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**Research Report**

## Why we need more and better biodiversity aid

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## Why We Need More and Better Biodiversity Aid

### Summary

Despite increased conservation efforts, biodiversity continues to decline, while international targets to conserve biodiversity remain out of reach. Mobilising financial resources for conservation investments is considered crucial to addressing the direct and indirect drivers of biodiversity loss and to setting incentives for conserving biodiversity. Aid is, and will likely continue to be, the main source of funding biodiversity conservation in developing countries. Mobilising domestic funds still presents a challenge to many developing countries although some domestic budgets for biodiversity show upward trends. Donor countries have repeatedly committed to increasing funds to support conservation measures in developing countries but the modest achievements of international conservation efforts have created doubts with regard to its effectiveness.

However, research shows that aid can play a crucial role in biodiversity conservation in developing countries. Having said that, aid needs to be better aligned with biodiversity strategies and to aim at mainstreaming.

The main messages of this Briefing Paper are as follows:

- **The trend of increased biodiversity aid must continue to address the funding gap, in particular in underfunded biodiversity-rich countries.** According to estimations, between USD 150 billion and USD 440

billion per year is needed to conserve biodiversity. Biodiversity-rich countries in particular are significantly underfunded and face high biodiversity loss rates.

In these countries, domestic budgets are not sufficient by far; hence biodiversity aid needs to be increased. Besides aid, financial resources from other sources (e.g. domestic, private) also need to be mobilised.

- **Biodiversity aid must support the implementation of national biodiversity strategies, implementing the objectives of the Convention on Biological Diversity (CBD), and must foster the mainstreaming of biodiversity considerations into other sectors (e.g. agriculture, trade).** Biodiversity strategies and the mainstreaming of biodiversity considerations are seen as key instruments in fostering biodiversity conservation. Increases in aid marked as targeting biodiversity as a “significant” objective (meaning prime objectives other than biodiversity conservation) indicate that biodiversity has been increasingly mainstreamed.
- **The effectiveness of biodiversity aid must be improved.** To better assess the effectiveness of biodiversity-related aid, an adequate quantification of needs (i. e. frequent and consistent assessment of the biodiversity status across countries) and expenditures (i. e. comprehensive tracking of biodiversity funding with a consistent methodology) is required.

## International targets and commitments

Biodiversity is vitally important for human wellbeing but is being lost at unprecedented rates. It is estimated that up to 2,000 species vanish each year, and this is only a rough figure.

The history of ambitious but unfulfilled biodiversity targets shows that conservation efforts have to be improved significantly. Already in 2002, the Parties to the Convention on Biological Diversity (CBD) committed “to achiev[ing] by 2010 a significant reduction of the current rate of biodiversity loss”. The same year, the target was incorporated in the Millennium Development Goals (MDGs). However, it was not possible to reduce the overall rate of loss. In 2010, the Parties to the CBD adopted the Aichi Biodiversity Targets and again committed to “tak[ing] effective and urgent action to halt the loss of biodiversity in order to ensure that by 2020 ecosystems are resilient and continue to provide essential services”. The biodiversity-related Sustainable Development Goals (SDGs) fully build on these targets. Yet, on-going conservation efforts are unlikely to be reflected in improved trends in the state of biodiversity by 2020.

Mobilising financial resources for conservation investments is considered crucial if biodiversity is to be conserved and the sustainable use of biodiversity and ecosystems enhanced. Addressing the drivers of biodiversity loss (e.g. deforestation, increased per capita consumption patterns) requires down-scaling unsustainable production and providing adequate financial incentives to stop activities which are harmful and to engage in conservation. Aid is still, and will continue to be, the main source of funding biodiversity conservation in developing countries. Mobilising domestic funds presents a challenge to the limited budgets of developing countries that need to satisfy important, yet strongly competing sectors.

Donor countries have repeatedly committed to increasing funds in support of conservation measures. In 2014, at the Twelfth Meeting of the Conference of the Parties to the Convention on Biological Diversity (CBD) in Korea, governments agreed to double financial resources to biodiversity protection, mainly flowing to least-developed countries and small island developing states. Both the Addis Ababa Action Agenda, the outcome document of the Financing for Development conference in 2015, and the SDGs of the 2030 Agenda call for resource mobilisation from all sources and at all levels to conserve and sustainably use biodiversity. In addition, developed countries were to aim “to implement fully” their Official Development Assistance (ODA) commitments, including the commitment by many developed countries of providing 0.7% of ODA/GNI (gross national income) to developing countries and 0.15 to 0.20% to least-developed countries.

Nonetheless, even when funding is increased, the achievements of biodiversity-related aid are not very clear. Despite slight increases in funds for biodiversity since the 1980s, biodiversity is still being lost. To better understand the role

that aid can play in biodiversity conservation and to increase its effectiveness, we need to know more about (1) the needs for conservation, (2) the financial means, and (3) the determinants of aid effectiveness with regard to biodiversity.

### (1) What is needed to conserve biodiversity?

Slowing biodiversity loss is a long-term task that comprises several actions and actors on different scales. In order to tackle and slow the rate of biodiversity loss, governments, donors, civil society and the private sector need to focus on tackling the direct and indirect drivers of biodiversity loss. Direct drivers – the result of indirect drivers – primarily occur at the local and regional levels and include: climate change, nutrient loading and pollution, land-use change, species introduction, and overexploitation of resources. Indirect drivers include economic activity levels (e.g. international trade), demographic growth, and cultural preferences (e.g. per capita consumption patterns linked to individual wealth and beliefs). In order to tackle these direct and indirect drivers, there seems to be a general agreement along two main lines: (a) adopt national biodiversity strategies and mainstream biodiversity considerations, and (b) upscale international and domestic financial resources and realign existing, partly biodiversity-harming, expenditures to biodiversity objectives.

#### (a) Biodiversity strategies and mainstreaming

National biodiversity strategies, implementing the CBD, are a key instrument to conserving biodiversity by giving priority to biodiversity concerns. These strategies need to be implemented and regularly revised with regard to the agreed targets. Today, 185 countries have adopted biodiversity strategies, of which 89 countries have developed new strategies since 2010. In addition to biodiversity strategies, biodiversity considerations need to be mainstreamed into (cross-)sectoral and development plans at global, national and local level. Mainstreaming can be carried out in different ways: e.g. integrating biodiversity objectives into current development models, incorporating biodiversity economic values into cost-benefit analyses for private and public projects, and dismantling adverse sectoral incentives/subsidies (e.g. forest clearing as a requisite for acquiring land titles; tax exemptions for mining activities; and subsidies for forest plantations development leading to natural forest clearance). Nevertheless, it is critical that mainstreaming addresses downscaling unsustainable production and consumption patterns in a meaningful way. Also, without a politically supported strategy on downscaling unsustainable production and consumption, any effort to protect biodiversity will remain incomplete.

#### (b) Financial upscaling

Among the various estimates available on current and required expenditures for biodiversity, there is a trend suggesting the existence of a biodiversity funding gap. The High-Level Panel on Global Assessment of Resources for

Implementing the Strategic Plan for Biodiversity 2011 – 2020 concluded that – in order to reach the Aichi Biodiversity Targets with estimated costs of between USD 150 billion and USD 440 billion per year – a substantial up-scaling of financial resources will be required. In particular, key countries are highly underfunded. For example, the 40 most underfunded countries harbour 32 % of all threatened mammalian diversity (Waldron et al., 2013).

The financial gap cannot be addressed by biodiversity budgets alone. Investments in biodiversity usually come along with multiple benefits for other sectors (e. g. forestry, agriculture, water). Existing expenditures, for example in the agricultural sector, can be realigned and used to achieve multiple benefits, including biodiversity.

## (2) What is being done financially?

Efforts and resources to protect and conserve biodiversity have increased in recent years. However, we lack an exact quantification of conservation investments and funding sources due to missing data and varied reporting and accounting methodologies. Total annual expenditures on global biodiversity protection for 2001–2008 are estimated to amount to approximately USD 21.5 billion (Waldron et al., 2013). Biodiversity aid is generally targeted to countries with greater biodiversity conservation needs as well as to countries with higher governance scores. Top recipient countries are India, Brazil, China, Mexico and Indonesia (Miller, Agrawal, & Timmons Roberts, 2013).

### *Bilateral Official Development Assistance (ODA)*

Total bilateral biodiversity-related ODA commitments by Organisation for Economic Co-operation and Development/Development Assistance Committee (OECD-DAC) members increased over the past decade, reaching USD 6.44 billion per year on average in the period 2012–14. This amounts to 4.8 % of total bilateral ODA commitments by OECD-DAC members.

Considerations for biodiversity are increasingly being mainstreamed. Financial resources allocated to activities that aim at biodiversity conservation as a “principal” objective were quite stable between 2006 and 2012. The increase in bilateral biodiversity-related ODA during this period is therefore largely attributable to an increase in ODA marked as targeting biodiversity as a “significant” objective (meaning other prime objectives than biodiversity conservation, see Fig. 1). Between 2012 and 2014, ODA that targeted biodiversity as a significant objective reached USD 3.95 billion on average per year (61 %).

The top 10 donors accounted for nearly 90 % of total biodiversity aid flows, according to estimates for 1980 – 2008. The United States was the largest bilateral donor (7 % of total biodiversity aid committed), followed by the Netherlands and Germany (both 4 %). Looking at the more recent period 2012 –2014, Germany, the United States and the EU institutions together provided 45 % of total biodiversity-related ODA.

### *Multilateral Official Development Assistance (ODA)*

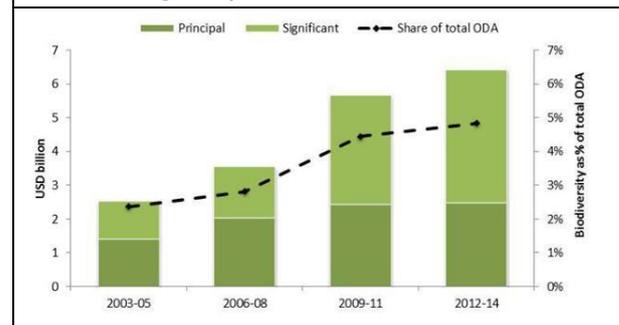
Multilateral flows are estimated to be more than double bilateral flows. The World Bank (31 % of all biodiversity aid) and the Global Environment Facility (GEF) (28 %) are the largest donors (Miller et al., 2013). Multilateral biodiversity-related ODA allocated through the GEF has been relatively stable since 2002, although the amount of financial resources provided to the GEF by donor countries has been increasing over time. For 2014–2018, donor countries pledged to provide USD 4.43 billion through the GEF, including USD 1.30 billion for biodiversity.

### *Domestic funding*

Domestic funding is understood as national spending (e.g. national biodiversity conservation budgets; protected area entrance fees; concessions). Although information and data on domestic funding for biodiversity conservation is limited, it is estimated that, on average, approximately USD 16–20 billion per year are invested at a global scale.

Worldwide domestic biodiversity funding accounts for approximately 90 % of total annual biodiversity funding, yet with wide country-level variations. In developing countries only 13 % of biodiversity investments come from national budgets, whereas in developed countries 97 % of biodiversity investments are sourced from national budgets (Waldron et al., 2013). However, domestic budgets for biodiversity have shown upward trends in a number of developing countries.

**Figure 1: Trends in biodiversity-related ODA, 3-year average, 2005–2014**



Source: Organisation for Economic and Development [OECD], (2016)

## (3) Is biodiversity funding effective?

Considering the modest success of biodiversity conservation in halting the loss of biodiversity, policymakers want, and need, to know how much each US dollar contributes to reducing biodiversity decline, for example, how much they have to spend for a 10 % reduction in biodiversity decline. It is therefore crucial to know what works in stopping biodiversity loss, and how much it will cost.

For the assessment of the effectiveness of biodiversity aid, biodiversity funding needs to be linked to a measurable

result in biodiversity conservation at output, outcome or impact level. The output level refers to the measures taken (e. g. establishment of a protected area), the outcome level relates to behavioural changes (e. g. reduction in poaching), while the impact level reflects changes in biodiversity (e. g. number of different species). This effectiveness assessment, however, is faced with several methodological and practical challenges.

Three challenges hamper the analysis of how effectively biodiversity funding contributes to the conservation of biodiversity and its sustainable use (Stepping & Meijer, forthcoming). First, although a limited number of indicators are available to measure biodiversity aspects at country level in a consistent and comparative way, those indicators are not necessarily the best to measure biodiversity status in its multiple dimensions because they are not impact indicators or only measure specific ecosystem components. Second, biodiversity aid reporting methods do not reveal the exact funding amount for projects' biodiversity component and vary among countries. Third, changes in biodiversity status are empirically and conceptually difficult to attribute to aid activities because of the complex functioning of ecosystems, the many factors influencing its status, and the time lag before changes in biodiversity status are measurable.

Still, the evidence on the effectiveness of biodiversity aid is growing. There is research suggesting that funding for marine and terrestrial protected areas is effective (Waldron & Miller, forthcoming). Most studies focus on specific projects or specific donors, but have not looked into the effectiveness of biodiversity aid at a global scale, nor from the perspectives of a country comparison or an ecosystem services' impact.

There are studies available suggesting that conservation finance is able to slow or halt decline, but it takes 5–20 years for finance to have an impact (Waldron & Miller, forthcoming). Such a delayed effect is problematical because in most biodiversity-rich countries in the world declines takes place quickly, whereas decisions happen slowly – and to make matters worse – assessing effects and needs happens even more slowly. Yet, the distribution – that is, matching financial means with needs – is crucial because countries with the worst predicted declines often have the lowest budgets.

### Concluding remarks

International funding commitments show that biodiversity conservation is on the political agenda of many countries. Still, it remains to be seen whether the financial means already pledged by developed countries will be provided. It is clear that the existing funding gap needs to be closed and that for many developing countries aid will remain the main source. Biodiversity aid can play a crucial role for conservation when the commitments support the implementation of national biodiversity strategies of recipient countries and foster the mainstreaming of biodiversity considerations into other sectors. Assessing the effectiveness of biodiversity-related aid, however, remains a challenge, and improvements are needed. First, the adequate quantification of needs requires a more frequent and more consistent assessment of the biodiversity status across countries. Second, biodiversity funding needs to be tracked from all sources, including international and national as well as public and private; for all types, including direct and mainstreamed funding; over time; and with a consistent methodology.

### References

- Miller, D., Agrawal, A., & Timmons Roberts, J. (2013). Biodiversity, governance, and the allocation of international aid for conservation. *Conservation Letters*, 6, 12–20.
- Organisation for Economic Co-operation and Development. (2016). *DAC Statistics: Biodiversity-related Official Development Assistance*. Paris: Author.
- Stepping, K., & Meijer, K. (Forthcoming). *The challenges of assessing the effectiveness of biodiversity-related development aid*. Resubmitted.
- Waldron, A., & Miller, D. (Forthcoming). *Quantifying the impact of conservation investment and human pressures on global biodiversity*. Submitted.
- Waldron, A., Mooers, A.O., Miller, D.C., Nibbelink, N., Redding, D., Kuhn, T.S., ...Gittleman, J.L. (2013). Targeting global conservation funding to limit immediate biodiversity declines. *Proc Natl Acad Sci USA*, 110(29), 12144–12148.

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