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SOURCEBOOK

ON SUSTAINABLE FINANCING FOR BIODIVERSITY, ECOSYSTEMS & PROTECTED AREAS IN THE WESTERN BALKANS

Mladen Lazić and Lucy Emerton

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SOURCEBOOK
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Reflecting wider regional, European and global concerns, this sourcebook deals with the topic of why, how and which financing mechanisms can be used to strengthen biodiversity conservation and sustainable development.

It seeks to equip public sector environmental and economic planners with information about sustainable financing approaches, instruments and real-world case studies, as well as to distil concrete lessons learned and recommendations about needs, opportunities and ways forward in enhancing the financial sustainability of biodiversity, ecosystems and protected areas in the Western Balkans.

AUTHORS:

Mladen Lazić is an economist and political scientist who received his Bachelor's degree from McGill University in Montreal, Canada, and obtained his master's degree in European Integration at the University of Belgrade, Faculty of Political Science. He has been working with the Serbian Ministry of Finance since 2003 as the Head of Section for Programming of EU funded Projects and Development Aid and the Head of Technical Secretariat for Preparation, Monitoring, and Reporting of the Public Financial Management Reform Program. He is a certified trainer for the EU Instrument for Pre-Accession Assistance and Project Cycle Management and holds a ToT certificate on the Economic Valuation of Ecosystem Services. He is involved in regional projects related to the above-mentioned fields.

Lucy Emerton is an environmental economist specialising in biodiversity and ecosystem valuation, and the development of innovative conservation finance and incentive mechanisms. She has been working for the last 30 years as a technical and policy advisor to a wide variety of government, non-governmental, United Nations and private sector organisations worldwide, across more than 70 countries in Africa, Asia, Europe, the Middle East, Australasia and Latin America – including in the Western Balkans region. Lucy is currently Environmental Economics and Finance Director of the Environment Management Group, a consultancy group and think-tank providing business planning advice and technical support in environmental sustainability to the corporate sector, governments and international agencies. She serves as International Expert on Ecosystem Assessment and Valuation for the GIZ / ORF BDU project.

Foreword:

Setting the policy (and political) context for the protection of biodiversity globally, as well as in the Western Balkan region, is an engaging exercise. In 2015 the German Federal Ministry for Economic Cooperation and Development (BMZ) commissioned the *Deutsche Gesellschaft für Internationale Zusammenarbeit* (GIZ) to implement the Open Regional Fund for South-East Europe – Biodiversity (ORF BD) project, aiming to enhance regional cooperation on integrating biodiversity issues into development planning. An urgent need to conduct a comprehensive action on sustainable finances for biodiversity was emphasised in the ecosystem services assessment and valuation (ESAV) component, the one I was in charge of as a senior manager. Together with the project partners a decision was made to move in the direction of an integrated approach, since it should bring about the desired progress and contribute to achieving the defined goals. On the ground it meant that, endeavouring to mainstream biodiversity into multilateral sectoral, and particularly financial planning, there was a need to commence the process of building key stakeholders' capacities to look for new options and mechanisms that may provide funds needed for conservation. Consequently, this process served to contribute to the overall sustainability and to increase accountability of a wider group of stakeholders. In 2018, the new ORF was commissioned for Implementation of Biodiversity Agreements (ORF BDU). Building on previous achievements, the project brings forward key recommendations in order to further strengthen regional cooperation in the Western Balkans in terms of meeting international obligations for preserving biodiversity as well as EU-related obligations. From the very beginning, in collaboration with the BMZ-commissioned and GIZ-implemented Sectoral Programme on Implementing the Convention of Biological Diversity opt for the Western Balkans to pilot the latest training on sustainable finances for biodiversity, the fundamental know-how was provided to key regional players.

The ORF BDU supported regional technical and experts platforms, in particular the Biodiversity Task Force of South East Europe (BDTF SEE) and Expert Group on Ecosystems Services Assessment and Valuation (ESAV EG), quickly putting in practice the knowledge acquired, and immensely assisting in framing the needs and selecting the most applicable sustainable finances mechanisms for biodiversity, ecosystems and protected areas in the Western Balkan regional context. Vast contributions were also received from other relevant organisations working in the region, in particular the International Union for Nature Conservation – Regional Office for Eastern Europe and Central Asia (IUCN ECARO), also acting as the BDTF Secretariat.

Addressing the priorities set by regional stakeholders, and making use of valuable inputs on practical and policy-relevant information provided by the experts platforms, the ORF BDU commissioned an expert team, consisting of Mr Mladen Lazić and Ms Lucy Emerton, to develop a sourcebook with real-world cases and lay out why, how and which financing mechanisms can be used to strengthen the Western Balkans-tailored biodiversity conservation while contributing to sustainable development.

Conservation of biodiversity in not a cost-free, not even a low-cost activity. Economic instruments give signals to producers and consumers to behave in a more biodiversity-sustainable way. Nonetheless, the funding will still remain inefficient if the integrated and intersectoral approach is not in place. Therefore, a glossary on finances for biodiversity and protected areas was also included in this sourcebook, aiming to ensure that we all speak the same language – and fully understand what is behind the terminology, what is the importance for sectors involved, and, eventually, how to raise awareness and exploit the untapped potential of integrated approaches.

The global processes are set to emphasise sustainable development and environmental conservation as cross-cutting goals. The European Union's Green Deal is a fundamental part of the EU approach for implementing the United Nations' 2030 Agenda and Sustainable Development Goals (SDG). This sourcebook on sustainable financial mechanisms for biodiversity, ecosystems and protected areas in the Western Balkans reflects the strong commitment of the Western Balkans and our partners, as well as of the GIZ, to supporting integration of biodiversity issues into sectoral and development planning. Moreover, it aims also to contribute to biodiversity finances debate and global processes on resource mobilisation.

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Acronyms & abbreviations

BIOFIN	Biodiversity Finance Initiative of the United Nations Development Programme
BMZ	Bundesministerium für wirtschaftliche Zusammenarbeit und Entwicklung (German Federal Ministry for Economic Cooperation and Development)
CEFTA	Central European Free Trade Agreement
CFA	Conservation Finance Alliance
CNF	Caucasus Nature Fund
EFT	Ecological-fiscal transfers
EIB	European Investment Bank
EU	European Union
EUR	Euros
FMO	Nederlandse Financierings-Maatschappij voor Ontwikkelingslanden N.V. (Dutch Development Bank)
GIZ	Deutsche Gesellschaft für Internationale Zusammenarbeit GmbH (German International Development Cooperation)
IADB	Inter-American Development Bank
IUCN	International Union for Conservation of Nature
KfW	Kreditanstalt für Wiederaufbau (German Development Bank)
OECD	Organisation for Economic Cooperation and Development
PA	Protected area
PES	Payments for ecosystem services
PONT	Prespa Ohrid Nature Trust
USD	United States Dollars

INTRODUCTION:
What is sustainable financing and why does it matter?

Identifying biodiversity costs and funding gaps

The costs of biodiversity conservation are high and wide-ranging. At a global level, it has been calculated that something between USD 150 billion and USD 440 billion a year is required to fund the Aichi Biodiversity Targets (CBD 2014), while the costs of maintaining an effective and globally-representative system of protected areas are estimated to range from USD 12 billion to USD 77 billion (Bruner et al. 2004, James et al. 1999, McCarthy et al. 2013, Waldron et al. 2013). Within Europe, it costs EU member states some EUR 7 billion a year just to maintain the network of Natura 2000 sites and national protected areas, in addition to spending EUR 2.8 billion on species conservation and EUR 4.4 billion on high natural value farming (Kaphengst et al. 2011).

In addition, biodiversity typically incurs a large opportunity cost. This refers to economic activities that are diminished or lost when it is necessary to restrict land and resource uses in the interest of conservation, or to forego particular development opportunities. For example, decrease in agricultural production from setting aside land in protected areas to achieve mammal conservation targets has been estimated at USD 200-300 billion a year – almost ten times as much as direct management expenditures (Barth et al. 2016). In Europe alone, opportunity costs contribute a massive 80 per cent of the EUR 10.6 billion annual outlays on implementing EU biodiversity policy; the bulk of these costs arise from restrictions on land management and the use of scarce financial and human resources that could be deployed for other purposes or developments (Kaphengst et al. op. cit.).

It is therefore hardly surprising that it remains a major challenge to secure sufficient financial resources to cover the costs of biodiversity conservation. In total, global funding to biodiversity is estimated at around USD 52 billion a year (Parker et al. 2012) – a tiny proportion of the hundreds of billions of dollars required to achieve the Aichi Biodiversity Targets. All over the world, conservation agencies report major funding shortages. Even protected area managers in North America estimate that around a fifth of their budget requirements remain unmet (Balmford et al. 2003). Similarly, EU funding to the Natura 2000 network only meets an estimated 20 per cent of needs, and national funding is insufficient to fill the remaining gap (Kettunen et al. 2017). In sub-Saharan Africa, Asia, Latin America, the Middle East, and Pacific regions, the biodiversity funding gap is put at 90 per cent or more (Balmford et al. op. cit.). As described below, in Chapter 2, serious conservation funding shortages are reported in all of the Western Balkan economies.

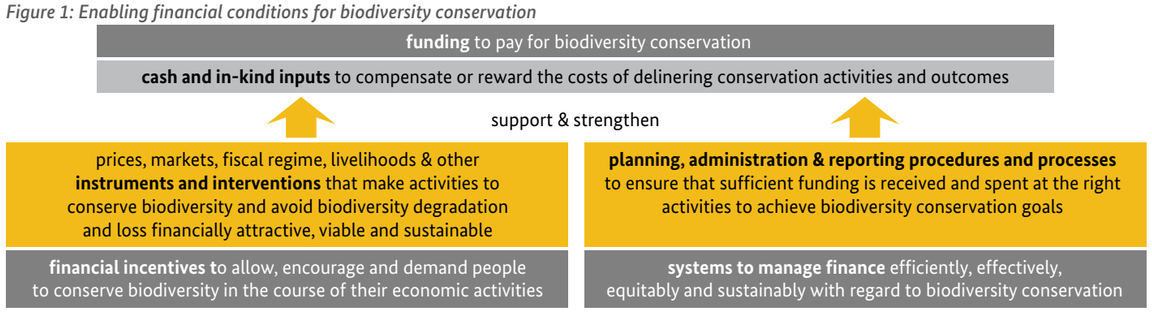
Rethinking financial sustainability

While these funding gaps give serious cause for concern, it is now generally agreed that a broader perspective is required. The financial constraints to biodiversity conservation extend far beyond a simple lack of money (Emerton 2005). A wide range of other factors also serve to limit the effectiveness and impact of conservation spending. However much more money is made available, biodiversity conservation is unlikely to be effective, equitable or sustainable unless these broader structural conditions are addressed.

For example, one common constraint is the disconnect between budget planning and on-the-ground management needs. There is often little idea of how much funding is required to deliver key conservation activities, where it could come from, or how it might be accessed. Other critical issues include the source, diversity and timing of funds, the form in which they are provided, to whom they accrue and on what they are spent, as well as the institutional, policy and planning frameworks that determine how financial resources are requested, allocated, administered and used. Money is not always available at the right place and time, for the activities that have the highest priority in conservation terms or for the groups that actually bear the costs of conservation. As described in Chapter 2, many of these financial constraints continue to pose major challenges to conservation in the Western Balkan region.

This means that, as well as making enough funding available, it is also necessary to develop the systems to manage finance efficiently, effectively and sustainably, and set in place financial incentives for the people that bear the costs of biodiversity conservation and/or have the potential to impact on its status (GIZ 2019; Figure 1). A well-balanced approach to conservation financing must consider all these issues and enabling conditions.

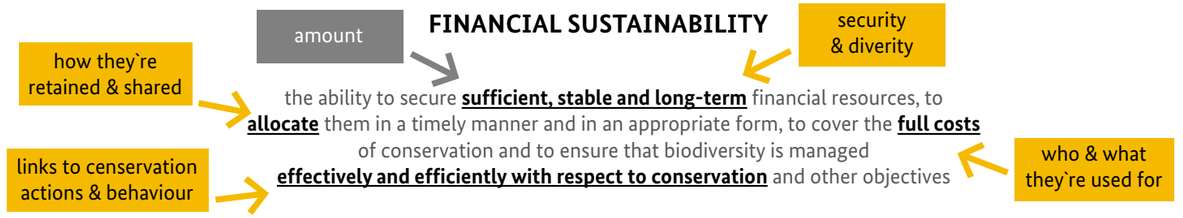
Figure 1: Enabling financial conditions for biodiversity conservation



(From: GIZ 2019)

Over time, a more nuanced understanding of 'financial sustainability' has gradually come to replace the simple concept of 'funding' that traditionally dominated biodiversity planning. This takes account of the wider financial constraints to biodiversity, and seeks to improve the broader systems and conditions that are required to enable effective, equitable and sustainable conservation. Following this logic, the International Union for Conservation of Nature (IUCN) now defines financial sustainability as: 'the ability to secure sufficient, stable and long-term financial resources, and to allocate them in a timely manner and in an appropriate form, to cover the full costs of conservation and to ensure that they are managed effectively and efficiently' (Emerton et al. 2006; Figure 2).

Figure 2: Key elements of financial sustainability



(From: Emerton et al. 2006)

In short, financial sustainability is only possible if there are strong and effective institutions, policies and systems, and a solid framework for planning and implementing biodiversity conservation within which financial measures and incentives are embedded. The approaches and mechanisms described in this sourcebook are all oriented towards this broader understanding of financial sustainability.

Developing sustainable financing solutions

In line with these advances in thinking, recent years have seen a shift in the way that biodiversity financing is conceptualised and practised. Recent work by the global Conservation Finance Alliance (CFA) characterises conservation finance as 'mechanisms and strategies that generate, manage, and deploy financial resources and align incentives to achieve nature conservation outcomes' (Meyers et al. 2020). There has been a move away from a rather one-dimensional goal of simply generating more money, towards a concern with achieving the multiplicity of conditions that are required to make conservation financially sustainable for all concerned.

Rather than focusing only on fundraising, most conservation planners are now concerned with identifying financing solutions – 'integrated approaches to solve a specific problem or challenge by the context-specific use of finance and economic instruments' (UNDP 2018). In most cases these 'solutions' comprise packages of instruments and portfolios of interventions that are designed to work together to address the financial barriers to conservation, and to compensate or reward the full range of biodiversity costs and cost-bearers (GIZ 2019, Illes et al. 2017, Kettunen et al. 2017, OECD 2019). For example, one measure may increase management effectiveness, another save costs, yet another achieve distributive fairness, and finally one may provide incentives to conserve biodiversity (Ring and Schröter-Schlaack 2011). The bottom line is to ensure that biodiversity is financially attractive, viable and sustainable for all the groups and sectors that incur costs from conservation, or whose actions have the potential to affect its status (Rode et al. 2016). Chapter 3 of the sourcebook describes some of the mechanisms that are most commonly (and successfully) used to build biodiversity financing solutions across the world, and are considered to have the highest potential for development in the Western Balkan region.

It follows that biodiversity financing solutions must be designed in a strategic manner, if they are to be successful and sustainable in practice. Most importantly, there is a need to tailor them to the specific context and conditions under which they will be implemented, the groups and decision-making processes they seek to target or influence, and the policy and practical purpose they are intended to serve (Berghöfer et al. 2017). It should be emphasised that in most cases, the first best financing solution is not to introduce new instruments, but to improve or realign existing ones. This can often serve to reduce – or even solve – many of the financial constraints to effective biodiversity conservation. Only then should new and additional mechanisms be considered. In either case, this typically involves finding a bundle of instruments or 'policy mix' that extends across the economic sectors that depend on and affect biodiversity (Ring and Barton 2015). The ability of conservation finance solutions to also strengthen other goals and engage a broad range of stakeholders can act as an important factor in garnering broader political and popular buy-in, and may also help in leveraging additional funding and investment (WWF 2009).

It is beyond the scope of this sourcebook to deal with the process of strategic planning and design of biodiversity financing solutions. As laid out in Chapter 5, a wide range of guidance is available elsewhere (see, for example, GIZ 2019, Meyers et al. 2020, UNDP 2018), including approaches tailored to specific groups, sectors or planning frameworks. For example UNDP's Biodiversity Finance Initiative (BIOFIN) offers a tool to assist national-level governments to assess biodiversity expenditures, financing needs and potential solutions (UNDP 2018). Targeted materials are also available for conservation organisations and NGOs (see, for example, Clark 2007), private sector and businesses (Stephenson et al. 2018), and protected area planners and managers (see, for example, Emerton, Tizard and Saw Htun 2018, Flores et al. 2008, Miller and Kettunen 2007, TNC 2013). At least one toolkit deals specifically with South East Europe (see Ruzzier et al. 2010).

REGIONAL CONTEXT:
Why is biodiversity finance an issue in the Western Balkans?

Conservation commitments and budget pressures

The Western Balkans is a region exceptionally rich in biodiversity, hosting a wide variety of natural landscapes, ranging from Mediterranean coastal zones, through rivers, forests and steppes, to alpine high mountains. All of the economies in the region are signatories to (or are in the process of ratifying) key international and European nature-related conventions and agreements, including the Convention on Biological Diversity. A broad array of national and local-level biodiversity policies, strategies and plans are under implementation, and a significant proportion of the region is being actively conserved. Protected areas currently extend across just under 21,000 km^2 or approximately 7.5 per cent of the land area of the Western Balkans (adapted from Vasilijević et al 2018). While regional protected area coverage is still substantially lower than the global figure of 15.4 per cent, it has almost doubled over the last 25 years, from just 4 per cent in 1995 (EEA 2010).

As conservation efforts have intensified and expanded, so the funding needs for biodiversity, ecosystems and protected areas have increased. Across the region, biodiversity conservation depends almost entirely on funding from the state budget, sometimes supplemented by municipal budgets (Vasilijević et al. 2018), and very limited sources of self-generated revenues (mainly from forestry and tourism). Although there are no up-to-date or disaggregated figures on biodiversity spending in the Western Balkan region, annual domestic environmental expenditures were estimated to stand at about EUR 10.87 million or EUR 3,473 per capita in Albania in 2005, EUR 5,492 per capita in Bosnia and Herzegovina, EUR 4.8 million in North Macedonia, EUR 4.1 million in Montenegro, and EUR 8,516 per capita in Serbia (RECCEE 2007). There is also a heavy reliance on external support, most notably EU pre-accession assistance, but also a series of grants from other bilateral and multilateral donors, as well as loans from various financial institutions (such as the European Investment Bank and World Bank).

However, with few exceptions, public budgets remain limited, over-stretched, and subject to multiple competing demands. It is often difficult to make the case for biodiversity – especially in the face of other pressing needs for funding from sectors that are widely perceived to be more 'economic', 'productive', or to make a greater contribution to 'development'. In 2005 in Albania environmental expenditures were equivalent to only 0.165 per cent of GDP, and in Bosnia and Herzegovina less than 2 per cent, while in Serbia the share of central and local government spending between 2001-06 was under 3 per cent (RECCEE 2007). In turn, biodiversity, ecosystems and protected areas account for only a tiny proportion of these environmental budgets.

Increasing biodiversity funding needs and opportunities

It is generally agreed that conservation funding remains a challenge across the region's economies. For example, Albania's Biodiversity Strategy repeatedly mentions the shortage of financial resources (MOE 2015), Bosnia and Herzegovina refers to difficulties in providing 'full and continuous financial support to the biological diversity conservation system' (MFTER 2016), and both Montenegro (MSDT 2015) and North Macedonia (MEPP 2018) identify limited budgets as posing a serious threat to biodiversity. A biodiversity assessment of Kosovo* finds that 'other than a few small grants, there are no funds available for biodiversity conservation, either through the government budget or from donor assistance' (USAID 2003). Meanwhile, Serbia notes that protected areas still lack about USD 8.7 million or 50 per cent of the funding needed to cover basic costs, and up to USD 25 million or 75 per cent of that is required for them to function optimally (MESP 2011).

In response, Western Balkan economies have set ambitious targets to expand and diversify conservation financing, from domestic and international, public and private sources. National Biodiversity Strategies and Action Plans include a wide variety of measures to achieve these goals. For example, to '[increase] the mobilisation of financial resources for biodiversity from all sources (including possible innovative financial mechanisms)' (Albania), 'prepare and adopt a strategy for the mobilisation of financial resources' (Bosnia and Herzegovina), 'establish an efficient mechanism of funding and switch to sustainable biodiversity economy' (Montenegro), 'increase the level of investments in and funding of biological diversity conservation from central and local budgets and other sources' (North Macedonia), and 'ensure a diverse portfolio of sources and strategies for the long-term funding' (Serbia).

Moving on into the post-2020 agenda, it is likely that regional biodiversity financing needs – as well as opportunities – will increase still further. The 2030 outlooks emphasise the sustainable development and environmental conservation as cross-cutting goals, while the European Green Deal is a key part of the EU's approach for implementing the United Nations' 2030 Agenda and the Sustainable Development Goals. As part of this, the Green Agenda for the Western Balkans may undoubtedly involve both additional nature conservation interventions and new funding flows. Meanwhile Chapter 27 on Environment remains one of the most challenging (and potentially costly) chapters in the EU negotiations process. The acquis comprises over 200 major legal acts covering, among other things, nature protection, and Western Balkan economies are currently at different stages of transposition of the EU Nature Directives. It is widely recognised that compliance will require significant investments.

Addressing financial constraints to biodiversity conservation

After having been left in a severely weakened economic and political state following the breakup of Yugoslavia in 1991 and the protracted period of instability and unrest that ensued, the region's transition to a market economy has been gradual. The 2000s saw a progressive lifting of sanctions and trade barriers, followed by widescale macroeconomic liberalisation, privatisation, and increasing foreign direct investment. Regional economies were integrated into the Central European Free Trade Agreement (CEFTA) in 2006, and are now at various stages of acceding to the EU. While significant growth has occurred and economic and political stability has largely been achieved, the pace of structural reforms remains slow, trade deficits persist, and major sectors of the economy remain inefficient, technologically outdated, and uncompetitive. Prompted both by the need to enhance domestic economic performance and to meet the demands of EU integration, the Western Balkan economies are undergoing wide-ranging public financial management reforms. Following the recent global financial crisis, most have now entered a phase of comprehensive fiscal consolidation, often involving difficult measures such as public expenditure cuts, affecting salaries, pensions, and social services.

These processes present both challenges and opportunities for biodiversity funding. On the one hand, the public sector faces major – and intensifying – budget constraints. There remains a clear and urgent need to diversify and expand conservation funding beyond its traditional reliance on the government budget. However, at the same time, ongoing fiscal and legal reforms, improved planning procedures, measures to improve spending efficiency and cost recovery, combined with an increasing emphasis on market-based approaches and private sector engagement, offer a great deal of scope to work on improving or dismantling the financial constraints to biodiversity conservation that have plagued the region in the past.

Here, it should be emphasised that, even though lack of funds is often singled out as the greatest constraint to environmental protection in the Western Balkans, other important aspects should also be taken into account, the ones that would continue to present serious obstacles to biodiversity conservation even if more funds were made available. Most of the financial constraints described in Chapter 1 continue to pose a challenge in the region. For example, in most economies there is a very limited environmental revenue base, and few opportunities to access additional funding and income. In addition, conservation agencies tend to have little control over their own earning and spending. Even where fees, charges or taxes are generated, they tend to be submitted to the central government treasury and treated as a source of general funding, rather than being directly retained and reinvested into nature conservation where they are generated. On the expenditure side, the cost norms that are used to calculate expenditure needs tend to be outdated, meaning that funding received is often far too low to meet even basic operational and investment requirements.

There is also generally a lack of long-term strategic planning and insufficient human and administrative capacities to adequately address environmental issues in the Western Balkans. Difficulties in justifying conservation budget requests, lack of high-quality projects, and weak absorptive and spending capacity are all reasons why environmental investments are not higher, and why ministries of finance are often reluctant to grant higher budgets to environmental ministries and conservation agencies. At the same time, in a region that was for many years marked by political and economic turbulence, environmental protection has long been placed very low on governments' priority lists – and, to a large extent, remains so. Lack of awareness of environmental topics and their importance for sustainable development is a persistent problem among senior decision-makers. It has also meant that, over time, gaps in environmental standards and spending have continued to widen as compared to other European countries, and economic and fiscal policy frameworks are frequently unsupportive of nature conservation. Not only are many of the positive incentives for biodiversity that now exist in other parts of Europe still lacking in the Western Balkans, but in many cases current tax, trade and investment regimes actually favour (or fail to discourage) unsustainable, polluting, or otherwise environmentally-damaging patterns of growth.

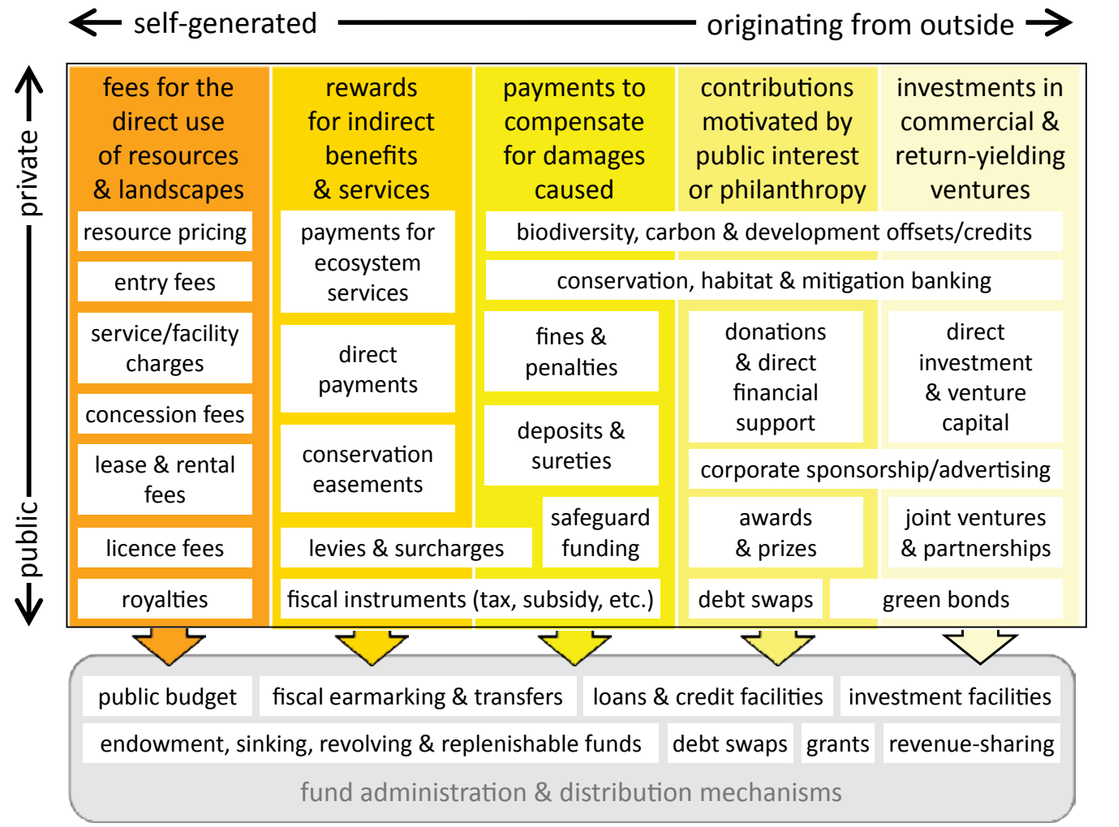
BUILDING SOLUTIONS:
Which mechanisms can be used to finance biodiversity?

Tailoring financing mechanisms to their practical and policy purpose

As described in Chapter 1, conservation finance solutions can be defined as 'integrated approaches to solve a specific problem or challenge by the context-specific use of finance and economic instruments' (UNDP 2018). They almost always involve packages of mutually-reinforcing measures, designed to address a given set of financial constraints, in a particular institutional, political, social and economic setting. A first step in designing financing solutions is therefore to determine what constraints and opportunities exist, and what the most appropriate and effective combination of financial instruments and interventions is likely to be.

Many different mechanisms now exist, and are used, to finance biodiversity conservation across the world. It is helpful to distinguish these according to their funding source and target (e.g. public or private, self-generated and originating from outside), the type of instrument or its underlying motivation (e.g. user fees, rewards, damage compensation, philanthropic contributions and commercial investments), and whether they seek to generate, administer or distribute funding (Figure 3). Categorising biodiversity financing mechanisms according to this typology allows for solutions to be better planned and tailored to their practical and policy purpose, and to the specific opportunities and needs that exist in a given conservation context (Berghöfer et al. 2017).

Figure 3: Typology of biodiversity financing mechanisms



(From: Emerton et al. 2006, GIZ 2019)

This chapter describes a selection of biodiversity financing mechanisms which are most commonly used, have been demonstrated to be the most effective or useful in practice, and which appear to hold the greatest potential and opportunity to be used to strengthen conservation and sustainable development in Western Balkan economies. They span five main types of financial instruments, including those which aim at:

- Enhancing the management or distribution of the public budget (public financial management reforms, fiscal earmarking, ecological-fiscal transfers);
- Creating or improving markets in biodiversity goods and services (user fees and resource extraction charges, surcharges, sustainable biodiversity markets and products, payments for ecosystem services, biodiversity offsets, habitat or mitigation banking);
- Facilitating commercial or return-based investments in biodiversity (green bonds, commercial investment funds);
- Capturing donations from the general public (crowdfunding); and
- Administering and disbursing financial resources (trust funds).

Public financial management reforms

As is the case in most parts of the world, regular government budget allocations form the core of biodiversity finance in the Western Balkans. There are strong grounds for arguing that this should continue to be the case. Development of new and additional financing mechanisms should never be seen as a substitute for public funding, or as a reason for government to decrease its budgetary or policy support to conservation. It is, after all, a basic responsibility of governments to act in the public interest, and to maintain their citizens' rights to a clean and healthy environment. National policies as well as global and regional commitments such as the Convention on Biological Diversity and Agenda 2030 also imply a stated pledge and obligation to meet – and fund – nature conservation and sustainable development targets.

As already described in Chapter 1, it is now generally accepted that, before developing new financing mechanisms, efforts should be made to improve the effectiveness of existing financial instruments and funding flows, especially the public budget (Berghöfer et al. 2017). Public financial management reform processes can be used to lend support to these goals. Their intention is to improve budget efficiency, cost effectiveness and, ultimately, funding impact – which are all typically of high relevance for overcoming the financial constraints to biodiversity conservation. One important area of improvement is budget planning. For example, across the Western Balkans, programme budgeting approaches are being adopted which direct funding to a specific activity or programme. This is particularly relevant for biodiversity, where a disconnect between conservation planning and financial planning has often, in the past, resulted in funding shortages for key conservation activities (because they were simply not reflected in budget requests). It also allows for (and to a large extent demands) improved targeting of conservation measures, more cost-effective spending, as well as improved monitoring and indicators.

In addition, it is increasingly recognised that biodiversity needs to be mainstreamed into sectoral budgets, policies and programmes – for example in agriculture, water, industry, energy, and so on. Not only is this a way of spreading, or sharing, the costs of conservation (and reducing the budgetary burden on environment agencies), it is also a way of institutionalising 'user pays' or 'polluter pays' principles among the sectors that depend on and affect biodiversity the most. Mainstreaming principles are increasingly being accepted and adopted by countries at the macro-level. 'Green budgeting' for example, is now relatively common. This refers to the use of the budget (including taxes, spending and policy co-ordination) to promote the alignment that is essential to meet environmental goals.

Over the last decade or so, there has been a growing concern with realigning taxes and subsidies with environmental goals. This is a way of improving revenues and reducing costs, as well as providing financial incentives to encourage biodiversity conservation. Across Europe, for example, targeted agri-environmental measures are used to reward and compensate farmers for providing environmental services, and a range of other fiscal instruments and public payment systems aim to support non-productive investments in high conservation value farm and forest lands, and the management of Natura 2000 sites. There has also been a general increase in both the level and degree of enforcement of environmental penalties and fines, seeking to discourage environmental harmful activities as well as to ensure that sufficient funds are available to mitigate or remediate the effects of such damages. A third important area of environmental-fiscal reform has been the progressive dismantling of perverse subsidies (subsidies aimed at supporting or stimulating other sectors or activities, which also give rise to adverse impacts on biodiversity). Many countries have, for example, now eliminated or significantly reduced subsidies for fossil fuels, fertilisers and other agro-chemicals, logging and fisheries. Not only has this helped to reduce direct threats to the environment (such as resource over-exploitation, land conversion and pollution), but it has also allowed considerable savings in government expenditures, freeing up public budgets and in theory making available more funding for biodiversity.

Fiscal earmarking

Fiscal earmarking, also known as hypothecation, involves setting aside some or all of the taxes and other public revenues earned by a particular activity or product, and allocating them to conservation. This is an example of the 'user pays' principle, and also often serves as a form of cost-recovery. The logic is that if a good or service depends on biodiversity and ecosystem services, then it is only fair (and sensible) that the proceeds from its use should contribute towards maintaining the source of these raw materials or inputs. In turn, if it gives rise to negative impacts, then it is reasonable to argue that the income generated should be used to cover the costs of mitigating, remediating or compensating these damages.

Fiscal earmarking is often used to make sure that biodiversity revenues are returned to the site or agency that earned them. For example, most national parks in Europe retain income from tourist entry fees and sales of natural products. In other cases, earnings from sectors that depend on biodiversity in some way are ploughed back into conservation. In the United States, excise taxes on hunting and fishing gear, firearms and ammunition are allocated to funding the Federal Wildlife Program. Likewise, a fixed sum from Belize's tourist tax is paid to the national Protected Areas Conservation Trust fund, and a portion of departure fees collected at Fiji Airport is earmarked for environmental conservation initiatives. Fiscal earmarking can also be applied to products and services completely unrelated to biodiversity. For example, ten per cent of tobacco tax revenues in California is given over to parks and wildlife habitat conservation, Missouri's 0.05 per cent tax on sales of personal property and retail services is allocated to the Department of Conservation, and both the Nebraska Environmental Trust and the Great Outdoor Colorado programmes are financed through earmarked state lottery funds.

There is good potential for using fiscal earmarking as a conservation financing mechanism in the Western Balkans. While there is a general lack of biodiversity-related taxes and fees, there is no shortage of fiscal revenue streams from other sectors that depend on and affect biodiversity, ecosystems and protected areas – for example tourism, fisheries, hunting, forestry, infrastructure, and industry. In addition, the rapid urban, industrial and infrastructural development that is ongoing across the region provides many opportunities (and, many would argue, needs) to look at ways of earmarking revenues to be ploughed back into conservation.

Ecological-fiscal transfers

Ecological-fiscal transfers (EFTs) increase the share of public funding going to regions which have high levels of biodiversity or ecosystem services, have set aside land for conservation, face pressing threats or incur high costs to maintain environmental quality, or are otherwise deemed to be particularly ecologically-sensitive or to play a key role in securing national (or even global) environmental benefits. They incorporate environmental criteria into the formulae used to determine how much budget is shared at the sub-national level, for example territory under forests, national parks or watershed management areas, biodiversity richness, or endangered species. As well as providing funding, EFTs are increasingly seen as a mechanism to support and incentivise decentralised conservation efforts, especially in poorer and more remote areas with an otherwise weak revenue base.

There is a growing experience of EFTs world-wide. In 2007, Portugal became the first EU member state to introduce EFTs. The Local Finances Law now specifies that 5-10 per cent of the General Municipal Fund will be distributed to municipalities according to the size of territory under protected areas or land with Natura 2000 status. Over recent years, France, Germany and Poland have also adopted EFT principles in some form, while outside the EU, EFTS are under development or implementation in Switzerland, Brazil, India, and Indonesia. Although EFTS are yet to be considered in the Western Balkans, there is a clear opportunity to integrate biodiversity or ecological criteria into the formulae already used to determine vertical budget transfers from central to local government.

User fees and resource extraction charges

Fees and charges have long formed the basis of biodiversity funding, in the Western Balkans and elsewhere. The concept is simple: those who consume, use, or otherwise affect biological resources and ecosystem services should pay. Fees and charges usually have three overlapping purposes: to recover the costs of providing or maintaining the good or service, to ensure that funds are available to mitigate or remediate any damage that is caused to the natural environment in the course of carrying out the activity, and to manage demand for a particular product or site (for example through differential pricing).

The Organisation for Economic Cooperation and Development (OECD) currently records more than 170 biodiversity-related fees and charges across dozens of countries. Many of these are practised in the Western Balkans. They range from fees for small-scale (and often non-commercial) activities such as the collection of wild fruits and mushrooms, or hay-cutting, to charges for large-scale, industrial activities such as logging, mining, and bioprospecting. Tourism-related charges are also commonplace, and lucrative. For example, every year millions of people visit and stay in protected areas and other natural landscapes, and engage in a wide range of recreational pursuits such as bird-watching, wildlife-viewing, hiking, mountaineering, white-water rafting, fishing and hunting. It is now commonplace to impose fees to enter or visit these landscapes, use their facilities, and undertake activities in them. Related income can be generated by sales of souvenirs and by offering concessions and leases for restaurants, gift shops, guided tours, hotels and other facilities. These offer a valuable (and usually predictable) source of income for conservation. In some cases, protected areas and other natural landscapes are tapping into additional, specialised markets – for example film production, 'destination' weddings, or licensing the use of a nature-related brand or logo.

User fees and resource extraction charges are already one of the main sources of protected area revenues, across the Western Balkans. There is undoubtedly potential both to rationalise and improve price levels (in line with the actual market value of the goods and services involved, and the full costs of providing them), and to make efforts to ensure that the resulting funds are actually retained and reinvested in conservation. In addition, there may well be opportunities to diversify the range of fees collected, beyond the traditional focus on timber, forest products, and tourism. Many possibilities exist to develop new, and sustainable, activities and markets which could serve as additional sources of revenues for conservation.

Surcharges

A surcharge is an extra fee that is added on to the retail price of products or services. Unlike a tax (which is imposed and collected by government), it is usually levied by the company that produces or sells the commodity. A common objective is to cover the costs of complying with environmental standards or offsetting the regulatory fees imposed on the company by government. Examples include carbon-related surcharges on air travel or vehicles, or on transport, packaging, water, fuel, or energy use. It should be noted that although these types of surcharges offer an effective way of generating revenues, they do not necessarily provide new funding for conservation. In many cases they only cover the cost of managing, remediating or mitigating the environmental damages incurred in the course of producing, processing or disposing of the good or service. In addition, because the burden of payment is typically transferred to consumers via higher prices, there is rarely an incentive for producers to act in a more efficient or environmentally-friendly manner (although surcharges can lead to significant changes in consumer behaviour).

Voluntary surcharges are also often used to tap into consumers' interest in biodiversity and ecosystems, and to capture their willingness to contribute to conservation. Unlike the mandatory surcharges described above, this is a way of generating new conservation funding. Voluntary surcharges often target luxury goods or high-end markets. For instance, many hotels now offer their customers the choice of opting into a flat rate or percentage addition to their bills which is earmarked for biodiversity and nature conservation. Several states in the USA provide an option for vehicle owners to purchase higher-cost licence plates, with the surcharge being directly earmarked for conservation. The additional USD 30 fees associated with Minnesota's 'Critical Habitat Plate' are channelled to the Reinvest in Minnesota Critical Habitat Program, and conservation funding is also generated via Nevada's 'Conserve Wildlife' license plate, Maine's 'Conservation and Support Wildlife' plate, and Ohio's 'Conservation and Sportsman's' plates. Similar schemes operate in Europe for credit cards, chequebooks, and postage stamps.

It is likely that the increasingly strict environmental standards and procedures that are being introduced, and enforced, in the Western Balkan economies as part of the EU integration process may also be accompanied by the introduction of a range of surcharges. However, the main potential to use surcharges to increase conservation funding (rather than simply to offset compliance costs) is likely to lie with voluntary contributions, for example in relation to tourism, natural products or 'cause-related' marketing. Any form of surcharge which is perceived to increase costs for consumers, especially for basic necessities, is likely to be politically unpopular and may be difficult to implement.

Sustainable biodiversity markets and products

Over recent years, consumers' demand for sustainable biodiversity products has grown significantly across most parts of the globe. A wide range of new, and increasingly profitable, markets are beginning to emerge – for example in natural cosmetics and healthcare products, organic or wildlife-friendly foods, sustainably-sourced seafood, certified timber, and ecotourism. Various tools and instruments have been developed which seek to promote and facilitate the growth of these new markets, build consumer confidence and interest, enhance profitability, and enable businesses to access price premiums as compared to more conventional or unsustainable alternatives. The aim is to enable individuals, companies, and even government agencies, to earn conservation-related income.

These instruments target biodiversity businesses at all stages of the value-chain, from harvesting through production and processing to wholesale and retail trade. For example, a broad range of eco-labelling and certification schemes have been developed and are used across the world in agriculture, tourism, forestry, fisheries, cosmetics and other key markets. They offer verified third party guarantees that a particular product, process, or service conforms to a set of defined standards as regards biodiversity impact (and, often, other areas such as fair trade or local community impact). Branding is another instrument that has been used successfully to encourage and promote sustainable biodiversity products and markets. It refers to the development of a particular identity, storyline and – usually – emblem which is associated with a particular site and/or region (rather than, as with labelling and certification, a set of practices and impacts). Assigning or authorising the use of the brand to a particular product allows it to associate with this identity and employ it to support marketing or to appeal to a particular customer base. In addition, a variety of other instruments and measures are often used to promote and encourage biodiversity business, often as part of regional development packages or support from central government. These include training and technical support, assistance with marketing, preferential access to credit and loans, or granting subsidies, tax relief and other fiscal incentives.

In many respects, economies of the Western Balkan countries have a comparative advantage in biodiversity-based products and markets. The region has a well-developed nature-based tourism industry, and many rural areas already rely heavily on low-input agriculture, fisheries, forestry and natural products as a source of income and employment. Increasing integration with EU markets and trade processes is likely to offer important opportunities to further develop these supply chains, and to extend markets beyond the currently relatively limited regional and local customer base.

Payments for ecosystem services

Payments for ecosystem services (PES) mainly target regulating services such as watershed protection, flood control or shoreline defence, and cultural services such as landscape beauty. They involve transfers of cash or other resources from ecosystem service beneficiaries (such as downstream water consumers, city-dwellers or hydropower schemes) and providers (such as farmers, land trusts and protected areas). PES are a novel way of operationalising a 'user-pays' approach in relation to ecosystem services. As well as generating income and funding, they serve as incentives to encourage land and resource managers to conserve biodiversity and ecosystems in the course of their economic activity.

There are now many PES examples around the world. For example, the EU supports targeted agri-environmental measures, forest-environment payments, support to non-productive investments in high conservation value farm and forest lands, and payments to support the management of Natura 2000 sites. In addition, municipalities, utilities and private companies are beginning to enter into PES agreements directly with landholders. For example, by 2015, watershed protection payments worth around EUR 5.7 billion were recorded in European countries, covering more than 13.4 million hectares of mainly privately-owned land (Bennet et al. 2017). Although almost all of the payments were made as public subsidies, around EUR 40 million was funded directly by users, mainly driven by growing water risks and stricter regulation.

While PES are still at a relatively early stage of development in the Western Balkans, there is general consensus that they hold great potential, especially as a means of providing finance and incentives to farmers and forest owners to conserve biodiversity and ecosystem services. The main focus has been on watershed protection services. Proposals have already been formulated to develop PES schemes in Karaburun-Sazan Marine and Coastal Protected Area in Albania, Northern Velebit National Park and Velebit Nature Park in Croatia, Dojran Lake in North Macedonia, as well as in Albania at the Ulza watershed, Kosovo* and several other sites. At the national level, scoping studies have been carried out in Croatia, North Macedonia, Montenegro and Serbia which identify clear PES needs and potentials.

Biodiversity offsets

Many developments, especially infrastructure, hydropower, extractive industries and the expansion of agriculture and human settlements, have unavoidable and permanent impacts on biodiversity and natural ecosystems. This is the case even where environmental regulations and best practice guidelines are adopted, and proper compensation and environmental management procedures are followed. Biodiversity offsetting is a way of compensating or balancing biodiversity loss in one place and time with an equivalent biodiversity gain elsewhere. It involves investing in the rehabilitation or conservation of equivalent resources, habitats or even species at another site, once all the developer's legal obligations and compensation requirements have been discharged. The aim is to achieve an outcome of 'no net loss' or, preferably, a 'net gain' in biodiversity, that would not otherwise have been achieved.

Biodiversity offsets have become more and more widely accepted, and used, as a mechanism to finance ecosystem restoration, rehabilitation and conservation over the last decade. For example, in 2014, the EU initiated a 'no net loss initiative' which would allow compensating biodiversity losses in one area by balancing with gains elsewhere in the EU. The UK's new Environment Bill requires land developers to deliver a 10 per cent biodiversity net gain. At present an increasing number of development banks and other donors also require that projects deliver no net loss of biodiversity, and a number of companies now invest in offsets as part of their voluntary commitments to biodiversity conservation. By 2015 there were 65 programmes and 180 projects in existence in Europe with a total transacted value of more than EUR 63 million (Bennett et al. 2017).

Several factors suggest a growing potential for biodiversity offsets in Western Balkan economies. One is the ambitious programme of urban, industrial and infrastructural development that is ongoing across most parts of the region. This presents both needs and opportunities to mitigate and balance negative biodiversity impacts by offsetting. Increasing EU integration undoubtedly offers another important stimulus (and requirement) to tighten environmental regulations and standards, and to operationalise 'no net loss' approaches and methods.

Habitat or mitigation banking

Habitat or mitigation banking is a way of creating an offset market or trading mechanism. By permanently protecting the natural habitats on their land (creating biodiversity or habitat 'banks'), landowners generate credits. These credits can then be transferred or sold to developers that need or wish to compensate or offset negative environmental impacts. Habitat banks are typically overseen by regulators, and credits are usually verified and monitored by an independent third party.

In most cases, credits are purchased in order to comply with legal requirements to compensate and mitigate environmental damage. For example, in the USA, 'species conservation banking' emerged in the 1990s in response to the Endangered Species Act, which requires compensation for impacts on listed species or their habitat. Less commonly, offsets may be traded on a voluntary basis, as donations to nature conservation, or as part of corporate environmental and social responsibility programmes. Transactions may involve individuals, associations, companies or government agencies as buyers and sellers. Recent years have also seen the emergence of intermediary institutions or facilities, which build a portfolio of 'deposits' of biodiversity credits from landholders that are then made available or resold to developers to purchase as and when they need to offset their impacts. For example, in the UK, a variety of third-party commercial ventures have been established to facilitate habitat banking, largely prompted by the provisions of the new UK Environment Bill, which will require land development projects to deliver 10 per cent biodiversity net gains, and also enable habitat banking as an offset mechanism.

As with biodiversity offsets, rapid and intensifying development in the region, combined with progressive EU integration and a rising concern with enforcing environmental standards and legislation, all suggest that there may be possibilities to develop habitat and mitigation banking systems. It should however be noted that a strong legal framework is required to both enable and regulate habitat banks, and to ensure that performance and compliance are adequately monitored.

Green bonds

Green bonds are used to raise capital to fund environment-related investments – such as renewable energy, energy efficiency, clean water, biodiversity conservation, and climate mitigation. Just like traditional bonds, they offer investors a way of lending money to governments or companies for a specified period of time, earning interest as well as recouping their initial investment. In addition to earning income, green bonds provide investors with a level of satisfaction from the fact that funds are used for environmental purposes. Although green bonds still comprise only a small part of the global bond market, they have been attracting a lot of attention over the last decade or so. In 2018, there were more than 1,500 issues from 320 issuers in 44 countries, valued at more than USD 167 billion.

A key feature of green bonds is that investors expect to be repaid, with interest. For this reason, the majority of green bond issues to date, both sovereign and corporate, target climate-related projects in commercially-oriented sectors such as energy, transport, construction and technology. For example, in 2019 the drinks company PepsiCo, Inc. issued a USD 1 billion green bond to finance investments in sustainable water supplies and packaging materials. In May 2019, the Dutch government issued a sovereign green bond for EUR 6 billion to secure financing for various climate related projects. Biodiversity and ecosystem conservation offer a more limited range of profit-making investment options. There is, however, a growing interest in initiatives that specifically target sustainable land use and positive biodiversity impacts. For example, the Rainforest Impact Bond, being piloted by ADM Capital in Indonesia, is based around sovereign aid commitments to mitigating climate change and/or promoting forest conservation and focuses on long-term funding for smallholder livelihood and rural electrification projects. In other parts of the world, Park Bonds and even a Rhino Impact Bond have been proposed as mechanisms to finance protected area systems.

One challenge to the development of green bonds in the Western Balkans is that even conventional capital markets remain relatively undeveloped. Both sovereign and corporate bond markets are still emerging. Over the medium term, green bonds may however offer a promising avenue for raising finance for return-generating biodiversity projects. EU integration processes can further facilitate the development of green bond markets, including the voluntary, non-legislative EU Green Bond Standard that is currently under development and aims to enhance the effectiveness, transparency, comparability and credibility of the green bond market and to encourage market participants to issue and invest in green bonds.

Commercial investment funds

Over recent years, there has been a growing interest in investments which seek to generate positive social and environmental impacts, alongside market-rate financial returns. Green bonds, described above, are one example. However, more generally, biodiversity, natural capital and eco-investments have begun to emerge as a distinct asset class. A number of supply-side (targeting investors) and demand-side (targeting companies) instruments have evolved which seek to better capture, mobilise and allocate the resulting investment funds.

A wide variety of financial instruments offer investors the opportunity to sink their funds into attractive biodiversity investments, including direct cash contributions, purchase of company securities (stocks, shares, bonds, and so on), or via pooled investment funds and collective investment schemes. The latter currently dominate the biodiversity finance market. The bulk of commercial funding to biodiversity comes from (or through) institutional investors, such as banks, insurance companies, pension funds, mutual funds and others. For example, Althelia Funds is a London-based asset manager focusing on commercial investments that deliver financial returns and contribute towards species, ecosystems, climate, livelihoods, sustainable enterprise, fair economic returns, and inclusivity targets. The main investors in Althelia's climate and sustainable oceans funds (each based on a fund raise of USD 100 million) are the European Investment Bank (EIB), the Dutch Development Bank (FMO), the Inter-American Development Bank (IADB), Credit Suisse, AXA insurance company and the Caprock Group.

Demand-side financing mechanisms seek to make this investment capital available to biodiversity entrepreneurs and businesses as and where needed. A number of niche funds and dedicated facilities have been set up over recent years, specifically seeking to leverage and mobilise investments for biodiversity. These often involve providing blended finance, combining commercial finance with concessional funding from governments, development banks, development donors, non-governmental organisations, or philanthropic foundations. For example, the European Investment Bank's Natural Capital Financing Facility consists of a flexible finance facility in combination with a technical assistance and grant facility, targeting pro-biodiversity and adaptation, payments for ecosystem services, biodiversity offsets and compensation, and green infrastructure activities.

As with green bonds, the early stage of development of capital markets in the Western Balkans means that the development of commercial biodiversity investment funding should be seen primarily as a medium-term opportunity. It is however likely that there will be growing opportunities over time, as capital markets emerge and strengthen, EU integration progresses, and the private sector becomes increasingly engaged in sustainable biodiversity markets.

Crowdfunding

Crowdfunding usually asks for donations to a particular cause to be made online, and in most cases involves a large number of people each contributing a small amount of money. In some cases donors receive a reward for their contribution, such as a souvenir or free product. Not only does crowdfunding help to secure funds for biodiversity, but it can also play an important role in raising awareness and stimulating collective action. The popularity of crowdfunding has skyrocketed over the last 5 years – by 2018 the global market was estimated at USD 10.2 billion. It has also become a popular means of raising funds for conservation. It is estimated that around USD 5 million of conservation funding was generated through crowdfunding between 2009-2017, through almost 600 projects carried out in more than 80 countries and using 72 different crowdfunding platforms (Gallo-Cajiao et al. 2018). Most were proposed by local NGOs, university researchers, or proponents with no institutional affiliation.

Although still supplementary, and secondary, to more traditional conservation funding, crowdfunding has proved to be a particularly effective means of providing seed funding to establish a small project or research initiative that can then be submitted for a larger grant. Campaigns based on single, charismatic, species or sites tend to stimulate the most interest among donors. For example, in 2013 Sociedade Portuguesa para o Estudo das Aves (BirdLife Portugal) launched a crowdfunding campaign to support the conservation of the endemic and endangered Azores bullfinch by restoring the bird's habitat in the native Laurel Forest of São Miguel Island. Along similar lines, scientists from the Australian National University were able to raise more than AUD 130,000 to save the critically endangered orange-bellied parrot, and Hawaii's Kauai Forest Bird Recovery Project were able to crowdfund the purchase of traps to catch predator rats.

As in other parts of the world, there is clear potential to use crowdfunding as a means of mobilising financial resources for biodiversity conservation in the Western Balkans. High rates of internet connectivity and usage, as well as participation in social media platforms, mean that a potentially large audience exists from which to raise funds. Experience in other parts of the world, however, underlines that the main potential of crowdfunding is likely to be for relatively small-scale projects with modest funding needs, which involve 'charismatic' or iconic species, landscapes or causes that are likely to attract wide public interest and support.

Trust funds

Trust funds serve as mechanisms to mobilise funds from a variety of different donors, governments and the private sector, in order to achieve conservation goals. They have become a popular financing mechanism for biodiversity, ecosystems and protected areas, and today there are a large number of examples of trust funds operating at site, sub-national, country and regional levels across the world. As of the end of 2017, more than 100 conservation trust funds were established or already active, many of which had been in operation for several decades (Mathias and Victurine 2018).

Most conservation trust funds combine one or more of three basic fund types: endowment (investing a capital amount and spending only the interest earned), sinking (drawing down a fixed amount of funding over a specified time period), and/or revolving (operating a fund that can be continuously renewed and replenished with new income on a regular basis). The legal and institutional set up varies widely, depending on the fund purpose and sources as well as the laws of the country in which it operates. While most trust funds are independent, constituted as non-governmental organisations, foundations, common law trusts and non-profit corporations, models do exist of government-run funds.

Several conservation trust funds have been established in the Central and Eastern Europe and the Caucasus region. The Caucasus Protected Areas Fund (now called the Caucasus Nature Fund, CNF) was established in 2007, aiming to support the management of protected areas in Armenia, Azerbaijan and Georgia. It now has an endowment of more than EUR 30 million. The CNF was set up with the financial and technical assistance of three international organisations (KfW, a German development bank, WWF, and Conservation International), working with governments and NGOs in the three countries. More recently, Prespa Ohrid Nature Trust (PONT) was created in 2015 to provide long-term financing for the Prespa Ohrid ecoregion – a transboundary area of Albania, Greece and North Macedonia. Combining endowment and sinking elements, PONT was capitalised with funding from MAVA Foundation, German Ministry for Economic Cooperation and Development (BMZ) and the German development bank (KfW). It is currently able to fund a draw down of EUR 1.5-2 million a year until 2030, channelled through a regional conservation network (PrespaNet) operating by three national NGOs.

Trust funds have great potential as a means of financing biodiversity conservation in the Western Balkans, although it should be noted that it is often difficult to raise sufficient capital to establish a fund of any meaningful size. Most trust funds, especially endowment funds, are worth millions, tens of millions or even hundreds of millions of USD or EUR. This means that multiple public, private and external donors are usually required, and complex legal, institutional and governance structures must be established. Given the somewhat patchy history of government-run national environmental funds in the region, the greatest potential may be to identify opportunities to develop independent, site-level trust funds.

WAYS FORWARD:
What are the opportunities to strengthen biodiversity finance?

Sustainable finance goes beyond funding

It is very clear that sustainable financing of biodiversity involves much more than just ensuring that sufficient funds are secured. Adequate budgets are a necessary condition for effective, equitable and sustainable conservation, but, by themselves, are rarely sufficient. The challenge is much deeper. It is apparent in the Western Balkan economies, just like in many other parts of the world, that existing funds are not only insufficient, but they are not always managed effectively or in support of conservation. A lack of quality proposals and administrative capacity necessary for preparing and implementing projects is evident. As the region progresses towards EU integration, it is becoming clear that enormous funds need to be invested in the environment sector in order to reach European standards and targets. However, this is only one part of the solution. Significant efforts also need to be invested into strengthening administrative and human capacities in the agencies and organisations responsible for financing and managing biodiversity in the region.

One aspect of this is to streamline and harmonise the processes for planning, administering and managing biodiversity finances. There remains an urgent need to reconsider the methods by which (and levels at which) funding needs are costed. Across the region, conservation planners and managers face difficulties in making the economic and financial case for biodiversity, ecosystems and protected areas. Conservation planning and prioritisation processes also typically remain disconnected from financial planning and budgeting procedures. In addition, in most Western Balkan economies there remain very few sources of environmental revenues that can be tapped as conservation funding. Even when such income streams are generated, they are rarely permitted to be retained by the structures responsible for managing biodiversity, ecosystems and protected areas, or reinvested into conservation.

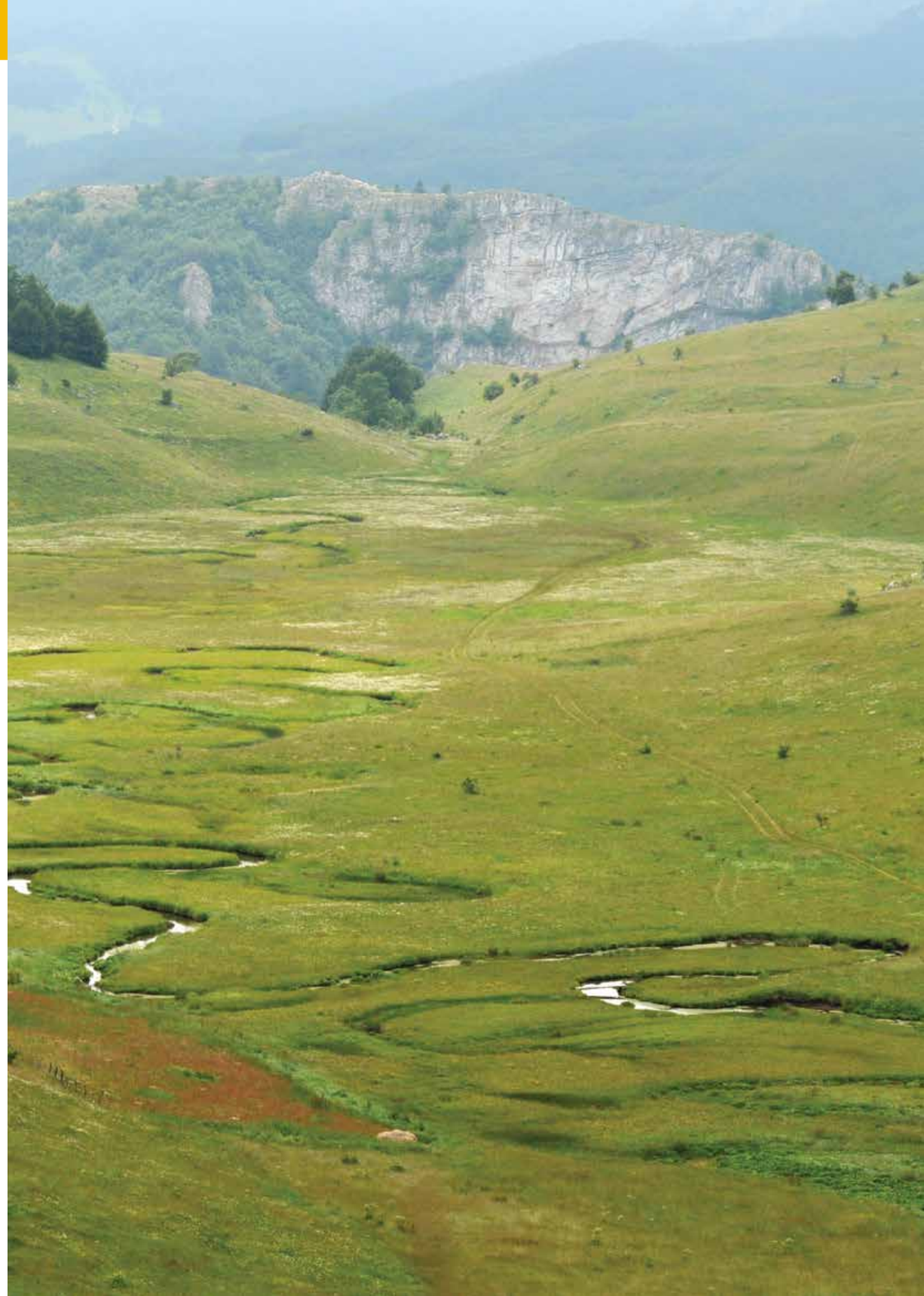
A first step towards ensuring sustainable biodiversity financing is to take the necessary actions in order to reduce the negative impact of economic activities on biodiversity (and thus reduce conservation costs and funding needs). This typically does not require complex or lengthy legislative amendments or large budgets. Often it merely requires the reorientation of existing spending, improvements in public financial management processes and procedures, and realignment (and harmonisation with environmental goals) of policy frameworks. This last point is a particularly important one. Across the region, the economic and fiscal policy environment is rarely supportive of biodiversity conservation – and in fact, in many cases, serves to directly discourage or disincentivise it. For example, a number of taxes, subsidies and other instruments exist that actually make it cheaper for producers, consumers and investors to over-exploit, convert, or otherwise degrade the natural environment in the course of economic activities. Many instances of these so-called 'perverse' environmental subsidies and investment incentives persist across the Western Balkan economies, for example in agriculture, energy, water, industrial, and infrastructure sectors.

Public budget support must be enhanced and supplemented

There is little doubt that the public budget should form the core of conservation financing in the Western Balkan economies – as in other parts of the world. It remains a basic government responsibility, as well as a stated commitment, to ensure that biodiversity, ecosystems and protected areas are maintained and adequately funded. Yet, across the region, biodiversity tends to be given a low priority as compared to other sectors and policy goals. Improved budget support is a necessity and must go hand-in-hand with other measures to overcome the financial constraints to conservation. Not only does this require that funding is increased to environmental agencies, but it also implies making efforts to mainstream biodiversity into sectoral budgets. This is especially urgent for many sectors in the region that depend on and affect biodiversity and ecosystem services, for example tourism, forestry, water supply, disaster risk reduction, farming, industry, and infrastructure.

It is, however, unlikely that the public budget will ever be enough to meet the costs of biodiversity, ecosystems, and protected areas. Moreover, it is equally true that conservation is not only the responsibility of the government. It is necessary to build a broader and more diverse funding portfolio. In the Western Balkans there are many opportunities linked to ongoing processes of market expansion, European and regional integration, privatisation, industrial and infrastructural expansion – as well as to a growing environmental awareness on the part of consumers and investors. There is significant room for development of new markets and commercial investment opportunities, as well as for the principle 'user/polluter pays' to take a firmer hold. There is a growing acceptance (and requirements in the legal framework to that effect) that groups and sectors using biodiversity, or whose activities affect it, should also contribute towards financing its conservation (and bearing the costs associated with their actions).

However, these mechanisms should be carefully assessed and chosen. Their introduction may require new knowledge, skills, institutions and regulations, and may take time to start producing positive results. If not chosen and implemented properly, new biodiversity financing mechanisms will fail to produce results. There is also a need, which is particularly apparent in the region, to ensure that any new financing mechanisms are accompanied by appropriate institutional and governance mechanisms, and implemented in a transparent and accountable manner. Generally speaking, people are willing to pay more and contribute to conservation, if they are convinced that the funds will be used properly.



Biodiversity financing demands a regional approach

Besides the obvious need to secure national and site-level financing for biodiversity conservation, and to work at the local, sectoral and economy-wide levels to identify, develop and implement financial solutions, it is important to take a regional approach. Both the benefits and costs of biodiversity, ecosystems and protected areas, as well as the financial threats, challenges, and potential solutions, transcend national boundaries.

There is a great deal of mutual gain to Western Balkan economies from working together on biodiversity finance, and ensuring that national financing approaches and actions are coordinated and harmonised – especially having in mind the challenges of the European integration process and harmonisation with the EU Acquis. As well as providing an effective means of tackling financial threats and constraints to conservation, there are clear advantages in terms of attracting new funding, sharing and saving costs, developing common approaches and mechanisms, and sharing technical information and lessons learned. There are also many opportunities to work at the regional level, building on shared strategies, institutions and instruments such as the Regional Working Group on the Environment (RWGE) of the Regional Cooperation Council for the Western Balkans (RCC) and its Biodiversity Taskforce (BDTF), as well in support of the post South East Europe 2020 Strategy and the Green Agenda for the Western Balkans.

Needs, options & recommendations

1. **Streamline and improve the planning, programming, costing and budgeting of biodiversity conservation projects and programmes, in line with national policies and legislation, international conventions and EU Acquis, and as part of ongoing public financial management reforms.**
2. **Strengthen administrative and human capacities for biodiversity finance planning, administration and management, at site, sectoral, and national levels.**
3. **Generate and share information about the economic and business case for investing in conservation, within government agencies and the private sector, among land and resource users, and the general public.**
4. **Take steps to justify and secure increased public budget support for biodiversity, ecosystems and protected areas, both within and outside environmental sectors.**
5. **Identify needs and possibilities for realigning, harmonising and improving the targeting and effectiveness of existing budgets, policies and instruments so as to overcome the financial constraints to biodiversity, including dismantling perverse subsidies and other economic, financial and fiscal disincentives.**
6. **Diversify the funding base for biodiversity, by developing and deploying new and additional financing sources and income streams, including through the use of fiscal instruments, market-based mechanisms, commercial or return-based investments, donations, and contributions.**
7. **Make efforts to engage a broad range of stakeholders in biodiversity financing, and to operationalise 'polluter/user pays' principles. This involves ensuring that the groups and sectors that bear the costs of conserving biodiversity and securing ecosystem services are sufficiently compensated and rewarded, as well as that the ones consuming, degrading or otherwise affecting them are fairly and adequately charged for their use and the impacts they give rise to.**
8. **Set systems in place to allow biodiversity funding and revenues to be retained, reinvested and spent in support of the highest priority conservation goals and actions. This also includes the provision of incentives for conservation.**
9. **Enhance regional cooperation, information-sharing, common approaches and joint actions on improving biodiversity funding and overcoming financial constraints. As far as possible these should be positioned to build on and strengthen existing regional institutions, agreements and instruments, to contribute towards ongoing European integration processes, and to capture the opportunities they give rise to.**
10. **Investigate possibilities for developing a common, regional biodiversity financing mechanism that brings together external funding sources as well as national contributions within a shared strategic and implementation framework.**

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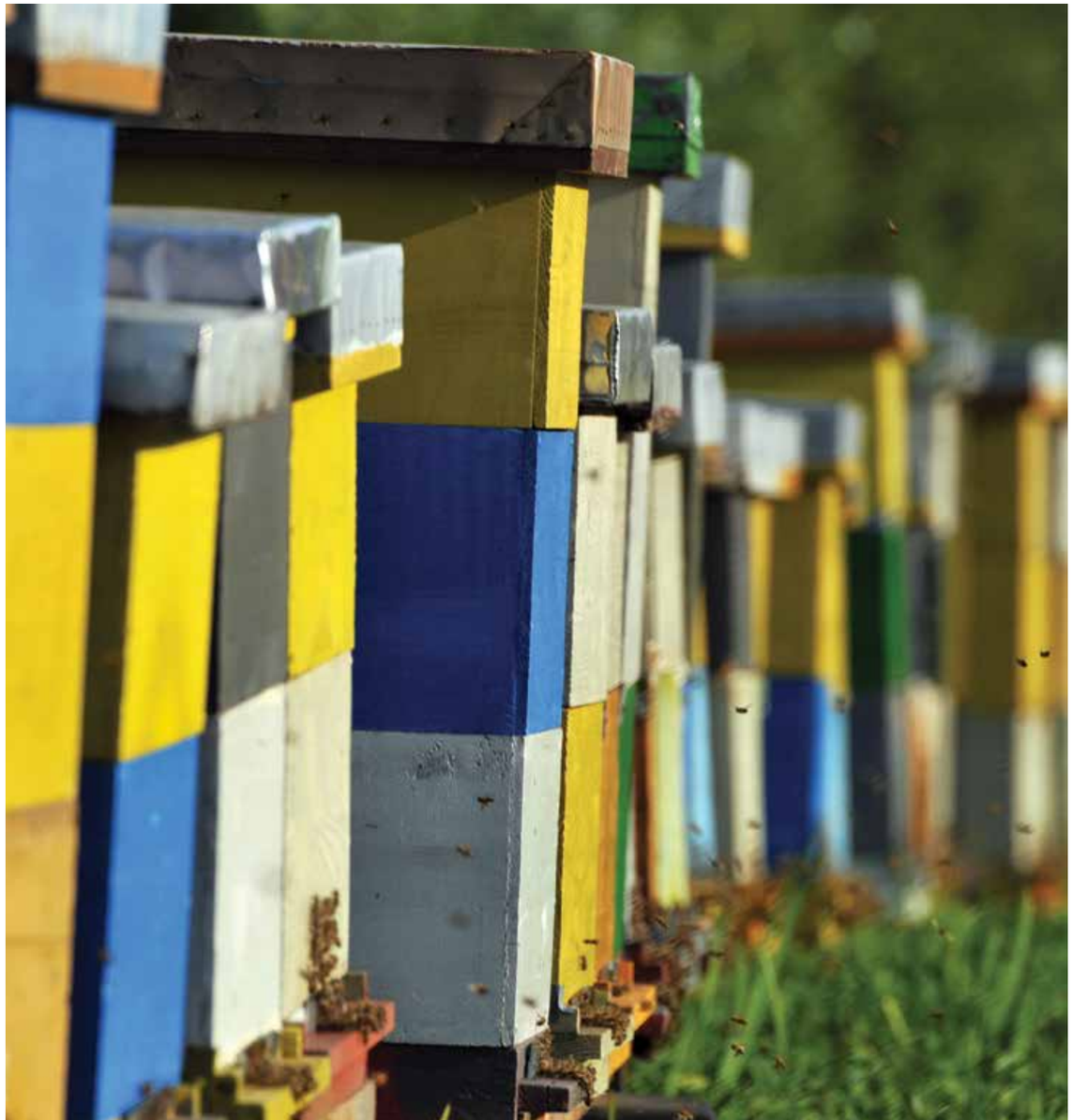
KEYSHEET 1: Improving public financial management

Even though, in most cases, only a small proportion of biodiversity funding comes from the government, these funds are absolutely vital. The public budget should always be seen as a core conservation financing mechanism, and must remain so in the future. It is a basic responsibility of governments to act in the public interest, and to maintain their citizens' rights to a clean and healthy environment. Global and regional commitments such as the Convention on Biological Diversity and the South East Europe 2020 Strategy also imply a stated obligation to meet and fund conservation and sustainable development targets.

In view of the ever present pressing requirements to maintain and increase public budget allocations to biodiversity, ecosystems and protected areas, it is important to note that there is considerable room (and need) for improvement in planning, managing and spending available funds. The intention of public financial management (PFM) reform is to improve budget efficiency, cost effectiveness and, ultimately, funding impact. Public financial management reforms that are ongoing in most Western Balkan economies offer important opportunities in this regard. However, it is clear that that further efforts are needed in areas such as cost reduction, transparent budget planning and procedures, and that improved coordination of planning and spending between different sectors, agencies and regions is called for.



Programme budgeting in Serbia

Under the 2020 Budget Law, 1.08% of total budget expenditures (from all sources) are allocated to the environmental sector. Only a portion of this relatively small budget allocation goes to conservation of biodiversity, ecosystems and protected areas. On the one hand, there is a question of prioritisation – in other words, how important environment-related issues are considered to be. On the other hand, there is an obvious shortage of good quality projects coming from the environmental sector. In addition, in many cases, the funds allocated for environmental purposes have not been effectively spent. It is clear that there is a need for better planning and more effective execution, as well as for awareness-raising and consideration of alternative mechanisms for financing environment-related projects.

This last aspect – building a more diverse funding portfolio – is especially important, having in mind all the obligations that will arise from opening negotiations with the EU under Chapter 27. In January 2020, after two years of preparation, Serbia adopted the negotiation position for Chapter 27. One of the most challenging aspects regarding this chapter for Serbia is to define how harmonisation in this field will be financed and sustainability secured in the long term. There are different assessments of the funds necessary to secure for this purpose, but it is clear that we are talking about billions of EUR in investments. The main reasons for transitional periods for majority of waste and water directives are high costs and limited funding available. Investments in the water and waste sectors can reach around EUR 7.5 billion. These investments are foreseen to be financed from the EU funds (64%), state (18%) and local (4%) budgets, as well as from loans (14%). Additionally, total investment required to achieve full compliance with the Industrial Emissions Directive is approximately EUR 1.3 billion.

Within the framework of the Action Plan for the development of administrative capacities in the area of environment, the Negotiating Group and Ministry of Environmental Protection have identified the need for employment of around 1,450 workers in all institutions dealing with environment at all levels. After a review of the situation in this area, taking into consideration high implementation costs, additional time required to establish the system, and the necessity to strengthen administrative capacities, 19 EU regulations requiring transitional period were identified.

The Fiscal Council suggested that the level of investment into the environmental sector over the next ten years is to be around EUR 8.5 billion. In order to reach this goal, annual allocations for this purpose should be around 1.2% of GDP, which is significantly more than today. In addition to the revenues collected from various ecological fees not being fully used for this purpose, there are significant obstacles such as lack of good quality projects, low absorption capacity, absence of strategic planning and inadequate human resources (for example, the number of inspectors in the environment sector). It is fair to conclude that Serbia has a great deal of potential for tackling challenges in the environmental sector and that in years to come its overall investment in this field will have to be much more substantial than what it is today.

(From: Serbian Fiscal Council: Investments in environmental protection: a social and fiscal priority. http://www.fiskalnisavet.rs/doc/eng/FC%20-%20Investments%20in%20environmental%20protection.pdf)

In general, budget preparation process requires that programmes and programme activities are submitted to the Ministry of Finance, who then decide how the funds will be allocated, based on available resources and quality of proposals. However, providing a strong and convincing justification for budget allocations to biodiversity often remains a major challenge – especially when compared to sectors or agencies perceived to make a more direct or obvious contribution to economic growth and development. While requests to fund biodiversity conservation are in most cases channelled through the Ministry of Environmental Protection (or the like), it is important to note that most sectors and agencies either depend on or in one way or another affect biodiversity, ecosystems or protected areas. In the latter case, biodiversity is often not considered to be a high priority. Relatively low budgets allocated towards biodiversity are not only a result of limited resources available in the developing Western Balkan region but are also due to weak planning and programming capacities and, consequently, lack of good quality project proposals.

Nearly all of the Western Balkan economies have undertaken some form of public financial management (PFM) reform over recent years, or are in the process of doing so. One important area of improvement has been in budget planning. Programme budgeting approaches are increasingly being used, providing an opportunity for budget beneficiaries to request budget funds for specific programs and program activities, which is clearly visible in the annual Budget Law. Introduction of programme budgeting increases transparency of the budget process, since it provides detailed information on sectoral priorities for the following budget year. Thus it enables clear and transparent fund allocation, which sets the stage for successful implementation, monitoring, reporting and evaluation of a specific action. Formulating SMART indicators and presence of reliable sources of verification provide a means of evaluating whether the measures have achieved the desired results. Such approaches are particularly relevant for biodiversity, where, in the past, disconnection between conservation planning and financial planning often resulted in lack of funding for key conservation activities (because they were simply not reflected in budget requests). Programme budgeting therefore allows for, and even demands, a much better planning of conservation measures and targeting of actions, as well as more cost-effective spending based on well-developed impact indicators.

Consequently, there are a number of potential benefits for biodiversity funding, both direct and indirect. One important advantage of developing improved PFM and planning systems is that it sends a strong message to the donor community about the reform processes being taken seriously and funds being allocated, distributed, and spent according to transparent rules and procedures. This increase in trust and confidence in PFM often leads to an increase in donors' contributions and thus in the amount of funds available for conservation purposes. In addition, since PFM relates to all segments of the budget cycle, its reform also ensures a better macroeconomic forecast, a more effective, efficient and transparent budget execution, and better control of public funds.

In the Western Balkan region, the European Community has been providing strong support to and close supervision of PFM reform processes. The release of significant amounts of EU pre-accession assistance is also linked to a successful PFM reform. The EU support also includes substantial Chapter 27 – related investments, since it is one of the most challenging and financially-demanding chapters in terms of EU membership negotiations, ensuring compliance and achieving harmonisation. Aiming to create conditions for preventive action and the polluter-pays principle, as well as to fully integrate environmental protection into all other EU policies, the Acquis in the area of environment

consists of over 200 major legal acts dealing with water and air quality, nature protection, waste management, pollution control, risk management, forestry, noise, and so on.

Two additional mechanisms for improving public spending effectiveness and efficiency can also be highlighted here, since they are present alongside (and usually also as a part of) the PFM reform. One is cost reduction and cost effectiveness. Funds are not always planned or spent prudently or effectively, and in many cases there is considerable room for reducing costs or cutting down on expenditures. This has, historically, been a common problem in many public environmental agencies and protected area management institutions, which have rarely been run on business principles. Across the Western Balkan region, efforts are commencing to introduce cost-reduction strategies, which in many cases served to free up considerable funds. Examples include automation of fee payments, re-deployment of human resources, lease of infrastructure not in use, and contracting out of key services and facilities to third parties.

In addition, it is increasingly recognised that, if sufficient funds are to be made available for biodiversity conservation, they need to be mainstreamed into sectoral budgets, policies and programmes across the economy. Not only is this a way of spreading, or sharing, the costs of conservation (and reducing the budgetary burden on environment agencies), it is also a way of institutionalising the 'user pays' or 'polluter pays' principle as a means of both improving cost recovery in relation to environmental goods and services and ensuring that full costs of environmental damages and remediation are covered (or avoided in the first place). As a result, significant cost efficiency is attained as well as reductions in government spending. Mainstreaming principles are increasingly being accepted and adopted by countries at the macro-level. 'Green budgeting', for example, is now becoming relatively common. This refers to the use of the budget (including taxes, spending and policy co-ordination) to promote the alignment that is essential to meet environmental goals. As well as improving budget allocations for the environment, green budgeting also seeks integration into every aspect of the economy, encouraging a more sustainable economic model. For example, the Paris Collaborative on Green Budgeting was launched by the OECD in 2017, aiming to design new, innovative tools to assess and drive improvements in aligning national expenditure and revenue processes with biodiversity, climate and other environmental goals. It is considered to be a crucial step in achieving central objectives of the Paris Agreement on climate change as well as of the Aichi Biodiversity Targets and the United Nations' Sustainable Development Goals.

- Government budget forms the core of biodiversity funding;
- Efforts to improve existing systems and funding effectiveness;
- Already accepted instruments and procedures are used.

- May be difficult to prioritise biodiversity and ecosystems in public financial management and budgets.

Further reading:

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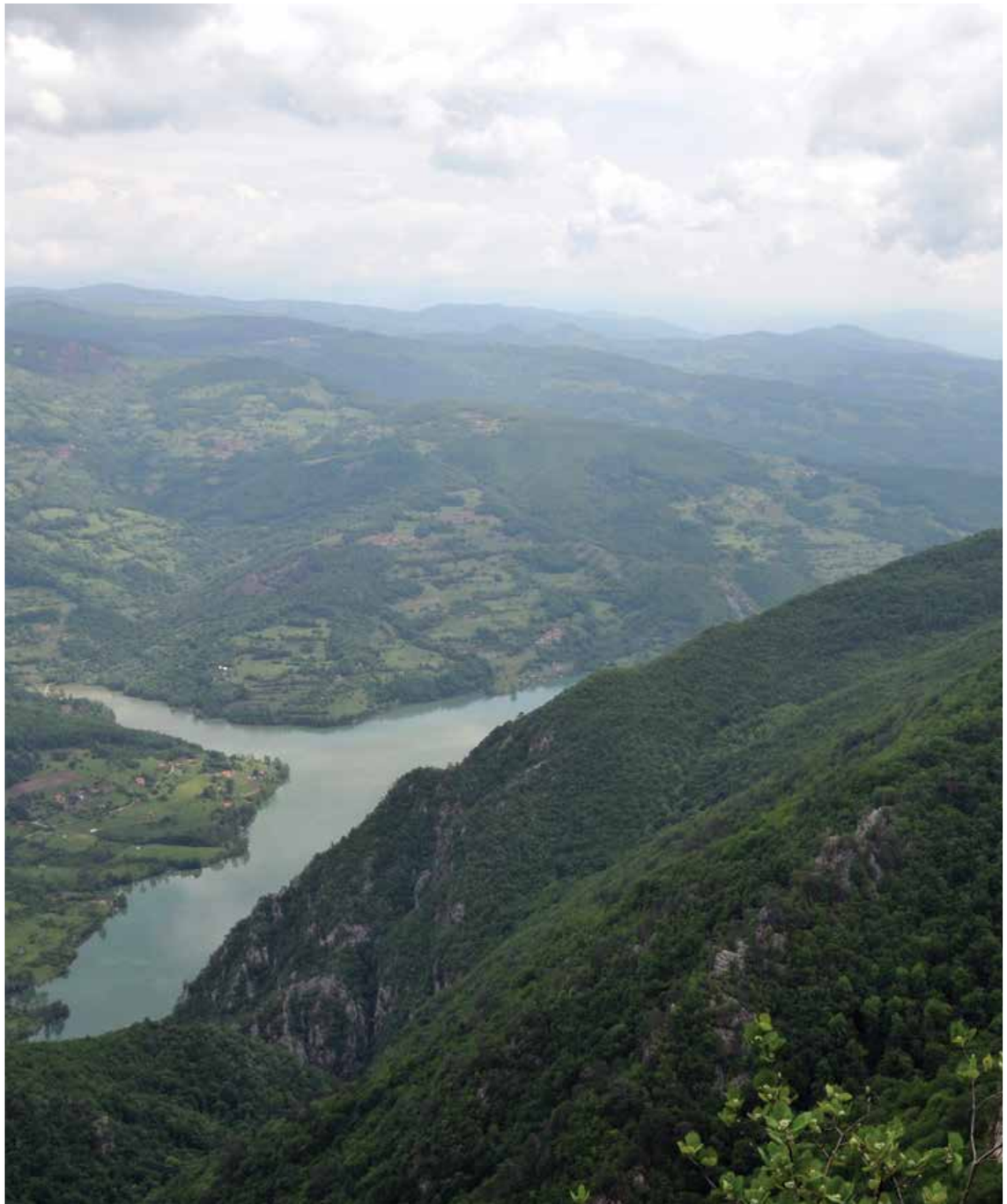
KEYSHEET 2: Fiscal earmarking

Even though revenues and income generated in many sectors of economy depend on or affect biodiversity, they are rarely reinvested into conserving nature or addressing the environmental impacts they give rise to. Fiscal earmarking, also known as hypothecation, involves setting aside all or a portion of taxes and other fiscal revenues, and allocating them in support of a specific sector or activity – in this case biodiversity. For example, a national park might be allowed to retain and spend the tourist fees it generates, or a percentage of fuel taxes may be contributed towards environmental protection activities.



Fiscal earmarking of hunting and fishing revenues in Estonia

In Europe, one of the best examples of fiscal earmarking successfully reinvested in conservation is the initiative related to fishing and hunting fees in Estonia. In one form or another, those fees have been in place in Estonia since the 1990s. At present, the legal base for fishing and hunting can be found in the Estonian Environmental Charges Act (2005), Estonian Fishing Act (2015), and Estonian Hunting Act (2013). Under these laws, recreational fishing fees depend on the period of fishing. For commercial fishing, rates are based on the sales price for the fish species. People are allowed to engage in recreational fishing in protected areas, where special fishing cards are offered in limited numbers. Annual fees are charged for hunting.

The principal idea behind the introduction of fishing and hunting fees was to fund restocking and overall protection of resources. The initiative was successful, largely due to transparent earmarking principles and good communication with the public on how the revenues were spent. Fishing and hunting revenues are transferred to the Environmental Investment Centre (EIC), a state agency responsible for environmental issues, currently covering areas such as nature conservation, fisheries, forestry, water management, waste management, etc. In 2015, revenues from fishing fees reached EUR 1.57 million, out of which around EUR 1.21 million (77%) was reinvested for conservation purposes.

The EIC reinvests funds in the form of grants. They are used for research purposes, such as building up an inventory of fish stocks, and conservation actions, such as river restorations and awareness-raising through organising summer camps for children to teach them about environmental issues and importance of sustainable fishing. Funds raised from hunting fees are used for restoration and improved management planning.

(From: Illes 2016)

In the Western Balkans, as in many other areas around the globe, biodiversity, ecosystems and protected areas generate considerable local, national, and even regional economic activity. For example, revenues generated from tourism are not only limited to entrance fees, but also include spending on a wide range of services (hotels, restaurants, markets, etc.). As such they contribute greatly to earnings, employment, spending and the tax base in a specific area. The major proportion of such fiscal revenues is, however, usually either retained by the sector that earned them, or remitted to the central treasury and reallocated across the economy. Little or no funding is retained or reinvested directly in nature conservation. Bearing in mind the very limited national budget available for biodiversity, earmarking all or some of these revenues for conservation could provide (or significantly contribute to reaching) sustainable financing for conservation.

Fiscal earmarking can take many forms. In some cases, revenues from biodiversity, ecosystems and protected areas are reinvested directly into the site or sub-sector that generated them. For example, most national parks in Europe retain earnings generated by tourist entrance fees and sales of natural products. In other cases, fiscal earnings from sectors that depend on or are linked to biodiversity are ploughed back into conservation. In the United States, excise taxes on hunting and fishing gear, firearms and ammunition are allocated to funding the Federal Wildlife Program. A fixed sum from Belize tourist departure tax is paid to the national Protected Areas Conservation Trust fund, and a portion of departure taxes collected at Fiji Airport is earmarked for environmental conservation initiatives. Fiscal earmarking can also be applied to products and services that are unrelated to the environment. For example, ten per cent of tobacco tax revenues in California are given over to parks and wildlife habitat conservation; Missouri's 0.05 per cent tax on sales of personal property and retail services is allocated to the Department of Conservation; and both the Nebraska Environmental Trust Act and the Great Outdoor Colorado programmes are financed through earmarked state lottery funds.

However, the argument is more complex than it seems at first. Fiscal revenues form a major source of public funds. There are multiple demands on these funds, and it is generally accepted that there must be some degree of revenue-sharing or cross-subsidisation across sectors. It is rarely possible – or justifiable – for a sector or agency to retain all of the revenues it generates. However (and to some extent counterbalancing this), there is often a significant level of distrust on the part of taxpayers that that their contributions are managed well and used for the best purpose. Earmarking taxes for spending in the sector or site where they were generated is a way of increasing accountability, serving to motivate people to pay taxes and get them more involved in tax-related policymaking. The argument is that taxpayers will support higher tax rates if they are convinced that there is a clear link between taxes paid and specific policy actions they favour, or reinvestment into providing the services or facilities for which the taxes were paid in the first place. Following on from this, in cases of biodiversity, ecosystems and protected areas fiscal earmarking only makes sense if it can be demonstrated that the revenues will indeed be used for conservation. In the Western Balkan region there are several examples of earmarking environmental taxes. However, in many cases, there is a lack of additional information on how those funds are allocated. The main concern remains the effectiveness and proper allocation of earmarked funds.

- Uses existing systems and instruments;
- Greater transparency of budget allocation leads to wider public support;
- Ensures sustainability and predictability;
- Enhances medium and long-term planning;
- Conservation efforts.

- Fairness of the budgetary process through which actors compete for funds;
- Introduction of earmarked taxes/fees may lead to the economic decline of a specific area.

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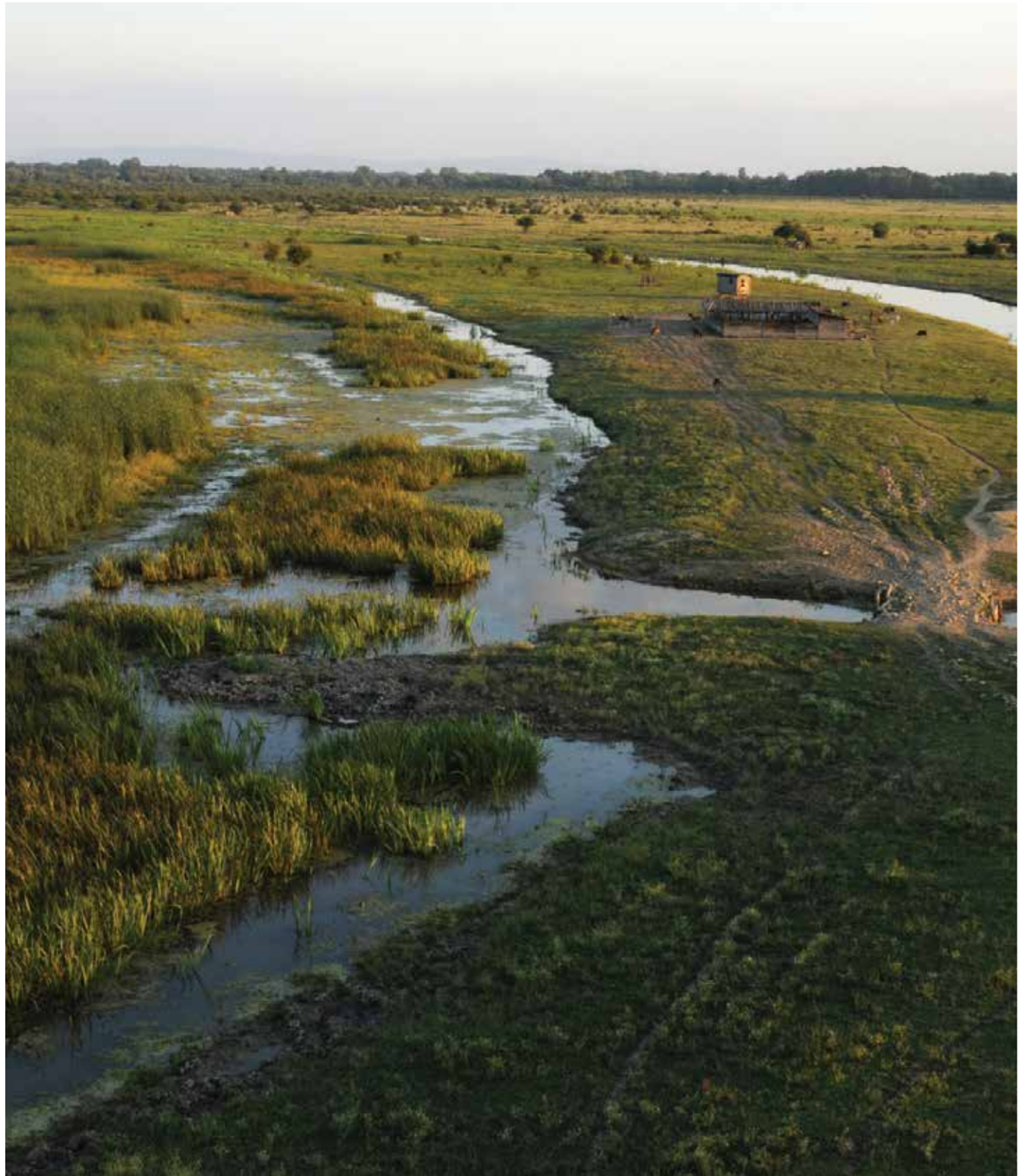
KEYSHEET 3: Ecological-fiscal transfers

Both direct and opportunity costs of biodiversity conservation can be very high for local authorities. It is often hard to justify setting land aside for protected areas or otherwise restricting land uses, especially in the face of pressing needs for local income and development. Recognising that such actions are also in the national public interest, and may secure global benefits, ecological-fiscal transfers (EFTs) are a way of rewarding and compensating local conservation costs. They incorporate environmental criteria into fiscal revenue redistribution, and allocate a share of the national budget according to ecological indicators (such as protected areas, watershed management areas, or biodiversity richness). Good conservation performance thus becomes a source of additional income and budget for the local government authority. As well as providing funds for biodiversity, EFTs are increasingly seen as a mechanism to support and incentivise decentralised conservation efforts.



Ecological-fiscal transfers in Portugal

Ecological Fiscal Transfers (EFTs) were introduced in Portugal in 2007, designed to compensate for the opportunity cost arising from setting aside land as protected areas or imposing other land-use related constraints. The legal basis was provided for by amendments to the Local Finances Law, which is used to determine fiscal transfers from central government to municipalities. The Law now specifies that 5-10% of the General Municipal Fund will be distributed according to the amount of territory under protected areas or land with Natura 2000 status (5% is allocated equally across all municipalities, 65% according to population, and 20-25% according to total area). Those funds are not earmarked and local governments may decide how to use them.

The effectiveness of EFTs in Portugal is still unclear, since it was introduced relatively recently, and there is as yet no adequate monitoring system. Although there is some evidence that the mechanism has produced positive effects for biodiversity, some shortcomings were also identified in the first decade of its implementation. The complexity of the legislation governing EFTs (the Local Finances Law) created confusion among local authorities, which were often not aware of the amount of ecological-related funds, only of the total amount of fiscal transfer received. It has also been argued that EFTs have provided relatively larger benefits to municipalities with a larger proportion of conservation areas, raising questions about their effectiveness in acting as an incentive either to increase the area under protection, or to improve protected area management effectiveness. In some cases, it appears that EFTs have not been sufficient to counterbalance competing land uses and threats to PAs. Questions have been raised about the extent to which a lack of earmarking has limited conservation impact.

Various proposals have been made to increase the effectiveness of EFTs, such as the creation of municipal biodiversity conservation funds in order to channel funding to promising initiatives. There has also been a general call for clearer and more transparent procedures. Some changes have been made, for example the introduction of measures aimed at providing more fairness in funds distribution among municipalities and securing stable and predictable financial support.

(From: Campo Rodrigues 2016)

In most countries in the world, public revenues are retained and administered at the central level, and then redistributed to local governments as annual budget allocations, in line with the regular budget cycle and public policies. In simple terms, while local governments typically enjoy some level of fiscal decentralisation, they still require subsidies from central government in order to cover their expenditures and achieve fiscal balance. Such vertical transfers are usually guided by a formula that combines a number of criteria used to determine local-level needs for (and sometimes entitlements to) public funding – for example the size of population, territory, level of development, revenue base, and so on. There are a number of ways of integrating ecological considerations. One is to directly introduce new elements into the revenue-sharing formula, for example territory under a forest or protected areas. In other cases, the size of budget allocation does not depend on environmental criteria, but a portion of the transfer is required (or allowed) to be invested in environmental activities. Sometimes, quite complex systems are used which combine both quantitative (e.g. protected area coverage) and qualitative (e.g. level of protection or management effectiveness) criteria.

Ecological-fiscal transfers (EFTs) therefore offer a way of incorporating environmental criteria into fiscal revenue redistribution. On the whole, they do not generate new revenues, but provide a mechanism for increasing the share of public funding going to regions which have high levels of biodiversity or ecosystem services, have set aside land for conservation, face pressing threats or incur high costs to maintain environmental quality, or are otherwise deemed to be particularly ecologically-sensitive or to play a key role in securing national environmental benefits. Often these regions are located in relatively remote areas, with low levels of development and a weak revenue base – EFTs often reflect equity considerations, as well as conservation goals. For example, one can imagine a relatively poor municipality hosting considerable biodiversity and natural resources and with a large protected area territory. It is not difficult to understand that there would be much pressure to exploit these resources and develop or convert these lands in order to generate local income, employment and economic development – even though the conservation of biodiversity, ecosystem services and protected areas might generate significant positive effects at the broader national or even global level. Here, that would be a clear argument for EFTs from the central government to the local government budget, in order to fund, reward, compensate and incentivise their conservation efforts.

Fiscal transfers may be earmarked (specific) or unearmarked (general). Earmarked EFTs are specifically intended to fund conservation, and cannot be used for other purposes. Unsurprisingly, in such cases, the positive impact on biodiversity tends to be much higher. However, although earmarked EFTs provide a direct source of conservation funding, they do not compensate for opportunity cost in the sense of supporting the sectors and groups whose activities are affected by restrictions on particular land and resource uses. In this sense, unearmarked EFTs can be an important mechanism to support spending on economic development by local and regional governments.

It is difficult to assess the effectiveness of EFTs, and as yet very little work has been carried out to measure their impact as a conservation funding mechanism or incentive. On the positive side, EFTs involve no additional burden on taxpayers, they merely redistribute existing public revenues. They also seem to be generally perceived by municipalities and local authorities as a reward, and as an incentive for good environmental performance. This has sometimes had the additional advantage of creating a positive competition among municipalities, encouraging other regions to improve their conservation track-record. At the same time, EFTs can raise public awareness about the importance of biodiversity and ecosystems, and send a clear message that the central government values conservation efforts.

Certain challenges, however, remain. In case of unearmarked EFTs, questions arise about the danger of funds being used to support projects which endanger biodiversity. Another limitation is that, because EFTs do not serve to increase the public revenue base but only to guide allocations, there is a risk that improvements in conservation (for example expansion of protected area network) will, in fact, reduce the amount of money granted per unit of effort or area. It has also been argued that because the value of EFTs is usually determined by the area of land under protection, they prejudice against municipalities with lower biodiversity or smaller protected areas, and favour those that already have an economic advantage in terms of tourism and other services. The implication is that areas with less biodiversity and more industry also need funds for environmental purposes.

There is a growing experience of EFTs, world-wide. Brazilian 'ecological value added tax (ICMS-Ecológico)' is widely recognised to be the forerunner of EFTs. It was introduced in 1992 in the federal state of Paraná, and is now used in 17 out of Brazil's 26 states. Since the early 1990s, the Federal Constitution has allowed for a quarter of the revenues from a tax imposed on the circulation of goods, services, energy and communications to be allocated to municipalities; of this share, 25 per cent is distributed according to criteria defined by each state, including as compensation for land-use restrictions associated with conservation (May et al. 2002). In 2007, Portugal was the first state in Europe to introduce EFT, followed by France, Germany and Poland (see Kettunen and Illes 2017, Schröter-Schlaack 2014), while outside the EU, EFTs are under development or implementation in Switzerland, India and Indonesia.

- Uses existing systems and instruments;
- No additional burden to taxpayers;
- Reward for not over-exploiting;
- Good motivation for local governments;
- Raises awareness about the importance of conservation efforts.

- If EFTs are "unearmarked", the effect is uncertain;
- Unfair for those municipalities with fewer protected areas.

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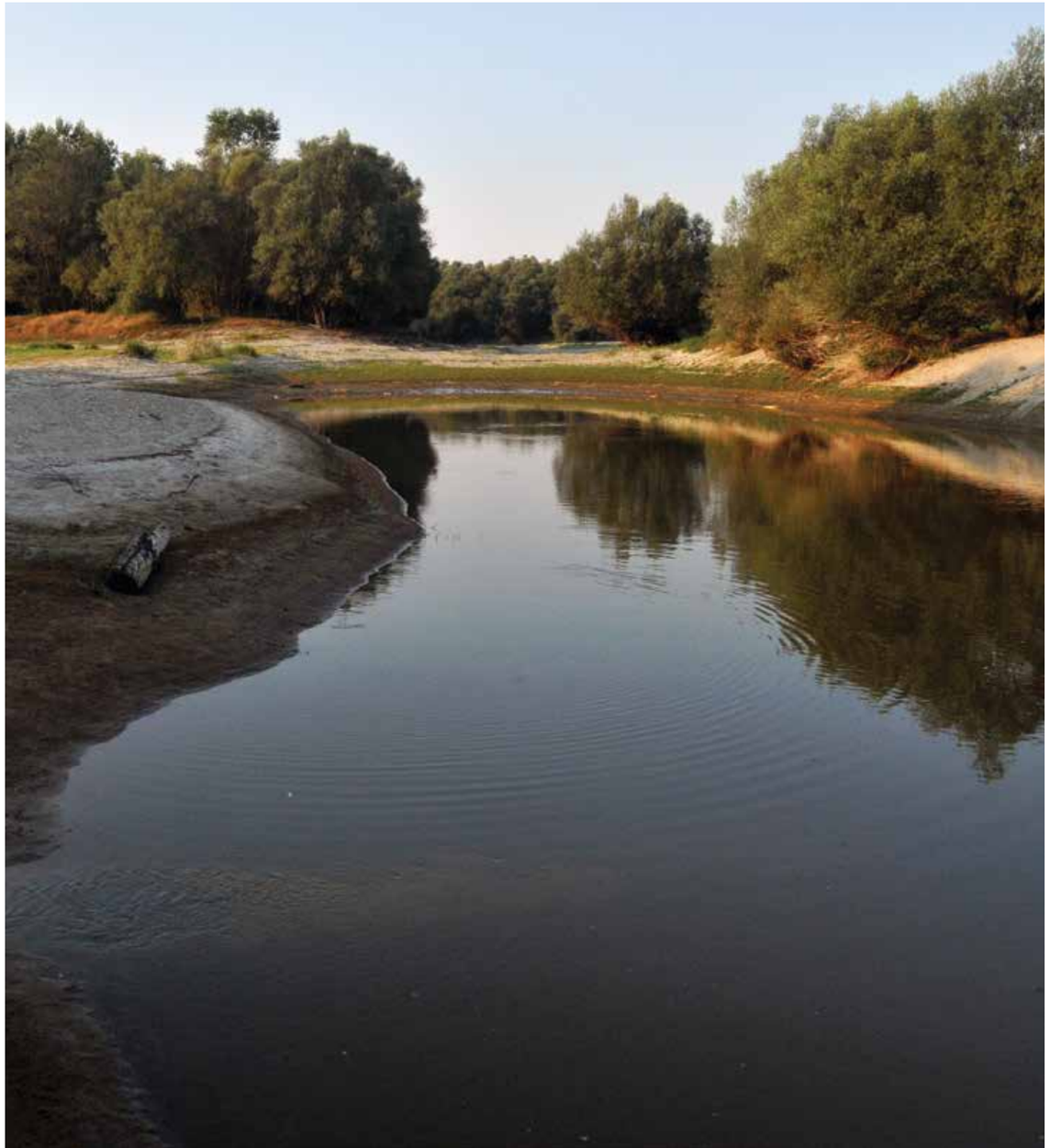
KEYSHEET 4: User fees & resource extraction charges

The concept behind user fees and resource extraction charges is very simple: that those who consume, use or otherwise affect biological resources and ecosystem services should pay for doing so. This is known as the 'user pays' or 'polluter pays' principle. This remains one of the most well-known and widely used biodiversity funding mechanisms. There are currently more than 170 biodiversity-related fees and charges, across dozens of countries, reported in the OECD PINE database. Examples include park entrance fees, charges for the use of recreational facilities, fishing and hunting fees, timber and mineral royalties, lease of lands and buildings in protected areas, etc.

As well as offering a tool for managing demand and use (for example through differential pricing), user fees and resource extraction charges can provide a valuable source of public revenues. It should however be noted that many land and resource uses run the risk of causing negative impacts on nature, if not managed sustainably. A key consideration is therefore to ensure that resource use is carried out in a sustainable manner, and that the revenues generated are re-invested in biodiversity conservation.



Biodiversity user fees and resource extraction charges in Europe

Across Europe, user fees and charges are in place as compensation for the use of natural resources. There are various examples of national park entrance fees or fishing and hunting fees in place. However, sometimes they are not earmarked and used for conservation purposes. In the UK, for example, national parks do not charge entrance fees, but many collect significant fees through parking charges or collect voluntary contributions. In the Lake District National Park, for example, fees collected from parking charges are used for conservation purposes. This park in North West England has very rich biodiversity and over 16 million visitors a year. Since 1994, there has been an initiative to collect donations from visitors. This is done throughout the whole tourism industry. Most businesses, such as hotels, shops, restaurants, gift shops etc., collect contributions using various collection methods and serve as a conduit between their customers and the conservation activities supported. The collected funds support a variety of projects. The initiative has raised millions of pounds and helped hundreds of conservation projects and tourism businesses. It is important to note that donations are voluntary. For example, when paying a hotel or restaurant bill, guests are invited to make a small donation. Funds raised are additional funds, beyond those secured annually by the state.

Another good example is the reform of salmon fishing regulation in Ireland. Salmon stocks throughout Europe had been declining for decades and serious steps had to be taken in order to ensure conservation. Fishing fees for salmon were earmarked, and 50% of revenues redirected to the Salmon Conservation Fund. The main purpose of the fund was to finance activities related to the conservation of salmon. Fees range from tens of EUR to more than EUR 100, depending on the region and duration. The monitoring process showed some improvements in conservation efforts and increased salmon stocks over the years of implementation. It was important that the Inland Fisheries Ireland managed both the licensing scheme and the Conservation Fund, responsible for conservation and management of salmon stocks.

(From: Kettunen 2017)

User fees and resource extraction charges have long formed a mainstay of biodiversity-related revenues, and traditionally form a particularly important part of protected area (PA) funding. In contrast to taxes (which are compulsory payments, collected by the government and paid into the general budget), user fees and resource extraction charges are levied on the consumption or use of specified goods and services. They are imposed by the owner or provider of those goods and services, which may be a government agency, a private company, an individual, organisation or institution. Fees and charges usually have three, overlapping, purposes: to recover the costs of providing or maintaining the good or service, to ensure that funds are available to mitigate or remediate any damage caused to the natural environment in the course of carrying out the activity, and to manage demand.

Various considerations emerge in relation to user fees and resource extraction charges. One is the question of pricing. This is often a complex issue, both economically and politically. In some cases, the very idea of biodiversity-related fees is controversial – especially if it is newly-introduced, where no charge was made before. For example, in many countries in Europe and North America it is strongly argued that no charge should be imposed to enter and enjoy protected areas and other government-run natural landscapes, as it is people's fundamental right to be able to freely enjoy nature (and the government's basic responsibility to ensure this). Furthermore, many would claim that they have already paid taxes for the provision of public services, and should not therefore be double-charged.

Even where some kind of a biodiversity-related fee is generally accepted, it is not always easy to determine the 'right' price. This is especially the case for goods and services that do not otherwise have a well-developed commercial market or cannot easily be quantified and measured (for example the use of natural areas, or collecting wild fruits, herbs and mushrooms for home consumption). The relationship between price and demand is also a factor that needs to be carefully considered. Prices should not be set too low, eespecially in cases where there is a risk of over-extraction or of exceeding carrying capacity (for example from resource extraction or tourist visitation). Conversely, there always a risk of unfairly excluding certain users or beneficiaries by setting the price too high (for example local people, poorer or more marginalised groups), or of decreasing demand and thus revenues as well (for example from visiting a specific site or making use of a particular facility or service). In some cases, price levels are designed with the explicit aim of managing demand, restricting extraction levels, or spreading use and users between different resources, sites and facilities. Typically, user fees and resource extraction charges are set based on detailed research on consumer demand, elasticity and substitutability, needs for cost recovery, as well as social and cultural considerations. Another important factor is that of retention and reinvestment. If fees and charges are to serve as a conservation financing mechanism (rather than merely as a source of income, or a demand management tool), then it is essential that the revenues generated are earmarked for a specific, related purpose. In most cases, people will also be unwilling to pay fees if they are not convinced that such fees are being reinvested into maintaining the resource, landscape or facility used.

A clear advantage of user fees and resource extraction charges is that they are usually relatively simple to set up and collect. They are also easy for users and beneficiaries to understand, because they are linked to the consumption or enjoyment of a particular good or service. Balancing this, it should be noted that fees and charges often require the development of supporting regulations and administration mechanisms. This can be complex and time-consuming. It is also always necessary to consider whether transactions costs of collecting, enforcing and administering payment systems will outweigh the revenues generated. This is sometimes the case, for example, in relation to tourism charges in remote, little-visited national parks. As fees and charges can sometimes have unintended impacts on use and demand, it is always important to ensure that they are subject to regular monitoring, evaluation and review.

Many types of biodiversity-related fees and charges are in place across the world, including in the Western Balkans. Tourism fees are one of the most obvious, and lucrative, sources of revenues. Two types of fees can be distinguished: entrance fees and activity-related fees. For example, every year, millions of people visit and stay in protected areas (PAs) and other nature-related destinations, and engage in a wide range of recreational pursuits, for example photography, sight-seeing, bird-watching, wildlife-viewing, hiking, mountaineering, white-water rafting, fishing and hunting. It is now commonplace to impose a charge to visit these landscapes, use these facilities, and undertake these activities. Related income can be generated by sales of souvenirs and by offering concessions for restaurants, gift shops, guided tours, hotels and other facilities. These offer a valuable (and usually predictable) source of income. In some cases, protected areas and other natural landscapes are tapping into additional, specialised markets – for example film production, 'destination' marriages, or licensing the use of a nature-related brand or logo.

A variety of resource extraction charges are used to generate funding, ranging from fees for small-scale (and often non-commercial) activities such as collecting wild fruits and mushrooms or hay-cutting, to charges for large-scale, industrial activities such as logging, mining and bioprospecting. For the latter, especially, a major question is the extent to which such income can be considered to be conservation funding. In many cases the revenues raised are not actually reinvested into biodiversity and ecosystem conservation or, in extreme cases, are incompatible with conservation – environmental damage caused by the activities actually exceeds the funding generated. Here the main considerations are, therefore, sustainability of the activity and the extent to which the generated income is reinvested directly in conservation. There is now also an increasing number of examples of conservation funding being generated via fees on non-extractive, non-consumptive use of biodiversity and ecosystem services – for example watershed protection and carbon sequestration. Payment for ecosystem services, a special type of user fee, is described in a separate keysheet.

- Simple and easy to set-up;
- Based on 'polluter pays' principle.

- It is difficult to set the proper price;
- Only useful for financing if there are also mechanisms to retain, earmark and reinvest revenues;
- Introduction of (inappropriate) fees and charges may cause more damage than benefits;
- Requires constant monitoring and evaluation;
- Danger of political interference.

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KEYSHEET 5: Surcharges

A surcharge is an extra fee or charge, added on to the cost of goods or services, paid by customers and consumers. In the environmental context, a general principle of a surcharge is that additional revenues are raised to support conservation or avoid negative impacts. In many cases, the aim is to cover the costs of complying with environmental standards or mitigating damage caused by production, processing or disposal of the good or service. Surcharges may also be used as a mechanism to tap into consumers' interest in the environment, and thus to capture their willingness to make an extra, voluntary contribution to conservation.

Sulphur-related marine fuel surcharges

One example of a surcharge aiming to cover the increased costs of environmental compliance is related to the global sulphur cap. This regulation, entering into force on 1 January 2020, was developed by the International Maritime Organisation (IMO), a specialised agency of the United Nations responsible for regulating shipping. Previously, ships could use fuel with a sulphur content of 3.5%, while the new sulphur cap will drop to as low as 0.5%. In order to meet the new regulation standards, companies will have to invest in compliant fuels or alternative technology. The expected result is to lower global shipping sulphur emissions by more than 80%.

The new 2020 sulphur ceiling is a real game-changer for the shipping industry, as it will bring substantial increases in fuel costs – estimated to be as high as USD 10-15 billion a year. This has stimulated shippers to revise the bunker adjustment factor (BAF) formulae and introduce a new 'low sulphur surcharge' or 'environmental fuel fee' so as to compensate for this rise in fuel costs. This adds an average of USD 125 per TEU (twenty-foot equivalent unit). The aim is to recover these additional costs from their customers. In most cases, this fee will be charged separately from the freight rate.

(From: http://www.imo.org/en/MediaCentre/HotTopics/Pages/Sulphur-2020.aspx)

Plastic bag levy in Ireland

In 2002 the Irish Government decided to introduce a EUR 0.15 environmental levy on plastic bags. Prior to this decision, 95% of shoppers would use plastic bags. The measure was introduced as an anti-litter one, with the goal to reduce plastic bags, which accounted for 5% of Ireland's litter. With the introduction of this levy there was a dramatic change in behaviour. According to the first official report, only in the first three months after the introduction of the levy more than 3 million EUR were raised. After the initial success, the levy was increased to EUR 0.22 in 2007. Over the 12 years period, a total of 200 million EUR was raised. The funds have been used for projects (such as waste reduction, research and development, promotion of awareness campaigns, etc.) managed by the Environmental Fund and to finance the Ireland Environmental Protection Agency. The success was immediate, leading to reduction in the consumption of plastic bags by as much as 90%. According to Mr Denis Naughten, Minister for Communications, Climate Action and Environment (2016-2018), introduction of the levy led to a dramatic reduction in the number of disposable plastic bags supplied to consumers. The number was reduced from an estimated 328 bags per person per year prior to the introduction of the levy, to 21 bags per person by the end of 2002, and further down to 8 bags per person by the end of 2016). General public response was very positive, just like the response from other major stakeholders. As emerges from a survey conducted by Convery et al. (2007), both the public and retail industry praised the levy for its positive effect on the environment. Introduction of the plastic bag levy in Ireland influenced consumer behaviour, but also generated significant funds used for environmental purposes. This has been taken over and applied as a good example by most Western Balkan economies, although it is still not clear whether the funds are used for environmental purposes, or the idea behind this mechanism was just to reduce usage of plastic bags.

(From: Anastasio and Nix 2016)

Surcharges are additional fees on a good or service, over and above its existing cost. Unlike fiscal earmarking and transfers, which are a way of redistributing public revenues, surcharges are usually added by companies to the price of their products or services. They are therefore levied directly on consumers and customers, and used to generate additional revenues. Surcharges may be a flat fee or calculated on a percentage basis. The main objective is usually to cover the costs of complying with environmental standards and mitigating negative impacts, as well as offsetting the regulatory fees imposed by the government. Examples include surcharges on air travel, high carbon-emitting vehicles, or on packaging, water, fuel or energy use.

Although they can be an effective way of generating revenues (and, in many cases, reducing consumption), such types of surcharges do not necessarily serve to contribute new funding for conservation. In many cases they only cover the cost of managing, remediating or mitigating the environmental damage incurred in the course of producing the good upon which the surcharge is being levied (and, in many instances, they are sufficient only to cover a small portion of this). In addition, because the burden of payment is typically transferred to consumers via higher prices, there is rarely an incentive for producers to act in a more efficient or environmentally-friendly manner. This does, however, mean that surcharges can lead to considerable changes in customers' and consumers' behaviour.

Another form of surcharge is one that seeks to capitalise on people's interest in biodiversity and ecosystems. This is usually a way of generating new and additional funds for conservation that are not linked to the environmental costs incurred in producing a good or service. These types of surcharges are usually voluntary, often targeting luxury goods in high-end markets. For example, many hotels now offer their customers to opt into a voluntary surcharge on their bills which is earmarked for biodiversity and nature conservation. Several states in the USA offer vehicle owners the opportunity to purchase higher-cost licence plates, with the surcharge being directly earmarked for conservation funding. The additional USD 30 fees associated with Minnesota's 'Critical Habitat Plate' are channelled to the Reinvest in Minnesota Critical Habitat Program, and similar schemes operate via Nevada's 'Conserve Wildlife' license plate, Maine's 'Conservation and Support Wildlife' plate, and Ohio's 'Conservation and Sportsman's' plates. Similar schemes operate across Europe for credit cards, chequebooks and postage stamps.

- Generate additional revenues;
- Encourage heavy polluters to comply with environmental standards;
- Strong incentive to change behaviour.

- Transfer the burden to consumers;
- May lead to reduction in revenue collection.

Further reading:

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KEYSHEET 6: Sustainable biodiversity products & markets

All too often, markets for sustainable, biodiversity-based or biodiversity-friendly products remain undeveloped, or even non-existent. This is in contrast to more traditional (and often unsustainable) markets, which tend to be better-established, easier to access, more reliable, to rely on a larger customer base, and offer higher prices. It is difficult for harvesters and traders to sell their goods, or to make a good return. More sustainable products and services remain uncompetitive and unprofitable.

However, consumer demand for sustainable biodiversity products has grown significantly over recent years. A wide range of new, and increasingly profitable, markets are beginning to emerge – for example in natural cosmetics and healthcare products, organic or wildlife-friendly foods, sustainably-sourced seafood, certified timber, and ecotourism. Various financial and economic tools and instruments are used to enable and encourage them, including certification, eco-labelling, branding, and other forms of support such as training and technical support, assistance with marketing, preferential access to credit and loans, or granting of subsidies, tax reliefs and other fiscal incentives.

Natura 2000 branding campaign

The Natura 2000 branding campaign has been developed to help make products coming from Natura 2000 sites better-known and more appealing to the public, and to increase awareness of the benefits these products provide for nature and the local economy. It aims to trigger new partnerships between site managers, farmers and local businesses, and improve perceptions of and increase support for the Natura 2000 network. One example is an initiative developed by Fundación Global Nature (FGN), a Spanish NGO. This involves supporting farmers active in the Natura 2000 sites in the regions of Castile-La Mancha and Castile-Leon to package and market nature-friendly legumes, almonds and other crops, making clear reference to their origin and environmental benefits of the production method. Production is currently completely organic, and farmers follow environmental guidelines that have been agreed upon and are clearly linked to biodiversity protection – for example, creating hedges and boundaries for crops to provide shelter and food for fauna species, replacing the use of chemical fertilisers by natural products, promoting crop rotation with varieties of legumes and fallow land to create a mosaic of cultures. Around 400 farmers have been involved in different project activities in the past four years, with about 20,000 ha of land area managed.

(From: Kettunen and Illes 2017, https://www.natura2000branding.eu/)

The 'Bear-friendly' label in Croatia and Slovenia

The 'Bear-friendly' label in Croatia and Slovenia was created in partnership with the LIFE DINALP BEAR project. It has been designed to reward local products and services contributing to better coexistence between bears and humans. Bear friendly practices include, for example, effective protection of livestock, beehives and orchards, the use of bear-proof garbage bins, development of bear-related responsible tourism programmes, and souvenirs that promote bear conservation within local areas. The label is currently used to market and promote tourism and recreation, fruit, honey, cheese, milk and meat products, as well as bear-friendly local handicrafts such as magnets, pendants, wooden and ceramic sculptures, toys and natural soaps. In addition to a bear motif, these products offer some key facts about bear conservation, raising awareness about the importance of the species among local and international public.

(From: http://www.discoverdinarics.org/bear-friendly/why-bear-friendly/, https://dinalpbear.eu/bear-friendly-label/, https://www.natura2000branding.eu/story/bear-friendly-products-promoting-the-coexistence-between-bears-and-humans/, https://ec.EUR opa.eu/environment/nature/conservation/species/carnivores/case_studies.htm#Bear%20Friendly%20Products%20|%20Croatia%20and%20Slovenia)

Various terms and concepts are used to describe sustainable biodiversity products and markets. For example, the International Union for the Conservation of Nature (IUCN) defines biodiversity business as 'commercial enterprise that generates profit and equitable benefits through biodiversity conservation and sustainable use activities', while the United Nations Conference on Trade and Development (UNCTAD) characterises biotrade as 'activities of collection, production, transformation, and commercialisation of goods and services derived from native biodiversity under the criteria of environmental, social and economic sustainability'.

It is generally agreed that key characteristics of these products and markets are that they either arise from the sustainable use of biodiversity ('biodiversity-based') or have been sourced or produced so as to avoid negative impacts – or even achieve positive impacts – on biodiversity ('biodiversity-friendly'), and/or seek to generate revenues or income that will be directly reinvested in biodiversity conservation. Some of the most well-known examples of biodiversity-based or biodiversity-friendly commodities include natural or wild-harvested products, organic or wildlife-friendly crops, sustainably-sourced seafood, certified timber, and ecotourism. Bioprospecting, biomimetics, bioremediation and, to some extent, geoengineering, can be considered to be special categories of biodiversity-based markets which, although potentially high-value and rapidly growing, have not as yet been subject to any kind of concerted effort to integrate sustainability considerations. They are also not the main focus of this key-sheet.

Because biodiversity goods and services typically occupy niche or specialised markets, the volume of demand is often relatively low, consumer expectations and quality standards tend to be high, and market access can be difficult. Businesses often deal in only small quantities of the product, leading to relatively high unit costs of production – which also tend to be compounded by factors such as seasonal variation, physical isolation and distance from markets, and the use of labour-intensive or unmechanised production techniques. The challenges faced in capturing a sufficient and stable market share and adequate price premiums to be profitable can be a major concern. In response, various tools and instruments have been developed which seek to promote and support sustainable biodiversity products and markets. Their main aim is usually to facilitate the growth of new, niche markets, build consumer confidence and interest, enhance profitability, and enable businesses to access price premiums as compared to more conventional or unsustainable alternatives. These instruments target biodiversity businesses at all stages of the value-chain, from harvesting, through production and processing, to wholesale and retail trade.

Eco-labelling, certification and standards are particularly widely used to support biodiversity-based or biodiversity-friendly products. They offer verified third party guarantees that a particular product, process, or service conforms to a set of defined standards as regards biodiversity impact (and, often, other areas such as fair trade or local community impact). A broad range of voluntary eco-labelling and certification schemes have been developed, and are used across the world, such as those under the International Federation of Organic Agriculture Movements (IFOAM) and Fairtrade Labelling Organisations (FLO), the Forest Stewardship Council (FSC), Marine Stewardship Council (MSC), Union for Ethical BioTrade (UEBT), European Ecotourism Labelling Standard (EETLS), and EU Ecolabel. Some are specifically concerned with biodiversity impacts, for example Bird Friendly Coffee (coffee production), Certified Wildlife Friendly (food, cosmetics, timber, paper, and forest products), Effinature (construction), FairWild (natural products), Rainforest Alliance Certified (coffee, tea and other agricultural products), and LEAF Marque (food crops). While certification can be an important factor in motivating consumer confidence and demand as well as enabling businesses to capture price premiums, it can also be a costly process, especially for small-scale producers. For example, the cost of an EU ecolabel application fee ranges from EUR 200 to 2,000, and annual fees can be as high as EUR 25,000.

Branding is an associated instrument that has been used successfully to encourage and promote sustainable biodiversity products and markets. It refers to the development of a particular identity, storyline and – usually – emblem which is associated with a particular site and/or region (rather than, as with labelling and certification, a set of practices and impacts). Assigning or authorising the use of a brand to a particular product allows it to associate with this identity, and employ it to support marketing or to appeal to a particular customer base. For example, many protected areas have logos and brands. Third parties, usually local businesses or enterprises, are often authorised to use such logos as part of the brand. This serves to promote and endorse services and products provided by regional operators and producers whose methods complement or support conservation activities.

In addition, a variety of other instruments and measures are often used to promote and encourage biodiversity businesses, often as part of regional development packages or support from central government. These include training and technical support, assistance with marketing, preferential access to credit and loans, or granting of subsidies, tax reliefs and other fiscal incentives. These topics are elaborated in other keysheets – see, for example, those on fiscal earmarking, commercial investment funds, and fiscal incentives.

- Providing incentives as well as funding for biodiversity;
- Targeting private producers directly;
- Once markets are up and running, little external intervention needed.

- New markets may require considerable capacity-building, publicity, credit, marketing and other support in order to develop;
- Work is often required to change consumer behaviour and tastes;
- Monitoring and enforcement of standards and certification may be costly and difficult.

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KEYSHEET 7: Payments for ecosystem services

Many ecosystem services, even those generating extremely high economic values, do not have a market or a price. This is often the case for regulating services such as watershed protection, flood control or shoreline defence, and cultural services such as landscape beauty. As a consequence, users can enjoy these benefits for free or at minimal cost. Meanwhile, the people that manage the lands and resources generating valuable ecosystem services are not rewarded or compensated for doing so.

Payments for ecosystem services (PES, sometimes also called payments for environmental services) involve transfers of cash or other resources between ecosystem service beneficiaries and providers. They are a way of operationalising a 'user pays' approach in relation to ecosystem services. As well as generating funding, PES serve as incentives to encourage land and resource managers to conserve biodiversity and ecosystems in the course of their economic activity.

'Upstream Thinking' PES scheme, UK

One example of a private PES scheme is provided by South West Water (SWW) in the UK, a company that manages a water and wastewater network serving nearly 600,000 customers in Cornwall, Devon, Dorset and Somerset. Since 2008, SWW has been running a PES scheme motivated by a wish to reduce water treatment costs, as well as to provide other co-benefits such as waterflow regulation, improved water storage, flood protection, climate change mitigation and biodiversity conservation. SWW's umbrella initiative groups several different payments for watershed services initiatives under a single brand called Upstream Thinking. The programme has two main elements: grants for farmers and restoration of peatland in partnership with landowners. Grants are targeted at farms with land connected to rivers above water abstraction points. Between 2010 and 2020, Upstream Thinking disbursed payments worth nearly EUR 25 million, including a targeted moorland restoration area of almost 5,000 hectares, spread across 11 catchments. Farmers receive payments if they reduce nutrient and pollutant discharge into waters by improving their land management – for example by relocating livestock, creating buffer strips, protecting slurry and manure pits, or improving pesticide management. Payments are made on the basis of agreed farm plans, and involve up to 50% funding of the direct costs of land and infrastructure investments. Contracts are typically between 10-25 years, and detail the conditions of payment, including any restrictions placed on farming operations. In most cases, there is no direct contact between SWW and farmers. Intermediaries (such as environmental or land trusts, universities or government agencies) handle the payment schemes.

(From: Bennet et al. 2017, Matzdorf et al. 2014; http://upstreamthinking.org/).

Grassland bird protection PES, Gemany

The example of Gemeinschaftlicher Wiesenvogelschutz ('grassland bird protection') in Germany illustrates a government-funded PES scheme. The programme operates in the Eider-Treene-Sorge river landscape, an interconnected wet lowland area in northern Germany that is mainly occupied by small and medium-scale dairy farmers as well as a Special Protected Area and Natura 2000 site. It is designed to protect the nesting sites of lapwing (Vanellus vanellus), black-tailed godwit (Limosa limosa), curlew (Numenius arquata), oystercatcher (Haematopus ostralegus), and redshank (Tringa tetanus). Originally initiated by a regional environmental association in 1997 and funded by donations from local companies and banks, the scheme was taken over and expanded by the federal State of Schleswig-Holstein in 1999. Since 2007, the PES programme has been coordinated by the Kulturlandschaft nachhaltig organisieren (Kuno e.V.), a land care association responsible for management planning in the Special Protected Area. Various voluntary supervisors are also involved, who monitor key breeding populations and sites, and approach farmers in these areas about participating in the programme. Farmers sign nature conservation contracts, and are given output-based payments for the protection of nesting sites in fields when mowing, grazing or managing the grassland. Payment is determined by the number of intact clutches per hectare of land. Farmers receive EUR 150 for individual clutches or EUR 350 for two or more clutches per hectare. If mowing restrictions are necessary, individual clutches will also receive a EUR 350 per hectare payment. The PES scheme has now also spread to other regions of Schleswig-Holstein in which species of meadow birds are found.

(From: Matzdorf et al. 2014, Nicolaus and Jetzkowiz 2014 https://ec.EUR opa.eu/environment/nature/rbaps/fiche/grassland-bird-protection-payments-germany-schlesw_en.htm).

The basic economic rationale for PES is fairly straightforward. It revolves around the principle that land and resource users should be fairly rewarded for generating ecosystem services, and adequately compensated for any costs they incur (including foregoing other, destructive or unsustainable economic activities). Similarly, those who benefit from ecosystem services should pay at a level and in a form that accurately reflects the values they receive and/or the losses and damages they avoid. To date the vast majority of PES schemes relate to watershed protection, biodiversity and landscape services. For example, PES might involve rural farming communities in upland watersheds being paid to conserve forest or adopt sustainable land management practices by downstream hydropower schemes, water supply utilities, or water-dependent industries.

As a general principle, if a payment is to be acceptable, effective and sustainable, then it must be set at a level which is greater than the costs of providing ecosystem services, but less than the gains received by users. In practice, most PES are negotiated between buyers and sellers, based on mutual 'willingness to pay' or 'willingness to accept'. Very often, the fee is calculated as a proportion of the income or revenue generated from ecosystem service-dependent industries (for example a percentage of water bills or hydropower revenues, a bednight levy on hotel bills, or a surcharge on products) or provided as a flat fee based on available funding. PES are typically paid on a per hectare basis, sometimes adjusted according to the biophysical characteristics of the land being managed or the level of protection being offered.

While there is no single universal definition, the most widely-accepted characterisation of PES is 'a voluntary, conditional agreement between service users and service providers that are conditional on agreed rules of natural resource management for generating off-site services' (Wunder 2005, 2015). The conditionality requirement is particularly important, as payments should be tied to the delivery of agreed, verified and measurable activities or outputs. In addition, PES require a supporting institutional infrastructure. They must be enabled by laws which allow payments to be charged and received, and protect the rights of both buyers and sellers. Systems need to be in place for monitoring both the provision of ecosystem services and the functioning of PES schemes. Finally, it is also important that both buyers and sellers have access to accurate and sufficient information on the ecosystem service provided.

PES are usually divided into three basic types of schemes: public or government-financed, private or user-financed, and public-private hybrids. In practice, a wide variety of PES (or 'PES-like') arrangements exist, involving government agencies, private landholders, companies and businesses, communities, non-governmental organisations and other entities. They may yield direct cash payments, offer other fiscal or financial stimuli such as tax relief or credit, or provide non-cash and in-kind benefits such as training, publicity and recognition, free electricity, local infrastructure development, or land titles. Some PES schemes are regulated or mandatory, while others are run on a purely voluntary basis. In many cases some kind of an intermediary or third-party agency is used to collect, administer, distribute, regulate and monitor PES, often via a dedicated financing instrument or mechanism. A number of countries have, for example, developed national, government-run PES funds. In order to increase chances for its success, along with the government, there should be other interested stakeholders for PES system implementation. Successful management of resources is essential for effective set-up and implementation of PES.

While PES originally emerged two decades or more ago, most of the early experiences took place in Latin America. There are now a growing number of PES examples in European countries. For example, the EU supports PES in Member States through targeted agri-environmental measures, forest-environment payments, support to non-productive investments in high conservation value farm and forest lands, and payments to support the management of Natura 2000 sites. In addition, municipalities, utilities and private companies are beginning to enter into PES agreements directly with landholders. For example, it is estimated that in 2015, around EUR 5.7 billion flowed to European landholders as watershed protection PES (Bennet et al. 2017). These schemes covered more than 13.4 million hectares of land, 96% of which was privately-owned. Although almost all of the payments were made as public subsidies, around EUR 40 million was funded directly by users, mainly driven by growing water risks and stricter regulation.

While PES are still at a relatively early stage of development in the Western Balkans, there is general consensus that they hold great potential, especially as a means of providing finance and incentives to farmers and forest owners to conserve biodiversity and ecosystem services. The main focus has been on watershed protection services. Proposals have already been formulated to develop PES schemes in Karaburun-Sazan Marine and Coastal Protected Area in Albania, Northern Velebit National Park and Velebit Nature Park in Croatia, Dojran Lake in North Macedonia, as well as in Albania at the Ulza watershed, Kosovo and several other sites (see, for example, Binet et al. 2016, CNVP 2013, Flores and Ivicic 2011, Ilieva et al. 2016). At the national level, scoping studies have been carried out in Croatia, North Macedonia and Serbia which identify clear PES needs and potentials (Sekulić 2012, Vuletić et al. 2010).

- Flexible and easy to customise;
- Creates incentives and behavioural changes as well as funding;
- Corrects market failures by introducing pricing;
- Additional income for undeveloped areas.

- Establishing evidence of clear links between ecosystem service generation and land/resource management regimes is complex and costly process;
- Costly to design, negotiate, implement and enforce compliance/conditionality;
- Not designed to reduce poverty;
- Vulnerable to elite capture.

Further reading:

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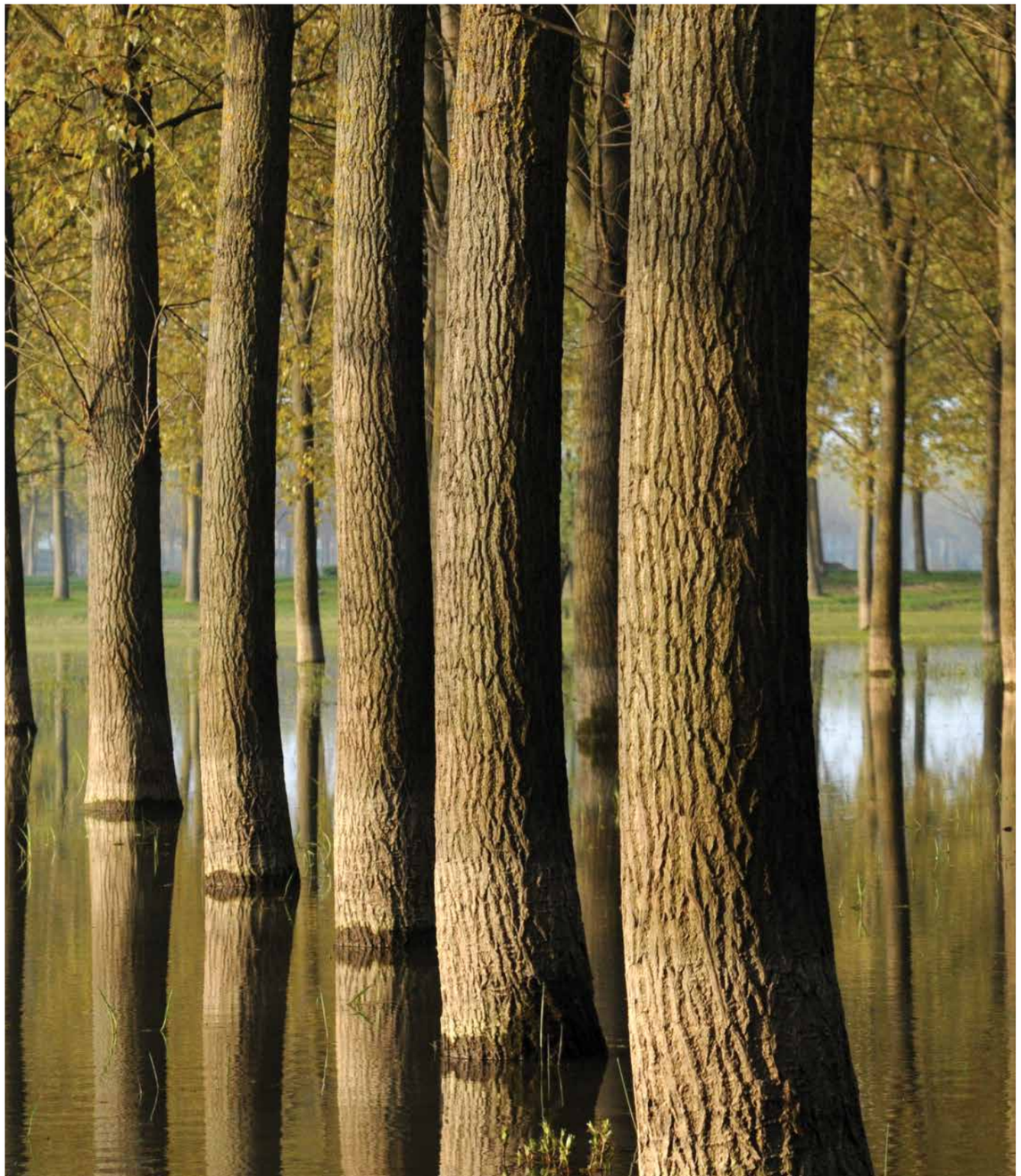
KEYSHEET 8: Biodiversity offsets

Biodiversity offsets (sometimes also known as development offsets) aim to compensate for unavoidable damages to the natural environment that arise as a result of development activities. They usually involve investing in the rehabilitation or conservation of equivalent resources, habitats or even species at another site. The aim is to ensure 'no net loss', and preferably a net gain, of biodiversity. Offsets are usually pursued as a last resort, only at the end of the mitigation hierarchy, after on-site environmental harm has been reduced and alleviated as much as possible – and are typically carried out voluntarily, over and above a company's legally-mandated environmental compensation responsibilities. While offsets can, in principle, be applied to any activity that affects the natural environment, they are most commonly associated with extractive industries, hydropower, construction and infrastructure development.



Biodiversity offsets at Darlington Nuclear Generating Station, Canada

Grassland restoration was carried out to offset losses due to construction activities at Ontario Power Generation's (OPG) Darlington Nuclear Generating Station site. Six hectares of meadowlark breeding and foraging habitat were lost and needed to be compensated. In order to provide a biodiversity offset, a location was identified at the Rice Lake Plains in Northumberland County. This area was chosen as a very scattered and low diversity conifer plantation, which was restored with native grassland seeds, based on desired conservation outcomes in the long term.

One challenge was the fact that the Nature Conservation of Canada (NCC) has set a very high 3:1 ratio for offsetting negative impact on biodiversity. Additionally, full costs of restoration, including the monitoring process in years to follow, had to be covered. The plan was to have 25 hectares restored, exceeding significantly the minimum loss/gain proportion requirements. This joint initiative of NCC and OPG secured sufficient funding for offsetting, resulting in overall net gain, including additional protection of some sensitive birds species.

This was a good example of a smooth negotiation process between the OPG and NCC. The restoration process started in 2013 with preparation of land in the selected offsetting site. Some remaining trees had to be removed and it had to be reconfirmed that the land is adequate for native grass species selected. With good planning and efficient execution of work, the total restoration area was later extended to as much as 30 hectares, exceeding 6 times the original area lost. Having in mind that restoration included some sensitive bird species, there was a need to monitor this area in the following years, making sure that expected long-term results were achieved.

(From: Ontario Nature 2016)

Biodiversity offsets at Ambatovy Joint Venture mines, Madagascar

The Ambatovy Joint Venture is a nickel and cobalt mining operation located in Madagascar. The mine was established in 2013, and covers approximately 2,000 ha, including 1,800 ha of intact and degraded natural habitats. It is located around 80 km east of the capital, Antananarivo, in a high biodiversity region which includes forests, wetlands and a National Park. The forests support 14 species of lemurs, 32 of other mammals, 122 of birds, almost 200 of reptiles and amphibians and 50 fish species. It is also a home to almost 1,600 plants, making more than 10% of Madagascar's known flora. To date, about 150 species of conservation concern are impacted by the mine's footprint, including 109 species of plants and 48 species of animals.

Although biodiversity offsetting is not yet a legal requirement in Madagascar, Ambatovy comply with the IFC Performance Standards on Environmental and Social Sustainability, and have made a commitment to the Biodiversity Offset Standard. A range of mitigation measures were first applied at the mining site, including avoiding unnecessary deforestation, careful routing of pipelines to avoid forests and sensitive areas, erosion control, and so on. Offsets were then used to cover the residual losses, after these avoidance, minimisation and rehabilitation efforts. Several offsetting sites were identified in the mining area, covering more than 3,600 ha in total. Additionally, there were three off-site offsets, totalling more than 18,000 ha.

A variety of systems have been set in place to monitor the conservation impact of the offset programme, including species population assessments, and satellite monitoring of deforestation. The analyses were conducted by the National Environment Office, an independent Scientific Consultative Committee, the Independent Engineers on behalf of Ambatovy's lenders, and through a separate audit in 2013 done jointly by Golder Associates and Forest Trends. The results demonstrated a significant decline in deforestation rates, and the protection of 20,000 ha of forest. In addition, the local populations of two endangered species have increased, as well as some other species. As a result, the offset programme received the Nedbank Capital Sustainable Businesses award in 2014.

(From: Dickinson and Berner 2010)

Biodiversity offsets in Europe

Some European countries have substantial experience in the implementation of biodiversity offsetting. Countries like Germany, the UK, and France are leading the way. On the other hand, in many countries like Sweden, for example, biodiversity offsetting is voluntary, while in Eastern Europe it is very poorly developed.

Germany introduced the Impact Mitigation Regulations in 1976 and made offsetting mandatory trying to ensure 'no net loss'. Compensation actions are identified already in the planning phase of each project. The state has overall control of the offsetting process. Data from the state register identifies thousands of new sites every year resulting from the Impact Mitigation Regulation.

In the United Kingdom, there is significant experience in this area. Biodiversity offsets programs in the UK are well developed. For example, Associated British Ports (a major port operator in the UK) sold 25 hectares of land on the East coast of England to the Environment Agency, making it a habitat creation site. In return, ABP secured credit of 25 hectares of intertidal habitat. Many industries started purchasing land for future compensation actions. Also, an interesting example is the Environment Bank which brokers biodiversity compensatory mitigation agreements. As of 2016, Environment Bank worked in 15 counties on more than 60 projects, totalling EUR 1.9M and mostly offsetting the impact on grasslands with enhancing areas of higher ecological value.

In Sweden, for example, offsets were mandatory in only a few cases and there are no banking or compensation schemes in Sweden. In Eastern Europe, biodiversity markets are poorly developed. There are some signs of biodiversity offsets market development mostly in Poland, Hungary, and Bulgaria.

From: Leonardi et al. 2017)

Many developments, especially infrastructure, hydropower, extractive industries and the expansion of agriculture and human settlements, have unavoidable and permanent impacts on biodiversity and natural ecosystems. Biodiversity offsetting is a way of compensating or balancing biodiversity loss in one place and time with an equivalent biodiversity gain elsewhere. The aim is to achieve an outcome of 'no net loss' or, preferably, a 'net gain' in biodiversity.

Forest Trends' Business and Biodiversity Offsets Programme (BBOP) defines biodiversity offsets as 'measurable conservation outcomes designed to compensate for significant residual adverse biodiversity impacts arising from project development after appropriate prevention and mitigation measures have been taken'. A key feature is that they are expected to be undertaken only as the last resort, as a final stage of a strict mitigation hierarchy, whereby priority is first given to avoiding or preventing negative impacts; then, when impacts cannot be avoided, to minimising damage and rehabilitating their effects; and lastly to offsetting or compensating for residual adverse impacts. The point of biodiversity offsets is not to allow or 'greenwash' projects that have negative environmental impacts, or to permit developers to evade their legal obligations, but to offer a mechanism to offset losses (or achieve gains) that would not otherwise have been achieved. In some cases biodiversity offsets are required by law (compliance-driven), and in other cases they are purely voluntary on the part of the developer.

The concept and practice of biodiversity offsetting first emerged in the early 2000s, and is now widely used and applied across the world. By 2011 biodiversity offset laws were under development or in place in more than 70 countries (Madsen 2012) and in 2014 the EU initiated a 'no net loss initiative' which would allow compensating biodiversity losses in one area by balancing with gains elsewhere in the EU. In 2016, IUCN developed the first ever global policy framework to guide the design, implementation and governance of biodiversity offset schemes and projects. Increasingly, development banks and other donors require that projects deliver no net loss of biodiversity, and a number of companies now invest in offsets as part of their voluntary commitments to biodiversity conservation. For example, the International Finance Corporation (IFC) Performance Standard 6 requires that all the projects they finance must deliver no net loss (or in some cases, a net gain) of biodiversity. There is now a relatively wide experience in biodiversity offsets and compensation, across many different countries and sectors. By 2015, 65 programmes and 180 implemented or in-development projects were in existence in Europe, including 3 at the EU-level, with a total transacted value of more than EUR 63 million (Bennett et al. 2017).

Although the concept of biodiversity offsetting is fairly straightforward, many complexities arise in the design and implementation of schemes on the ground. Some of these difficulties and debates are technical, and concern the metrics that are used to measure, compare and evaluate offsets. For example, it is often difficult to quantify the loss and gain of biodiversity that underlies offsets, and to calculate compensation requirements and equivalence between sites, for habitats, species and spatial coverage. In a similar vein, while there is general agreement that conservation outcomes from biodiversity offsets should be 'additional' (in other words they would not have resulted without the offsets, there is as yet a lack of consensus on the level of proof necessary to demonstrate additionality. It also often remains a challenge to ensure that offset systems are adequately regulated and administered, monitored and enforced. In order to secure successful use of biodiversity offsetting, some major factors need to be in place. Among others, there have to be a strong political support, stable socio-economic situation, sufficient time and resources for design and implementation, transparency, and detailed information on impact on biodiversity.

On the positive side, using biodiversity offsets allows governments to push forward development plans in sensitive environments, while ensuring that no net loss of biodiversity will take place (or, preferably, there will be a net gain). It can encourage both public and private sector actors to better understand and invest in conservation efforts, acting in a socially responsible way. On the negative side, if misused and not treated as the last resort at the end of the biodiversity mitigation hierarchy, offsetting runs the risk of somehow legitimating biodiversity loss. To conclude, this mechanism has shown some very promising results, but it should be used only as a last available option for biodiversity conservation and clearly not in all cases.

- Provide conservation funding that is additional to existing or mandatory efforts;
- Provide an effective way of reaching no net loss targets;
- Encourage investments in conservation;
- Socially responsible.

- May lead to destruction of ecosystems if not used as the last measure in mitigation hierachy;
- Risk of 'green-washing' and of not achieving desired goal if not designed and implemented on correct scientific information.

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KEYSHEET 9: Habitat or mitigation banking

Developers are almost always required by law to offset or compensate activities that convert, damage or otherwise interfere with biodiversity. One way of doing this is by paying for restoration, conservation or enhancement of equivalent habitats elsewhere.

Habitat or mitigation banking is a way of creating an offset market or trading mechanism. It allows landowners to earn credits for conserving, restoring or enhancing the natural environment, and to earn income by selling these credits on to land developers that need to mitigate negative impacts. Put simply, landowners are paid to conserve biodiversity (by not developing their land) by those who wish to develop lands elsewhere (and will cause damage to biodiversity).

Habitat banking therefore tackles several aspects of biodiversity financing. It is a way of ensuring that sufficient funds are made available to cover the costs of compensating or offsetting environmental damage. At the same time, it provides funding and financial incentives to encourage and enable landholders to conserve biodiversity and ecosystems.

Wetland mitigation banking and species banking in the USA

Perhaps the most well-known and long-established example of habitat banking is 'wetland mitigation banking' in the USA. This has been in operation since the early 1990s, and now covers more than 1,800 sites, generating transactions worth more than USD 3 billion a year. Wetland mitigation banking is enabled under Section 404 of the Clean Water Act. This requires that anyone wishing to dredge or fill a wetland considered to be of national importance must first obtain a permit, which requires taking steps to avoid, minimise or – as a last resort – offset, mitigate, or compensate for any damage that cannot be minimised. One allowable way of compensating damage is to pay for the conservation of wetland habitats in other sites with similar values and functions. Landowners that restore, create or enhance wetlands can 'bank' these credits, and receive payment for them.

A mitigation bank is created under a formal agreement with a regulatory agency, when a landholder undertakes to restore, establish, enhance, or (in certain circumstances) preserve a wetland, stream, or other aquatic resource area for the purpose of providing compensation for unavoidable impacts from developments elsewhere. The value of each bank is measured in 'compensatory mitigation credits', defined by their ecological value based on the amount and quality of habitat that is conserved or improved. Credits are designated by an interagency Mitigation Bank Review Team (MBRT), which may include representatives of various federal, state and/or local government agencies. The MBRT evaluates and permits each proposed mitigation bank, as well as determining the number of credits it may earn and sell. The MBRT periodically releases bank credits as the bank meets certain performance milestones. These then can be sold on to land developers.

A similar system of 'species conservation banking' emerged in the late 1990s, created in response to the Endangered Species Act and its state-based equivalents. Here, conservation banks are designed as compensation for impacts on listed species or their habitat. Species conservation credits can be created on private or public lands by conserving species habitat and obtaining regulatory approval to create credits. As with wetland mitigation banking, in most cases the landowner (or 'bank') negotiates directly with the credit buyer. Several 'habitat credit exchanges' have, however, emerged, serving to coordinate or broker species conservation banking deals, working with multiple landowners to enrol and create credit projects across a designated region (often the wider range for a particular species).

(From: EPA 2010, 2019, Poudel et al. 2019, USFWS 2012)

Opération Cossure mitigation banking scheme, France

Another example of government-led habitat banking is provided by the 'biodiversity offset supply' scheme run by France's Ministry of Ecology, Sustainable Development and Energy. This experimental mitigation banking programme has been operating for more than a decade. Its aim is to provide credits for habitat, species and ecosystems, promote biodiversity mitigation and compensation early on in project development planning, and provide empirical evidence of the effectiveness of biodiversity offsets in achieving no net loss. The concept of habitat banking is now included in France's 2016 Law on Biodiversity. The scheme has created one operational bank in the south-east of France, and four additional pilots, based on similar principles, are now under development in the Alps, Brittany, and the Paris metropolitan region.

For example, 'Opération Cossure' is run by CDC Biodiversité (a private subsidiary of the public financial institution Caisse des Dépôts et Consignations). It was initiated in 2010 in a site that forms part of an important corridor for native bird species in the Réserve Naturelle des Coussouls de Cra. It involved the purchase of an abandoned industrial orchard in order to recreate a herbaceous sheep-grazed habitat for steppe birds such as the pin-tailed sandgrouse (Pterocles alchata), Eurasian stone curlew (Burhinus oedicnemus), little bustard (Tetrax tetrax) and calandra lark (Melanocorypha calandra). Protection of the restored habitats is guaranteed for 30 years.

After regulatory approval, credits (calculated on an area basis of 1 ha/1 unit) were sold to developers whose impacts on biodiversity had not been compensated, as well as those wishing to establish new projects. In order to comply with ecological equivalence requirements, eligible offset units have to be linked to the same habitats and species as well as to be delivered within a service area of 600 km2. For each purchase, government regulators approve the number of units the developer must buy.

(From: Ecostar 2017, Wende et al. 2018.)

The Environment Bank Ltd., UK

There are now also several examples of third-party commercial ventures that have been established to facilitate habitat banking. In the UK, the Environment Bank Ltd is an independent biodiversity offset brokers. Habitat banking is one of the services offered, alongside a 'bespoke offset search' seeking to match developers with potential schemes. This responds in part to the provisions of the new UK Environment Bill, which will require land development projects to deliver 10% biodiversity net gains, and also enables habitat banking as an offset mechanism. More than 75 planning authorities in the UK are currently investigating the possibility of setting up habitat banks as mechanisms to deliver the required biodiversity gains.

The Environment Bank works with local authorities to establish habitat banks that will meet their current and future compensation needs, and to broker trades between landowners and developers across the country. Credits are either derived from either bespoke individual offset sites close to the development area, or from larger-scale habitat banks (of between 40-100 ha) which combine strategically-placed sites so as to maximise biodiversity values. The latter is the preferred option, with habitat banking wherever possible targeting the creation of large conservation areas. This is seen as being the most cost-effective option for developers, as well as the best way of maximising conservation impacts across the landscape. 'Conservation Bank Agreements' are signed with landowners and conservation bodies, and offer annual per hectare payment for a 30-year contract period. The performance of habitat banks is monitored against the objectives of Biodiversity Management Plans. 'Conservation Credit Purchase Agreements' are signed with the developer, who is then issued 'Conservation Credit Certificates' which can be presented to the planning authority to discharge their biodiversity net gain requirements.

(From: https://www.environmentbank.com/)

Habitat banking (sometimes also known as mitigation banking, biodiversity banking or conservation banking) is a trading mechanism that facilitates the exchange of biodiversity offsets and credits. By permanently protecting the natural habitats on their land (creating biodiversity or habitat 'banks'), landowners generate credits. These credits can then be transferred or sold to developers that need or wish to compensate for the negative environmental impacts their activities cause. The need to comply with legal requirements means that habitat banks are typically overseen by regulators, and credits are usually verified and monitored by an independent third-party.

In most cases, credits are purchased in order to comply with legal requirements to compensate and mitigate environmental damage. Less commonly, offsets may be sought on a voluntary basis, as donations to nature conservation, or as part of corporate environmental and social responsibility (CESR) programmes. Transactions may involve individuals, associations, companies or government agencies as buyers and sellers. In the past, sales were most often negotiated directly between buyers and sellers. Recent years have however seen the emergence of intermediary institutions or facilities building a portfolio of 'deposits' of biodiversity credits from landholders that are then made available or resold to developers to purchase as and when they need to offset their impacts. These larger-scale exchanges may be publicly or privately-run, and often transact habitat banking as part of a much broader offering of environmental-financial services.

The increased interest in habitat banking over the last few years is closely linked to the emergence of 'no net loss' principles and goals (as stated, for example, in Action 7 of the EU Biodiversity Strategy and in many national biodiversity policies, strategies, plans and even laws). The aim is to achieve a 'like-for-like' outcome, in the sense of seeking to replace the exact function and value of the specific habitats (or even species) that stand to be adversely affected. This concept of equivalence is now increasingly being replaced by one of 'net gains' or 'like-for-like-or-better'. A 'mitigation ratio' is often applied, requiring a larger amount of habitat to be conserved than the area that is being affected by the development. For example, the UK's new Environment Bill requires land developers to deliver a 10% biodiversity net gain. Similarly, several of the mitigation banking systems operating in the USA require that each hectare of land affected by a development is compensated with two, three or more hectares of habitat 'created, enhanced, or restored'. Practical experiences of habitat banking remain mostly confined to the United States and (to a lesser extent) Australia and Western Europe. It is however worth noting that recent years have seen a sharp increase in interest in Europe, both within individual countries and at the EU level. So far, in Europe, habitat banking schemes have been piloted or are under development in Finland, France, Germany, the Netherlands, Spain, and the UK.

Habitat banking has a number of potential advantages as a biodiversity financing mechanism. As well as providing a means of covering the costs of compensating, mitigating and ensuring no net loss (or net gain) to biodiversity in the course of development, it offers a way of funding and rewarding landholders for their conservation actions. Habitat banking can also function as a means of increasing the size and connectivity of conserved landscapes, by consolidating small, fragmented patches of habitat into larger, contiguous areas.

One fundamental criticism is that systems of offsets and credits do not necessarily make any new finance available for biodiversity or increase the area of habitat being conserved. They merely ensure that there is no net loss, and cover the costs of mitigating and compensating any damages that arise (although it should be noted that the emergence of the concept of 'mitigation ratios' does to some extent overcome this problem). Experience also shows that formal, regulatory cap-and-trade offset schemes typically require substantial time, effort and expertise to set up, as well as considerable monitoring and regulation to function effectively – in both administrative and conservation terms.

- A good way of reaching no net loss targets;
- Increases the size and connectivity of conserved landscapes;
- Help governments reduce habitat and species loss;
- Encourages landowners to produce voluntarily ecosystem services;
- Could contribute to job creation and national economic growth.

- Does not necessarily make new finance available for biodiversity;
- Does not necessarily increase the area being conserved;
- Requires legislative changes;
- Net income from habitat banking should be higher than net income from alternative land use;
- Works best in stable societies with well functioning institutions.

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KEYSHEET 10: Green bonds

Green bonds are a new application of a conventional financial instrument (bonds), used to raise capital to fund environment-related investments – such as renewable energy, energy efficiency, clean water, biodiversity conservation, and climate mitigation. Like traditional bonds, they are tradable capital market instruments issued by sovereign governments, states, municipalities or corporate entities to raise upfront funds, backed up by the promise to repay the investor the value of the bond plus periodic interest payments. Although green bonds still comprise only a small part of the global bond market, their popularity has increased significantly in recent years. In 2018, there were more than 1,500 issues from 320 issuers in 44 countries, valued at more than USD 167 billion.

World Bank experience with green bonds

To date, the World Bank has issued more than 150 green bonds worth more than USD 13 billion in 18 currencies around the world. Not only that the World Bank is the leader in issuing green bonds, but it also paved the way for green bond impact reporting, as an important tool for investors. Many investors consider this as the best example and most appropriate format for reporting. To understand the important contribution of the World Bank in this field, it is important to note that they have been supporting both investors and issuers and contributed greatly to awareness raising about environmental issues. The World Bank initiated selection criteria for green bond projects, but also monitoring and reporting on impact assessment, which is highly appreciated by investors worldwide. Although this is a mechanism originally envisaged for institutional investors, the World Bank is also active regarding retail investors, especially in developed markets such as Europe and the US. The World Bank carefully assesses all proposals in term of compliance with the established criteria and their environmental impacts, but also monitors implementation and prepares impact assessment. The World Bank publishes the annual impact report on green bonds. In the first 10 years, the World Bank green bond programme reached as much as 12.6 billion USD worldwide.

(From: World Bank 2020)

Suzano forestry bond, Brazil

The Brazilian forestry company, Suzano, is one of the leading producers of eucalyptus pulp in the world. In 2016, Suzano issued a USD 500 million green bond. Funds were used to invest in sustainable management of forests and their restoration, reduction of carbon dioxide emissions, biodiversity conservation, wastewater treatment, and projects ensuring better energy efficiency.

The Suzano bond was among the first forestry bonds to be issued in the world. It was rated as BB+ with 10 year maturity date, and a 5.75% coupon. The bond received a confirmation regarding its alignment with the Green Bond Principles, which was especially important in order to attract investors.

About two thirds of investments in the bond came from the US, and one-third from Europe. This was largely a result of Suzano's marketing activities in these parts of the world, focusing on fixed-income investors. Clear advantage in the process was Suzano's transparent business processes and certification proving its commitment towards achieving high environmental standards. However, some challenges faced in the certification process were related to identification of appropriate projects and ability to provide reports on environmental benefits of the investment.

The response from investors was much better than expected. Analysis carried out by Suzano concluded that the following were major reasons for success: it was one of the first green bonds in Brazil and, equally important, it was issued in US dollars. The bond was also the first issuance of the company in 6 years. Finally, the rate of return was much higher than those generally offered in other developing countries.

(From: Environmental Finance – Brazilian paper company issues USD 500 m green bond for forestry projects https://www.environmental-finance.com/content/news/brazilian-paper-company-issues-500m-green-bond-for-forestry-projects.html)

Green bonds have been attracting a lot of attention over the last decade or so. They are very similar to traditional bonds, in the sense that they are used to finance government activities and to provide capital for private sector ventures, and that investors tend to look for low-risk and long-term investments. The important difference is that the funds raised are used exclusively for 'green' projects. The fact that both corporate and sovereign bonds are well-known, commonly-used instruments is undoubtedly one of the reasons that they have become so popular. They have the additional advantage of being able to raise quite large amounts of money, relatively quickly.

Bonds are debt instruments that a government or a company issues in order to raise funds. In simple terms, buying a bond is a form of lending money to the government or company that issued the bond for a certain period of time, when the money will be paid back, with interest. Here, it is important to emphasise that the funds raised by green bonds must usually be invested in enterprises that generate a positive return – after all, investors expects to be repaid, with interest. Aside from earning interest, green bonds provide investors with a level of satisfaction from the fact that funds are used for environmental purposes. In that sense, green bonds represent a very good combination of secured financial investment and positive impact on the society.

As an example of corporate bonds, PepsiCo Inc, mainly a beverage company, issued a USD 1 billion green bond in October 2019 in order to finance existing and new projects related to water sustainability, sustainable plastics, packaging, etc. Sovereign green bonds are those issued by national governments. In May 2019, for example, the Dutch government issued a green bond for up to EUR 6 billion in order to secure financing for various climate related projects. Sub-national bonds are loans that investors provide to local governments such as cities, provinces, counties or similar. In February 2019, for example, the city of Santa Fe in New Mexico issued a USD 13.5 million green bond to finance the new water system.

To date, almost all green bond issues, both sovereign and corporate, target climate-related projects in energy, transport, construction and technology sectors. This is probably due to the ability of these projects to generate a return on investment. For the same reason, there are, as yet, no instances of bonds having been issued or successfully used to generate funds for biodiversity and ecosystem conservation. There is, however, a considerable momentum around initiatives that specifically target finance to sustainable land use and investments with positive biodiversity impacts. Examples include the Unlocking Forest Finance project in the Amazon and the Rainforest Impact Bond in Indonesia. The Rainforest Impact Bond, piloted by ADM Capital, proposes a structure that would use sovereign aid commitments linked to mitigating climate change and/or promoting forest conservation. It would involve a medium term note programme and loan facility to provide long-term funding (10-15 years) for smallholder livelihood and rural electrification projects. In other parts of the world, Park Bonds and even a Rhino Impact Bond have been proposed as mechanisms to finance protected area systems (Landreau 2014).

Reflecting the growing interest in green bonds, a range of guidance and information has been issued over recent years. In 2014, a consortium of large investment banks prepared a set of voluntary guidelines: the 'Green Bond Principles' (GBP). This document is regularly updated, and hosted by the International Capital Market Association (ICMA). Although the guidelines do not provide an exclusive list of what is deemed 'green', they do suggest some project categories such as energy, water management, transportation, pollution control, land use, forestry and others. The 2015 World Bank guide 'What are Green Bonds?' also provides information about the concept of green bonds and how it can be used in the most effective way.

Green bonds have also emerged rapidly in EU countries. In 2018, the European Commission established a Technical Expert Group on Sustainable Finance (TEG) in order to provide support, among other topics, to increasing transparency of the green bond market. In June 2019, the TEG published a report on the EU Green Bond Standard. The analyses of the EU green bond market indicate that it is well developed, although there is a great deal of variation among member states. For example, the market is very advanced in France, the Netherlands, Germany, Switzerland, Nordic countries and the UK, while in Eastern and Southern Europe it remains in the very early stages of development. In many cases, especially in renewable energy sector, utility companies are very active and represent major issuers of green bonds. In addition, throughout the western part of Europe, the green bonds are also widely used by local municipalities.

Outside Europe, major green bond markets exist in North America and East Asia. For example, in 2014, the Export-Import Bank of Korea issued a USD 500 million green bond, intended to be used to finance low carbon and climate resilient growth projects. More than USD 36 billion in labelled green bonds was issued from China in 2016, accounting for just under 40 per cent of global issuance (CBI & CCDC 2017). Commercial banks made up the largest proportion of issuance, and corporates are also playing a growing role. India has also issued a large range of green bonds, most of which relate either to renewable energy, low-carbon transport and low-carbon buildings. By the end of 2016, USD 2.7 billion of green bonds had been issued. Although the largest number of bond issues are corporate (including several energy developers, as well as financial institutions), the State-run generation utility NTPC is also one of the largest players to date, and several other public or parastatal power utilities are looking to follow suit. Development banks have also become involved in the Asian market for green bonds: for example, the Asian Development Bank's inaugural issue of 10-year bonds in 2015 raised USD 500 million with which to fund a variety of climate adaptation and mitigation projects in developing Asia. Just under two thirds were purchased by fund managers, pension funds and insurance funds, around a quarter went to banks, and 16 per cent to central banks and official institutions.

Although green bonds offer considerable opportunities to raise environmental funding, it is important to understand both the requirements for them to work well, and the challenges involved in developing green bond markets. First and foremost, there has to be a strong, well-regulated and stable capital market. The main potential is for large scale projects in developed countries. Although bond investors typically look for low-risk and long-term investments, where they receive a fixed interest rate and repayment at maturity, the fact that most environmental projects show only slow and modest returns on investment mean that green bonds have not always been able to attract a great deal of interest on the part of buyers. The market is still largely dominated by institutional investors, especially insurance companies, pension funds, banks, and investment funds. This is exacerbated by the fact that many environmental projects are start-up activities or involve relatively unknown developers. As bonds are essentially riskless investment vehicles for investors, they have often proved to be inadequate to stimulate new (risky and small-scale) activities. While it is theoretically possible to build in risk buffers, for instance via co-financing from donor money, green bonds are much more appropriate to finance portfolios of already established projects, technologies, or programmes.

To conclude, even though green bonds represent a relatively new mechanism, they have already stimulated a lot of interest, and are generally considered to have great potential as an environmental financing mechanism. Their application to biodiversity, ecosystems and protected areas is, however, less certain. This is largely because of the difficulty in finding bankable, return-yielding investment projects. The application of green bonds is also limited by the fact that they require a stable and developed capital markets, and that most investors will expect some kind of verification or certification of their 'green' credentials. In many parts of the world, including the Western Balkans, these conditions and standards are still emerging.

- Use existing systems and instruments;
- Have potential to generate substantial funds;
- Serve to enhance awareness raising and involve social responsibility.

- Lack of consensus on green bond defininition;
- Lack of reporting and transparency;
- Transaction costs and taxes influence decisions.

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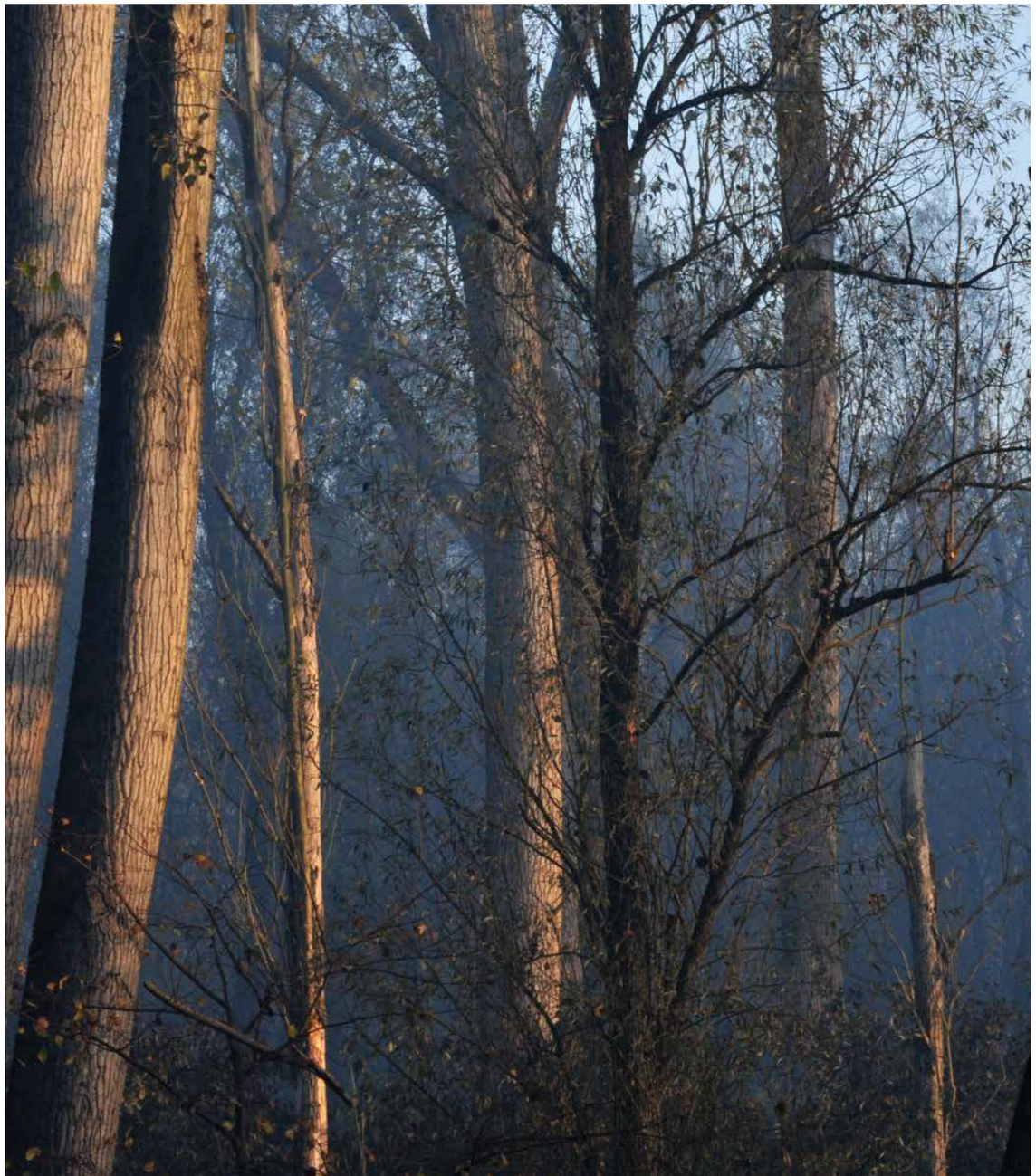
KEYSHEET 11: Commercial investment funds

Companies have traditionally found it difficult to access the finance required to develop biodiversity-based businesses or improve environmental sustainability of their operations. All too often, their proposals have been written off by investors and financial institutions as being too high-risk, low-return, slow-yielding, or otherwise unbankable. This especially tends to be the case for start-up enterprises, or those seeking to move into new markets or switch to non-conventional technologies, processes and products.

However, over recent years there has been a growing interest in investments looking to generate positive social and environmental impacts, alongside market-rate financial returns. Biodiversity, natural capital and eco-investments have begun to emerge as a distinct asset class. A number of instruments have evolved aiming to capture, mobilise and allocate the resulting investment funds.



The Natural Capital Financing Facility, European Investment Bank

One example of a blended fund is the European Investment Bank's Natural Capital Financing Facility (NCFF), which provides tailored loans and investments to companies of between EUR 2-15 million. Backed by an EU guarantee, the NCFF consists of a flexible finance facility (typically providing direct/intermediated debt or investing in equity funds) in combination with a technical assistance support facility (which offers grants for project preparation, implementation, monitoring and evaluation). The NCFF provides financing for four categories of activities: pro-biodiversity and adaptation, payments for ecosystem services, biodiversity offsets and compensation, and green infrastructure. These must be commercially viable and demonstrate a return on investment, either by generating revenues or cost savings. Eligible companies are required to be legally registered, and planning to utilise the funds for projects exclusively located within the EU.

The NCFF cooperates with several financial intermediaries which on-lend smaller financing volumes to end beneficiaries in a specific region or sector. For example, an agreement was signed in March 2018 for the 'Natural Capital investments for Croatia' operation. This consists of a 'multi beneficiary investment loan' of EUR 15 m to Hrvatska banka za obnovu i razvitak (HBOR, the Croatian Bank for Reconstruction and Development). The HBOR, with its specialist local expertise and understanding of the Croatian market, then provides loans to national companies for conservation, restoration and nature-based adaptation, such as eco-tourism, sustainable agriculture and forestry, or green infrastructure for cities.

(From: https://www.eib.org/en/products/blending/ncff/index.htm)

Althelia Funds impact investments, UK

There are also a growing number of biodiversity-oriented financing facilities seeking to attract funding from private and institutional investors. For example, Althelia Funds (part of the Mirova Group, an affiliate of Natixis Investment Managers), is a London-based asset manager focusing on commercial investments that deliver financial returns and are also aligned with the conservation of nature and sustainable social development. Its portfolio investments comprise real assets, debt and growth equity. With an average investment or loan size ranging between USD 7-15 million, funds are invested in ventures which contribute towards targets involving species, ecosystems, climate, livelihoods, sustainable enterprise, fair economic returns and inclusivity. These seven impact themes (and their associated performance indicators) are explicitly aligned with the UN Sustainable Development Goals.

Althelia has so far depended almost entirely on institutional investors, including development banks, commercial banks, insurance companies, and pension funds. It operates a number of funds, one of them being the USD 100 million Climate Fund. The investments are made through Ecosphere+, a business that helps to bring nature-based carbon credit-generating projects to market. Investors include the European Investment Bank, the Dutch Development Bank (FMO), Credit Suisse, and AXA. The Sustainable Ocean Fund, also based on raised funds of USD 100 million, provides private debt investments into coastal fisheries, sustainable aquaculture projects, the seafood supply chain, creation of business opportunities through tourism, payments for ecosystem services, and blue-economy infrastructure. It reached a first close towards the end of 2018 with commitments from the European Investment Bank (EIB), AXA, the Dutch Development Bank (FMO), the Inter-American Development Bank (IADB), and the Caprock Group. In addition, the United States Agency for International Development (USAID), through the Development Credit Authority, has provided a 50 percent risk-sharing guarantee for private investors for up to USD 50 million (EUR 42 million).

(From: https://althelia.com/)

In order to mobilise investment funds for biodiversity, it is necessary to align and bring together demand and supply side aspects. Supply-side financial instruments offer investors the opportunity to sink their funds into attractive biodiversity investments. Demand-side financing mechanisms seek to make this investment capital available to biodiversity businesses as and where needed.

On the supply side, there is now an increasingly wide variety of financial products which specifically apply environmental, social and governance (ESG) criteria in order to target sustainable or ethical investments. These are often grouped together under the umbrella term 'socially responsible investing (SRI)'. While relatively few investment funds are concerned solely with biodiversity, many offer a mixed environmental portfolio which combines a number of criteria and performance standards relating to nature, sustainability, energy, water, climate, and other factors. In almost all cases some kind of formal due diligence, verification or certification process is carried out to ensure that companies meet these criteria.

While SRI markets have been growing rapidly, biodiversity and conservation-related investments still comprise a relatively small share. Within Europe alone, total SRI assets under management are put at more than EUR 11 trillion, with ESG integration growing by 60% over two years to more than EUR 4 trillion in 2018, and impact investing reaching EUR 108 billion in assets from only EUR 20 billion in 2013 (Eurosif 2018). This compares to a global estimate of just over USD 8 billion of private capital committed to conservation investing from 2004 to 2015 and USD 31.7 billion of public funds between 2009 and 2015 – an average of just under USD 1 billion and USD 4.5 billion a year respectively (Hamrick 2017).

Biodiversity investments may be made as direct cash contributions from individuals and companies, through the purchase of company securities (stocks, shares, bonds, and so on), or via pooled investment funds and collective investment schemes. The latter currently dominates the biodiversity finance market. Debt and equity funds are currently the most common financial vehicles and, to a lesser extent and mainly for larger investors, also bonds and notes. The bulk of funding comes from (or through) institutional investors, such as banks, insurance companies, pension funds, mutual funds and others. For example, almost 70% of SRI assets in Europe were found to be held by institutional investors in 2017 (Eurosif 2018). Retail investors still account for a small share, and the products serving them also tend to be mainly restricted either to the direct purchase of securities or to more general, composite SRI or ESG funds, which may or may not contain biodiversity as a component. It is, however, worth noting that this share is growing: in Europe, the proportion of SRI assets held by retail investors increased from under 4% in 2013 to more than 30% in 2017.

Overall, the amount of direct funding being provided by private investors to companies generating profits via activities that have a positive impact on biodiversity (generally known as 'biodiversity businesses'), such as venture capitalists and 'angel investors', is still thought to be relatively small. It can, however, be extremely important for individual companies – for example start-ups, or businesses that require a one-off injection of funds in order to expand or undertake a shift in the direction of becoming more biodiversity-friendly. This is especially the case for companies that lack access to other sources of finance (such as conventional bank loans), or for non-traded companies that have not yet issued stocks and shares.

It is more common for biodiversity businesses to raise funds either through conventional means (the sale of stocks, shares, and other securities), or as a grant or loan obtained via a third party intermediary (such as a government, bank or other financial institution). A number of niche funds and dedicated facilities have been set up over recent years which specifically seek to leverage and mobilise investments for biodiversity. These often involve the provision of blended finance, combining commercial finance with concessional funding from governments, development banks, development donors, non-governmental organisations, or philanthropic foundations. The concessional funding component typically offers below-market interest rates, loan guarantees or extended grace periods, and may also include supplementary grant funding and technical assistance support. Several networks and support platforms have also emerged, mostly operating on a non-commercial or charitable basis, which help to connect biodiversity-oriented businesses to public and private investors, or act as intermediaries to facilitate access to loan capital.

- Work through existing market systems and instruments;
- Can also serve to improve investor awareness and corporate responsibility;
- Have the potential to mobilise and channel large amounts of funding.

- Still comprise a relatively small share of investment and financing options;
- Currently mostly confined to larger companies and institutional investors;
- Regulatory frameworks and standards still emerging.

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KEYSHEET 12: Crowdfunding

Crowdfunding raises funds through a collective effort, usually asking for donations to a particular cause to be made online. It typically works on the basis of a large number of people each contributing a small amount of money. In some cases donors receive a reward for their contribution, such as a souvenir or free product. A number of internet crowdfunding platforms have been set up to help fundraisers to market their calls and manage the collection of donations. Not only does crowdfunding help to secure funds, but it can also play an important role in raising awareness and stimulating collective action. In 2018, global crowdfunding was estimated at USD 10.2 billion.

Crowdfunding for the Netherlands National Seed Collection

Many wild plant species in the Netherlands are at risk of extinction. A crowdfunding campaign to save the Dutch wild plants that are threatened with extinction was launched in June 2019. This was implemented through Stichting Het Levend Archief (the Living Archive Foundation), an initiative of Professor of Plant Ecology at Radboud University and Wageningen University & Research.

The Living Archive Foundation provides vital support to ex-situ conservation, by collecting, propagating and storing seeds of plant species that are native to the Netherlands. In doing so, it safeguards the species, so that if the source populations are in danger of disappearing, genetically-identical seeds can be used to rescue them. The conserved seeds form the basis of the National Seed Collection. However, key equipment was lacking. One important need was for equipment to regulate humidity in the drying room – before seeds can be stored, they must be dried properly.

The donation-based crowdfunding campaign was run through the online platform 'Radboud Fonds', an initiative of Radboud University and Medical Centre that raises funds for research, education and patient care projects. The funding target was EUR 10,000. Between the end of June and the end of August, when the campaign was finished, a total of EUR 11,352 was raised by 346 donors. Those who made a donation were offered lectures and tours, along with a bag of seeds for the native plant species they collectively tried to protect.

(From: https://www.ru.nl/iwwr/news/news/vm/crowdfunding-campaign-save-dutch-wild-plants/)

Crowdfunding for solar panels in UK schools

A crowdfunding initiative was used to raise funds to finance the installation of solar panels in 19 British schools. It was run through the Abundance Platform, a UK-based online investment platform which claims to offer ethical and socially beneficial investments that contribute to a green economy. The investments offered by Abundance are mainly renewable energy projects in the UK, with investors receiving a share of the profits from the generation and sale of low-carbon electricity.

The project raised £650,000. As a result, the schools involved in the project did not have to pay for solar panels and associated operational costs, and at the same time their electricity bills were reduced by as much as 30%. This project generates revenues by selling cheaper electricity to schools; the Government has introduced a feed-in tariff system. Investors purchase debentures for individual projects, thus making long-term investments (up to 25 years). According to Bruce Davis, Co-Founder and Joint Managing Director of Abundance: 'Our business is focused on offering socially-beneficial investments, and giving individuals greater transparency on where they put their money. In doing so, we can all start putting our money into areas of the economy that add real value to the UK'.

(From: Nigam et al 2018)

Crowdfunding for wind turbines in the Netherland

WindCentrale is a crowdfunding platform that was launched in 2010 in the Netherlands with the aim of accelerating the transition to renewable energy in the Netherlands. The platform enables the public to become co-owners of a wind turbine and derive benefits from using wind energy. It envisages that eventually at least 1 in 20 houses should produce their own energy through wind turbines, which would help the Netherlands to achieve their European sustainability goals for generating renewable energy by 2020.

One of WindCentrale's innovations is to promote a model which splits wind turbines into wind shares. Each share has an envisaged production capacity of 500 kWh. Through the platform, individuals are invited to make an investment in the range of EUR 200-500 per wind share. The energy produced through wind shares is then deducted from their annual electricity bills. Each investor receives 500 kWh on an annual basis, judged to be sufficient to meet energy bills for the next 12- to 15-year period.

In this way, the incentive is not only to promote renewable energy sources but also to obtain some personal benefits. More than 60,000 wind shares, worth EUR 15 million, have been sold. The nine wind turbines funded have generated a total of more than 27 GWh in production capacity, sufficient to supply energy to 15,000 households. It is interesting to note that within a day of the campaign being launched, 1,700 Dutch households made a collective investment into in their own turbine; they acquired 6,648 shares worth EUR 1.3 million.

(From: Nigam et al. 2018)

Crowdfunding allows individuals, organisations, or even governments to secure funding for a project or venture with small donations from the general public. The internet has brought a new dimension to this financing mechanism, making it accessible for every individual with a good business idea or proposal, and allowing for a marketing platform that has an almost infinite reach around the globe. In simple terms, crowdfunding enables a project or business to be funded by many people, hence the name 'crowd', rather than one or two major investors. Funds are raised in a short, sometimes limited period, allowing for a quick start of the project. This has created many opportunities, especially for individuals or small NGOs and CSOs who would otherwise have very limited access to capital.

The popularity of crowdfunding has skyrocketed over the last 5 years. Availability of information and wide internet access from around the globe have been crucial to its success. Anyone with a smartphone and internet access can browse a wide range of crowdfunding initiatives and make donations in just a few clicks. Most crowdfunding is conducted through specialised crowdfunding sites. In a few simple steps fundraisers can create a page on one of the available platforms, where they pitch their project or venture to potential backers. The next step is to market their proposal, and attract attention to their page, with social media usually being a particularly important way of publicising the fundraising drive.

Online platforms tend to focus on a particular type of fundraising, with some limiting themselves to charitable and public interest causes, and others being oriented more towards raising funds for businesses and profit-making enterprises. Some crowdfunding platforms operate on a fee basis, and others are financed through advertising or voluntary contributions, and do not make any charge to users (for example GoFundMe and Free Funder). Where charges are made, these are typically calculated on a percentage basis usually something between three and seven percent. Equity-based crowdfunding normally also includes other charges, and some platforms charge for marketing campaigns.

Crowdfunding can take various forms. Donation-based or charity-based crowdfunding offers donors no material incentive for providing financial support, and is typically reserved for charitable activities. The campaigns tend to be short in time, and usually generate less money than more commercial crowdfunding types. Some of the most popular donation-based crowdfunding platforms are Kickstarter, GoFundMe and Indiegogo. In contrast, reward-based crowdfunding usually involves a non-financial reward to donors (such as a souvenir, a free sample product, pre-orders, services or recognition). This is the best-known type of crowdfunding and is often used for small businesses to generate start-up or expansion funds. Under debt-based or peer-to-peer lending crowdfunding, investors get their money back, usually with some kind of interest. Those campaigns are usually short-term, and offer a good option for businesses that do not wish to sell shares in order to finance their debt. Debt-based crowdfunding platforms such as Funding Circle and Zopa often enable individuals to earn higher rates of return than what they would get from banks. Equity crowdfunding raises capital through the sale of securities like equity, debt and revenue shares, marketed through a crowdfunding platform. It has particular application as a way of raising more business capital, and is often used by startups. Investors get a share in the company and, if the company is successful, the value of the equity goes up (and vice-versa).

Crowdfunding has many applications, from charity and cause-based fundraising, through research and publications, to commercial business investments, and even efforts by individuals to finance their holidays, homes, hospital bills, or university fees. It has also become a popular means of raising funds for conservation. It is estimated that around USD 5 million of conservation funding was generated through crowdfunding between 2009-2017, through almost 600 projects carried out in more than 80 countries, and using 72 different crowdfunding platforms; most were proposed by local NGOs, university researchers or proponents with no institutional affiliation (Gallo-Cajiao et al,. 2018). Although still supplementary, and secondary, to more traditional conservation funding, crowdfunding has proved to be a particularly effective means of providing seed funding to establish a small project or research initiative that can then be submitted for a larger grant. Campaigns based on single, charismatic, species or sites tend to stimulate the most interest among donors. For example, In 2013 Sociedade Portuguesa para o Estudo das Aves (BirdLife Portugal) launched a crowdfunding campaign to support the conservation of the endemic and endangered Azores bullfinch by restoring the bird's habitat in the native Laurel Forest of São Miguel Island (see http://www.spea.pt/fotos/editor2/ci_crowdfunding_priolo_en.pdf). Along similar lines, scientists from the Australian National University were able to raise more than AUD 130,000 to save the critically endangered orange-bellied parrot, and Hawaii's Kauai Forest Bird Recovery Project were able to crowdfund the purchase of traps to catch predator rats. It is, however, also worth noting that a growing literature on biodiversity crowdfunding suggests that many campaigns have not been successful, with a high proportion unable to reach their funding targets. For example, by the time the Azores bullfinch campaign was closed, less than half of the target USD 28,000 had been raised.

One of the best features of crowdfunding is that it serves as a tool for generating funds where other, traditional financing mechanisms are not available. Platforms are easy to access and available to anyone with internet access. They are also in most cases cheap, or even free, to use. This allows for quick action and, usually, a quick response. The most challenging aspect of crowdfunding is therefore not usually setting up a page or proposal, but rather designing and implementing a successful marketing campaign that attracts sufficient attention and donations. For donors and investors, information, accountability and risk can pose problems. Having made a donation, it is often not possible to access information about how the project has been implemented (or, in some cases, whether it has been implemented at all), or what its social and environmental impact has been. Cash investments made with the expectation of payback and interest can also involve a considerable degree of risk on the part of the investor, as there is no guarantee of return and usually no recourse or fallback should payback not materialise. Crowdfunding also raises a number of security-related concerns, for example money laundering, financing terrorism and cross-border movements of funds. It is regulated differently around the world. In some countries (mainly in Western Europe and North America), reward and donation-based crowdfunding are accepted but other types are subject to legislative provisions. In other instances there is no legislation, or regulations are under development.

- A good tool when other mechanisms are not available;
- Technological development and global internet access make it easy to use;
- Quick action and mobilisation of people.

- Requires smart design of marketing campaign;
- Monitoring and reporting are challenging but essential;
- Risks related to cybersecurity and money-laundering.

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KEYSHEET 13: Trust Funds

Trust funds mobilise, collect, and manage financial resources and use them for specific purposes and beneficiaries. They have become a popular financing mechanism for biodiversity, ecosystems and PAs, and today there are a large number of examples of trust funds operating at site, sub-national, country and regional levels across the world. Most combine funding from governments, international donors and the private sector, and some also generate their own revenues. Trust funds may be constituted in many different ways such as government extra-budgetary funds, non-governmental organisations, foundations, common law trusts and non-profit corporations. A wide range of financial management models also exist, including endowment, sinking and revolving funds. If designed and implemented well, trust funds present significant – and sustainable – conservation financing mechanisms.

Caucasus Nature Fund (Armenia, Azerbaijan, Georgia)

Just as is the case in many other parts of the world, the Caucasus region faces a critical shortage of funds for conservation. Especially after the collapse of the Soviet Union, there has been a significant decrease in budgets, and it became evident that alternative financing mechanisms would have to be mobilised in order to prevent the continued deterioration of biodiversity and protected areas.

In response, the Caucasus Protected Areas Fund (now called the Caucasus Nature Fund, CNF) was established in 2007, aiming to support managing protected areas (PAs) in the three countries. The initial goal was to secure financing for up to 50% of PA management costs. Establishing the fund was a challenging task, and took a total of four years. The process was underpinned by three international organisations (KfW - a German development bank, WWF, and Conservation International), working with governments and NGOs in the three countries. A lengthy stakeholder consultation process was initiated, a financial gap analysis was undertaken, and the institutional, legal and financial frameworks in all three countries were reviewed in detail. There was considerable debate over the best organisational and financial model for the fund. It took more than a year to draft, negotiate and finalise the legal charter and bylaws for the fund. In the end, the fund was registered as a tax-exempt, not-for-profit German foundation. The board of directors was established and detailed management guidelines were prepared, regulating all operational aspects of the fund.

The CNF combines endowment and sinking fund elements. The initial capital of EUR 7.5 million was raised mainly thanks to German bilateral contribution of EUR 5 million, supplemented by a contribution from the Global Conservation Fund. Today, the endowment stands at more than EUR 30 million, including contributions from KfW (German development bank) and BMZ (Germany's Ministry of Economic Cooperation and Development). Financing has also been provided by a range of other donors, private companies and individuals. The endowment is invested internationally, and cash reserves are kept in interest-bearing term deposits with Caucasus banks.

The trust works through public-private partnerships with the three governments by matching, but not exceeding the State budgets. The process of application is channelled through the Ministry responsible for environment and nature protection which has the competence to recommend PAs in most immediate need of funding. Thus, even though governments are not represented on the board of directors or other management structures of the CNF, they do have a significant role in the decision making process. In 2018, nearly EUR 1.6 million was disbursed as grants in Armenia and Georgia to support PA operational costs and improve management effectiveness, biodiversity monitoring, and eco-tourism services.

(From: CNF (2018) Annual Report. Caucasus Nature Fund. https://www.caucasus-naturefund.org/wp-content/uploads/2019/04/CNF_Annual_*Report_2018_Final_signed.pdf)*

Prespa Ohrid Nature Trust (Albania, Greece, North Macedonia)

The Prespa Ohrid Nature Trust (PONT) was created in 2015 to provide long-term financing for the Prespa Ohrid ecoregion – a transboundary area of Albania, Greece and North Macedonia. The transboundary conservation trust fund was capitalised with funding from The MAVA Foundation, German Ministry for Economic Cooperation and Development (BMZ), and the German development bank (KfW). PONT combines investment income from this endowment with other available capital and annual donations to generate grant-making resources for protected areas and environmental stakeholders, including civil society, municipalities and science/academic institutions addressing nature protection in the region.

PONT has currently established long-term financing allowing a drawdown of EUR 1.5-2 million a year until 2030. The fund provides conservation grants to PA authorities, CSOs, municipalities and scientific/academic institutions working to conserve the Prespa Ohrid ecoregion. At present, initial focus is on the Prespa lakes basin, including the six protected areas (PAs) surrounding it. In the future, PONT aims to expand its work to include the Lake Ohrid basin.

To strengthen cooperation between local stakeholders, PrespaNet, a regional conservation network was officially established by three NGOs – the Protection and Preservation of Natural Environment in Albania (PPNEA), Society for the Protection of Prespa (SPP) in Greece, and the Macedonian Ecological Society (MES) in North Macedonia. It was through PrespaNet that a 5-year strategy for the Prespa Ohrid Nature Trust (PONT) was elaborated with partners. PrespaNet acts as a channel for fund disbursement in support of the region's PAs. The funding allows the PrespaNet partners to run local offices and work on their programmes in close cooperation with the PA management bodies over a long period of time. Pooling of administrative services between three funds, through the Nature Trust Alliance shared operational services, has led to cost reductions, allowing for more money to be allocated to the PONT grant programme and conservation objectives.

(From https://www.pont.org/; PANORAMA Solutions: Prespa Ohrid Nature Trust (PONT) – an innovative partnership enhancing conservation and cooperation, https://panorama.solutions/en/solution/prespa-ohrid-nature-trust-pont-innovative-partnership-enhancing-conservation-and)

As defined by the Conservation Finance Alliance and Wildlife Conservation Society, 'conservation trust funds are private, legally independent institutions established to catalyse resources and provide stable, sustainable, long-term sources of funding for the protection and sustainable management of natural resources in areas of high biodiversity' (Mathias and Victurine 2018). They serve as mechanisms to mobilise funds from a range of different donors, governments and the private sector, in order to achieve conservation goals. Each trust fund has its own legal and institutional setup, governance mechanisms and implementation procedures. It also usually has a specific mandate, target and objectives. Typically, trust funds serve as financial mechanisms, not as project-implementing organisations. They fundraise and manage money, review and make decisions on proposals and business plans, but are not directly responsible for delivering conservation activities projects.

Conservation trust funds are generally capitalised by grants (or, less commonly, loans) from donor agencies, governments, foundations, non-profit organizations, individuals and corporations. They may operate under various different legal arrangements. In some countries, they are formed as trusts which own and manage financial resources. In other countries, with no legal grounds for establishing a trust, foundations and associations are often established for this purpose. It is also not uncommon for trust funds to take the form of a non-governmental organisation or not-for-profit company. While most trust funds are independent and managed as private organisations, a variety of environmental funds

have been established – in the Western Balkans and elsewhere – as government-run organisations, or to operate as extra-budgetary funds. For various reasons, such as lack of legal basis or lack of transparency and trust in national institutions, trust funds may also be established offshore.

Most conservation trust funds combine one or more of three basic fund types: endowment (investing a capital amount and spending only the interest earned), sinking (drawing down a fixed amount of funding over a specified time period funds), and/or revolving (operating a fund that can be continuously renewed and replenished with new income on a regular basis). Endowment funds are usually designed for permanence, seeking to yield a stream of income in perpetuity. Most environmental endowment funds are set up to absorb large inflows from international donors (or, less commonly, the private sector) – for example via debt-for-nature swaps or from a one-off grant or donation. Environmental funds often incorporate sinking fund elements. These offer a transparent mechanism for managing and drawing down programme or project funding from one or several sources for specific purposes (often the delivery of a sector-wide strategy or plan, or undertaking activities at a particular development site). Revolving funds can be replenished from any number of sources, such as charges, fees and other earnings, external grants and budget allocations, as well as – less commonly (in the case of conservation funds, at least) – through recycling loans and credit. Many government-run environmental funds for example depend on earmarked fiscal revenues, and have often been set up with the specific purpose or retaining and reinvesting some or all of this income. While each of these different models implies slightly different arrangements as regards financial management processes and accountability, decision-making and day-to-day running, most have a similar governance structure, involving the establishment of some kind of dedicated secretariat and staff to manage the day-to-day operations of the fund, working under the guidance and oversight of an apex oversight board and/or advisory committee. This is the case even when funds are set up to be fully government-run.

Trust funds have proved to be a successful – and popular – form of conservation financing mechanism. As of the end of 2017, more than 100 conservation trust funds were established or in active operation; many of them had been operating for several decades (Mathias and Victurine 2018). Several are responsible for managing large amounts of money. For example, the Brazilian biodiversity fund raised capital of over USD 500 million, and the Mexican Fund for the Conservation of Nature runs a USD 120 million fund and several sinking funds. The Thai Energy Conservation Promotion Fund is financed through levies on petroleum and generates more than USD 220 million annually. The Madagascar Biodiversity Fund is functioning as a private foundation with an endowment of more than USD 50 million. While perhaps the greatest advantage of conservation trust funds is that they offer a predictable, sustainable financing mechanism, they also often add considerable organisational strength (and independence) to conservation efforts. This can help to improve donor confidence (and thus funding flows), as well as support a transparent, multi-stakeholder platform for discussing and addressing environmental challenges. In many cases, conservation trust funds have evolved to become significant, and influential, local or national institutions.

It should however be noted that conservation trust funds are complex, time-consuming and often costly to establish. It is often very difficult to raise sufficient funding to create a viable fund, especially for endowment funds, which require a fairly large amount of capital to be able to generate any meaningful level of interest income. Almost all successful examples have relied heavily on outside technical and fundraising assistance in their initial set-up stages (usually provided by international conservation organisations). Unless carefully designed, it can also be expensive to operate, manage and monitor their use and disbursement of funds. Although great attention is in most cases paid to ensuring transparent and accountable financial management and governance structures, there are always risk associated with developing and operating large flows of money, and several unfortunate examples exist where conservation funds have faced considerable problems as a result of corruption, fraud, and financial mismanagement.

A wide range of guidance is now available on designing and setting up trust funds. For example, a set of voluntary practice standards for conservation trust funds has been developed by the Conservation Finance Alliance (CFA), a global voluntary network with the aim of supporting sustainable financing for biodiversity conservation (see Spergel and Mikitin 2014). These are intended to serve as a tool for improving the design, management, and monitoring and evaluation of conservation trust funds.

- Enable wider support to conservation measures, often combining donors and financial mechanisms;
- Offer long-term solution and predictability;
- Low operational costs and mobilisation of wider support;
- Good platform for joint action.

- Creation of trust funds is a challenging , lengthy and often costly process;
- Design, structure and implementation arrangements of trust funds are challenging;
- For endowment funds it is often difficult to raise sufficient capital to create a viable fund.

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SOURCEBOOK
ON SUSTAINABLE FINANCING FOR BIODIVERSITY, ECOSYSTEMS & PROTECTED AREAS
IN THE WESTERN BALKANS

GLOSSARY:
KEY TERMS & DEFINITIONS

2030 Agenda	The 2030 Agenda for Sustainable Development, including its 17 Sustainable Development Goals (SDGs) and 169 targets, was adopted on 25 September 2015 by Heads of State and Government at a special UN summit. It commits to eradicate poverty and achieve sustainable development by 2030 world-wide.
Adaptation (see Climate adaptation)	In the specific context of climate change, measures to adjust to actual or expected future climate change, seeking to reduce the vulnerability of human or natural systems to the harmful effects of climate change (e.g. sea-level rise, more intense extreme weather events, or food insecurity). It also encompasses making the most of any potential beneficial opportunities associated with climate change (for example, longer growing seasons, increased yields, or reduced seasonal water stress).
Agri-environment measures	As defined by the EU, agri-environment measures are designed to encourage farmers to protect and enhance the environment on their farmland by paying them for providing environmental services. Farmers commit themselves, for a minimum period of at least five years, to adopt environmentally-friendly farming techniques that go beyond legal obligations. In return, they receive payments that compensate for any additional costs and income foregone.
Aichi Biodiversity Targets	The Aichi Biodiversity Targets are included in the Strategic Plan for Biodiversity 2011-2020, adopted by the Conference of the Parties to the Convention on Biological Diversity in 2010. They comprise 20 time-bound, measurable targets on biodiversity conservation, to be met by the year 2020.
Angel investor	An individual who uses their own funds to provide financial (and sometimes other types of) backing for small start-ups or entrepreneurs, often in exchange for ownership equity in the company.
Asset class	A grouping of investments that exhibit similar characteristics and are subject to the same laws and regulations. There are usually understood to be four classes of assets: stocks or equities, bonds or fixed-income instruments, money market or cash equivalents, and real estate or other tangible assets (such as commodities, futures, other financial derivatives, and even cryptocurrencies).
Biodiversity	The variability among living organisms from all sources including, terrestrial, marine and other aquatic ecosystems and the ecological complexes of which they are part. This includes diversity within species, between species, and of ecosystems.
Biodiversity banking	See habitat banking.
Biodiversity businesses	Commercial enterprises that generate profits via activities which conserve and positively affect biodiversity, use biological resources sustainably, and share the benefits arising from this use equitably.
Biodiversity offsets	Conservation actions intended to compensate for the residual, unavoidable impact on biodiversity caused by projects. They usually involve investing in rehabilitation or conservation of equivalent resources, habitats or even species at another site. The aim is to ensure at least no net loss of biodiversity and, where possible, a net gain. Offsets are usually pursued as a last resort, only at the end of the mitigation hierarchy, after on-site environmental harm has been reduced and alleviated as much as possible.
Biodiversity-based products	Products that depend on, or are derived from, biological resources (including species, genes and ecosystems) as a main input or raw material.
Biodiversity-friendly products	Products that are harvested, produced and/or processed in such a way as to do no harm to biodiversity or, preferably, to promote its conservation, sustainable use, and equitable sharing of benefits among stakeholders.
Biotrade	Collection, production, transformation and commercialisation of goods and services derived from biodiversity under the criteria of environmental, social and economic sustainability.
Blended finance	The use of development finance from governments, development banks or other agencies at concessional terms (for example below the market rate or in combination with technical assistance) to catalyse and mobilise commercial finance.
Brand	A particular identity, storyline and - usually - mblem which is associated with a particular product, site, and/or region.
Capital markets	A market in which buyers and sellers trade financial securities and other instruments (such as stocks, shares, bonds, debentures and other long-term investments). They provide a mechanism for channelling the wealth of savers and investors to those who require capital, such as companies or governments. Examples include the stock market, bond market, currency and foreign exchange markets.
Cause-related marketing	A mutually beneficial collaboration between a for-profit companies and charities, foundations or other not-for-profit/public interest organisations, designed to promote the former's sales and the latter's cause. It often involves sharing a portion of the revenues generated from the commercial sale of goods and services, or introducing an additional fee, donation or surcharge to a product price.

Certification	The process of measuring, testing and verifying that a good or service has met specified requirements in its production, sale or delivery. It is usually carried out on a periodic and renewable basis by an independent third-party agency and awarded according to strict and well-defined criteria.
Chapter 27 on Environment	The section of the EU acquis dealing with Environment, comprising over 200 major legal acts covering horizontal legislation, water and air quality, waste management, nature protection, industrial pollution control and risk management, chemicals and genetically modified organisms (GMOs), noise and forestry. Compliance with the acquis requires significant investment.
Climate adaptation	Measures to adjust to actual or expected future climate change, seeking to reduce vulnerability of human or natural systems to harmful effects of climate change (e.g. sea-level rise, more intense extreme weather events, or food insecurity). It also encompasses making the most of any potential beneficial opportunities associated with climate change (for example, longer growing seasons, increased yields, or reduced seasonal water stress).
Climate mitigation	Measures to reduce, stabilise, or prevent emissions of heat-trapping greenhouse gases in the atmosphere, for example by reducing sources of these gases (e.g. burning of fossil fuels for electricity, heat or transport), enhancing the "sinks" that accumulate and store these gases (e.g. oceans, forests, wetlands, grasslands and soils), or adopting new and improved technologies (e.g. renewable energy, upgrading old or inefficient equipment, improving design and planning).
Concession	A contractual right to carry out a business or other activity in a defined area, such as to explore or develop its natural resources or to offer commercial services (restaurants, gift shops, guided tours, hotels). The process of selection for concession is usually done through a competitive bidding process.
Conservation banking	See Habitat banking.
Conservation easement	A voluntary, legal agreement that permanently limits uses of land in order to protect its conservation values.
Conservation trust fund	Private, legally independent institutions established to catalyse resources and provide stable, sustainable, long-term sources of funding for protection and sustainable management of natural resources in areas of high biodiversity. They serve as mechanisms to mobilise funds from a range of different donors, governments and the private sector, in order to achieve conservation goals.
Convention on Biological Diversity	The Convention on Biological Diversity is an international legally-binding treaty with three main goals: conservation of biodiversity, sustainable use of biodiversity, and fair and equitable sharing of benefits arising from the use of genetic resources. It was opened for signature at the Earth Summit in Rio de Janeiro in 1992, and entered into force in 1993.
Corporate environmental and social responsibility	Corporate social responsibility is a concept whereby companies integrate social and environmental concerns in their business operations and in their interaction with the stakeholders on a voluntary basis.
Crowdfunding	A way of raising funds through a collective effort, usually asking for donations to a particular cause to be made online. It typically works on the basis of a large number of people each contributing a small amount of money. There are usually considered to be four categories of crowdfunding: donation-based or charity-based, reward-based, debt-based, and equity (see definitions below).
Debentures	A long-term security yielding a fixed rate of interest, issued by a company and secured against assets.
Debt financing	Money that must be repaid, usually with interest, with terms that stipulate the size of the loan, interest rate, and maturity or renewal date. May take the form of loans from a bank or other financial intermediary, or securities such as government and corporate bonds, certificates of deposit, and collateralised securities.
Debt-for-nature swaps	Debt-for-nature swaps are financial transactions in which a portion of a developing nation's foreign debt is forgiven in exchange for local investments in environmental conservation measures.
Disaster risk reduction	The concept and practice of reducing disaster risks through systematic efforts to analyse and manage the causal factors of disasters, including through reduced exposure to hazards, lessened vulnerability of people and property, wise management of land and the environment, and improved preparedness for adverse events.
Eco-certification	The process of measuring, testing and verifying that a good or service has met certain environmental performance and impact criteria in its production, sale or delivery. It is usually carried out on a periodic and renewable basis by an independent third-party agency, and awarded according to strict and well-defined criteria. Most certification services are associated with a logo (an ecolabel).

Eco-labelling	An ecolabel identifies overall environmental preference of a product (i.e. good or service) within a product category based on life cycle considerations and is awarded by an impartial third party to products that meet established environmental leadership criteria.
Ecological fiscal transfers	The incorporation of environmental criteria (such as protected areas, watershed management areas, or biodiversity richness) into the criteria or formula used to determine fiscal revenue redistribution from national to sub-national levels. They serve as a way of rewarding and compensating local conservation costs.
Ecosystem	A dynamic complex of plant, animal and micro-organism communities and their non-living environment interacting as a functional unit. This can refer to any functioning unit at any scale (e.g. a grain of soil, a pond, a forest, a biome, or the entire biosphere). Humans are an integral part of ecosystems.
Ecosystem-based adaptation	The use of biodiversity and ecosystem services as part of an overall adaptation strategy to help people to adapt to the adverse effects of climate change (e.g. sustainable agriculture, integrated water resource management, coastal wetland restoration, sustainable forest management). See Adaptation, Climate adaptation.
Ecosystem services	The benefits that people derive from ecosystems. They include provisioning services such as food and water; regulating services such as flood and disease control; cultural services such as recreational and cultural benefits; and supporting services such as nutrient cycling that maintain the conditions for life on Earth.
Ecotourism	Responsible travel to natural areas that conserves the environment, sustains the well-being of the local people, and involves interpretation and education.
Endangered species	A species of wild animal or plant that faces a very high risk of extinction in the wild throughout all or a significant portion of its range.
Endowment funds	Funds that invest a capital amount and spend only the interest earned.
EU acquis	The current body of common rights, obligations and rules that are binding on all EU countries, as EU Members. It is divided into 35 different policy fields or chapters for the purpose of negotiations between the EU and the candidate member states, each of which is negotiated separately.
EU Nature Directives	The body of EU-level laws protecting nature and biodiversity. These include, most importantly, the Birds Directive (1979) and Habitats Directive (1992).
European Green Deal	A strategy for growth and set of policy initiatives, launched 2019, which lays out a roadmap for making the EU's economy sustainable. Its aims include becoming climate neutral by 2050; protecting human life, animals and plants, by cutting pollution; helping companies become world leaders in clean products and technologies; and ensuring a just and inclusive transition.
Environmental, social & governance (ESG) criteria	A set of standards for a company's operations used by investors and in capital markets to evaluate corporate behaviour and screen potential investments for their environmental, social and governance impacts. Environmental criteria consider how a company performs as a steward of nature. Social criteria examine how it manages relationships with employees, suppliers, customers, and the communities where it operates. Governance deals with its leadership, executive pay, audits, internal controls, and shareholder rights.
Equity financing	Funding from investors or shareholders in exchange for the share of ownership in the company (purchase of stock and shares). Investors are not repaid, but are looking to support the company and will eventually sell their stake, ideally at a premium.
Financial return	The profit earned on investment over a period of time. It is usually expressed as a percentage proportion of the original investment.
Fiscal balance	The difference between a government's revenues and expenditures. When the balance is negative, the government has a fiscal deficit. When the balance is positive, the government has a fiscal surplus.
Fiscal decentralisation	The transfer of expenditure responsibilities and revenue assignments to lower levels of government.
Fiscal earmarking (also known as hypothecation)	Setting aside some or all of a public revenue source from a specific tax for a particular expenditure purpose (such as environmental conservation).

Fiscal instrument	Fiscal instruments are budget, taxation, public expenditure, public works, and public debt. They are used to influence the economy, using spending and taxation as to encourage or restrict private expenditures on consumption and investment.
Grants	Non-repayable funds or products disbursed or given by one party (grant makers) to a recipient. Grant makers are often government departments, corporations, foundations, trusts or development donors, recipients are often non-governmental or civil society organisations, educational institutions, businesses, or individuals.
Green bond	A fixed income, tradable capital market instrument targeted specifically at raising funding for environmental projects. Bonds are usually issued by sovereign governments, states, municipalities or corporate entities to raise upfront funds, backed up by the promise to repay the investor the value of the bond plus periodic interest payments.
Green budgeting	Using the tools of budgetary policy-making to help achieve environmental goals. This includes evaluating environmental impacts of budgetary and fiscal policies and assessing their coherence towards the delivery of national and international commitments. Green budgeting can also contribute to informed, evidence-based debate and discussion on sustainable growth.
Green project	A project with a goal to improve a specific environmental challenge.
Habitat	The locality or environment in which an animal lives.
Habitat banking	A system of trade or exchange in which credits can be earned from creating, restoring, enhancing or conserving specified natural habitats, as well as purchased in order to compensate or offset the negative impacts of development activities on biodiversity and ecosystems.
Habitat degradation	A decline in habitat quality for a species, e.g. related to changes in food availability, cover, or climate.
Habitat fragmentation	The process and result of breaking areas of contiguous habitats into distinct patches.
Habitat loss	An area that has become totally unsuitable for a species.
Hypothecation (also known as fiscal earmarking)	Setting aside some or all of a public revenue source from a specific tax for a particular expenditure purpose (such as environmental conservation).
Impact investment	Investments made into companies, organisations and funds with the explicit intention of generating a measurable, beneficial social or environmental impact alongside a financial return. The bulk of impact investing is done by institutional investors, but a range of socially-conscious or ethical financial service companies, web-based investment platforms, and investor networks now offer individuals an opportunity to participate.
Institutional investors	Large institutions, such as banks, insurance companies, pension funds, labour union funds, hedge funds, mutual funds, exchange-traded funds and endowments that buy and sell securities for their investment portfolios. Institutional investors may invest either on behalf of others or in their own capacity.
Interest rates	The proportion of a loan or deposit that is repaid as interest to the borrower, normally expressed as an annual percentage.
Millennium Ecosystem Assessment	Based on a call by the United Nations Secretary-General in 2000, the MA was initiated with the objective to assess the consequences of ecosystem change for human well-being and the scientific basis for action needed to enhance conservation and sustainable use of those systems and their contribution to human well-being. More than 1,360 experts worldwide were involved.
Mitigation banking	See Habitat banking.
Mitigating measures	Measures aimed at the elimination, reduction or control of the adverse environmental effects of a project. They include restitution for any damage to the environment caused by those effects through replacement, restoration, compensation, or any other means.
Mitigation (see Climate mitigation)	In the specific context of climate change, measures to reduce, stabilise or prevent the emission of heat-trapping greenhouse gases in the atmosphere, for example by reducing sources of these gases (e.g. burning fossil fuels for electricity, heat or transport), enhancing the "sinks" that accumulate and store these gases (e.g. oceans, forests, wetlands, grasslands and soils), or adopting new and improved technologies (e.g. renewable energy, upgrading old or inefficient equipment, improving design and planning).

Mitigation hierarchy	In the specific context of environment, biodiversity and ecosystem conservation, the mitigation hierarchy is defined as: avoidance (measures taken to avoid creating impacts from the outset), minimisation (measures taken to reduce the duration, intensity and/or extent of impacts that cannot be completely avoided), offset (measures taken to compensate for any significant residual, adverse impacts that cannot be avoided, minimised and/or rehabilitated or restored, in order to achieve no net loss or preferably a net gain of biodiversity), and compensation (measures to recompense, make good or pay damages for loss of biodiversity caused by a project that can fall short of achieving no net loss or a net gain).
Mutual funds	Professionally-managed investment programme which pools investors' funds and invests it in a diversified portfolio of equities, bonds and other securities. Each shareholder participates proportionally in the gains or losses of the fund.
Natura 2000	A network of core breeding and resting sites for rare and threatened species, and some rare natural habitat types which are protected in their own right. It stretches across all 28 EU countries, both on land and at sea. The aim of the network is to ensure the long-term survival of Europe's most valuable and threatened species and habitats, listed under both the Birds Directive and the Habitats Directive.
'No net loss' principle	To avoid a net loss of biodiversity and ecosystem services, damages resulting from human activities must be balanced by at least equivalent gains.
Offshore investment	The keeping of funds in a jurisdiction other than one's country of residence. The term may be used to describe foreign banks, corporations, investments, and deposits. Offshore jurisdictions are a commonly accepted means of reducing the taxes levied in most countries to both large and small-scale investors alike.
Opportunity cost	A benefit, profit, or value of something that must be given up to acquire or achieve something else. Since every resource can be put to alternative uses, every action, choice, or decision has an associated opportunity cost.
Paris Agreement on Climate Change	Agreement reached in 2015 by the Parties to the United Nations Framework Convention on Climate Change. It sets out a global framework to avoid dangerous climate change by limiting global warming to well below 2 °C and pursuing efforts to limit it to 1.5 °C. It also aims to strengthen countries' ability to deal with the impacts of climate change and support them in their efforts.
Payments for ecosystem services (PES)	Transfers of cash or other resources between ecosystem service beneficiaries and providers. They are a way of operationalising a 'user pays' approach in relation to ecosystem services. As well as generating funding, they serve as incentives to encourage land and resource managers to conserve biodiversity and ecosystems in the course of their economic activity.
Performance-based budgeting	An advanced programme budget, commonly used by government bodies and agencies to show the link between taxpayer funds and the outcome of services provided by federal, state, or local governments.
Perverse subsidy	Subsidies aimed at supporting or stimulating a particular sector or activity that have adverse social, economic and/or environmental effects over the long run. Examples include subsidies to encourage (unsustainable) production and exploitation of agriculture, fossil fuels, water and fisheries.
Polluter pays principle	The polluter should bear the cost of measures to reduce pollution according to the extent of either the damage done to society or the exceeding of an acceptable level (standard) of pollution. The 'polluter pays' principle is part of the 1992 Rio Declaration on Environment and Development, agreed at the United Nations Conference on Environment and Development (UNCED, commonly known as the Earth Summit).
Private investor	Individuals and companies that invest their own money in a company.
Programme budgeting	A budget designed for a specific activity or programme.
Protected Area	A clearly defined geographical space, recognised, dedicated and managed, through legal or other effective means, to achieve long term conservation of nature with associated ecosystem services and cultural values.
Public financial management	The set of laws, rules, systems and processes used by sovereign nations (and sub-national governments) to mobilise revenue, allocate public funds, execute public spending, account for funds, and audit results. The broad objectives of public financial management are to achieve overall fiscal discipline, allocate resources to priority needs, and allocate public services efficiently and effectively.
Public investor	Governments (at national, sub-national and municipal levels) as well as government-initiated organisations (such as development banks and multilateral finance institutions).

Restoration	(Of ecosystems) All of the key ecological processes and functions are re-established and all of the original biodiversity is re-established.
Retail investor	An individual, non-professional investor who purchases securities for his or her own personal account rather than for an organisation or for others. Retail investors usually operate through traditional or online brokerage firms or other types of investment accounts.
Revolving funds	A fund that can be continuously renewed and replenished with new income on a regular basis.
Securities	Any financial asset that has value and can be traded. Securities are generally classified as either equities (such as stocks and shares) or debts (such as bonds and debentures).
Sinking funds	Funds that draw down a fixed amount of funding over a specified time period.
SMART indicators	An acronym that stands for Specific, Measurable, Achievable, Relevant, and Time-Bound. The intention is to make clear what needs to be accomplished, when it needs to be accomplished, and how you will know when you are successful.
Socially responsible investing (SRI)	The practice of investing money in companies and funds that generate positive returns and long-term impact on society, environment, and doing business.
Species banking	A system of trade or exchange where credits can be earned from creating, restoring, enhancing or conserving natural habitats of specified species, and also purchased in order to compensate or offset the negative impacts of development activities on the specified species and/or their habitat.
Subsidy	Funds or other benefits (usually in the form of a cash payment or a targeted tax cut) granted usually by the state or a public body to encourage particular industries, sectors or activities, or to keep the price of a commodity or service low. A subsidy is typically given to remove some type of burden, and it is often considered to be in the overall interest of the public, given to promote a social good or an economic policy.
Surcharge	An extra fee or charge added on to the cost of goods or services by producers and retailers, and paid by customers and consumers. In the environmental context, additional revenues are raised to support conservation, including covering the costs of complying with environmental standards and mitigating negative impacts, and offsetting the regulatory fees imposed by the government.
Sustainable development	Development that meets the needs of the present without compromising the ability of future generations to meet their own needs.
Sustainable Development Goals	The 17 goals underpinning the 2030 Agenda for Sustainable Development, adopted by all United Nations Member States in 2015. They represent an urgent call for action by all countries in a global partnership, and recognise that ending poverty and other deprivations must go hand-in-hand with strategies that improve health and education, reduce inequality, and spur economic growth – all while tackling climate change and working to preserve our oceans and forests.
Sustainable use	The use of biodiversity, ecosystems and renewable natural resources in a way and at a rate that does not lead to their long-term decline, thereby maintaining their potential to meet the needs and aspirations of present and future generations.
Threatened species	A plant or animal species generally perceived as likely, in the near future, to become endangered within all or much of its range.
Trust funds	A legal entity that holds property or assets on behalf of another person, group or organisation. It can include money, property, stock, a business, or a combination of these.
Trustee	A person or firm that holds and administers property or assets for the benefit of a third party.
User pays principle	'User pays', or 'beneficiary pays', is a pricing approach based on the idea that the most efficient allocation of resources occurs when consumers pay the full cost of the goods and services that they consume.
User fees	A fee or a charge paid to a facility owner for using the facility. People pay user fees for the use of many public services and facilities. In the environmental context, user fees, inter alia, include entry fees and activity related fees in national parks and protected areas.
Venture capital	Equity funding for a new or expanding business that comes from outside investors (such as individuals, venture capital firms, investment banks and any other financial institutions). As well as cash funding, venture capital can also include managerial and technical expertise.

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