowing farmers to access international markets for their products, thus allowing them to cover the costs of using sustainable agriculture methods.

The Danish International Development Agency (Danida) has been supporting economically, socially and environmentally sustainable enterprises in Honduras and Guatemala, particularly targeting rural producers in poor and indigenous communities, as part of its Regional Environmental Programme in Central America (PREMACA). The programme supports a value chain approach, helping small businesses to develop sustainable production targeted at clearly identified green markets. To implement the programme, Danida has partnered with local private sector exporters' associations and NGOs specialised in green business development in these two countries. As of 2012, some 150 "eco-enterprises" had been supported, generating 10 000 – 15 000 jobs and USD 4 million in income over a period of 5-6 years. Increased income has come from producers being able to sell their products for higher prices through accessing environmental certification (e.g. through exporting organic products). Monitoring shows that the production of these certified products has also delivered positive environmental outcomes.

Sources: The USAID example is documented in Dempsey and Campbell (2006), "A Value-Chain Approach to Coffee Production: Linking Ethiopian Coffee Producers to International Markets", World Report, Spring 2006: Speciality Coffee; Improved Market Linkages and Increased Profits. The ADA example was provided to the OECD ENVIRONET Secretariat by the Austrian Development Agency. The Danida example was provided to the OECD ENVIRONET Secretariat by Denmark, and was complemented by Grosen, J. (2012), "Green Growth in Practice – Lessons Learnt from Promoting Eco-Enterprises in Honduras and Guatemala under Danida's Regional Environmental Programme in Central America", March 2012.

Dedicated funds and alliances can leverage funds and increase effectiveness

53. In addition to supporting capacity building in partner countries to mobilise finance for biodiversity, development co-operation providers can also leverage finance through the creation of dedicated funds. Dedicated funds for biodiversity and ecosystem services established or supported by (groups of) development co-operation providers may help mobilise funding from NGOs, foundations, partner country governments, and other providers. These funds can help to increase the effectiveness of development co-operation, by streamlining development co-operation activities in the area of biodiversity and ecosystem services, and increasing the alignment of biodiversity-related development finance with partner countries' biodiversity priorities (Drutschinin, Casado-Asensio et al., 2015). They can also help to make funding for biodiversity more long-term, stable and predictable (CFA, 2008). Finally they have a role to play in generating co-financing to support sustainable use of biodiversity and ecosystem services. However, disadvantages can include high administrative costs, exposure to market volatility, possible loss of capital, and the fact that many development co-operation agencies are not structured to follow up on the effectiveness of very long-term investments or to remain accountable to taxpayers on the use of these public funds (CFA, 2008). Box 6 illustrates some conditions for the successful establishment and running of conservation trust funds.

Box 6. Conditions for successful Conservation Trust Funds identified in partner countries to date

- The fund has a long-term fundraising strategy, and the funding commitment is over a long time period, e.g. at least ten to fifteen years.
- There is local ownership over the choice and design of projects that the funds are used to support.
- There is widespread support from a range of different stakeholders for achieving biodiversity conservation and sustainable development, but in particular from the government.
- There is a basic institutional framework (legal, financial) established in the partner country that people trust.
- The fund has clear targets and a clear monitoring and evaluation framework.

Sources: CFA (2008) Rapid Review of Conservation Trust Funds, Second Edition, May 2008; Ruhweza (2009), Using Trust Funds to Channel Payments for Biodiversity Conservation: Lessons Learned from the Mgahinga and Bwindi Impenetrable Forest Conservation Trust, case study prepared for the WGRAB Workshop on Innovative International Financing for Biodiversity Conservation and Sustainable Use, 2 July 2009, OECD, Paris; World Bank (2012), Expanding Financing for Biodiversity Conservation – Experiences from Latin America and the Caribbean, Environment and Water Resource Occasional Paper Series, World Bank, Washington.

54. Box 7 illustrates a few examples of dedicated conservation trust funds and alliances in practice.

Box 7. Examples of dedicated funds and alliances

The *Critical Ecosystem Partnership Fund* (CEPF), whose members are France, the European Union, Japan, Conservation International, the Global Environment Facility, the World Bank and the MacArthur Foundation, provides grants to NGOs and private sector organisations to help protect biodiversity hotspots in partner countries and countries with economies in transition. Since its inception in 2000, CEPF has committed USD 148 million in grants, with which grant recipients have leveraged USD 340 million for the conservation of biodiversity hotspots; an investment ratio of over 2:1. This money has supported over 1700 civil society organisations to conserve 21 of 35 hotspots in 60 countries and territories (CEPF, 2012).

The French Global Environment Facility (*Fonds Français pour l'Environnement Mondial*, FFEM) was established by the French Government in 1994 to co-finance activities targeting six global environmental areas, of which biodiversity is one. On average, FFEM estimates that for every EUR 1 (USD 1.3) it grants, an additional EUR 9 (USD 11.5) is raised through public and private co-financing (FFEM, 2013). From 1994-2013, FFEM has granted EUR 135.9 (USD 153.4) million to activities targeting biodiversity (126 projects in total). Of this, 67% is concentrated in Sub-Saharan Africa and the Mediterranean. In 2013, biodiversity comprised almost 45% of FFEM's funding, which predominantly focused on the integrated management of coastal and marine areas, and on biodiversity finance mechanisms e.g. access to green markets (FFEM, 2013). Supporting biodiversity finance mechanisms is one of the FFEM's five strategic priority areas for 2013-2014.

The U.S. Tropical Forest Conservation Act (TFCA) of 1998 is an example of a long-standing U.S. debt relief programme designed to capitalise Conservation Trust Funds (CTFs). As of December 2013, 19 TFCA agreements had been concluded with 14 partner countries. Together, these agreements will generate more than USD 326 million to help protect and sustainably manage tropical forests in partner countries. Participating conservation NGOs have contributed USD 22 million to these agreements. In addition, and often overlooked as serving to augment the direct deposit amounts capitalising the CTFs, are the significant income from the deposits, the cost-share from grant beneficiaries and the co-financing arrangements with other providers, including the private sector. Together, these funds have contributed significantly to biodiversity conservation worldwide, principally through habitat conservation.

The Conservation Finance Alliance (CFA) was founded in 2002 to enhance collaboration among institutions and organisations involved in the sustainable financing of biodiversity conservation. Three of the largest financial supporters of this initiative are the German Development Bank (KfW), the French Global Environment Facility (FFEM) and the French Development Agency (AFD). This initiative aims to help indirectly increase finance to biodiversity from non-ODA sources, through facilitating the sharing of ideas and experience. It does this through Working Groups on Innovative Financing Mechanisms, on Protected Areas Financing, and on Environmental Funds (CFA, 2014).

Sources: CEPF (Critical Ecosystem Partnership Fund) (2012), "CEPF achievements", www.cepf.net/Documents/CEPF_Impact_web.pdf; FFEM (Fonds Français pour l'Environnement) (2013), Rapport Annuel 2013, http://www.ffem.fr/webdav/site/ffem/shared/ELEMENTS_COMMUNS/U_ADMINISTRATEUR/5-PUBLICATIONS/Rapport%20annuel/2013/RA2013_FFEM-version-finale_FR.pdf; CFA (Conservation Finance Alliance) (2014), <http://conservationfinance.org/>. The U.S. TFCA example was provided by the United States Agency for International Development.

Environmental and social safeguards for biodiversity finance mechanisms are essential

55. Safeguards need to be applied when implementing biodiversity finance mechanisms to ensure that the protection of biodiversity and people's livelihoods are maximised, while any potential for unintended negative environmental and social impacts is minimised (Ituarte-Lima et al., 2014; OECD, 2013c).²⁴ It is important that the appropriate biodiversity finance mechanisms are chosen for the country context, that the distributional impacts upon all stakeholders are considered, particularly local and indigenous communities, and that measures intended to fund the conservation of biodiversity in one area do not subsequently put undue pressure on biodiversity in another location (Ituarte-Lima et al., 2014; OECD, 2013c). Following extensive research and an international consultation process, four voluntary guidelines for biodiversity finance mechanism safeguards were proposed at CBD COP12 (Box 8). These guidelines reflect international principles for effective development co-operation, which are discussed earlier in this paper.

Box 8. Proposed voluntary guidelines for biodiversity finance mechanisms

1. **Biodiversity underpins local livelihoods and resilience.** The underpinning role of biodiversity and ecosystem functions for local livelihoods and resilience, as well as biodiversity's intrinsic values, shall be recognised in the design and implementation of financing mechanisms.

2. **People's rights, access to resources and livelihoods.** Rights and duties in financing mechanisms should be defined in a fair and equitable manner, with the effective participation of all actors concerned and with the prior informed consent of indigenous peoples and local communities in projects that may have consequences for their rights, as recognised in some national legislation, or free prior informed consent as recognised in other national legislation and the United Nations Declaration of the Rights of Indigenous Peoples (UNDRIP).

3. **Local and country-driven/specific processes linked to the international level.** Safeguards in financing mechanisms for biodiversity should be grounded in local realities and supported by country-driven and specific processes, and should make use of existing relevant international legal and policy frameworks, and observe, at a minimum, internationally agreed commitments regarding sustainable use of biological diversity and livelihoods, inter alia, under the CBD, UNFCCC, international human rights treaties and UNDRIP.

4. **Governance, institutional frameworks and accountability.** Appropriate institutional frameworks, transparency, accountability, and compliance mechanisms with enforceable rights and responsibilities, constitute prerequisites for safeguards in financing biodiversity to function properly.

Source: Ituarte-Lima, C. et al. (2014), Biodiversity financing and safeguards: lessons learned and proposed guidelines, Stockholm: SwedBio/Stockholm Resilience Centre at Stockholm University, Information Document UNEP/CBD/COP/12/INF/27 for the 12th Conference of the Parties of the Convention on Biological Diversity in Pyeongchang Korea.

56. There are a number of ways that safeguards for biodiversity policy instruments can be implemented, all of which are also all long-standing elements of good practice in development co-operation. One measure is to conduct an ex-ante assessment of the proposed mechanism, such as a strategic social and environmental assessment (SSEA) or an environmental impact assessment (EIA), to be able to adjust the mechanism to avoid foreseeable negative impacts. Another safeguard measure is to ensure that a rigorous monitoring, reporting and evaluation system is in place, to evaluate whether there are negative impacts arising from the mechanism once it is in place, and to be able to adjust it accordingly. Furthermore, all stakeholders should be able to easily participate in an open, transparent dialogue during the design and the implementation of the mechanism, to ensure that their concerns and rights are properly taken into account (Drutschinin, Casado-Asensio et al., 2015; OECD, 2013c). Finally, there should be a consideration of how the biodiversity policy instrument fits into the broader policy landscape of the country, in an effort to achieve policy coherence for biodiversity, ecosystem services and development. Policies and mechanisms developed in isolation may undermine each other, leading to unintended adverse effects and lack of progress.

Notes Section III:

21 This section draws on OECD (2013c) *Scaling Up Finance Mechanisms for Biodiversity*.

22 See COP12 Decision XII/3.

23 Three further "biodiversity finance instruments" are offsets, ODA and biodiversity considerations reflected in climate change funding.

24 For a further discussion on environmental safeguards, see OECD (2013c), in particular the summary in chapter 9, and Drutschinin, A., Casado-Asensio, J et al. (2015), "Biodiversity and development co-operation", OECD Development Co-operation Working Papers, No.21, OECD Publishing, particularly the sections on managing for results and on monitoring and evaluation.

IV. SUMMARY POINTS AND AREAS FOR FUTURE RESEARCH

57. A significant increase in long-term and sustainable finance for biodiversity conservation and sustainable use is essential to meet the internationally agreed goals of the CBD, the MDGs, and in future the post-2015 Sustainable Development Goals. Biodiversity finance will need to come from a variety of sources; public and private, domestic and international. This paper has focused on trends in bilateral ODA, as this is where biodiversity finance data is most complete due to the comprehensive system for measurement and monitoring international public development finance. The paper also considers the role of biodiversity-related ODA in supporting the development and implementation of other biodiversity policy instruments that are able to mobilise finance. Finance flows from multilateral providers and non-DAC providers may also be significant, however their exact magnitude is not known.

58. Bilateral ODA commitments to biodiversity have, on the whole, been rising over the past decade, with an increasing focus on activities targeting synergies across multiple environmental objectives such as between biodiversity and climate change mitigation, climate change adaptation, desertification and local environment. Biodiversity-related ODA commitments are concentrated in activities related to environmental policy support, technical assistance and capacity building; and in the water supply and sanitation, agriculture and forestry sectors. However, there may be scope for further integrating biodiversity into health, education and tourism activities, and for taking biodiversity into greater consideration in mining, transport and construction activities. Achieving the conservation and sustainable use of biodiversity and ecosystem services depends not just on an increase in finance and activities primarily targeting biodiversity, but also on the integration of biodiversity into other sectors where there may be synergies to harness, or harmful effects to avoid or minimise. This more holistic approach may also be recommended to ensure that biodiversity and ecosystem services are fully integrated into the post-2015 Sustainable Development Goals.

59. The effectiveness of biodiversity-related development finance is as important, or more important, than its volume. Effectiveness entails ownership of biodiversity and development priorities by partner countries, a focus on achieving positive lasting results, inclusive development partnerships between provider and partner countries, and mutual transparency and accountability, as laid out in the Paris Declaration on Aid Effectiveness (2005), the Accra Agenda for Action (2008) and the Busan Declaration on Effective Development Co-operation (2011). A related OECD working paper identifies a number of success factors for biodiversity and development activities to achieving lasting positive results on the ground. This includes the rigorous identification and management of trade-offs and synergies; strong monitoring and evaluation, coupled with inclusive multi-stakeholder engagement to ensure learning and adjustment of policies to improve performance over time; use of landscape or ecosystem approaches; strong governance and institutions to manage biodiversity and development challenges; and pursuing policy coherence for development (Drutschinin, Casado-Asensio et al., 2015).

60. Positive, lasting results also require sustainable, long-term finance. While ODA has a unique role to play in supporting partner countries in their efforts to conserve and sustainably use biodiversity, even when scaled up, it will remain one of many sources of finance to achieve biodiversity and development goals. Development co-operation can support partner countries to design and implement policy instruments for biodiversity that are able to mobilise greater levels of finance, such as environmental fiscal reform and domestic budget allocation, payments for ecosystem services, conservation trust funds, biodiversity offsets, market creation mechanisms for green products, and more. This can involve support for the development of the technical skills

and knowledge necessary for the effective design, implementation and enforcement of these instruments, such as the scientific knowledge base, skills in economic valuation of biodiversity and ecosystem services, skills in sustainable land and water management, and skills in measurement, monitoring and evaluation.

61. A pre-requisite for any of these mechanisms is having a strong, stable and competent government and legal institutions. For example, as discussed earlier in the paper, environmental fiscal reform cannot work without a functioning tax system capable of levying, collecting and distributing revenues, and payments for ecosystem services cannot work without clear and enforceable land tenure/property rights to create enabling conditions for markets to function. This paper illustrates that development co-operation providers are well-placed to assist with the strengthening of these institutions in partner countries which in turn can boost the capacity to address biodiversity and development on the ground. Furthermore, development co-operation can facilitate the communication and multi-stakeholder participation necessary for these biodiversity finance mechanisms to work in an environmentally and socially sustainable way, such as helping the environment ministry develop a convincing case for biodiversity and ecosystem services for the ministries of finance and planning, and facilitating the participation of local communities in negotiations around the design and implementation of PES. Supporting strong governance, institutions, and multi-stakeholder participation should help ensure that, with the implementation of biodiversity finance mechanisms, the protection of biodiversity and people's livelihoods are maximised while safeguarding against unintended negative social and environmental impacts.

62. In order to develop a more detailed understanding of financing for development in support of biodiversity and ecosystem services, there is a need to expand data coverage, to develop ways to assess how well the finance is being targeted, and to explore the effectiveness and impact of each biodiversity finance mechanism. A statistical system integrating all bilateral flows, multilateral flows and development finance flows from non-DAC countries would be valuable to build a more complete picture of official development finance flows to biodiversity. More analysis on official development finance disbursements for biodiversity at the individual activity level would improve understanding from a recipient perspective, as disbursements show actual payments entering the partner country in each year. Knowing how well biodiversity-related development finance is responding to need is also crucial. It could be useful to develop appropriate indicators to see whether some partner countries are over- or under-funded, e.g. in relation to their level of poverty and their biodiversity assets, and country priorities and plans.

63. A range of biodiversity policy instruments can also mobilise finance, and development co-operation can support partner countries to adopt these. It could be valuable to explore the effectiveness and the impact of each biodiversity finance mechanism in partner countries and across a range of different contexts, based on experiences to date, which in turn would provide an evidence base for improving and targeting development co-operation. This, combined with a knowledge of the particular circumstances under which each biodiversity policy instrument is likely to be most effective, can inform development co-operation decision-making on how shape programmes and activities. Finally, it could be useful to further analyse the extent to which providers align with partner country priorities and co-ordinate with each other when addressing biodiversity and ecosystem services issues.

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ANNEX 1. DIFFERENT CALCULATIONS OF CURRENT AND REQUIRED FUNDING FOR BIODIVERSITY

Each estimate of current finance to biodiversity and biodiversity finance needs have been calculated by different sources, using different methodologies and in different contexts, therefore it is important to only use them as illustrative of a substantial funding gap to biodiversity. The paragraphs below give a bit more information about where the data comes from.

Current bilateral ODA is calculated directly from the Rio markers in the DAC Creditor Reporting System (CRS) database, and is the annual average of biodiversity-related ODA over 2011-13.

The estimate of total annual funding to biodiversity between 2005 and 2008 (Waldron et al., 2013) is a compilation of spend by bilateral and multilateral providers, private philanthropy, national in-country spending, and Conservation Trust Funds and debt swaps.

Global Canopy estimates total funding to biodiversity in 2010 by pulling together data from a variety of sources including academic journal articles, the OECD, the FAO, and international conservation NGOs (Parker et al., 2012). However, an important caveat is that there lacks an explanation as to the compatibility of methods or price level.

The estimate of annual funds needed to protect and effectively manage all terrestrial sites of global conservation significance (McCarthy et. al., 2012) focuses on the cost of implementing Aichi Target 11 and Aichi Target 12, and therefore reflects only part of the cost of implementing the Strategic Plan for Biodiversity 2011-2020.

The report by the High-Level Panel on Global Assessment of Resources for Implementing the Strategic Plan for Biodiversity 2011-2020 is the first formal assessment of the resources required to implement the Strategic Plan for Biodiversity 2011-2020. However, the High-Level Panel cautions the following: “these figures need to be treated with caution especially as the Panel is very clear that these resource requirements neither should nor could be met by biodiversity finance alone. Additionally...there is potential for considerable synergies among the [Aichi] Targets. Thus, it is expected that co-ordinated action could substantially reduce the total estimate” (CBD, 2012d).

ANNEX 2. KEY CBD TEXTS MANDATING THE PROVISION OF FINANCE FOR BIODIVERSITY

Reference	Title	Year	Key Action(s)
Article 20	Financial Resources	1992	Contracts Parties to provide financial resources for biodiversity, and in particular highlights the necessity for developed countries to provide <i>new and additional</i> financial and technical support for biodiversity to developing countries
Article 21	Financial Mechanism	1992	States that there will be a mechanism for the provision of financial resources to developing country Parties for purposes of this Convention on a grant or concessional basis. Note that the Global Environment Facility is now a key mechanism through which finance flows to support the Convention's objectives.
CBD COP 9 Decision IX/11	Review of implementation of Articles 20 and 21	2008	Establishes the Strategy for Resource Mobilization in Support of the Achievement of the Convention's Three Objectives for the Period 2008-2015
CBD COP 10 Decision X/3	Strategy for resource mobilization in support of the Convention's three objectives	2010	Identifies concrete activities, initiatives, targets to achieve the goals of the strategy for resource mobilisation, and indicators to monitor the implementation of strategy.
Strategic Plan for Biodiversity 2011-2020	Aichi Target 20	2010	States that "By 2020, at the latest, the mobilisation of financial resources for effectively implementing the Strategic Plan 2011-2020 from all sources and in accordance with the consolidated and agreed process in the Strategy for Resource Mobilization should increase substantially from current levels." (emphasis added)
CBD COP 11 Decision XI/4	Review of implementation of the strategy for resource mobilization, including the establishment of targets	2012	Sets the following targets, inter alia: (a) Double total biodiversity-related international financial resource flows to developing countries...by 2015, and at least [maintain] this level until 2020 (b) By 2015, at least 75% of Parties to have included biodiversity in their national priorities or development plans and have therefore made appropriate domestic financial provisions (c) By 2015, at least 75% of Parties have reported domestic biodiversity expenditures, as well as funding needs, gaps and priorities (d) By 2015, at least 75% of Parties have prepared national financial plans for biodiversity, and 30% of those Parties have assessed and/or evaluated the values of biodiversity and its components.
CBD COP12 Decision XII/3	Resource mobilisation	2014	Adopts the following targets: (a) Double total biodiversity-related international financial resource flows to developing countries...by 2015, and at least [maintain] this level until 2020 (b) Endeavour for 100%, but at least 75%, of Parties to have included biodiversity in their national priorities or development plans by 2015, and to have made appropriate domestic financial provisions (c) Endeavour for 100%, but at least 75%, of Parties provided with adequate financial resources to have reported domestic biodiversity expenditures, as well as funding needs, gaps and priorities, by 2015 (...) (d) Endeavour for 100%, but at least 75%, of Parties provided with adequate financial resources to have prepared national financial plans for biodiversity by 2015 (...) (e) Mobilize domestic financial resources from all sources (...)

ANNEX 3. OECD DAC STATISTICS, RIO MARKER METHODOLOGY AND JOINT TASK TEAM

Defining ODA, OOF and TOSSD

Official development assistance (ODA) is currently defined as flows to countries on the DAC List of ODA Recipients and to multilateral institutions provided by official or executive agencies. ODA must have the economic development and welfare of developing countries as its main objective, and be concessional in character - either flowing as grants or concessional loans (i.e. softer than market terms), estimated at a grant element of at least 25 % calculated at a discount rate of 10% (OECD, 2013b).

Other official flows (OOF) comprises transactions from governments to developing countries that do not qualify as ODA, either because they are not primarily aimed at development, or because they are not sufficiently concessional, i.e. loans extended at market rates (OECD, 2013b). Only France has marked OOF with the biodiversity Rio marker to date.

To support the UN's work on a financial framework for post-2015 goals, the OECD DAC has carefully examined how to modernise the DAC statistical system, measures and standards to ensure the integrity and comparability of data on development finance and create the right incentive mechanisms for effective resource mobilisation. Recent decisions under the DAC will modernise ODA measurement, develop a new, broader statistical measure of total official support for sustainable development (TOSSD) and measure the amounts of private finance mobilised through official development finance interventions. A further element of the modernisation is the altered treatment of loan concessionality, in order to make it easier to compare the effort involved with that in providing grants.²⁵

DAC members who report to the OECD DAC Creditor Reporting System are Australia, Austria, Belgium, Canada, Czech Republic, Denmark, EU Institutions, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Japan, Korea, Luxembourg, the Netherlands, New Zealand, Norway, Poland, Portugal, Slovak Republic, Slovenia, Spain, Sweden, Switzerland, the United Kingdom, and the United States.

The Rio markers

Background

Since 1998 the DAC has monitored official development finance targeting the objectives of the Rio Conventions through its Creditor Reporting System (CRS) using the "Rio markers". Data for years 1998-2006 were obtained on a trial basis; reporting became mandatory starting with 2007 flows. Every development finance activity reported to the CRS should be screened and marked as either (i) targeting the Conventions as a 'principal objective' or a 'significant objective', or (ii) not targeting the objective. There are four Rio markers, covering: biodiversity, desertification, climate change mitigation, and climate change adaptation. The adaptation marker was introduced in 2010.

The Rio markers were designed to measure and monitor official development finance targeting the objectives of the Rio Conventions, so as to track the degree to which members are integrating and mainstreaming environmental (e.g. biodiversity) considerations into their development co-operation activities, and to support members in preparing their National Communications or their National Reports to the Conventions. The markers therefore indicate

providers' policy objectives in relation to each activity. Activities marked as having a "principal" biodiversity objective would not have been funded but for that objective; activities marked "significant" have other prime objectives but have been formulated or adjusted to help meet biodiversity concerns.

The Rio marker methodology allows for the identification of official development finance activities with biodiversity-related policy objectives, and gives an *approximate* quantification of financial flows targeting objectives of the Rio conventions, given the data reflects the full value of official development finance activities. In marker data presentations the figures for official development finance targeting biodiversity as a "principal" or "significant" objective should be shown separately and the sum referred to as the "estimate" or "upper bound" of biodiversity-related ODA. In reporting against quantified international finance goals, many DAC members draw on the Rio marker data, but in doing so many report only a proportion of official development finance targeting biodiversity as a *significant* objective, estimating this through applying coefficients to adjust the share of finance reported. However, there is no agreed or common approach for this practice, and some countries use alternative methodologies and not Rio marker data (OECD, forthcoming b).

For more information on the Rio markers, including access to the data, an interactive data visualisation tool for biodiversity-related ODA, and statistical flyers on biodiversity-related ODA, please see our website, <http://oe.cd/RM>.

Rio marker definition and criteria for eligibility for biodiversity-related official development finance

Biodiversity-related official development finance is defined as activities that promote at least one of the three objectives of the Convention: the conservation of biodiversity, sustainable use of its components (ecosystems, species or genetic resources), or fair and equitable sharing of the benefits of the utilisation of genetic resources.

An activity can be marked with the biodiversity Rio marker if it contributes to:

- a) protection of or enhancing ecosystems, species or genetic resources through in-situ or ex-situ conservation, or remedying existing environmental damage; or
- b) integration of biodiversity and ecosystem services concerns within recipient countries' development objectives and economic decision making, through institution building, capacity development, strengthening the regulatory and policy framework, or research; or
- c) developing countries' efforts to meet their obligations under the Convention.

The activity will score "principal objective" if it directly and explicitly aims to achieve one or more of the above three criteria. For examples of typical activities, see <http://www.oecd.org/dac/stats/46782010.pdf>.

The Joint Task Team on the Rio Markers

A Joint Task Team²⁶ of the DAC Network on Environment and Development Co-operation (ENVIRONET) and Working Party on Development Finance Statistics (WP-STAT) on improvement of Rio markers, environment and development finance statistics was revived in November 2013. This collaboration focuses on the overarching goal to ensure that DAC methodologies and data remain the reference for the international community in measuring Official Development Assistance (ODA) and non-export credit Other Official Flows (OOF) related to climate change, biodiversity, desertification and other environmental concerns. This is being achieved through a programme of work over 2014-15 to review options to improve the quality and robustness of the Rio markers, increase the coverage of DAC statistics on environment-related development finance flows (i.e. multilateral flows and OOF), support international communities to use or to build on the existing DAC data and systems to increase transparency and support greater accountability in reporting against the Rio Conventions, and undertake greater communication and outreach. Four experts' meetings of the Joint Task Team have been held, in March,²⁷ June²⁸ and September²⁹ 2014, and in May 2015.³⁰ Additionally, a training workshop on accessing and using the Rio markers was held in September 2014,³¹ and a workshop with partner countries was held in May 2015.³²

Notes Annex 3.

25 More information is available in the DAC High Level Meeting Final Communiqué, 16 December 2014, <http://www.oecd.org/dac/OECD%20DAC%20HLM%20Communique.pdf>.

26 See "Terms of reference and scope of work for a Joint ENVIRONET and WP-STAT Task Team on Improvement of Rio markers, environment and development finance statistics". For further information please contact Valerie.Gaveau@OECD.org and Stephanie.Ockenden@OECD.org.

27 www.oecd.org/dac/environment-development/joint-tt-march-2014.htm

28 www.oecd.org/dac/environment-development/joint-tt-june-2014.htm

29 www.oecd.org/dac/environment-development/joint-tt-september-2014.htm

30 www.oecd.org/dac/environment-development/rio-markers-joint-tt-may-2015.htm

31 www.oecd.org/dac/environment-development/training-workshop.htm

32 www.oecd.org/dac/environment-development/rio-markers-workshop-may-2015.htm

