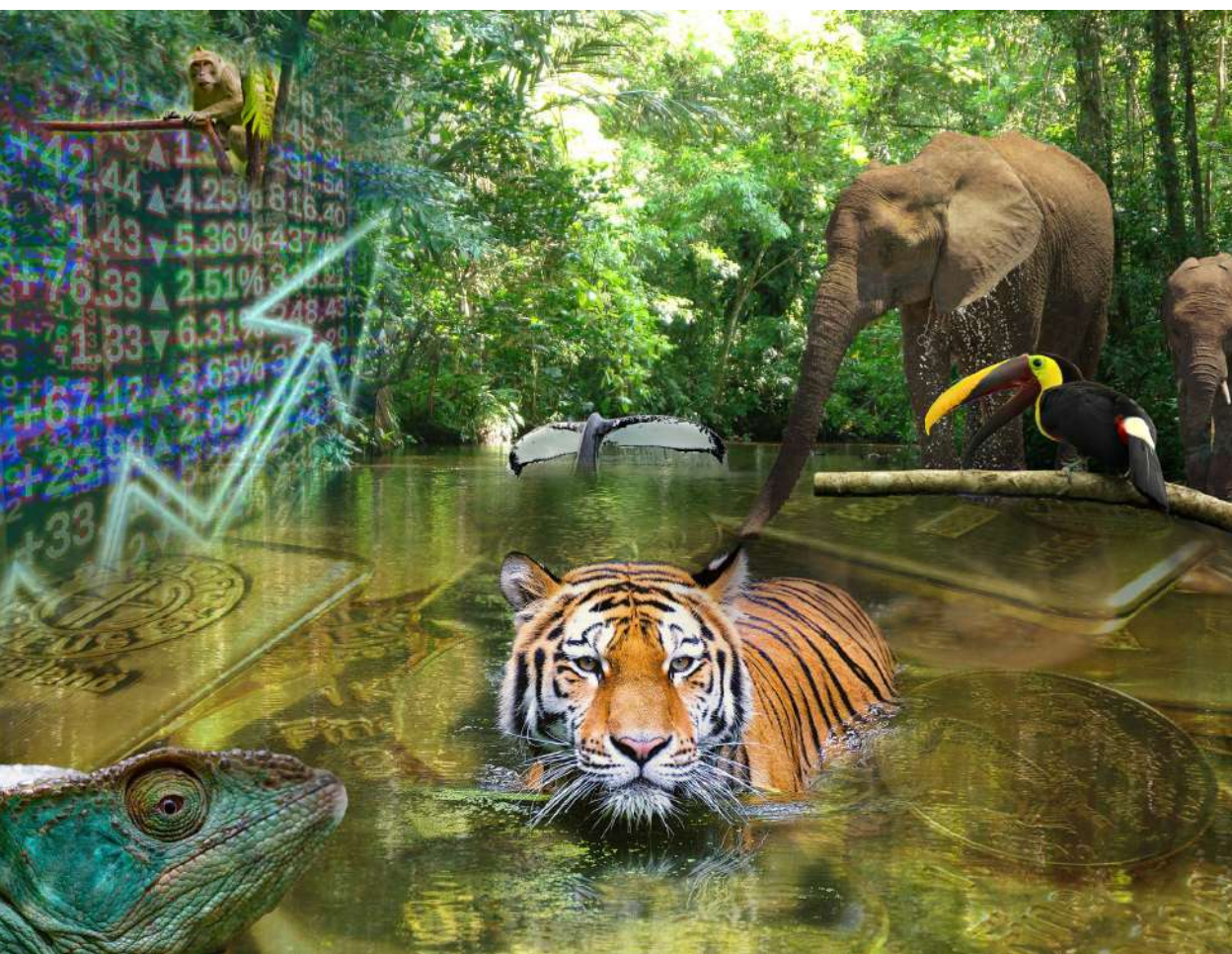




Sustainable investing in protected areas and biodiversity

Key enabling conditions in policy, law and institutions

Barbara Lausche



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Foreword

The need for increased investments in biodiversity and protected areas is not new. Yet, the magnitude of the threat to the wellbeing of current and future generations posed by unsustainable economic models has gained greater prominence in recent years. There is growing evidence that a failure to link economic, social and environmental dimensions in investment decisions has severely aggravated climate change, biodiversity loss and overall the worldwide environmental crisis.

The 2021 landmark Dasgupta Review highlights the major plights of not recognising nature as an asset that extends beyond a purely economic value. This review calls for attention to institutional failures, which contribute substantially to the degradation of vital ecosystems. Responses to the COVID pandemic have drawn even greater public attention to such failures. Alongside this, there is growing understanding that policy, law and institutions must play a key role in ensuring sustainable investments in biodiversity and conservation efforts, by providing the enabling conditions and safeguards.

The Environmental Law Centre has a long-standing trajectory of developing the legal tools, assistance and guidance for their implementation in all aspects related to protected areas and biodiversity conservation. Three milestone papers in this field include the *Guidelines for Protected Areas Legislation*; *Legal Aspects of Connectivity Conservation*, and *Integrated Planning: Policy and Law Tools for Biodiversity Conservation and Climate Change*. These publications have contributed to establishing the foundation for good governance of protected areas and important biodiversity hotspots. However, they do not provide the full picture of the way forward to finance nature, and their legal, institutional, and overall governance dimensions.

This paper recognises the significant financing gap that needs to be overcome to meet biodiversity, climate and land restoration targets. A 2021 UNEP report regarding the state of finance for nature estimates this gap at USD 4.1 trillion until 2050, which means that investments in nature need to triple by 2030 and quadruple by 2050 in comparison to current investment trends. Moreover, the new post-2020 Global Biodiversity Framework will set new ambitious targets that will require additional financing; the same applies to the agreement relating to the conservation and sustainable use of marine biodiversity in areas beyond national jurisdiction (BBNJ) recently adopted. Closing these gaps can only be achieved if governments, central banks, and financial institutions take responsibility for increased financial flows towards enhancing natural assets.

The present publication is a first attempt to guide how to navigate the different financing options available today, ranging from traditional sources, grants, national budgeting and loans, to innovative means, including green/blue bonds and blended financing, to mobilise greater public and private sector investments.

We do hope this book will contribute to a better understanding of the legal, policy, and institutional aspects of innovative means to finance biodiversity and thus de-risk investment processes and create further incentives for biodiversity conservation.

Ultimately, we aim to catalyse further conservation initiatives and stimulate concrete actions on the ground that integrate longer-term investment horizons to allow for non-financial benefits (like regenerated soils, restored grasslands, and increased species health) to be verified.

We are extremely grateful to the Aage V. Jensen Charity Foundation, which made this important piece of work possible.

Dr. Alejandro Iza

Director, IUCN Environmental Law Centre

Executive summary

This paper builds on and complements a series of recent ELC protected areas and biodiversity projects, starting with legislative guidelines for protected areas, next the legal aspects of connectivity, and finally integrated planning for biodiversity and climate change. The subject of this paper is the growing funding gap between what is needed and what is being provided to effectively address the planet's growing environmental crises – accelerating biodiversity loss, climate impacts affecting all parts of Earth and society, and expanding land, marine and ecosystem degradation as development proceeds unabated and unsustainably.

For the past few decades, the global policy impetus for “sustainable development” from all levels of science, technology, and diplomacy has gradually seeped into the strategic planning operations of global financial institutions as well as into some governments. This has generated a shift to questioning the meaning of ‘sustainable’ investing.

The fundamental driver for this project is the emerging awareness among leaders in finance and conservation of the global funding gap and the critical need to respond with more sustainable investing. As of 2019, according to one estimate, current spending on biodiversity conservation was between USD 124 and 143 billion per year, against a total estimated biodiversity protection need of between USD 722 and 967 billion per year. Other recent estimates may vary slightly but the message is clear: the gap is massive and growing. It has become an accepted premise in many environmental, social, and economic circles that conservation and sustainability need the help of new and innovative approaches to funding conservation, an area of interest for many global investment firms and financial leaders in the private market as they see nature being changed to the detriment of their investments. And there is general appreciation that governments, particularly emerging markets and developing economies, will not be able to deal with the funding gap alone; neither will philanthropy. In addition, many such governments are already struggling with extra debt and deficits, and unable to retain levels of conservation support pre-COVID.

During the past decade in particular, momentum has grown in the financial community to embrace opportunities and challenges of investing directly in green, sustainable, conservation, climate action and related projects, especially in emerging markets and developing economies. One of the key factors prompting the need for more concerted conservation action is that scientists believe land-use change and the use and trade of wildlife have increased the planet's vulnerability to pandemics. Investors and asset managers of the financial community are progressively looking for developing country opportunities to build a portfolio grounded in sustainability goals with environmental, social, and local governance benefits.

This kind of investment portfolio, whether in stocks, bonds or a combination thereof, has come to be called ‘ESG’ investing or ‘ESG’ integration into financial portfolios seeking large-scale, long-term sustainable investments. And many private financial leaders are speaking out with a significant commitment to putting ESG investing into action this decade. At the same time, this is a relatively new subject for most environmental lawyers and conservation practitioners. The findings of this paper are aimed at guiding the required governance arrangements for green investing in protected areas, biodiversity, and other environmental needs.

Part 1 provides evidence on the funding gap for biodiversity and protected areas, climate change, achieving the Sustainable Development Goals (SDGs) by 2030, and the new 2030 CBD targets for

biodiversity conservation. It also gives some estimates about the costs of continuing with 'business as usual'. With such a significant funding gap, one projected to grow even larger, investment strategies will require partnerships and collaboration among all key stakeholders - developing country governments, multilateral financial institutions, large-scale private investment firms, individual investors, national donors, philanthropy, NGOs and individual contributors.

Part 2 introduces the large-scale private, foreign investor (institutional or individual) and the key elements for a successful investment in a foreign country. These are generic aspects given the fact that every institutional and individual investor is governed by and has its particular priorities, shareholder and stakeholder pressures, in-house operational standards and national regulations.

When considering conservation or other green investing in developing countries, the main issues for large-scale investors (and their clients/shareholders) relate to the investment's sustainability, a responsive local policy environment supporting implementation, debt management in-country capacity, a functioning local financial sector, and a good credit rating of the sovereign government or public corporation. These considerations help investors and asset managers to gain confidence in the feasibility of this type of long-term investment. Furthermore, they can assess the return rates (financial and non-financial) and the risks. Transparency and information disclosure become critical for this process to work effectively.

Part 3 deals with the institutional authority and capacity of potential investee developing countries required to negotiate, implement, and monitor large-scale, long-term, private conservation investments to achieve the agreed investment and conservation goals. In particular, the large-scale private investor needs to have assurances that a given country's policy, law, and institutional framework supports such investments, particularly in biodiversity conservation, land and marine restoration, and other sustainable development projects. This framework would normally apply to government agencies, public enterprises/corporations (including State banks), and other public institutions (e.g., managing forests, fisheries, mining, energy).

Framework elements include a designated debt management office or focal point; core standards or guidelines in the country for conservation and sustainable investing; legal protections for the investors, investees, and affected communities; experience in project/programme planning and pipeline management; grievance mechanisms; and a responsive governance system that ensures meaningful stakeholders' participation, affected local communities, and other concerned parties; transparency and openness; equity and benefit-sharing; and a fair and independent judicial system.

Part 3 elaborates on the key enabling conditions investee governments should have in place to attract foreign private investors in conservation or other sustainable development investments. These include, primarily, investment law and supporting legal frameworks authorising foreign institutional and retail investors to participate in conservation and sustainable development finance in a particular country. Among other things, the paper stresses the need for this legal framework to emphasise transparency and predictability, contract enforcement, and dispute resolution, as well as an independent, efficient, and fair judicial system.

Other key policies also provide support for conservation investment, and these also normally require some grounding in law. Modern protected areas and biodiversity conservation policies, laws, and implementation mechanisms should be in place to reinforce associated substantive measures connected to investments, such as relevant international treaty obligations (e.g., Convention on Biological Diversity, Ramsar, Convention on Migratory Species). Also, some economic policies,

including those on subsidies, while not explicitly focused on conservation, may trigger actions with negative impacts on the natural environment, biodiversity, or ecosystem functions. There is a growing movement to support positive incentives, such as the promotion of green infrastructure through tax and others to reward those conservation actions. Other economic-related policies are being considered by a growing number of countries to provide authority to pay for ecosystem services (PES) (i.e., a landholder restores and protects a forest for watershed and biodiversity benefits and receives payment for that action). The authorisation of biodiversity offsets and carbon credits also could be considered as new positive subsidies. The availability of such incentive tools to support conservation actions on the ground may be a significant factor when calculating return rate and risk.

Part 4 shifts to the variety of financial products that may be used or adapted for ESG or other conservation or 'green' investing. These products are evolving to use both traditional and innovative financial mechanisms. A variety of such financial tools and strategies provide options for the investor and investee on the best ways to reduce risk and achieve both conservation (non-financial) and financial return. An emerging trend for calculating financial return relates to the evaluation of environmental services and biodiversity for their natural capital value (among others, services needed by nature and human quality of life provided by ecosystems, biodiversity, protected areas, forests, rivers, and soils).

Specific financial tools discussed in Part 4 include loans (acquiring debt), equity funds (buying shares of a company), debt for nature and climate swaps, and blue or green bonds (a type of loan to the government for specific purposes, the capital to be repaid with interest). There may be also opportunities for blended financing with many players and types of participation (direct funds, guarantees, insurance, technical assistance support, etc.), or impact financing (where specific impacts are the target from the beginning). Philanthropy is also touched on in Part 4 as in many cases it is philanthropy that provides initial funding and promotion, for example, for setting aside a land or marine area for conservation or protecting a threatened species and its habitat. Those actions are also frequently accompanied by significant local NGO and community support, even if only through in-kind services.

Part 5 relates to the efforts underway to develop some international standards for conservation/green investing and common measures to provide some comparability across investments, avoid greenwashing, and achieve the investment's conservation goals. This is an issue being raised in virtually all technical articles relating to conservation or green financing. It is a fast-emerging area of research and analysis, with significant progress being made in the past few years. Many international financial trade associations, NGOs setting investor standards, and international agencies (i.a. OECD, EU, World Bank Group, EBRD) are working towards universal standards regarding core definitions, for example, ESG investing; sustainable investing; reporting; disclosure and transparency requirements; and metrics to measure performance. Standard-setting has made significant progress as momentum for ESG and green investing has grown.

Major players in this work, both organisations and multilateral finance institutions, are listed in a table at the end of Part 5.

The paper concludes with several observations and key messages drawn from the project overall. These include recapping what needs to be done and by whom to accelerate conservation/green/ESG investments from private, foreign institutional and individual retail investors and begin to close the global green funding gap.

There are two Annexes: annex 1, contains several examples from developed countries on different approaches to conservation investing. Developing country examples are spread throughout the paper. Annex 2 contains a table of leading financial and development institutions supporting ESG and sustainable investing.

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This publication has been an effort of many people who have generously contributed their time, and expertise. We would like to thank all of them for their support and contributions to the production of this book.

In 2016 the Environmental Law Centre (ELC) started the assessment on how to strengthen private funding for conservation especially for protected areas, and in particular its legal and institutional dimensions. This is in response to growing evidence that government budgets and philanthropy will fall far short of meeting conservation funding needs. A working group of experts on sustainable finance was established and key ideas were gathered through this working group.

Lydia Slobodian, former legal officer at the ELC coordinated the work of this group, analysed their inputs and helped with the identification of priorities. That effort contributed to the preparation of this publication. Patricia Moore, an international environmental law expert and Lucy Emerton, an environmental economist kindly reviewed the advanced draft and offered helpful comments and additional ideas for future work. Many thanks for their insightful input.

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Given the complexity and dynamic nature of the growing movement of conservation investment for protected areas and biodiversity, we would like to emphasise that this publication should be considered an introduction to the theme of sustainable investment in protected areas and biodiversity, in particular, the key enabling conditions of policy, law, and institutions. New lessons and insights for best practices are emerging as private, foreign financial institutions and individual investors engage in building conservation investment portfolios with developing countries. We look forward to continuing to identify those initiatives and providing our contribution to this field in the future.

We look forward to continue identifying those initiatives and providing our contribution in this field in the future.

Acronyms and abbreviations

ACR	American Carbon Registry
AFD	French Development Agency
AFP	Private pension fund administrator
APIE	Foreign Investment Promotion Agency
BBOP	Business and Biodiversity Offsets Programme
BCG	Boston Consulting Group
BECCS	Bio-Energy with Carbon Capture and Storage
BIOFIN	Biodiversity Finance Initiative
BIS	BlackRock Investment Stewardship
BMPs	Best management practices
CAR	Climate Action Reserve
CBD	Convention on Biological Diversity
CBF	Caribbean Biodiversity Fund
CF	Conservation Finance
CFA Institute	Chartered Financial Analyst Institute
CNBC	Consumer News and Business Channel
COP26	United Nations Climate Change Conference of the Parties 26
COVID-19	Coronavirus Disease 2019
CPI	Climate Policy Initiative
CPIC	Coalition for Private Investment in Conservation
CRA	Credit rating agencies
DACCS	Direct Air Capture with Carbon Storage
DFI	Development Finance Institutions
DMO	Debt management office
EbA	Ecosystem-based adaptation
EESI	Environment and Energy Study Institute
EIB	European Investment Bank
EIU	Economist Intelligence Unit
ELC	IUCN Environmental Law Centre
ELT	IUCN Environmental Law Team
EM	Emerging market
EMDEs	Emerging markets and developing economies
ESG	Environment, social, governance
ESMS	Environmental and Social Management System
ETS	Emissions Trading System
EU	European Union
FAO	Food and Agriculture Organization of the United Nations

FDI	Foreign Direct Investment
FPIC	Free, Prior and Informed Consent
GBP	Green Bond Principles
GDP	Gross domestic product
GEF	Global Environment Facility
GFMA	Global Financial Markets Association
GGGI	Global Green Growth Institute
GHG	Greenhouse gas
GRI	Global Reporting Initiative
GSIA	Global Sustainability Impact Alliance
GSIR	Global Sustainable Investment Review
G7	Group of Seven
G20	Group of Twenty
HNWI	High-net-worth individual
IBRD	International Bank for Reconstruction and Development (World Bank Group)
ICMA	International Capital Market Association
ICSID	International Center for Settlement of Investment Disputes (World Bank Group)
IDA	International Development Association (World Bank Group)
IEEP	Institute for European Environmental Policy
IFC	International Finance Corporation (part of World Bank Group)
IIF	Institute for International Finance
IISD	International Institute for Sustainable Development
ILO	International Labour Organization
INDCs	Intended Nationally Determined Contributions
IOPS	International Organization of Pension Supervisors
IOSCO	International Organization of Security Commissions
IUCN	International Union for Conservation of Nature
LCR	Low-carbon, climate-resilient
LDC	Least developed countries
LIFE-AR	LDC Initiative for Effective Adaptation and Resilience
MIGA	Multilateral Investment Guarantee Agency (part of World Bank Group)
MDB	Multilateral Development Bank
NBS	Nature-based solution
NCFF	Irish Sustainable Forest Fund
NCS	Natural climate solution
NGOs	Non-governmental organisations
ODA	Official development assistance
OECD	Organisation for Economic Cooperation and Development
PES	Payment for environmental/ecosystem services

PPP	Private-public partnerships
PRI	Principles for Responsible Investment
REDD	Reducing emissions from deforestation and forest degradation
REDD+	Reducing emissions from deforestation and forest degradation, conservation of existing forest carbon stocks, biodiversity, sustainable forest management and enhancement of forest carbon stocks
RI	Responsible Investing
SASB	Sustainability Accounting Standards Board
SBTi	Science-based Targets Initiative
SDGs	Sustainable Development Goals
SI	Sustainable Investing
SRI	Socially Responsible Investing
TFCDD	Task Force on Climate-related Financial Disclosures
TNC	The Nature Conservancy
TSVCM	Task Force on Scaling Voluntary Carbon Markets
UN	United Nations
UNCTAD	United Nations Conference on Trade and Development
UNDP	United Nations Development Programme
UNEP	United Nations Environment Programme
UNESCAP	United Nations Economic and Social Commission for Asia and the Pacific
UNFCCC	United Nations Framework Convention on Climate Change
UN PRI	United Nations Principles for Responsible Investment
USA	United States of America
USD	United States dollar
VCM	Voluntary carbon market
WBCSD	World Business Council for Sustainable Development
WCC	World Conservation Congress
WCED	World Commission on Environment and Development
WEF	World Economic Forum
WINGS	Worldwide Initiatives for Grantmaker Support
WRI	World Resources Institute
WTO	World Trade Organization
WWF	World Wildlife Fund

About the author

Barbara J. Lausche is an international environmental lawyer, advisor and analyst with more than 30 years in conservation law and policy, nationally and internationally. Since 2010, she has served as Director of the Marine Policy Institute (MPI), at Mote Marine Laboratory, Florida. In 2019, she was appointed Chair of the IUCN-WCPA Marine Connectivity Working Group, comprising some 90 marine professionals worldwide, a position she continues today. She has been an active member of IUCN's World Commission on Environmental Law (WCEL) and World Commission on Protected Areas (WCPA) since the 1980s. Among her recent IUCN publications are the *Guidelines on Protected Areas Legislation* (2011), *Law and Connectivity Conservation, A Concept Paper* (coauthor, 2013), and *Integrated planning: policy and law tools for biodiversity conservation and climate change* (2019). Prior environmental law and policy positions have included senior staff at the World Bank, World Wildlife Fund-US, and numerous legal drafting consultancies in developing countries. She lives with her husband, Jose Antonio Garnham, in Sarasota, FL., USA.

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Glossary

Term	Definition
Additionality	Whether projects genuinely yield emission abatement that would not otherwise occur
Afforestation	The process of establishing and growing forests on bare or cultivated land, which has not been forested in recent history
Agroforestry system	The interaction of agriculture and trees, including the agricultural use of trees. This comprises trees on farms and in agricultural landscapes, farming in forests and along forest margins and tree-crop production, including cocoa, coffee, rubber and oil palm. (World Agroforestry Centre)
Alternative dispute resolution mechanism	Alternative dispute resolution mechanisms include arbitration, mediation and conciliation.
Angel investors	Investors who invest in start-ups or entrepreneurs. Angel investors may provide a one-time investment to help propel the business or provide an ongoing injection of money to support the development of a business through its early stages. Also known as informal investors, angel funders, private investors, seed investors or business angels.
Asset class	An asset class is a grouping of investments that exhibit similar characteristics and are subject to the same laws and regulations. Asset classes are made up of instruments which often behave similarly to one another in the marketplace. Historically, the three main asset classes have been equities (stocks), fixed income (bonds), and cash equivalent or money market instruments. Currently, most investment professionals include real estate, commodities, futures, other financial derivatives, and even cryptocurrencies to the asset class mix. (Investopedia.com)
Asset manager	For the purposes of this report, an asset manager is a financial services organisation responsible for making decisions (discretionary mandate) on investments on behalf of its clients or members. Asset managers include fund managers, wealth managers and banks, for example.
Baseline scenario	A scenario that reasonably represents the anthropogenic emissions by sources of greenhouse gases (GHG) that would occur in the absence of the proposed project activity.
Biodiversity	The variability among living organisms from all sources including, inter alia, terrestrial, marine and other aquatic ecosystems and the ecological complexes of which they are a part; this includes diversity within species, between species, and of ecosystems. (CBD, Art. 2)

Biodiversity offset	A quantified environmental benefit that is designed to compensate for any adverse impacts to habitat, environmental functions, or ecosystem services that cannot be avoided, minimised, and/or restored. Offsets can take the form of positive management interventions such as restoration of degraded habitat or preventing continued degradation. Offsets can be implemented by either the party directly responsible for adverse impacts or a third part.
Blended finance	Use of ‘development finance’ (from governments, development finance institutions or other agencies at concessional terms below market rate) to catalyse and mobilise commercial finance towards sustainable projects. Concessional financing can for example be used to mitigate risks for investors (provide first-loss in a fund or guarantee) or support project pipeline development (technical assistance facility).
Blue bond	A fixed income financial instrument which is created for the purpose of raising investment for new and existing projects to preserve and protect the ocean. They are a newer instrument than the green bond, but experts predict growth for these bonds similar to that experienced by green bonds. The World Bank has been involved in issuing blue bonds, as it did at the time with green bonds, including the first blue bond programme in the world, the Seychelles Sovereign Blue Bond.
Bond	A loan that pays interest over a fixed term, or period of time. When the bond matures at the end of the term, the principal, or investment amount, is repaid to the lender, or owner of the bond.
Capital markets	The part of the financial system in which money is channelled into productive investment via equity, debt and other medium to long-term instruments.
Carbon credits	Verifiable quantity of climate mitigation for which the buyer can claim an offset as a result of financing either reduction or avoidance of carbon emissions or the removal or sequestration of CO ₂ in the atmosphere.
Carbon neutral	Target for the company to compensate all emissions produced in a set period, usually evaluated on an annual basis.
Carbon offsets	A method of allowing companies and individuals to compensate for their own carbon emissions through contributing to reduced emissions of carbon dioxide of greenhouse gases elsewhere. This usually involves payment for carbon credits each representing one ton of carbon equivalent.

Climate change adaptation	Adjustment in natural or human systems in response to actual or expected climatic stimuli or their effects, which moderates harm or exploits beneficial opportunities. Adaptation not only covers actions undertaken to reduce the adverse consequences of climate change, but also those harnessing the beneficial opportunities it generates. In terms of corporate activities, adaptation covers company actions to adapt to the direct physical impacts of climate change, but it does not include mitigation measures by companies in response to climate policies. The stronger mitigation actions are and the earlier they are undertaken, the smaller the costs from adaptation are likely to be. Yet even strong and immediate mitigation does not obviate the need to adapt to changing climate conditions triggered by emissions that have already occurred or cannot be stopped immediately (UNFCCC, 2012).
Climate change mitigation	A human intervention to reduce the sources or enhance the sinks of greenhouse gases. Examples include using fossil fuels more efficiently for industrial processes or electricity generation, switching to solar energy or wind power, improving the insulation of buildings, and expanding forests and other “sinks” to remove greater amounts of carbon dioxide from the atmosphere (UNFCCC, 2012).
Clean Development Mechanism (CDM)	A provision of the Kyoto Protocol that allows developed countries (Annex 1) to offset their emissions by funding emissions-reduction projects in developing countries (non-Annex 1)
Integrated marine and coastal area management (IMCAM)	<i>“Integrated marine and coastal area management (IMCAM) is a participatory process for decision making to prevent, control, or mitigate adverse impacts from human activities in the marine and coastal environment, and to contribute to the restoration of degraded coastal areas.”</i> (Secretariat of CBD)
Conservation	The protection of biodiversity, ecosystems and landscapes/seascapes, particularly from the damaging impacts of human activity.
Conservation easements	A restriction placed on a piece of property to protect its associated resources. The easement is either voluntarily donated or sold by the landowner and constitutes a legally binding agreement that limits certain types of uses or prevents development from taking place on the land in perpetuity while the land remains in private hands.
Conservation finance	A mechanism through which a financial investment into an ecosystem is made – directly or indirectly through an intermediary – that aims to conserve the values of the ecosystem for the long term.
Credit rating agencies	Regulated entities whose main role is to assess a country’s or business’s credit worthiness and ability to repay.

Debt financing	Loans from a bank or other financial intermediary that is repaid by the borrower over time, usually with interest. It works similarly to a mortgage or a car loan. The interest margin and potential level of security (also called collateral) required depend on factors such as the type of capital expenditure ('project riskiness'), tenure (length of loan) and the financial strength of the borrower.
Debt-for-nature swap	'Debt for climate and nature swaps' involve the creditor reducing the debt— either by conversion to local currency and/or lowering the interest rate or giving some form of debt write-off. The creditor conditions this action on a commitment from the government to use the money saved to invest in climate resilience, climate emissions mitigation or biodiversity protection initiatives. The funds are channelled through the national budget and distributed to those agencies needing the funds to carry out this new commitment.
Debt management office	A debt management office is an institutional focal point dealing with sovereign (public) debt from the government directly or one of its public enterprises.
Deforestation	Permanent and intentional clearing of forested land by humans, often for agricultural expansion, timber harvesting for fuel or building materials, mining, and human settlement. Huge areas of forest can also become rapidly deforested during natural disasters like wildfires, tornadoes, and cyclones.
Due diligence	The process of carrying out an investigation or appraisal of a project or business by a prospective investor to establish its commercial viability and understand its potential risks. In the context of a conservation project, this often involves conducting a due diligence of environmental and social issues that may pose risks to a project finance transaction.
Ecosystem	A dynamic complex of plant, animal and micro-organism communities and their non-living environment interacting as a functional unit. (CBD, Art. 2)
Ecosystem services	The benefits that people obtain directly or indirectly from ecosystems – the goods and services provided by nature. These can be divided into provisioning services (food, water, wood, raw materials), regulating services (pollination of crops, flood and disease control, water purification, prevention of soil erosion, sequestering carbon dioxide), cultural services (recreational, spiritual and educational services) and supporting services (nutrient cycling, maintenance of genetic diversity).
Ecotourism	Providing tourism services in natural areas that both conserve the environment and improve the well-being of local people.
Endowment	A donation of money or property to a non-profit organisation, which uses the resulting investment income for a specific purpose. An endowment can also refer to the total of a non-profit institution's investable assets, also known as its principal or corpus, which is meant to be used for operations or programmes that are consistent with the wishes of the donor(s). Most endowments are designed to keep the principal amount intact while using the investment income for charitable efforts.

Environmental and Social Governance (ESG)	A set of non-financial indicators or standards for a business that investors or lenders use to evaluate corporate or government behaviour, screen investments and determine their sustainability, impact and investability.
Equity financing	Monetary contribution from investors (shareholders) who are looking to support the company and eventually sell their stake (ideally at a premium). The investors are exposed to more risk than debt providers (ranking 'subordinate' – e.g., lenders get their money first in case a company is liquidated).
Fiduciary duty, fiduciary responsibility	This refers to the highest standard of care that is expected in the relationship between two parties. For example, it obligates an asset manager (fiduciary agent) to act solely in the interest of its client. In most cases, this means maximising financial performance based on a set of pre-defined parameters, and that no profit is made from the relationship unless explicit consent is provided in advance.
Financial intermediary (FI)	A term used by EBRD to refer to a distinct player in finance. It defines the concept as follows: those providers of financial services to develop the financial sectors in their regions and to foster entrepreneurship through bank loans, small and medium-sized enterprises lending programmes, equity investments and support for other financial services (such as insurance and leasing). Financial intermediaries include a variety of financial service providers including, inter alia, private equity funds, banks, leasing companies, insurance companies and pension funds. The nature of intermediated financing means that the FIs will assume delegated responsibility for environmental and social assessment, risk management and monitoring as well as overall portfolio management. (EBRD)
Foreign direct investment (FDI)	A category of cross-border investment in which an investor resident in one economy establishes a lasting interest in and a significant degree of influence over an enterprise resident in another economy. (OECD)
Grant	Non-repayable funds disbursed, often by a government or donor organisation, for a specified purpose to an eligible recipient.
Green bond	A fixed income financial instrument, which is created for the purpose of raising investment for new and existing projects with environmental benefit.
Green infrastructure	Strategically created natural and semi-natural areas, designed and managed to allow nature to deliver a range of valuable ecosystem services (such as clean air and water), in both rural and urban settings.
Guarantees	An agreement whereby a third party agrees to 'step-in' to cover a borrower's financial obligations to repay the lender under certain scenarios. A guarantee could be provided by a third-party to enable a borrower to access a loan - or at the portfolio level (e.g. the European Investment Bank's National Capital Financing Facility is backed by a European Union guarantee).

Habitat degradation and fragmentation	“Degradation” is a general term describing the set of processes by which habitat quality is reduced. Habitat degradation may occur through natural processes (e.g. drought, heat, cold) and through human activities (forestry, agriculture, urbanization) (IPBES). “Fragmentation” is the breaking apart of continuous habitat into distinct pieces. (UNEP-WCMC)
Hedge fund	A limited partnership of investors that uses high risk methods, such as investing with borrowed money, in hopes of realizing large capital gains.
IFC Performance Standards	An international benchmark for identifying and managing environmental and social risk that has been adopted by many organisations as a key component of their environmental and social risk management.
Impact bonds	Investment in bonds with the intention of generating social and/or environmental impact alongside financial return.
Impact investors	Investors that make investments “into companies, organisations, and funds with the intention to generate social and environmental impact alongside a financial return. Impact investments can be made in both emerging and developed markets, and target a range of returns from below market to market rate, depending on investors’ strategic goals.
Institutional investor	Organisations, including endowment funds, banks, pensions, insurance companies, real estate investment funds, mutual funds, hedge funds, and investment advisors, which invest on behalf of their members. Institutional investors pool money to purchase securities and other investment assets and trade them in large enough quantities to qualify for preferential treatment and lower commissions.
Joint venture	A business arrangement undertaken by two or more parties who retain their distinct identities but generally share ownership, risks, and returns and governance. (CPIC)
Land tenure	refers to the rights of people or communities to manage (own and use) the land that they reside on.
Leakage	In the context of climate change, where a project results in an increase in emissions outside the project boundary.
Mutual fund	A company that brings together money from many people and invests it in stocks, bonds or other assets. The combined holdings of stocks, bonds or other assets the fund owns are known as its portfolio. Each investor in the fund owns shares, which represent a part of these holdings.
Mutual fund families	A family of funds (or fund family) includes all the separate funds managed by a single investment company. For instance, all of the mutual funds offered by Vanguard would be part of the same family of funds.

Natural capital	The world's stocks of natural assets, which include geology, soil, air, water and all living things. Humans derive a wide range of services from natural capital, often called ecosystem services, which make human life possible.
Natural regeneration	the process by which woodlands are restocked by trees that develop from seeds that fall and germinate in situ. Seedling establishment of some species has been observed by following the growth and survival of tree species growing after silvicultural operations to promote natural regeneration.
Nature-based solutions to climate adaptation	Using natural (not man-made) techniques to either prevent, mitigate or adapt to the effects of climate change. For example, taking advantage of the carbon-sequestering properties of forests to reduce atmospheric carbon dioxide concentrations, using green roofs to reduce the atmospheric heating effects of buildings or re-planting coastal areas with native plants to act as natural flood defence mechanisms.
Negative screening	The process of finding companies that score poorly on environmental, social and governance (ESG) factors relative to their peers. These companies can then be avoided when constructing a portfolio.
Net zero	Target to become carbon neutral by a certain date in the future (not mutually exclusive with Science-Based Targets initiatives [SBTi]).
No net loss regulations	A "No net loss" policy can be defined as a principle by which countries, agencies, and governments strive to balance unavoidable habitat, environmental and resource losses with replacement of those items on a project-by-project basis so that further reductions to resources may be prevented.
Payments for Ecosystem Services (PES)	A financial tool for ensuring that those who maintain an ecosystem's ability to provide services (e.g. to provide clean water) are compensated for carrying out - or refraining from - certain activities. Payees may be beneficiaries (e.g. a downstream user of clean water), or polluters offsetting their negative environmental impacts elsewhere. PES attempts to address failures in current economic systems where the stewardship of ecosystems is not rewarded, often resulting in their over-use or conversion to more unsustainable land-uses.
Pension funds	Also known as retirement funds: a kind of savings scheme where you (as an employee) invest a small portion of your income/salary into a designated savings plan. The main objective of this plan is to get a steady flow of income after you complete your active years of service.

Private philanthropy	Private philanthropy includes transactions from the private sector having the promotion of the economic development and welfare of developing countries as their main objective, and which originate from foundations' own sources, notably endowment, donations from companies and individuals (including high net worth individuals and crowdfunding), legacies, as well as income from royalties, investments (including government securities), dividends, lotteries and similar.
Pollution runoff	Water runoff from the land that picks up fertilizer, oil, pesticides, dirt, bacteria and other pollutants as it makes its way through storm drains and ditches, untreated, to our streams, rivers, lakes and the ocean. Polluted runoff is one of the greatest threats to clean water.
Public-private partnership	A contractual arrangement between a public agency (federal, state or local) and a private sector entity. Through this agreement, the skills and assets of each sector (public and private) are shared in delivering a service or facility for the use of the general public.
Rate of return	The net gain or loss of an investment over a specified time period, expressed as a percentage of the investment's initial cost. When calculating the rate of return, one is determining the percentage change from the beginning of the period until the end.
Reduced Emissions 'from Deforestation and Forest Degradation (REDD+)	REDD+ projects are project types in areas where existing forests are at risk of land-use change or reduced carbon storage; the projects focus on conserving these forests before they are degraded or deforested, resulting in the avoidance of a business-as-usual scenario that would have produced higher emissions; emissions reductions occur primarily through avoided emissions; the + indicates the enhancement of forest carbon stocks, and under jurisdictional REDD+, there is a requirement to reduce emissions below the baseline.
Reforestation	This process increases the capacity of the land to sequester carbon by replanting forest biomass in areas where forests have been previously harvested.
Resilience	The capacity of an ecosystem to respond to a perturbation or disturbance by resisting damage and recovering quickly.
Responsible investments, Sustainable investments	Responsible (or sustainable) investment is an approach to investing that incorporates non-financial factors into investment decisions. This typically includes integration of Environmental, Social and Governance (ESG) factors, sustainability-themed investing, impact/community investing, and corporate engagement and shareholder action.
Science-based target	Target consistent with the level of decarbonization required to keep global temperature increase within 1.5 to 2° Celsius compared to preindustrial levels; offsets are not allowed for counting toward SBTi targets; however, SBTi recognises the use of offsets for net-zero claims.
Sequestration	The process of removing CO ₂ from the atmosphere either by natural or artificial means.

Social capital	The networks of relationships among people who live and work in a particular society, enabling that society to function effectively.
Sovereign wealth fund	A government-owned investment fund.
Stock exchange	A place where shares of public listed companies are traded. A stock exchange facilitates stockbrokers to trade company stocks and other securities. A stock may be bought or sold only if it is listed on an exchange. Thus, it is the meeting place of the stock buyers and sellers.
Subsidies	OECD defines ‘subsidies’ as current unrequited payments (repayment not necessary) that government units, including non-resident government units, make to enterprises on the basis of the levels of their production activities or the quantities or values of the goods or services which they produce, sell or import.
Sustainability-linked loan	Any types of loan instruments and/or contingent facilities (such as bonding lines, guarantee lines or letters of credit) which incentivise the borrower’s achievement of ambitious, predetermined sustainability performance objectives.
Sustainable and Responsible Investment (SRI)	According to a 2018 SRI report by Eurosif, sustainable and responsible investment (“SRI”) is a long-term oriented investment approach which integrates ESG factors in the research, analysis and selection process of securities within an investment portfolio. It combines fundamental analysis and engagement with an evaluation of ESG factors in order to better capture long term returns for investors, and to benefit society by influencing the behaviour of companies. (Eurosif, 2018, p. 12)
Taskforce on Climate related Financial Disclosure (TCFD)	Taskforce established in 2015 to increase and improve the relevance of climate-related information disclosed voluntarily by corporations, to enable financial market players and the authorities to better understand and manage the risks they represent.
Thematic bonds	Instruments that contribute toward broad ESG-related goals and objectives and are labelled as such. Thematic bonds may include instruments in which the proceeds are earmarked for specific purposes (e.g. green, social, or sustainable bonds), as well as those for which the financial and/or structural characteristics vary depending on whether the issuer achieves predefined sustainability or ESG objectives (sustainability-linked bonds).
Trust fund	An estate planning tool that establishes a legal entity to hold property or assets a person or organisation. Trust funds can hold a variety of assets, such as money, real property, stocks and bonds, a business, or a combination of many different types of properties or assets.

UN-REDD+	United Nations collaborative programme on ‘Reducing Emissions from Deforestation and Forest Degradation’; includes the role of conservation, sustainable management of forests and enhancement of forest carbon stocks in developing countries. First negotiated under the United Nations Framework Convention on Climate Change (UNFCCC) in 2005, with the objective of mitigating climate change through reducing net emissions of greenhouse gases through enhanced forest management in developing countries.
Wealth management	Wealth management is an investment advisory service that combines other financial services to address the needs of affluent clients. To meet the complex needs of a client, a broad range of services—such as investment advice, estate planning, accounting, retirement, and tax services—may be provided.
Venture capital	Financing that investors provide to small businesses that are believed to have long-term growth potential.

Sources: Unless otherwise indicated, definitions are drawn mainly especially from EIB, 2019; Stephenson et al., 2018; Clarmondial, 2017; and TCFD, 2020.

Introduction

“It’s good business to invest in nature conservation”

(World Economic Forum, 2020)

A Purpose and audience

“Nature loss threatens the global economy”. This was a key message in a new publication “State of Finance for Nature” produced by UNEP, the World Economic Forum (WEF)¹ and other economic partners (UNEP et al., 2021a). That report assessed how much public and private investment is being directed to nature-based solutions (NbS). Among its findings, USD 133 billion/year currently flows into NbS (using 2020 as the base year), with public funds making up 86 % or USD 115 billion/year, and over a third of this being invested into protection of biodiversity and landscapes (Id., p. 6). Looking to the future, the report concluded with the rather shocking finding that investment in NbS will need to at least triple in real terms by 2030 and increase four-fold by 2050 if the world is to meet its climate change, biodiversity, and land degradation targets (Id.). That would bring the cumulative total investment up to USD 8.1 trillion and a future annual investment rate of USD 536 billion (Id.).

In the report’s Foreword, Inger Andersen, Executive Director of UNEP, and Klaus Schwab, Founder and Executive Chairman of the World Economic Forum were clear and unequivocal about the implications:

... [T]his report found that private finance in nature-based solutions must be scaled up significantly [and] Governments must create the enabling environment that allows this to happen.

This project is in response to that call, particularly the need to facilitate large-scale investment in conservation. Funding gaps are only part of the problem. Without the proper laws, policies, institutions, operational capabilities, and community support in place for a functioning and accountable financial system, investment flows may not be managed to fully meet the identified goals, thus, will not be as effective as possible in close the funding gap. Constraints also may go beyond laws and regulations, to management and technical capacity, mechanisms for financial monitoring and reporting, and ability to make performance progress based on agreed-upon indicators.

The project’s goal is two-fold. The first is to help developing country governments become more knowledgeable about opportunities for large-scale foreign conservation investing by private and international investors (corporations, individuals), and key considerations for their involvement. The second is to provide guidance on legal actions, if not already in place, that should be considered by government policy makers and public finance/dept management agencies, among others, to ensure a supportive enabling environment for large-scale foreign investment. This may include clearly defining what constitutes a ‘foreign investment’ in conservation; rights and duties of such foreign investors as well as investees, policies for cooperation among all relevant State bodies, identification

¹ The World Economic Forum is an international organisation founded in Switzerland as an NGO in 1971 with the aim to build public-private cooperation in the world. The Forum meets in Davos annually and engages the foremost political, business, cultural and other leaders of society to shape global, regional and industry agendas.

of the government agency responsible for promoting and overseeing foreign investment, and ensure good governance practice including transparency and openness of all parties in large-scale private investment initiatives in conservation that will complement domestic conservation funding.

Common features of most foreign large-scale investments in conservation may include a considerable number of different players and many types of financial instruments to consider (including ‘blended finance’). In addition, the conservation programme(s) for which large-scale investments are being sought may involve preparation of complex and inter-related components related to design, management, and implementation, along with allocation of budgets that may need to be agreed upon by government and private investor representatives before agreements are likely to be concluded and investment funds likely to flow. Many government specialists may need to provide key input to the processes specifically because large sums of monies (and potential public debt) are involved. Such public sector specialists may come not only from conservation-related ministries, but also from ministries of economics, finance, foreign affairs, and central banks. Other entities which may choose to participate or monitor the negotiating and implementing process include development finance agencies, private donors, commercial banks, NGOs, local communities, and Indigenous peoples at national and local levels.

As reflected in the above-mentioned UNEP/World Economic Forum report, there is growing acknowledgement that there is an urgent need to increase the flow of conservation funds to developing countries. Priorities for use of these funds include measures to reverse biodiversity loss, restore and increase protected area coverage, effectively address climate change adaptation, resilience, and carbon sequestration, and achieve the 2030 United Nation’s Sustainable Development Goals (SDGs) and CBD target for expanding protected coverage of land and marine territory to 30 % of the entire space.

Innovative conservation investing has already begun, some for the first time and on a pilot basis. For example, since 2020 Seychelles has had a blue bonds project of USD 15 million to clean its coastline and create more MPAs, among other things (discussed more below). The World Bank reports that Mexico, in 2020, issued a sustainable development bond of approximately USD 890 million as the world’s first sovereign (government) bond to fund social programmes (World Bank, 2000a, p. 55). In Columbia several ministries are working together (including Planning, Environment, and Finance) to develop a national green taxonomy to underpin the issuance of public and private sector green bonds and to promote green lending (World Bank, 2000a, p. 58).

A related new development is the creation of special investment funds for the environment. For instance, Credit Suisse in partnership with Rockefeller Asset Management launched the Ocean Engagement Fund in September 2020. This targeted fund raised USD 212 million in the first month. The fund specifically addresses investment needs under SDG 14 (Conserve and sustainably use the oceans, seas, and marine resources for sustainable development), one of the SDGs attracting the least amount of private capital. That special fund aims to proactively engage with portfolio companies to steer them away from practices that harm the ocean, and encourage projects that mitigate the effects of climate change and lessen biodiversity loss by targeting three key themes: ocean conservation, pollution prevention and carbon transition (Tobin-de la Puente, J. & Mitchell, A.W. (eds.), 2021, p. 79). Another example comes from the investment firm, Althelia Ecosphere, which created the Althelia Climate Fund (raising some EUR 100 million from several investors). As part of that initiative, a business that helps companies create and implement nature-based solutions particularly related to climate change. Ecosphere+ (now managed by Mirova Natural Capital) has brought to the market one of the largest portfolios of forest conservation and forest carbon projects

in the world, generating verified carbon credits and measurable sustainable development impacts, with projects in Africa, Latin America, and Asia (see <https://www.ecosphere.plus/>).

In these examples and many others, some of which are elaborated below, a strong motivation was the investors' expectations that their investments would be sustainable. Sustainability concerns have noticeably heightened since 2020 when the global-COVID-19 pandemic put most economies and societies around the world at added risk even as nature degradation and climate change were independently starting slowly to raise similar concerns. These unanticipated incidents, coupled with increasing natural disasters, some linked to climate change, forced migrations, human conflict, and significant disparities between the rich and poor have created a variety of uncertainties about future economic growth using traditional market short-term gains and stimulating interest in more long-term sustainable investing.

As will be elaborated below, key financial leaders and organisations in the global investment community are now repeatedly calling for attention to sustainability. As this message gains momentum and is adopted by more financial, business, banking, and conservation leaders, terms such as sustainable investing, environmental/social/governance (ESG) investing, socially responsible investing (SRI), green finance, ethical investing, climate finance, and impact investing are beginning to be used, sometimes interchangeably although their approaches are different. Some companies have publicly pledged to make climate financing their priority, both to help mitigate climate change and build resilience for its impacts.

For purposes of this paper, variations of such terms may be used depending on the context and source being referenced, with the understanding that 'green finance' or 'green investment' is the broadest category. It includes 'conservation finance' as one element as well as 'ESG' and 'climate finance'. Because the investment community, financial fund managers, and trade organisations providing oversight and guidance seem to be moving increasingly toward a focus on ESG-oriented investment (including conservation and climate), this paper will follow that trend and make frequent use of the ESG label. In addition, because such terms may not be familiar to many working in biodiversity and protected areas conservation, several of the key finance-related terms used here have been singled out for definition in the next subsection so the reader may have a smoother read in subsequent sections. In addition, there is a full glossary also at the end of this paper.

Finally, it is worth noting some context to this project. As part of IUCN's overall strategic work in protected areas and biodiversity law and policy, this project is the latest in a series of recent outputs. The first was the *IUCN Guidelines for Protected Area Legislation* (2011) (a significant update of original guidelines from 1980). The next product, serving as a complement to the guidelines, focussed on connectivity conservation and the law, resulting in an IUCN concept paper, *Legal Aspects of Connectivity Conservation* (2013) which incorporated biodiversity and climate change. A third project in this series turned to planning, producing the IUCN publication *Integrated Planning: Policy and Law Tools for Biodiversity Conservation and Climate Change* (2019).

Generally, as we focus here on opportunities for greater private conservation investment, it should be stressed that conventional approaches to sustainable financing must continue as a core responsibility of national governments. A 2006 report by IUCN-WCPA confirmed the need for conventional funding approaches to continue, while recognising that much more was needed for sustainable conservation financing (see Everton et al., 2006). At that time, the notion of outright direct investment of large sums by external private investors over extended terms had not yet become sufficiently advanced to developed to generate commonly-accepted definitions and basic standards for performance.

However, to energise this area about the same time the United Nations launched six Principles for Responsible Investing (PRI) at the New York Stock Exchange, an event that drew 100 private investors as signatories. The movement grew quickly and today, PRI has a network of over 4000 investor signatories (UNPRI is discussed at length below). As elaborated in Part 5 of this paper, this UN initiative stimulated several other efforts by organisations and trade associations, as well as multilateral financial institutions, to develop standards of performance to ensure that environmental and social considerations are incorporated in green investment project and programme design.

The primary audiences envisioned for this paper include developing country government policymakers and key practitioners. Among these are ministries in economics, finance, and foreign affairs in light of their responsibilities for advising and overseeing foreign investment, national budgets and national debt, as well ministries with conservation responsibilities, conservation practitioners knowledgeable about specific conservation programmes needing investment, and NGOs supporting conservation. Others concerned about conservation finance also may find this paper interesting including professors, researchers, students, and concerned NGOs or individuals.

Specifically, this paper envisions that it will be relevant for emerging and developing economies and also that it will be especially important for least developing countries. Many emerging and developing economies will likely have in place basic market trading mechanisms and investment tools along with basic institutional expertise to regulate such markets, manage debt and oversee foreign, large-scale private investments. In contrast, many least developed countries may have a less developed public finance investment infrastructure for large-scale foreign investment, may not have a functioning domestic financial trading market system, and may need additional technical assistance to strengthen associated their investment policy, law, and institutional frameworks.

Again, considering the anticipated audiences, the paper's content, style, and organisation have aimed to provide a document for practical application rather than of theory, in an easy-to-read format, organised to help the reader appreciate the different interests and concerns of investors as distinct from the needs and requirements of interested developing country governments. In addition, there has been a rigorous effort to include definitions of main financial terms used drawing from recognised sources, noting that in this emerging field sometimes such terms are used in diverse ways, depending on the context. For the convenience of the reader, key terms are defined in the next section of this Introduction and a more comprehensive list of terms can be found in the glossary at the end of the paper.

Selection of main references and other sources of information was guided by three main considerations: 1) to provide the most current reference materials available in this emerging field of finance in order to provide the latest developments in country cases, standard-setting, performance indicators, and lessons being learned; 2) to select reference materials and other sources of information (among the growing body of literature) that were produced mainly by public international and regional institutions or international conservation organisations who are generally well known and in good standing globally, among investors, and with developing countries, and 3) wherever possible to give preference to reference materials and other sources of information that were already in the public domain and also were easily accessible online without a fee.

A final point is worth clarification. The aim of this paper has been to present the current and emerging state of large-scale private, foreign conservation investing and ways for developing country governments to take steps to tap into that now movement. It is not meant to be an historical narrative of protected area finance over past many decades. Such an historical focus might be appropriate

for a textbook but would not have sufficiently served this project's purpose. The history of protected areas financing can be found in numerous other, easily available publications, some of which are noted in footnotes of the references used for this paper.

B Key finance terms

Biodiversity finance: Finance that contributes – or intends to contribute to – activities that conserve, restore, or avoid a negative footprint on biodiversity and ecosystem services (World Bank, 2020b).

Bonds: A loan that pays interest over a fixed period of time. When the – bond matures at the end of the term, the principal, or investment amount, is repaid to the lender, or owner of the bond. A 'green bond' relates to financial support for conservation activities on land, and 'blue bond' for conservation activities in coastal and marine areas.

Capital: Wealth in the form of money or other assets owned by a person or organisation or available or contributed for a particular purpose such as starting a company or investing. There are four kinds of 'capital': human, manufactured, wealth, and natural capital.

Capital markets: Markets where savings and investments are channelled between suppliers – people or institutions with capital to lend or invest – and those in need. Suppliers typically include banks and investors while those who seek capital are businesses, governments, and individuals. An example of a capital market is the New York Stock Exchange.

Climate finance: The local, national or transnational financing – drawn from public, private, and alternative sources of financing – that seeks to support mitigation and adaptation actions that will address climate change (World Bank 2020b, from UNFCCC).

Conservation finance: Mechanisms and strategies that generate, manage, and deploy financial resources and align incentives to achieve nature conservation outcomes (CFA).

Conservation investments: Investments intended to return principal or generate profit while also resulting in a positive impact on natural resources and ecosystems. Investors must be motivated by conservation impacts. The impacts cannot be the by-products of financially-focused investments (Conservation Finance Network).

Corporate ESG: Environmental, social, and governance (ESG) criteria used as a set of standards for a company's operations for socially conscious investors to screen potential investments. Environmental criteria include how a company performs as a steward of nature. Social criteria relate to how it manages relationships with employees, suppliers, customers, and the communities where it operates. Governance deals with a company's leadership, executive pay, audits, internal controls, non-discrimination, equity, and shareholder rights.

Equity: Typically referred to as shareholders' equity (or owners' equity for privately held companies), represents the amount of money that would be returned to a company's shareholders if all of the assets were liquidated and all of the company's debt was paid off in the case of liquidation. In the case of acquisition, it is the value of company assets minus any liabilities owed by the company not transferred with the sale.

ESG: Environmental, social and governance – describes areas that characterize a sustainable, responsible or ethical investment. ESG focuses on these three specific foundational pillars that are crucial to today's corporate management and investors alike. Environmental issues can include pollution, climate risk, exposure to extreme weather, carbon management, and use of scarce

resources. Social issues can include product safety, human rights, worker safety, customer data protection, and diversity and inclusion. Governance issues can include factors such as accounting standards compliance, succession planning, anti-competitive behaviour, and a strong ESG management process. (<https://www.gobyinc.com/esg-sri-sustainable-investing-differences/>).

ESG investing: Investors are increasingly applying these environmental, social, and governance (non-financial factors) as part of their analysis process to identify material risks and growth opportunities. ESG metrics are not commonly part of mandatory financial reporting, though companies are increasingly making disclosures in their annual report or in a standalone sustainability report. Numerous institutions, such as the Sustainability Accounting Standards Board (SASB), the Global Reporting Initiative (GRI), and the Task Force on Climate-related Financial Disclosures (TCFD) are working to form standards and define materiality to facilitate incorporation of these factors into the investment process (CFA Institute).

Financial sector: The set of institutions, instruments, and the regulatory framework that permit transactions to be made by incurring and settling debts; that is, by extending credit (World Bank 2020b, drawn from OECD).

Green finance (GF): A broad category under which conservation finance is one element as well as ESG and climate finance. Green finance comprises the financing of public and private green investments in the following areas:

- Environmental goods and services (such as water management or protection of biodiversity and landscapes);
- Prevention, minimisation, and compensation of damages to the environment and to the climate (such as energy efficiency or dams);
- The financing of public policies (including operational costs) that encourage the implementation of environmental and environmental-damage mitigation or adaptation projects and initiatives (for example feed-in-tariffs for renewable energies); and
- Components of the financial system that deal specifically with green investments, such as the Green Climate Fund or financial instruments for green investments (e.g. green bonds and structured green funds), including their specific legal, economic and institutional framework conditions (Meyers, 2000, p. 38).

Impact investing: Investors that make investments into companies, organisations, and funds with the intention to generate social and environmental impact (net benefit) alongside a financial return. Impact investments can be made in both emerging and developed markets and target a range of returns from below market to market rate, depending on investors' strategic goals.

Institutional investor: An institutional investor is a company or organisation that invests money on behalf of other people. Mutual funds, pensions, and insurance companies are examples. Institutional investors often buy and sell substantial blocks of stocks, bonds, or other securities and, for that reason, are more sophisticated than the average retail investor and, in some instances, are subject to less restrictive regulations (Investopedia).

Retail investor: Also known as an individual investor, is a non-professional investor who buys and sells securities or funds that contain a basket of securities such as mutual funds and exchange traded funds (ETFs) (Investopedia).

Securities: Fungible and tradable financial instruments used to raise capital in public and private markets. There are primarily three types of securities: equity – which provides ownership rights to holders; debt – essentially loans repaid with periodic payments; and hybrids – which combine aspects of debt and equity.

Socially responsible investing: Investing that encourages corporate practices that are morally grounded and promote environmental stewardship, consumer protection, human rights, and racial and gender diversity (<https://www.gobyinc.com/esg-sri-sustainable-investing-differences/>).

Sovereign ESG: Sovereign ESG is distinct from corporate ESG on both data and methodology levels. Because sovereign ESG is an under researched area of ESG investing, the current vacuum has been filled with extrapolations from the more developed area of corporate ESG (World Bank).

Stock: A stock (also known as equity) is a security that represents the ownership of a fraction of a corporation. This entitles the owner of the stock to a proportion of the corporation's assets and profits equal to how much stock they own. Units of stock are called “shares” (Investopedia).

Sustainable investing (SI): An investment discipline that considers environmental, social and corporate governance (ESG) criteria to generate long-term competitive financial returns and positive societal impact (USSIF). Sustainable investing directs capital to companies fighting climate risk and environmental destruction, while promoting corporate responsibility. Sustainable investors, ranging from global institutions to individuals, utilise a combination of traditional investment approaches together with ESG insights to pursue their investment goals. Sustainable investing seeks to find companies that are positioned to grow while also doing good and pioneering better business practices. This approach blends a focus on return with a desire to do good (<https://www.gobyinc.com/esg-sri-sustainable-investing-differences/>).

C Organisation

This paper is organised into five main parts. Part 1 gives data and statistics on the global funding gap calculated by specialists, mainly from international organisations. The subject is divided into four topics: the funding gap for biodiversity, climate change action, achieving the UN sustainable development goals, and a final short section on estimates of costs if world leaders and citizens do nothing to reduce the funding gap.

Part 2 focuses on the large-scale investor and how corporations, financial leaders and shareholders are raising concerns about sustainability of their investments. There is new awareness moving through the financial industry, particularly in the past few years since about 2018, about the need to begin to take a more long-term view about investments and how nature and economies are intertwined. The phrase ‘Environment, Social, and Governance’ (ESG) investing has taken on special relevance as a label for investors seeking sustainability, conservation, and social equity.

Part 3 moves to basic considerations for green investing, this time on the part of the investee, mainly a developing country or its public enterprises and corporations. It highlights key areas for attention, including having a designated debt (or investment) management office that serves as a two-way focal point for negotiating a modern investment law and other enabling conditions that will attract the private finance community and other partners to support major projects with significant investment sums over the long-term.

This Part continues with the investee as key player (whether a government agency or one of its public enterprises). The focus now is on specific legal and policy elements at the national/subnational level important to have in place when seeking large-scale private investment in conservation or ESG. These include a modern investment legal framework supporting green investment and sustainability, addressing subsidies (eliminating those that have negative impacts on nature, strengthening those with positive impacts), and practicing one's fiduciary duty and due diligence.

Part 4 introduces some of the innovative financial tools being developed by financial institutions (both public and private) and tested with projects on the ground. Some of these tools have gained notoriety because they are being designed and implemented for the first time specifically for green investing. This is the case, for example, with green bonds and blue bonds issued by governments in partnership with others.

Finally, Part 5 gives an overview of the parallel work underway by oversight organisations such as the European Union, OECD, and the UNPRI (Principles for Responsible Investment) to begin to formalise standards, definitions, and principles that can be applied to ESG investment projects and other green investments, particularly green/blue bonds. This is an emerging area that many analysts have urged need development of basic standards and common definitions to provide a common framework for such investment operations and comparability across investments, including with terminology and also for reporting on performance and the metrics used.

A short conclusion of key messages and roles of different players rounds out the text, followed by references, a glossary, and two annexes. The first annex contains a short list of additional country examples of conservation investments supporting protected areas and biodiversity (the annex with examples from developed countries; developing country cases are included throughout the text of the paper). The second annex is a table containing a sampling of major financial and development institutions (mostly international) supporting ESG and sustainable investing through their formal statements, reports, and investment actions.

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A short conclusion of key messages and roles of different players rounds out the text, followed by references, a glossary, and two annexes. First, there is a short list of additional country examples, this time from developed countries, undertaking conservation investment to support their protected areas and biodiversity (developing country cases are in the text of the paper); second, a table containing a sampling of major financial and development institutions (mostly international) supporting ESG and sustainable investing through their formal statements, reports, and investment actions.

Part 1 The global funding gap

*“The World is in the midst of one of the most dramatic extinction episodes in history.
The signs of biodiversity loss are everywhere.”*

(Henry M. Paulson Jr., Chairman, Paulson Institute; former U.S. Secretary of Treasury 2006-2009)
(Foreword in *Financing Nature: Closing the Global Biodiversity Financing Gap*, 2020.
Paulson Institute/Nature Conservancy; Cornell Atkinson Center for Sustainability).

This section reviews some of the latest calculations and estimates on the funding gap that exists globally between what is being done and what needs to be done to adequately address biodiversity, climate change, and the Sustainable Development Goals. It also reviews some of the current data confirming continuing biodiversity loss which makes closing the funding gap even more urgent.

1.1 Biodiversity

Among the most recent estimates of the biodiversity funding gap comes from the 2021 UNEP/ WEF *State of Finance for Nature* report noted in the Introduction above. Most such estimates carry uncertainties because countries and organisations do not always track and report figures using the same classification or method (UNEP et al., 2021a p. 18). This raises even more challenges if one wanted to estimate funding flows and gaps at the country level because some of the data sets may not be explicitly labelled for conservation-oriented activities, or may not exist for some desired categories, for example, nature-based solutions which is a recent category not yet incorporated into national legislation or international instruments. This situation requires that analysts work with midpoints and upper and lower bounds (see Figures 1 and 2 that show how the UNEP study used this technique to illustrate the breakdown of funds from the public and private sectors by different categories of funding activity).

While estimates of the nature funding gap surely continue to be produced as more data are available, two particular publications with financial flow estimates were also studied for this project, in addition to the UNEP report noted above. These were: 1) the 2020 OECD publication *Comprehensive overview of Biodiversity Finance* (OECD, 2020b) and 2) a 2020 Paulson Institute report on *Financing Nature: Closing the Global Biodiversity Financing Gap* (Deutz et al., 2020). Each of these sources undertook significant and credible work to collect estimates of existing financial flows for biodiversity, explaining the methodology and recognising uncertainties.

Among other initiatives, the OECD is delivering analysis and recommendations on targets and indicators for a Post-2020 Global Biodiversity Framework. OECD is a major player in this field, tracking data on global biodiversity funding from public and private sources (OECD, 2020b increasing to USD 6.9 trillion a year to make this investment compatible). Other related OECD work includes developing good practice insights on the design and implementation of policy instruments for biodiversity and tracking economic policy instruments and finance for biodiversity (OECD website: work in support of biodiversity). Much of their analysis was used in the UNEP paper.

A third initiative tracking financial flows for biodiversity and nature comes from the Paulson Institute. In its 2020 report, *Financing Nature: Closing the global biodiversity gap*, analysts calculated that as of 2019, current spending on biodiversity conservation was between USD 124 and 143 billion per year, against a total estimated biodiversity protection need of between USD 722 and 967 billion per year.

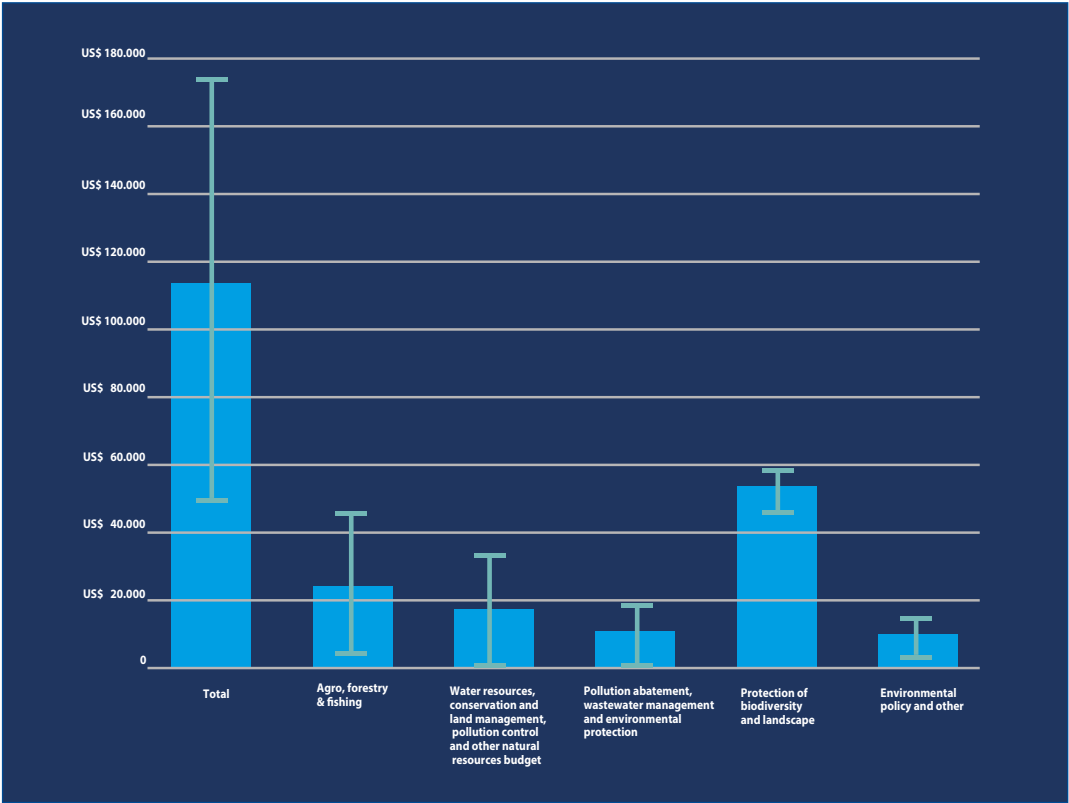


Figure 1: Public-sector finance of NbS in 2019, with upper and lower bounds

Note: The dark blue bars indicate the midpoint estimate and the light blue vertical lines the uncertainty range. Source: Modified after Vivid Economics in UNEP et al. (2021a), p. 19

That calculation leaves a current biodiversity financing gap of between USD 598 and 824 billion per year. See Figure 3 for the breakdown of 2019 global biodiversity financing in USD billions per year. The Paulson Report also broke down the biodiversity funding needs by category: protected areas, sustainable management of productive landscapes and seascapes, agricultural lands – cropland and rangelands, forests, fisheries, critical coastal ecosystems, invasive species management, and biodiversity conservation in urban environments (see Figure 4).

These kinds of institutional estimates are generally filled with uncertainties and the best available information from a range of clearinghouses for economic policy and financial information, including data collected by the OECD, the United Nations Development Programme Biodiversity Finance Initiative (UNDP BIOFIN), Forest Trends’ Ecosystem Marketplace, GEF, and Bloomberg New Energy Finance (NEF). According to the UNDP BIOFIN, although global estimates can be reached from models, “neither the current level of investment in biodiversity nor needs have been systematically articulated on a national scale” (BIOFIN.org, accessed 10-12-2021).

For another perspective on financial needs, in 2014 a high-level panel of the CBD was assigned the task of assessing the financial resources that would be required to implement the CBD Strategic

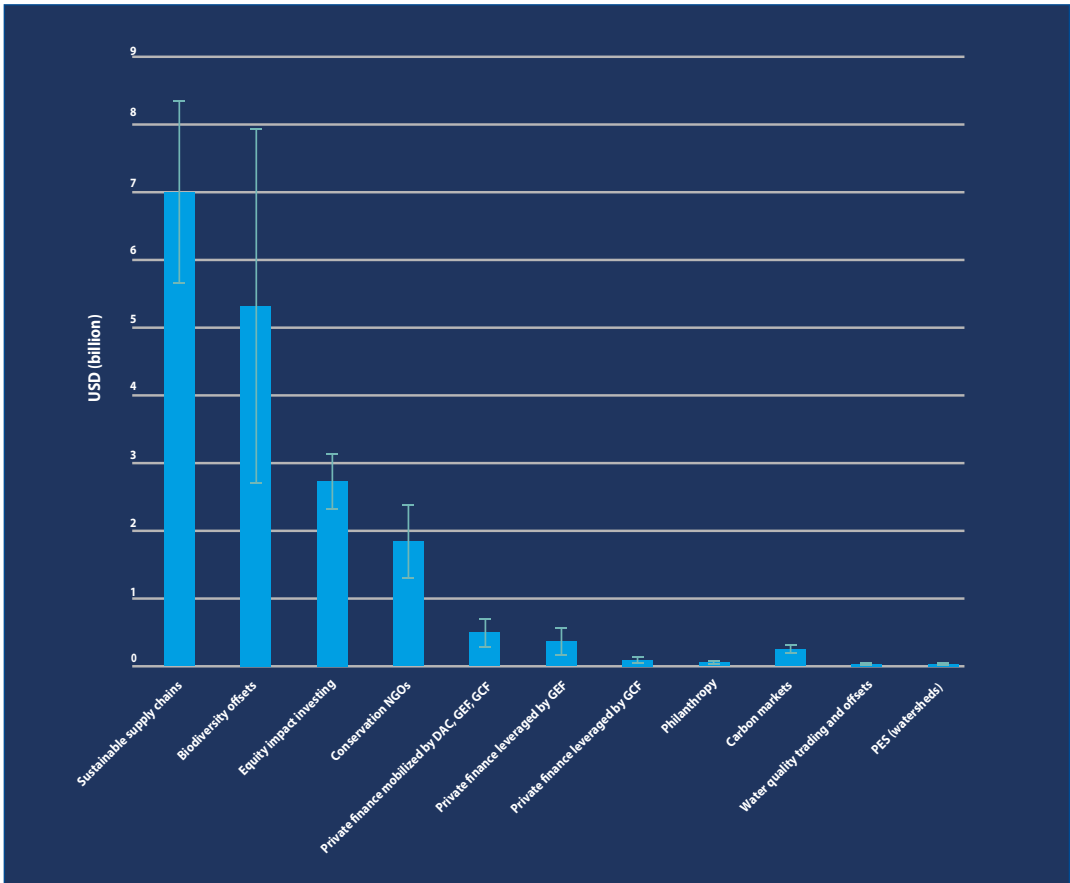


Figure 2: Private sector finance in 2019, with upper and lower bounds, by category

Note: The dark blue bars indicate the midpoint estimate and the light blue vertical lines indicate the range (minimum and maximum estimates). Source: Modified after Vivid Economics in UNEP et al. (2021a), p. 23

Plan for Biodiversity (2011–2020); they concluded with an estimate ranging from USD 150–440 billion per year, recognising that there were uncertainties and more research would be vital to refine the numbers (CBD, 2014, p. 2).

Negative and positive subsidies. The existence of negative subsidies that could be harmful to biodiversity is mentioned in many of the studies on biodiversity funding needs; this has been an issue from early on and continues to be a major challenge to change. The opportunity frequently cited is that much of the projected funding gap of between USD 598 billion and 824 billion per year (taking as an example the Paulson Report estimate, could be reduced by removing subsidies that are potentially harmful to biodiversity. As reflected in Figure 5, such harmful subsidies far outpace global financial flows into biodiversity conservation. They will be discussed in detail in Part 3 which deals with required national actions to reform and support efforts to attract large-scale private institutional investors for biodiversity and climate change projects.



Figure 3: Summary of financial flows into biodiversity conservation (in 2019 USD billions/year), by category

Source: Deutz et al. (2020), p. 45

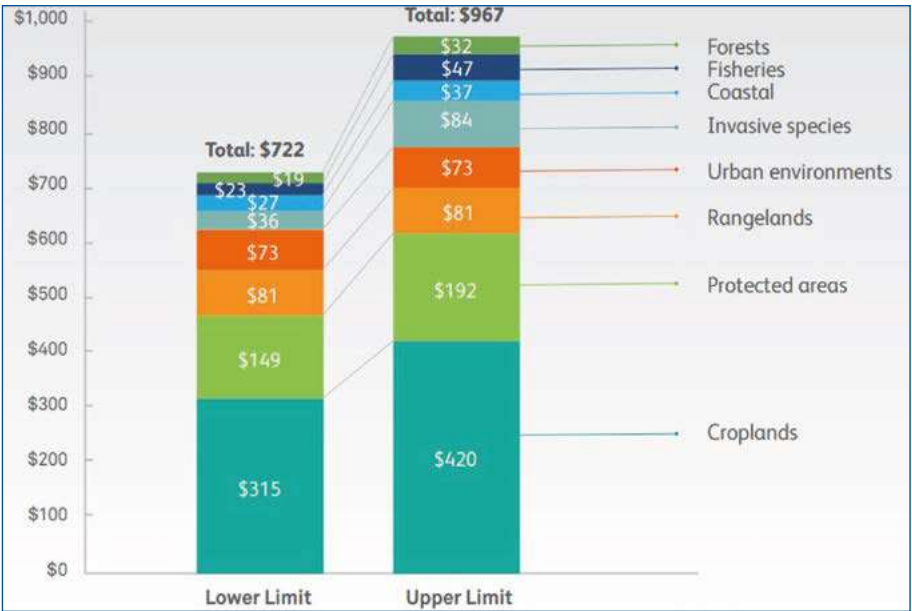


Figure 4: Global biodiversity conservation funding needs (in USD billions/year)

Source: Deutz et al. (2020), p. 51

As many finance and conservation experts have concluded, government funding remains crucial for biodiversity conservation, but this funding along with philanthropic resources alone are not enough to address the global biodiversity conservation financing needs of the future. Thus, private and public-private investments are critical for the future of biodiversity conservation. And there a number of new investment tools to do this as explained in the Paulson Report:

Private sector biodiversity financing solutions are diverse and include green bonds, sustainability linked loans, environmental impact bonds, as well as direct incorporation of sustainability and biodiversity conservation measures into supply chains. In addition, new partnerships in the philanthropic and nongovernmental sector are emerging to link biodiversity conservation and private investment, for example, through the development of public-private (“blended”) impact investing funds to support sustainable forestry, agriculture or fishing practices. (Deutz et al., 2020, p. 44)

Closing the funding gap becomes more urgent each year as scientific surveys continue to show severe biodiversity losses coupled with climate change which is exacerbating losses. As we move through the second decade of the 21st century with more people (a doubling since 1970), more development and global trade, and more consumption there will inevitably be more habitat loss, pollution, species extinctions and ecosystem fragmentation unless all countries, citizens, and all financial sources pledge to take drastic action to reverse the trend.

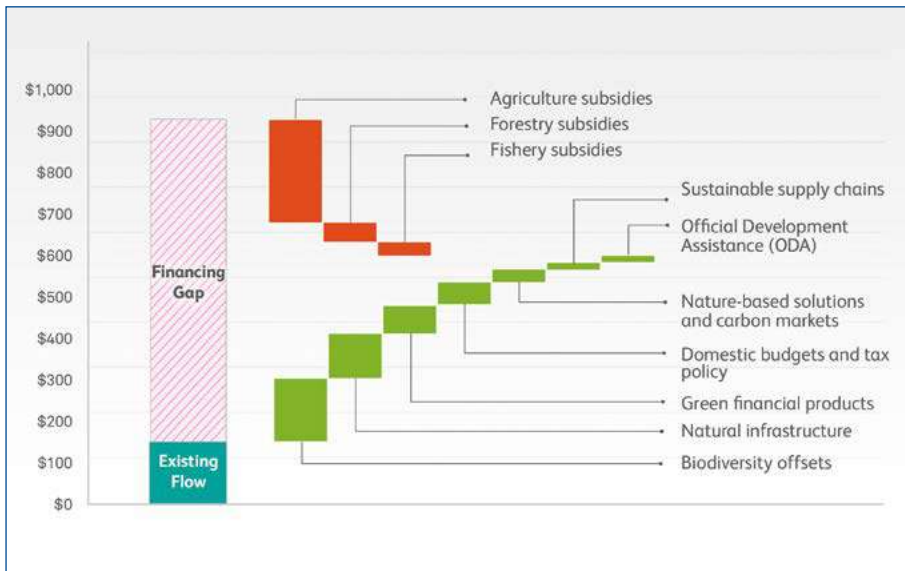


Figure 5: Harmful subsidies for biodiversity conservation (upper estimates, 2019, USD billion/year)

Source: Deutz et al. (2020), p. 46. [The estimates of agricultural, forestry, and fisheries harmful subsidies used correspond to OECD’s “potentially biodiversity harmful” category of production subsidies. This graph excludes the estimated additional USD 395–478 billion in fossil fuel production subsidies. While fossil fuel subsidies are not addressed in this report, the potential indirect impacts of these subsidies on biodiversity resulting from increases in atmospheric and ocean temperatures associated with fossil fuel use may exacerbate biodiversity loss.]

In addition, each year there are new commitments to be met under international law as organisations and their members set forth new goals for conservation, for example, the new proposed CBD targets to put 30 % of the planet's ocean and land in some protective status. Work already has started to estimate the costs and benefits of this decision. A 2020 report, based on the work of over 100 economists/scientists, analysed the global economic implications of a 30% PA target for agriculture, forestry, fisheries, and the PA/nature sector itself. According to that study the annual investment needed for an expanded (30%) PA system would be USD 103–178 billion, including USD 68 billion for the existing system, of which only USD 24.3 is currently spent; the authors also noting that underfunded systems lose revenue, assets, carbon and biodiversity). The analysis also identified a number of significant economic and social benefits from such a plan (see Waldon et al., 2020b)

For many working in conservation, these numbers do not represent a new challenge, only a more massive and urgent one. Alarm about biodiversity loss was raised some four decades ago by the National Forum of Biodiversity sponsored by the National Academy of Sciences and Smithsonian (see *Biodiversity*, 1986). Today, as countries endeavour to set national goals and meet new and emerging international commitments in biodiversity conservation, many are severely constrained by limited resources and technical capacity, and these efforts are no match for the scale of the problem. We are now facing real human and economic impacts from climate change, potentially recurring pandemics as human and nature collide, deforested and degraded forests, grasslands, wetlands, and other important ecosystems, overfishing, unsustainable agriculture, and land and ocean degradation. Developing countries already facing the most difficult human and economic hardships, particularly in light of the pandemic, will feel the environmental impacts more severely; next will be the emerging market countries. But as we will see through various case studies, these countries have begun to build up their legal and institutional capacity to attract some outside private large-scale investment. In all cases, however, global financial leaders project major risks and hardships ahead for the planet.

Helping fuel the growing global concern about biodiversity, WWF's 2020 global Living Planet Index found sharp declines continuing for the planet's biodiversity – an average 68 % decrease in population sizes of mammals, birds, amphibians, reptiles, and fish between 1970 and 2016 (WWF, p. 6). According to the analyses, a 94 % decline in the Living Planet Index for the tropical subregions of the Americas is the largest fall observed in any part of the world. In addition, they uncovered similar trends from the tiniest creatures to the canopy, looking at soil biodiversity, insects and, for the first-time, plants (WWF, p. 9). Moreover, the report found that “seventy-five per cent of the Earth's ice-free land surface has already been significantly altered, most of the oceans are polluted, and more than 85 per cent of the area of wetlands has been lost” (WWF, 2020, p. 6).

The latest IUCN Red List of Endangered and Threatened Species also reported that biodiversity is in decline. Currently, there are more than 134,400 species on the IUCN Red List, with more than 37,400 species threatened with extinction, including 41% of amphibians, 34% of conifers, 33% of reef building corals, 26% of mammals and 14% of birds.

Reconfirming the severity of this problem for the planet, the WWF report includes a section on the ocean, reporting that nowhere in the ocean is entirely unaffected by humans: only 13% of its area is considered to be wilderness, waste and marine litter are found even in deep ocean trenches, and human pressures are increasing over time. The negative effects of these impacts threaten the goods and services – such as food provision, climate regulation, carbon storage and coastal protection – that those marine ecosystems provide to human society, and upon which we all depend. “Fishing for human consumption is considered to have the greatest impact on ocean biodiversity, causing one

in three fish stocks assessed to be considered overfished and leading to the unintended bycatch of species such as sharks, seabirds and turtles.” (WWF, 2020, p. 70).

This continuing decline reflects decades of unsustainable development and vastly under-financed efforts to restore, conserve, and maintain the natural environment and all its elements. Finally, there is high-level agreement that biodiversity loss is not only an environmental issue but a major development and economic one. In addition, it is a security issue as climate change and the loss of natural resources, especially in developing countries, leads to conflict, increased poverty, dislocation, forced migration, and now perhaps more pandemics. Many businesses and policy makers are finally hearing the concerns of scientists, conservation practitioners, and some investors that there needs to be a collective change of course toward a more sustainable way of life for today and the future, and a major effort to get large institutional investors to finance nature projects and build portfolios and relationships with countries and businesses supporting ESG investing.

1.2 Climate change

Given the linkages between climate change and biodiversity (protected areas, wildlife, ecosystems, genetic resources), it is necessary to mention the significant funding gap currently estimated for climate change action. This funding gap is tied to the latest international targets set by the 2015 Paris Agreement for limiting global warming. The Paris Agreement is a legally binding international treaty on climate change. It was adopted by 196 Parties at COP 21 in Paris on 12 December 2015 and entered into force on 4 November 2016. Its goal is to limit global warming to well below 2° Celsius, preferably to 1.5° Celsius, compared to pre-industrial levels. Experts are clear that going beyond 1.5° Celsius could be devastating for the planet and all life as we know it. The Paris Agreement requires each Party to prepare, communicate and maintain successive nationally determined contributions (NDCs) that it intends to achieve to meet these goals (UNFCCC, 2015, Article 4, paragraph 2).

Climate change will add further disruption to the best efforts at land and marine management and biodiversity conservation. In the marine world, as noted in the WWF report, climate change may alter where large ocean fauna (like whales) feed, potentially bringing them into conflict with hazards like shipping (a phenomenon already happening); cause range shifts that can move fish stocks across national boundaries and outpace regulations and governance; affect nutrient cycles and ecosystem productivity; and increase the risk of species invasions (WWF, 2020, p. 71).

There is considerable literature emphasising the linkage between climate change and biodiversity and the need to address them together. For instance, the planet’s ability to retain important ecosystem services such as pollination through climate change adaptation and mitigation will depend on our ability to protect biodiversity. Likewise, as climate change accelerates biodiversity loss, our ability to protect biodiversity will also depend on how quickly and decisively the world can act on climate.

The good news is that reducing the rate of warming also reduces the effects on species. The Xerces Society, an international non-profit organisation founded in 1971 and dedicated to science-based conservation of the natural world and endangered habitats, projects if warming is kept below 2° Celsius (the goal of the Paris Agreement), the onset of these disruptions can be delayed by 60 years, giving each species more time to adapt to changing conditions (xerces.org/about-xerces).

The financial and economic challenges for climate change action have two main dimensions: 1) the cost to closing the funding gap to meet the goal of the Paris Agreement (global warming below 2° Celsius, and preferably to 1.5° Celsius by 2030 compared to pre-industrial levels) and

2) the economic consequences for world economies if climate change continues as business as usual and Paris goals are not met. Figure 6 reviews causes and effects of climate change as it is affecting the planet and all life on Earth.

Within that context, the next question is what is the estimated funding for climate change presently and how much more is needed (the gap) to meet the Paris goals. Estimates vary. The Global Green Growth Institute (GGGI), a treaty-based, international, inter-governmental organisation established in 2012 at the Rio+20 United Nations Conference on Sustainable Development, began working on this question shortly after the Agreement was concluded in 2015. Countries pledged to support least developed countries (LDCs) and emerging economies in their efforts to mitigate and adapt to the impacts of climate change while still pursuing economic development, in other words, pursuing 'green growth'. In addition, the 197 countries participating in Paris submitted their 'Intended Nationally Determined Contributions' (INDCs) to mitigate and adapt to climate change.

In 2016, GGGI published a report: *Mind the Gap—Bridging the Climate Financing Gap with Innovative Financial Mechanisms*, which contained a number of funding calculations and projections. According to that report, wealthy industrialized nations pledged to support LDCs and emerging economies in mitigating and adapting to climate change, committing, in 2009, USD 100 billion per year through 2020 (GGGI, 2016, p. 2). This commitment was renewed at the 2021 G7 meeting:

We reaffirm our commitment to the collective developed country climate finance goal to jointly mobilise USD 100 billion annually by 2020 through to 2025 from a wide variety of sources, and welcome the commitments already made by some of the G7 to increase climate finance and look forward to new commitments from others well ahead of COP26 in Glasgow (G7 Communiqué, 2021, p. 3).

There is a significant gap between current funding and what is required to have a serious impact on climate change and achieve sustainable development goals. The GGGI report estimated that the climate finance gap is USD 2.5–4.8 trillion over the next 15 years (GGGI, 2016, p. 4). Phrased another way, bridging this gap would require an additional USD 166–322 billion per year based on current investment estimates. The ranges reflect the many variables involved, including macroeconomic factors such as economic and population rates and scientific uncertainties such as rates of technology adoption and real-time rates of climate change, tipping points, etc.). The report acknowledged that the majority of future climate finance must come from the private sector, and mainly through innovative financial mechanisms (defined as blended financial instruments; reduced specific investment risks; and leveraging private capital) (GGGI, 2016, Ch. 3 & 4).

Another initiative to estimate financing requirements for addressing climate change came out at the end of 2020 from the Boston Consulting Group Center for Climate & Sustainability partnering with the Global Financial Markets Association. Their estimate was that approximately USD 100–150 trillion+ cumulative investment will be needed globally through 2050 to achieve a 1.5° Celsius target across the many sectors involved (BCG/GFMA, 2020, p. 40). On average, this amounts to an annual investment of USD 3–5 trillion+. To get to this estimate, more than 100 market participants were interviewed worldwide.

The Energy Transition Commission, a global coalition of energy leaders committed to achieving net-zero emissions by mid-century, has estimated that USD 1.5–1.8 trillion investment per annum will be required through 2050 to do this. In 2018, according to the Climate Policy Initiative (CPI), global climate finance flow reached USD 546 billion, far short of the Commission's estimated need. The CPI,

a global policy/finance organisation advising governments, businesses and financial institutions on economic growth while addressing climate change, has projected that:

Limiting global temperature rise to below 1.5° Celsius while achieving sustainable development will require trillions in new investments, and a deliberate shift toward low-carbon, climate-resilient economic models (CPI: <https://www.climatepolicyinitiative.org/the-programs/climate-finance/>)

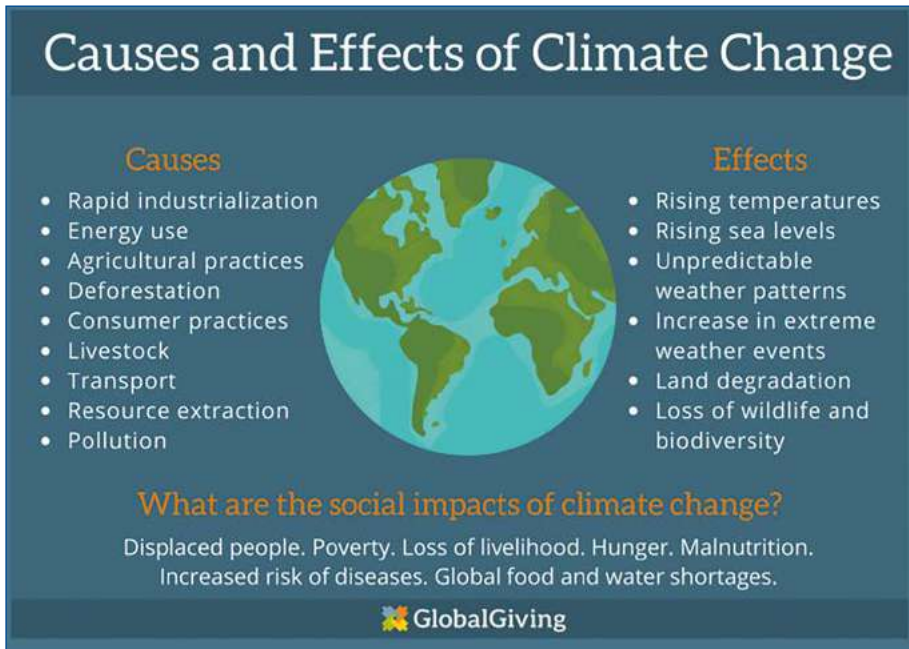


Figure 6: Causes of climate change ignite social, economic, environment and health effects

Source: <https://www.globalgiving.org/learn/cost-to-end-climate-change/>

Looking only at infrastructure investment, the OECD estimates that around USD 6.3 trillion of infrastructure investment will be needed each year to 2030 to meet development goals, increasing to USD 6.9 trillion a year to make this investment compatible with the goals of the Paris Agreement (OECD, 2017c, p. 15).

Finally, the COVID-19 pandemic has had a massive impact on economies and social systems, particularly of developing countries. Analyses indicate that focus on emergency healthcare and economic relief left fewer public resources available for investment in climate adaptation and building climate resilience and in that context especially these countries now face an increasingly steep adaptation funding challenge (OECD, 2020c).

Again, such estimates will only be possible to reach with private-public partnerships (PPP), significant private institutional investments, and blended finance with all forms of funding available. Countries will need to be ready for preparing national law and policy frameworks in finance and conservation

to enable major investment operations and well-designed projects that can show results, backed up by guarantees and multi-partners to minimise risk. (These issues are explored at some length in sections below.)

Echoing the concerns of global financial leaders, the World Economic Forum in its 2021 Global Risk report identified the following main global environment risks, with climate change being second on the list and recognised as impacting all others, especially biodiversity, in devastating ways (Table 1):

Table 1: Most serious global risks as of 2021

Global Risk	Description
Biodiversity loss and ecosystem collapse	Irreversible consequences for the environment, humankind, and economic activity, and a permanent destruction of natural capital, as a result of species extinction and/ or reduction
Climate action failure	Failure of governments and businesses to enforce, enact or invest in effective climate-change adaptation and mitigation measures, preserve ecosystems, protect populations and transition to a carbon-neutral economy
Extreme weather events	Loss of human life, damage to ecosystems, destruction of property and/or financial loss at a global scale as a result of extreme weather events: cold fronts, fires, floods, heat waves, windstorms etc.
Human-made environmental damage	Loss of human life, financial loss and/or damage to ecosystems as a result of human activity and/or failure to co-exist with animal ecosystems: deregulation of protected areas, industrial accidents, oil spills, radioactive contamination, wildlife trade etc.
Major geophysical disasters	Loss of human life, financial loss and/or damage to ecosystems as a result of geophysical disasters: earthquakes, landslides, geomagnetic storms, tsunamis, volcanic activity etc.

Source data: World Economic Forum (WEF) Global Risks Report (2021), Appendix A, p. 87

1.3 Sustainable Development Goals

International organisations are constantly monitoring progress being made on the many global environmental and social goals and sustainability targets set by international conventions and countries in the past two decades, from the CBD Aichi Targets of 2020 to the 17 UN Sustainable Development Goals. Each annual report reveals major shortfalls in most areas and the need for significant amounts of additional funding. This need comes at a time of a dramatic reduction of overall global foreign direct investment (FDI) in 2020, falling by 42 % to an estimated USD 859 billion, from USD 1.5 trillion in 2019 (UNCTAD statement January 2021). This is largely attributed to the COVID-19 crisis and according to UNCTAD, the outlook for 2021 especially for developing countries remains a major concern. This would bring FDI below USD 1 trillion for the first time since 2005. FDI is projected to decrease by a further 5 to 10 % in 2021 and to initiate a recovery in 2022. According to UNCTAD's latest World Investment Report, 2020, a rebound in 2022, with FDI reverting to the pre-pandemic underlying trend, is possible, but the outlook is uncertain (UNCTAD, 2020, p. 12).

Work is underway by the international community of nations to update the CBD targets with new goals for 2030 – in particular, the 2030 CBD Global Biodiversity Framework. Moreover, the 2030 Agenda for Sustainable Development, adopted by all United Nations Member States in 2015, has at

its heart the 17 Sustainable Development Goals (SDGs) and an urgent call for action by all countries – developed and developing – in a global partnership. (see Table 2 listing the 17 SDGs.) Furthermore, the IUCN Nature 2030 Programme highlights alignment with the 17 SDGs, recognising the links between the COVID-19 Pandemic and nature and infectious disease emergence, and calling for more private sector investment to support conservation and generally significantly increased investment in nature conservation including through COVID-19 recovery funding (IUCN, 2021).

Table 2: 17 United Nations Sustainable Development Goals for 2030

Goal	Purpose	Image		
1	End poverty in all its forms everywhere			
2	End hunger, achieve food security and improved nutrition and promote sustainable agriculture			
3	Ensure healthy lives and promote well-being for all and all ages			
4	Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all			
5	Achieve gender equality and empower all women and girls			
6	Ensure availability and sustainable management of water and sanitation for all			
7	Ensure access to affordable, reliable, sustainable and modern energy for all			
8	Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all			
9	Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation			
10	Reduce inequality within and among countries			
11	Make cities and human settlements inclusive, safe, resilient and sustainable			
12	Ensure sustainable consumption and production patterns			
13	Take urgent action to combat climate change and its impacts			
14	Conserve and sustainably use the oceans, seas and marine resources for sustainable development			
15	Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss			
16	Promote peaceful and inclusive societies for sustainable development, provide access to justice for all and build effective, accountable and inclusive institutions at all levels			
17	Strengthen the means of implementation and revitalize the global partnership for sustainable development			

Source data: *SDG Compass*, 2015, p. 7

The SDGs 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 (see <https://sdgs.un.org/goals>). These two processes and others reflect the growing commitment to more sustainable actions in all aspects of life for all people and the planet. A shift of behaviour has begun in the world of finance, where market participants and investors are becoming interested in the sustainability issue and more innovative in their support for investments that have sustainable outcomes, not only in the financial sense but also in the non-financial sense (environmental, social, and governance sustainable benefits).

To give a sense of the overall funding challenge, one need only turn to the SDG of 2030. UNCTAD in its 2014 World Investment Report first estimated investment requirements for 10 relevant sectors (encompassing all 17 SDGs) and found an annual investment gap in developing countries of USD 2.5 trillion (UNCTAD, 2020, p. 180). Some seven years hence, the price can only go up. That report highlighted the need for considerable private investment, including international investment, to supplement public and domestic investment in order to bridge the financing gap. Over the next 10 years, the ‘decade of delivery’ for the SDGs, UNCTAD projects that the challenge will be how to combine growth with a greater focus on channelling funds to SDG-relevant investment projects in developing countries, and especially LDCs (UNCTAD, 2020, p. xv).

Finally, COVID-19 has put progress toward achieving the SDG in danger of slowing down and in some cases even reversing, according to the OECD, with poverty expected to rise and increased inequalities as not all countries will be able to raise the funds necessary to recover. The OECD has labelled this the scissor effect where, especially in developing countries, needs are increasing and resources are declining, a process that has been magnified by the pandemic (see Figure 7).

1.4 Global economic cost of ‘business-as-usual’

There is significant literature on the economic costs (and related social disruption) of not taking action to reduce biodiversity loss and mitigate climate change. ‘Business as usual’ with respect to biodiversity loss has significant direct costs independent of climate change impacts. According to a 2019 OECD report to the G7 countries on biodiversity and finance, the costs of inaction on biodiversity loss are high and are anticipated to increase (OECD, 2019a, at 17). That report indicated that the world lost an estimated USD 4-20 trillion per year in ecosystem services from 1997 to 2011, owing to land-cover change and an estimated USD 6-11 trillion per year from land degradation. It went on to specify where such biodiversity losses had significant impacts economically. Specifically, biodiversity loss can result in reduced crop yields and fish catches, increased economic losses from flooding and other disasters, and the loss of potential new sources of medicine (as the majority of drugs used for healthcare and disease prevention are derived from biodiversity) (OECD, 2019a, p. 7).

The OECD G7 report concluded with the following warning about ‘business as usual’:

The benefits derived from biodiversity and ecosystem services are considerable, but are systematically undervalued or unvalued in day-to-day decisions, market prices and economic accounting. Conventional accounting approaches and measures of economic performance (such as GDP) provide only a limited picture of an economy’s health, and generally overlook the costs of ecosystem degradation. **Ongoing efforts to better assess and value biodiversity and ecosystem service and integrate these values into decision-making are vital for halting biodiversity loss.** [Emphasis in original] (Id.)

As for climate change impacts, there has been a recent awakening among economists, financial advisors, commercial enterprises, scientists, communities, and local governments. If the world continues with business-as-usual rather than moving to a low-carbon, net-zero economy, the global economy will face significant costs from the climate impacts and associated fall-out with biodiversity and ecosystem functions. The Economist Intelligence Unit (EIU) of the Economist Group recently developed a new Climate Change Resilience Index to assess how well the world's economies are doing to build climate change resilience. This index is made up of 8 indicators (see Table 3).

At the same time, there are impressive efforts to calculate the real financial and non-financial benefits of investing in protected areas and biodiversity. A major independent economic assessment produced by the UK Campaign for Nature (CFN) and National Geographic in 2020 and involving more than a 100 economists and scientists concluded that “the global economy would benefit from the establishment of far more protected areas on land and at sea than exist today” and that benefits would outweigh costs by a ratio of at least 5-to-1 (see CFN, 2020). This project, the first of its kind, was particularly in response to the draft post-2020 Global Biodiversity Framework proposal to expand conservation areas to 30% of the earth's surface by 2030. The two main concerns were the near-term costs of such an actio and whether long-term financial and non-financial benefits could outweigh such costs.



Figure 7: The scissor effect demonstrates a widening SDG financing gap in developing countries

Source: OECD (2020c), overview section

The assessment found that the additional protections for the land and sea would lead to an average of USD 250 billion in increased economic output annually and an average of USD 350 billion in improved ecosystem services annually by 2050 (Id.). These averages were derived from the report's finding that economic output would actually be within a range of USD 64-454 billion, (because costs and benefits will vary by area protected), and within a range of USD 170-534 billion for ecosystem

services, including non-financial services (Walton et al., 2020a. Table 3 and associated text, p. 33; Walton et al. 2020b. p. 1.)

Table 3: Eight indicators that make up the EIU's Climate Change Resilience Index

	Indicator
1	Loss of land/physical capital due to extreme climate/weather events
2	Impact on public services, basic needs and government expenditure
3	Impact on agricultural sector (loss of crop yields)
4	Loss of labour productivity
5	Tourism loss
6	Trade loss
7	Adaptation costs
8	Mitigation costs

Source data: *The Economist Intelligence Unit (2019)*

Using this Resilience Index, the EIU measured the preparedness of the world's 82 largest economies and found that the global economy will be 3 % smaller by 2050 due to lack of climate resilience (EIU, 2019). Table 4 shows the breakdown of GDP losses by region.

Table 4: Regional and global GDP losses by 2050

Region	Real GDP loss
North America	1.1%
Western Europe	1.7%
Asia-Pacific	2.6%
Eastern Europe	3%
Middle East	3.7%
Latin America	3.8%
Africa	4.7%
World average	3%

Source data: *The Economist Intelligence Unit (2020)*

Looking at these losses from a global perspective a 3 % drop in global GDP translates into a global cost from climate impacts by 2050 to be about USD 7.9 trillion (Galen, 2019).

As shown in Table 4, Africa is most at risk, and in general developing countries are worse off in resiliency than richer ones. Overall, the study found that economic impacts from climate change on the developing world will be much greater than in richer countries. Existing estimates of cost have

massive ranges because experts disagree about the pace of change (depending on what the world can do to reduce emissions and keep temperatures below 2° Celsius) and how to stop it.

1.5 Summary points

1. Major gaps exist between funds available and what is needed to halt biodiversity loss, enable effective climate action, and achieve the global sustainable development goals (SDGs).
2. Conventional sources of conservation funding (government budgets, philanthropy), by themselves, will not be sufficient to maintain and expand terrestrial and marine protected area networks, address ecological connectivity needs, and protect key biodiversity areas in the future.
3. There are inconsistencies in the ways in which biodiversity, climate change, and SDG financing are reported and tracked. In particular, there exist gaps on private finance flows, and no consolidated data on biodiversity finance from multilateral development banks (G7 summary).
4. The costs of inaction on biodiversity loss are high and are anticipated to increase. Biodiversity loss can result in reduced crop yields and fish catches, increased economic losses from flooding and other disasters, and the loss of potential new sources of medicine (as the majority of drugs used for healthcare and disease prevention are derived from biodiversity) (OECD, 2019, G7, p. 7).
5. In order to address the global funding gap, there is an urgent need to further develop and expand innovative financing mechanisms, in particular, involving large-scale institutional investors looking for sustainable long-term investing.

Part 2 Changing dynamics – large-scale investing moves to conservation

“Unsustainable economic growth has had devastating consequences for ecosystems that are under threat from climate change, species extinction and water insecurity. And now it’s time for a rethink of our relationship with nature.”

(World Economic Forum, 2021)

2.1 Private and public investors and finance organisations look for sustainability

A major trend in large-scale private investing has been a shift to more ‘socially responsible’ or ‘sustainable’ investing. Shareholders are seeking it and finance and asset managers are on board as well in many of the largest institutional investment organisations. As the Earth has become more gravely stressed with climate change, pandemics, species loss, and ecosystem degradation, this movement began to blossom within the financial community in the mid-2000s and has become a growing portion of overall capital market investing ever since. Initially it gave birth to a variety of terms: ‘Socially Responsible Investing’ (SRI) or ‘Sustainable Investing’ (SI), ‘Responsible Investing’ (RI), ‘Conservation Finance’ (CF), ‘Green’ investing, and ‘Environment, Social, and Governance’ (ESG) investing (see section B of the introduction for some basic definitions). The common element was that large-scale investments should not only focus on financial return but also on sustainability of the investment and non-financial benefits doing good in the community to achieve sustainable development. Depending on the user, application of these concepts may overlap; the common thread is sustainability.

Shift to sustainability. As investors began to become more acquainted with the concept of sustainable development, it became clear that the very purpose for conservation financing would need to go beyond the near-term economic gain normally anticipated in traditional investments. The additional goal would need to (and mainly) be to generate long-term environmental (biodiversity, protected areas, climate change) and social (fairness, transparency, equity) benefits for which the project would be financed. These non-financial benefits or returns would begin to sprout a whole new field of principles, calculations, metrics, and valuations of what is natural capital and how to value it to begin to help show concrete benefits. Gradually, a couple of labels seemed to take hold more than others among the large investment institutions and also some participating stakeholders. These were, first, ‘Environment, Social, and Governance’ (ESG) investing, and second, ‘Green’ investing. These terms have now taken on a life of their own. BlackRock, one of the largest global private investment firms committed to ESG integration in 2021, saw the term ‘sustainable investing’ “as the umbrella and ESG as a data toolkit for identifying and informing on solutions” (Larry Fink, 2020).

The seed for this shift to more sustainable investing in support of sustainable development took decades to sprout. The concept of sustainable development emerged formally in 1987 when the United Nations published a Report of the World Commission on Environment and Development: *Our Common Future* (also known as *The Brundtland Report* for its Chair, the Prime Minister of Norway). This report defined sustainable development as development that “meets the needs of the present without compromising the ability of future generations to meet their own needs” (WCED, 1987, p. 8). It

was the culmination of a 3-year international effort of thousands of people from around the world with widely different backgrounds (technical experts, political representatives, scientists, researchers, NGOs, and the general public) to contribute to the work of the Commission.

This worldwide effort was driven by a growing sense that coordinated political action of all nations was needed more than ever to address the many critical survival issues related to uneven development, poverty, and population growth which were placing “unprecedented pressure on the planet’s lands, waters, forests, and other natural resources, not least in the developing countries” (WCED, 1987, p. xii).

This significant undertaking put the environment at the forefront again of the international political agenda (the initial effort being the Stockholm Conference in 1975). In terms of priorities, the “Commission focused its attention in the areas of population, food security, the loss of species and genetic resources, energy, industry, and human settlements – realizing that all of these are connected and cannot be treated in isolation one from another” (Id., p.11). In the words of Mrs. Brundtland, what “emerged was a common concern for the planet and the interlocked ecological and economic threats” which its people, institutions and governments now face (Id., p. xii).

For several years, the recognised scope of sustainable development has been three interconnected pillars: environmental sustainability, social sustainability, and economic sustainability. And as we work our way through the early years of the 21st century, according to the CFA (Chartered Financial Analyst) Institute Research Foundation (a not-for-profit organisation promoting research for investment practitioners worldwide) the new model for investing is and will continue to be to leverage private capital to address conservation and social issues, including climate change; ESG will be embedded in all investment; and system-level thinking on sustainability will need to be integrated into traditional investing theory and practice (Matos, 2020, p. 5).

In a world where news now spreads almost instantaneously, disasters related to climate change, disease (COVID-19 pandemic), environmental degradation, and accelerating biodiversity loss are mostly attributed to human activity and the world community is beginning to recognise that. That realisation triggered questions about what humankind can do to reverse the negative impacts of such disasters. The question for the investment community became how to plan and pursue sound, sustainable conservation investments in the face of these growing global financial risks and uncertainties about the future for positive global growth.

Attention to environmental and social issues that may add material risk to an investment is now common for many large investors. On the one hand, there are still many in the investment community who know little about ESG investing in specific projects, but on the other, ESG investing is now familiar to many investors, including through especially created ESG funds. Large financial investments are beginning to be made in emerging markets and developing country businesses and a growing number of governments and public sector enterprises are looking to large-scale ESG investments to support their environmental and social priorities. According to JP Morgan, an American multinational investment bank and financial services company: “We integrate ESG analysis into our approach and evaluation of all investment opportunities. It’s becoming business as usual” ([J.P. Morgan website](#)).

An initial concern holding back sustainable investing was the worry about sacrificing returns, but research is starting to suggest otherwise (as noted in the prior section). ESG was now being viewed as a tool to address economic, environmental, social and governance challenges to sustainable investing, with potential for a financial return. ESG language now dominates the financial tool kit because

it provides a focus more directed to these specific challenges than simply ‘Socially Responsible Investment’. Today, according to major players in the financial community, ESG integration into investment portfolios is becoming the norm (CNBC, 2019). ESG investing has spread worldwide, with Europe taking the lead but other countries catching up. (see Figure 9). Growing awareness of global environmental and social issues, encouraged in part by the Paris Agreement on climate change, the UN Sustainable Development Goals (SDG), and the CBD post-2020 Development Goals has helped financial institutions look for paths toward longer term conservation investments that include design features promoting sustainable goals.

					GROWTH PER PERIOD			COMPOUND ANNUAL
	2014	2016	2018	2020	GROWTH 2014-2016	GROWTH 2016-2018	GROWTH 2018-2020	GROWTH RATE (CAGR) 2014-2020
Europe* (EUR)	€ 9,885	€ 11,045	€ 12,306	€ 10,730	12%	11%	-13%	1%
United States (USD)	\$ 6,572	\$ 8,723	\$ 11,995	\$ 17,081	33%	38%	42%	17%
Canada (CAD)	\$ 1,011	\$ 1,505	\$ 2,132	\$ 3,166	49%	42%	48%	21%
Australasia* (AUD)	\$ 203	\$ 707	\$ 1,033	\$ 1,295	248%	46%	25%	36%
Japan (JPY)	¥ 840	¥ 57,056	¥ 231,952	¥ 310,039	6,692%	307%	34%	168%

NOTE: Asset values are expressed in billions. New Zealand assets were converted to Australian dollars. In 2020, Europe includes Austria, Belgium, Bulgaria, Denmark, France, Germany, Greece, Italy, Spain, Netherlands, Poland, Portugal, Slovenia, Sweden, the UK, Norway, Switzerland, Liechtenstein.*Europe and Australasia have enacted significant changes in the way sustainable investment is defined in these regions, so direct comparisons between regions and with previous versions of this report are not easily made.

Figure 8: Recent surge in sustainable investing

Source: Global Sustainable Investment Alliance by CNBC (2019)

Size of ESG investing. In terms of size and location of ESG investing, according to Bloomberg Intelligence estimates made in February 2022 (before the Russian war with Ukraine and energy crisis, projections for ESG investment were very positive (see Bloomberg Intelligence, 2022 online):

ESG-related assets are expected to reach USD 41 trillion by the end of 2022. Growth in the U.S. is leading the charge although Europe has historically been at the forefront, the researchers said. ESG-related assets account for one in three dollars managed globally, industry group Global Sustainable Investment Association estimates.

This estimate shows that ESG investments have been significant, and there was a view in early 2022, that ESG was “moving from the periphery to the mainstream of finance”. Estimates from the same Bloomberg analysis projected that ESG assets could reach USD 50 trillion by 2025. As of early February 2022, growth was being attributed to record-breaking fund inflows as financial markets thrived, and investor concerns were focused on sustainability investing due to climate change, biodiversity loss, and other societal issues (Id.).

Now, as this paper is being finalized, the global financial markets have been facing downturns due to the Russia-Ukraine war launched February 24, 2022, as well as inflation pressures. According to a May 2022 analysis by Morningstar, Inc., an American financial services firm providing investment research and investment management services, the estimates have been adjusted downward to reflect the changing financial markets (Morningstar, 2022). The numbers are still impressive:

Global sustainable funds attracted close to USD 97 billion of net new money in the first quarter of 2022, representing a fall of almost 36% relative to the fourth quarter of 2021. Amid investor concerns over inflationary pressures and the war in Ukraine, sustainable funds still held up better than the broader market, which saw inflows slump by 73% over the period (Id., p. 1).

According to the CFA Institute, an organisation that tracks ESG trends and metrics, “there is no one exhaustive list of ESG examples. ESG factors are often interlinked, and it can be challenging to classify an ESG issue as only an environmental, social, or governance issue....” (CFA Institute web site, 2022).

More broadly, a European association, EUROSIF, looked at European investment as of 2018, in this case focusing on ‘Sustainable and Responsible Investing’ (SRI), a concept that includes ESG investing as well as other conservation financing. EUROSIF, the leading pan-European association promoting Sustainable Finance at the European level, and encompassing the EU, wider European Economic Area (EEA) and United Kingdom (UK) as a partnership of Europe-based national Sustainable Investment Fora (SIFs). In that 2018 report, EUROSIF found that SRI is becoming mainstream among its European members, with total assets under SRI management at over EUR 9 trillion as of 2018, Switzerland leading the way at EUR 2.4 trillion, followed by UK with just over EUR 2 trillion (EUROSIF, 2018, p. 82).

Metrics for defining ESG. Initially, there were few norms or metrics to define or measure the ESG health of a developing country or business or to have some standardisation for reporting and monitoring. This is gradually changing as analysts project that the flow of funds into ESG investments over the next two decades will steadily grow, especially as millennials and Generation Z move into the workforce, and the need for some scoring, standardisation, common definitions, and evaluation guidance will be essential (see Part 5).

It is acknowledged in financial reports that no ‘one size fits all’ when it comes to defining exactly what ESG covers. Citing the lack of common standards, a situation that is changing, the CFA Institute Research Foundation (which seeks to set professional standards for investment) noted in 2020, there is no consensus on the exact list of ESG issues and their materiality when determining financial risk (CFA, 2020b, p. 7). The view on this from the World Bank, which in 2020 published ESG guidance for sovereign (i.e. government) debt managers in emerging economies and developing countries (its clients):

ESG has become an umbrella term to describe investment strategies, instruments, or activities that incorporate environment, social, and governance issues from a variety of perspectives. This variety of perspectives makes ESG difficult to summarize in a single definition (World Bank, 2020a, p. 23).

Presently, each investment institution has its own approach to identifying and assessing financial risks when considering an ESG or green investment. Much depends on the ESG issues involved. The CFA Institute, in 2020, offered its own list of main ESG issues particularly relevant for investment institutions and managers (see Table 5).

Table 5: Main ESG issues according to the CFA Institute

Environmental	Social	Governance
<ul style="list-style-type: none"> • Climate change and carbon emissions 	<ul style="list-style-type: none"> • Workforce health and safety, diversity, and training 	<ul style="list-style-type: none"> • Shareholder rights
<ul style="list-style-type: none"> • Natural resource use and energy and water management 	<ul style="list-style-type: none"> • Customer and product responsibility 	<ul style="list-style-type: none"> • Composition of boards of directors (independence and diversity)
<ul style="list-style-type: none"> • Pollution and waste 	<ul style="list-style-type: none"> • Community relations and charitable activities 	<ul style="list-style-type: none"> • Management compensation policy
<ul style="list-style-type: none"> • Ecodesign and innovation 		<ul style="list-style-type: none"> • Fraud and bribery

Source data: Modified after Matos (2020), p. 7

The World Bank also has compiled a list of common environmental risks based on responses to an Investor Survey question: Which ESG and/or SDG issues do you consider to be financially material when assessing investments in a sovereign (country). These risks are listed in Table 6 and are particularly relevant for emerging markets and developing economies which may be working with the World Bank on projects from time to time.

Table 6: Factors that could cause material risk to investments if not addressed

ESG category	Risk factors
Environmental	<ul style="list-style-type: none"> • Climate mitigation/adaptation strategy <ul style="list-style-type: none"> » Exposure to and preparedness for natural disasters (physical risk) » Climate transition (dependence on fossil fuels) • Energy efficiency and security • Air pollution • Carbon footprint • Water pollution and management • Food security • Protection of natural resources (biodiversity, deforestation) • Waste generation and recycling
Social	<ul style="list-style-type: none"> • Demographics (e.g. working age population) • Social and income inequality • Human rights • Freedom of speech and opinion • Health care • Education and outcomes (e.g. access to schooling) • Human capital development and the labour market • Gender equality • Discrimination



Governance	<ul style="list-style-type: none">• Government effectiveness and transparency• Rule of law and corruption• Regulatory quality• Macroeconomic policy stability• Ease of doing business• Trade openness• Enforcement of legal rights• Peace and stability• Judicial independence and effectiveness• Regulatory framework• Contract enforcement process
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Source data: World Bank (2020a)

2.2 Who are potential ESG investors

With this background, it is necessary to turn now to who are the investors and investment institutions interested in ESG investing and sustainability and their motivations behind this interest. Climate change, biodiversity loss, environmental degradation, and the recent COVID-19 pandemic seem to be key reasons for a global awakening of many institutional investors to the need for large-scale investments in environmental, social, and governance support to protect the global economy, especially in emerging markets and developing countries.

There are different groups of investors becoming motivated to support conservation financing for biodiversity and protected areas benefits, in addition to seeking financial returns. As noted in the introduction, these investor groups are growing, with the large institutional investors particularly in the lead. Different investor groups will have different characteristics and priorities for pursuing responsible investments. Not all may focus specifically on ESG investments, but still adhere to responsible investment principles. Moreover, some companies may apply ESG principles to their investments, to avoid or minimise harm, but may not invest in distinct ESG beneficial projects in the emerging or developing country economies.

According to the CFA Institute Research Foundation, institutional investors are “professional investors who invest growing pools of capital on behalf of their ultimate beneficiaries or individual clients” (Matos, 2020, p. 13). Institutional investors are typically classified into six groups: 1) bank asset management divisions; 2) insurance companies, 3) investment companies (mutual fund families); 4) investment advisors; 5) pension funds (public or private), endowments (academic institutions or private foundations), sovereign wealth funds (state-owned investment funds); and 6) hedge funds and others (Id). To understand why large-scale institutional investors are becoming most concerned about ESG issues, it is important to have a general sense of the underlying factors of influence. In the past couple of years, there seem to be three main motivations, all flowing from concerns about long-term sustainability of their investments. A dominant concern is climate change and how to mitigate and adapt to keep global temperatures below 2° Celsius (which scientists say is a turning point), along with the COVID-19 pandemic and fear of potentially similar global events in the future due to more human-nature conflict) and growing ecosystem degradation and biodiversity loss around the world (see Annex 2, Table 1 showing ESG support from leaders in global finance). These three factors have come together at a moment when long-term sustainable investment is a growing objective and now the financial community has specific areas where this objective may be realised.

A separate motivation especially for large-scale investment to become interested in conservation finance has to do with growing awareness of the significant value of ecosystem services for business. In January 2020, the World Economic Forum issued its first report of its new Nature Economy Report (NNER) series, *Nature Risk Rising: Why the Crisis Engulfing Nature Matters for Business and the Economy*. According to its research, USD 44 trillion of economic value generation – more than half of the world's total GDP – is moderately or highly dependent on nature and its services and is therefore exposed to nature loss and at risk (WEF, 2020a, p. 8). Biodiversity loss and ecosystem collapse ranked as one of the top five threats humanity will face in the next 10 years in the World Economic Forum's 2020 Global Risks Report (WEF, 2020b, p. 86). This was repeated in its 2021 Global Risks Report as discussed below. A highly respected, global voice for the planet, Sir David Attenborough, had this message for the WEF's 2020 Annual Meeting: "Never before have we had such an awareness of what we are doing to the planet, and never before have we had the power to do something about that" (WEF, 2020a, p. 8).

According to a 2017 technical report by WWF, GEF, and Clarmondial (Swiss investment company advising on sustainable natural resource management), there are four major investor groups being moved by such global events to do more for conservation: financial investors, corporations, foundations, and donors (including their investment arms and development finance institutions) (Capitalising Conservation, 2017, p. 16). Each has different motivations, capacities and challenges when engaging in conservation investments (see Table 7).

It is worth highlighting a few points from this Table. Importantly, financial investors comprise what the literature calls institutional investors. These include institutions and organisations which have substantial monies to invest – pension funds, insurance companies. High net worth individuals and retail investors also might be included. For this group, strategies they follow for achieving responsible investments may vary.

The Global Sustainability Impact Alliance (GSIA), a collaboration of membership-based sustainable investment organisations around the world, has set out classifications of responsible investment strategies. Two approaches are particularly relevant for conservation investments: 1) sustainability themed investing where the focus is on a specific theme such as clean energy or sustainable agriculture, or sustainable fisheries, and 2) impact investing which aims to solve specific social or environmental problems and the investment is targeted to the relevant businesses, communities, or government agencies. Impact investments can be made in both emerging and developing markets, with a range of returns from below market to market rate depending on investors' strategic goals (see generally Stephenson et al., 2018 [CPIC]). An impact investor may give special weight or value to such elements as climate change adaptation and mitigation (e.g. JP Morgan), or want to focus on specific solutions such as helping restore forest biodiversity or specific marine fisheries or ecosystems, such as coral reefs.

In addition, government institutions are likely to be involved in helping mobilise public and private funds when public good and public interest linkages such as conservation or social investments are involved. This role is an essential and leading one when sovereign (country) debt is involved.

Tracking the growth of sustainable investing worldwide, GSIA reported in its 2021 report on worldwide trends in sustainable investing: "...an increase of 15% of sustainable and responsible investments (SRI) in the last two years bringing the total to USD 35.3 trillion." According to their analyses, that figure represents 36% of all professionally managed assets across regions covered in the report. (see [GSIA web site](#)). Growing concern over climate change has resulted in rising interest in green

Table 7: Overview of investor groups with potential for conservation investing

Investor group	Funding source	Motivations	Advantages/strengths	Challenges/restrictions	Possible roles
Financial investors	Individuals, directly and through asset managers (banks, pension funds, insurance companies, family offices)	<ul style="list-style-type: none"> Financial returns Uncorrelated assets (risk diversification) Interest in responsible investment 	<ul style="list-style-type: none"> Large and growing pool of capital allocated to responsible investments For some: relatively quick decision making 	<ul style="list-style-type: none"> Financial return expectations Fiduciary duty may limit risk appetite Typically low familiarity with conservation objectives and methods 	Investor
Corporates	Revenue from operations, channelled through strategic funds, corporate sustainability budgets, etc.	<ul style="list-style-type: none"> Securing/improving supply chain; including ensuring high quality/high margin products Maintaining social licence to operate Marketing, public relations 	<ul style="list-style-type: none"> Commercial interest Association with well-respected conservation organisations brings visibility/credibility Operational and technical know-how Can de-risk projects, e.g. through off-take agreements Incentive to transform 'unprofitable' corporate engagement into 'profitable' business case 	<ul style="list-style-type: none"> Depending on size and structure: decision making may be complex Low margins Budgets subject to satisfactory performance of overall business, internal capital allocation strategies Variable degree/depth of engagement in supply chains Competitors/industry profile 	Investor, implementation partner, off-taker
Foundations	Private or corporate sponsors	<ul style="list-style-type: none"> Mission-related investments Programme-related investments 	<ul style="list-style-type: none"> May be flexible in the type of funding that can be provided Can support financial de-risking mechanisms 	<ul style="list-style-type: none"> Demand performance and reporting on non-financial metrics Scope might be thematically or geographically limited, reducing ability to support broader approaches 	Investor, grant provider, supporter, de-risking mechanism, guarantor
Donors/development finance institutions	Taxes, levies, grants, etc. from the public through donor governments	<ul style="list-style-type: none"> Mandate from donor government 	<ul style="list-style-type: none"> May provide concessional funding alongside private investment capital, or support technical assistance Can support financial de-risking mechanisms 	<ul style="list-style-type: none"> Demand performance and reporting on non-financial metrics May have complex approval processes and reporting requirements Scope might be thematically or geographically limited 	Investor, grant provider, supporter, de-risking mechanism, guarantor

Source data: *Capitalising Conservation*, p. 18

finance, including climate-aligned bonds. (see Box 1 for a brief description of GSIA and more on its latest report).

Box 1: GSIA – Providing advice and support to investment organisations and members

The GSIA (Global Sustainable Investment Alliance) was founded in 2010, its main activity is to aggregate responsible investment market data from its members in order to analyze the global sustainable investment market and the evolution of trends in the Responsible Investment space, across the globe.

The GSIA's mission is to deepen the impact and visibility of sustainable investment organisations at the global level. Its vision is a world where sustainable investment is integrated into financial systems and the investment chain and where all regions of the world have coverage by vigorous membership-based institutions that represent and advance the sustainable investment community.

GSIA is known for setting out classifications for responsible investment strategies. One of its main products is a biennial global sustainable investment review. In July 2021, the GSIA published its fifth Global Sustainable Investment Review (GSIR) biennial report. It continues to be the only report to give a macro-level view of market trends; results are collated from the market studies of regional sustainable investment forums from Europe, the United States, Japan, Canada, and Australia and New Zealand. The report indicated that Canada is the market with the highest proportion of sustainable investment assets at 62%, followed by Europe (42%), Australasia (38%), the United States (33%) and Japan (24%). It also included data on the African market, finding that as compared to 2018, 2020 showed substantial growth and development of Responsible Investment markets in Nigeria and Kenya, along with South Africa being the financial hub of the region. Policy and regulatory changes were instrumental drivers for such growth in these countries. In Latin America the report found that regulations mandating pension funds in key markets is driving sustainable investment in the region. Mexico is mandating ESG investment with pension funds and Chile and Colombia are mandating pension funds to integrate ESG and climate risk into their investments (GSIA, 2021, p. 24).

...

Region	2016	2018	2020
Europe*	12,040	14,075	12,017
United States	8,723	11,995	17,081
Canada	1,086	1,699	2,423
Australasia*	526	734	906
Japan	474	2,180	2,874
Total (USD billions)	22,839	30,863	35,301

Source data: GSIR, 2020

A variety of material factors may affect an institutional investor's decision-making about how financially vulnerable ESG investing might be in a specific country. Particularly, this will likely be the case where the investor group may want an approach where ESG analysis and attention is integrated throughout the investment portfolio, called ESG Integration (another GSIA classification of ESG investment approaches).

In the case where systematic and explicit inclusion of ESG factors by investment managers is part of the financial analysis, main factors analysed may include: 1) specific country situation (which may face a variety of ESG risks, e.g., from climate change, biodiversity loss, coastal degradation); 2) investment period and how this relates to risk (for example, with longer-term 20 to 30-year ESG investments it may be difficult to calculate risk in advance mainly because of uncertainties and

data constraints); 3) quality of the country's public governance (for example, what is the country's macroeconomic performance, strength of its institutions, political stability, commitment to national sustainable development goals, ability to withstand environment shocks such as natural disasters and social shocks such as a pandemic). Parts 3 and 4 deal with these aspects in more detail.

For the kinds of major conservation investments envisioned to reduce the biodiversity financing gap discussed above, large-scale investors will need to be among the major players. In sum, the variety of investors who may get involved with ESG and conservation investing include those listed below:

- a. **Impact investors** – investors' intention to deliver specific environmental or social 'impacts' through their investments (see discussion below)
- b. **Companies** – where conservation projects may have a clear link with the long-term liability of their business
- c. **Development Finance Institutions (DFI)** – e.g., World Bank and other multilateral entities
- d. **Commercial banks** – may be interested so long as they have comfort over the ability of the borrower to repay its loan
- e. **Donors** – e.g., wealthy groups or private individuals, philanthropists, foundations, and from the public sector through charities, multilateral environmental funds, aid agencies
- f. **Venture capital firms** – provide private equity to small, early-stage emerging firms considered to have a high growth potential
- g. **Microfinance institutions** – make loans to poor people, interest rates may be higher than for traditional banking
- h. **Angel investors** – use their own money to invest in a company, usually at its very start
- i. **Institutional investors** – invest on behalf of asset owners and include pension funds, insurance companies and sovereign wealth funds
- j. **Retail investors** – e.g., crowdfunding, use of small amounts of capital from a large number of individuals to finance new company business
- k. **Conservation organisations** – engaging with investors
- l. **Philanthropic organisations** – engaging with investors

Finally, one should not treat lightly the role of government in actively pursuing ESG investments. Box 2, for example, gives a snapshot of efforts in China to move into this area of finance.

Box 2: Rise of ESG investments in the People's Republic of ChinaDate of action and length of project:

In the last couple of years there has been a significant uptake in ESG investing.

Amount and type of financial investment:

Capital flow into ESG-themed exchange-trade fund investment² has increased 464% between 2018 and 2019, accounting for USD 20.5 billion (USD 4.9 billion in 2018).

Purpose of investment:

- Two factors have been contributing to this rise. With China A-shares included for the first time into MSCI indices in 2018, China's capital markets are opening up further. This means listed Chinese companies have to significantly increase their ESG awareness and actions to attract foreign capital and catch up to more advanced developed practitioners in other countries.
- Second, stronger regulatory requirements for ESG disclosures were adopted and guidelines were drafted to encourage investors to integrate ESG in their mindset and decision-processes. The Chinese government has developed the Guidelines for Establishing a Green Financial System and made it mandatory for listed companies to disclose environmental information by 2020. The Asset Management Association of China and the Insurance Asset Management Association of China have also released their own set of Green Investment Guidelines in 2018 to help insurers and asset managers incorporate ESG principles into their businesses.

Things to keep in mind:

- In 2017, corporate governance was the most impactful ESG factor but by 2022, environmental factors are expected to impact share prices and bonds yields nearly as much as corporate governance.
- ESG risks are seen as more important than ESG opportunities (especially true for environmental factors).

Special challenges:

- Lack of knowledge and understanding of ESG issues;
- Lack of company culture around ESG investing with portfolio managers focusing on short-term profits when ESG requires a mid- or long-term perspective;
- Lack of comparable historic ESG data that can allow investors to confidently analyse possible links between ESG and investment performance;
- Complexity of what biodiversity entails;
- Lack of a business case;
- Lack of metrics and tools to quantify a company's risks or opportunities in relation to biodiversity;
- Lack of credible audit and assurance mechanisms to validate disclosures and business performance.

For more information on this case study, please consult the following links:

<https://www.cfainstitute.org/-/media/documents/survey/esg-integration-china.ashx>.

<https://www.theasset.com/article-esg/42464/esg-investing-gaining-ground-in-china>

<https://www.cisl.cam.ac.uk/resources/publication-pdfs/cambridge-natural-capital.pdf>

Source: Compiled by IUCN Environmental Law Centre

2.3 Key considerations of investors interested in conservation or ESG Investing in developing countries

In emerging and developing markets, there are opportunities for private international investors to participate in conservation projects through financing of ESG-focused international or national

² Exchange-traded funds is one ESG strategy. Other ESG strategies include mutual funds, wealth management products and private funds.

corporations or through investing in qualified initiatives of the government. Private investors can participate in financing government projects by buying stock in public enterprises (when available) or buying bonds (blue or green) from government. There are a growing number of examples where emerging and developing markets have issued blue or green bonds, frequently as part of a blended finance package involving multiple players (some examples are noted elsewhere in this paper).

Private investment opportunities could include support for establishing protected areas on land or sea, securing biodiversity hot-spots, supporting organic agriculture or renewable energy, designating fisheries no-take and connectivity areas to help restore the fishery, restoring a watershed through managed reforestation, etc. Each of these potential investment opportunities calls for different approaches and favours different investment instruments. Any investment action may involve multiple players and blended finance. Investments may be in the form of stock (equity), or bonds (debt) for different purposes.

Whether international investors are interested in supporting green projects (e.g., conservation, ESG, or climate) of corporations, public enterprises or government directly, there are certain elements they are looking for as they seek attractive long-term large-scale investments. Main elements are highlighted below.

2.3.1 Sustainability

A frequent point raised in much of the current literature is that the client (end-investor) is increasingly interested in sustainability criteria. Morningstar, Inc., an American financial services firm headquartered in Chicago, Illinois provides an array of investment research and investment management services, including recent sustainability ratings of several funds to help investors understand how companies are managing their environmental, social, and governance – or ESG – risks relative to their peers. According to a follow-up study, after Morningstar produced its sustainability ratings, US companies with low ESG scores lost customers while those with high ESG ratings had net inflows of funds (Matos, 2020, p. 54).

In the view of analysts, large-scale private institutional investors are most interested to know about certain key “ESG Readiness Factors” when considering an ESG investment with a government, public enterprise, or corporation. These are grouped into five areas: (a) ESG-enabling environment and stage of market development in the country, (b) ESG market definitions and standards, (c) project pipeline including project appraisal procedures and indicators of worth, (d) investor base (locally and globally), and (e) cost and pricing. Ideally, these factors would be considered before integrating specific ESG activities into an investment proposal (World Bank, 2020b, p. 31).

2.3.2 Enabling policy environment

An institutional investor will be concerned about the enabling environment for which ESG activities might be integrated into the country’s or business’s debt management programme. Most of these concerns relate to general considerations for any investment, such as the country’s macroeconomic conditions, financial needs of the government, debt management capacity, financial sector soundness, and safeguards to ensure a sound project and capacity for implementation.

Other policy and performance factors are specific to a country or business readiness to increase investment in ESG without excessive risk. These relate to the existence of supporting political positions with respect to environmental and social investment, supportive policies and regulations to make

sure ESG investing is promoted and guided, if possible with incentives and inducements to invest. Also important is a sound record of good governance, past performance with debt, and compliance with commitments to national and international environmental policies and laws, including the SDGs and their National Biodiversity Strategy and Action Plan (NBSAP). These measures give the investor confidence that the investment is on sound footing, will be executed well, and has manageable risk. As explained by the World Bank:

As many investors are demanding increased engagement, lack of transparency or information may affect the risk perception about the [country]. Consistent policy positions and support for green growth and environmental objectives give investors confidence. These may include the following: (a) environmental standards and enforcement, (b) environmental licenses and permits, (c) environmental taxes (such as carbon, landfill, emissions, and resource-use taxes), (d) annual reporting by companies and public sector entities on key environmental indicators, and (e) inclusion of environmental risk in fiduciary duty. International investors will generally shy away from investing in countries where there is a precedent of policy and political failings. These aspects are also importance from a governance viewpoint, which is a focus for EM investors (Boitreaud et al., 2020, p. 32).

2.3.3 Debt management capacity of investee

A special concern for large-scale investors is the capacity and resources of the corporation, public enterprise, or government directly to take on the additional responsibilities of debt management that come with ESG investing. The World Bank between 2007 and 2018 assessed 18 governments that were mostly low-income or lower-income countries for their capacity and resources to take on ESG investing. They found that more than 70 % of the countries did not comply with minimum requirements for debt management related to separation of duties, staff capacity, and business continuity plans (Boitreaud, 2020, p. 32). Moreover, the study found that 40 % of countries did not comply with minimum requirements regarding the management structure to ensure debt transactions are effective, including the need for a clear division between the political and executive levels. For such countries, the focus should be on satisfying the preconditions for market development such as the institutional setting and the governance framework. Countries at a more advanced stage of development, namely emerging and developing markets, may have more flexibility and technical capacity to support these requirements.

2.3.4 A supportive investee financial sector

Another important prerequisite for large-scale investors interested in ESG with special attention to governance, is the presence of an established, supportive financial sector in the investee country with knowledge of and experience with debt instruments. This includes a local stock exchange, a regulator, and a country's financial markets that can help create an enabling environment for developing a sustainable finance agenda. These entities need to facilitate international investor decisions, perhaps attract some local investors, and raise awareness of ESG investment opportunities in both equity and loan (equity) options by providing orientations, technical briefings, guidance, training, and support tools.

Interaction with international banks and commitment from local banks are also important, and in most emerging and developing markets international banks will likely be the first to initiate discussion about potential ESG debt/equity instruments. As a general principle, the state of a government's

financial market development is important when considering all green investing, including that focused on ESG factors, and countries where market development is just beginning may not yet meet ESG market readiness factors.

2.3.5 Transparency and full disclosure

Equally important to the investor, a potential client needs to have a tradition of transparency and disclosure of all relevant background information about their financial condition and proposed project in order to build trust in the community and with affected persons, as well as build and ensure good investor relations over the long term. This is particularly important at a time where ESG investing is relatively new and standards for operation (definitions, reporting requirements, etc.) are still under development and presently rather fluid. A history of following through on commitments can also help build credibility that the government, qualified public enterprise, or international or national corporation is a relatively safe risk for a new investment.

2.3.6 Addressing rates of return

Paramount among efforts to draw more large-scale private sector investors into nature and conservation financing, especially in emerging markets and developing countries, is to more properly value nature and its services in all economies so the rate of return can be more fully reflected in calculations to investors and asset managers. Recognising the financial (economic) and non-financial (natural capital) benefits of a long-term ESG investment is repeatedly emphasised in ESG-related investment guidance. Even financial leaders in charge of large private investments are beginning to acknowledge that our markets and economic models are failing to take into account the benefits from biodiversity conservation and the costs of biodiversity loss. As stressed in the relevant literature, “overall, a fundamental shift in the way markets and economics more broadly, value and protect nature is imperative” (Deutz et al., 2020, p. 12).

With respect to ‘rate of return’ with biodiversity and protected areas investments on both land and sea, as noted above, the challenge is to properly value the anticipated non-financial benefits. This is where natural capital calculations must become a routine part of the socio-economic analysis as part of the rate of return picture (see Figure 10 on the economic value of a whale). Natural capital is a conceptual approach that looks at nature through the prism of economics, providing a framework through which natural resources are valued alongside human and financial resources (see www.earth.org). Natural Capital can be considered the stock of renewable and non-renewable natural resources (e.g., plants, animals, air, water, soils, minerals) that combine to yield a flow of benefits to people (www.conservation.org). See Box 2 for a discussion of its growing acceptance and tools being developed to help businesses and governments assess the real value of the natural resources they may be using.

The principle of pricing nature is at the heart of conserving and protecting natural assets. Much progress has been made by policy makers in understanding and using principles of natural capital to assess real benefits. These benefits range from nature-based initiatives such as cleaning up rivers or coastlines, achieving well-managed watersheds, converting to organic agriculture, or transitioning to sustainable community forests or fisheries management. Applying the principles of natural capital, these projects clearly are ‘bankable’ and return-generating projects for investment over the long-term; in addition they are environmentally and socially beneficial. It is generally recognised at this point in the 21st century that biodiversity and ecosystem services underpin the global economy

and provide indispensable services at local, regional, and global scales, such as food production, water purification, flood protection and climate-change mitigation (OECD, 2019b). We already know a considerable amount about the estimated annual value of many biodiversity and ecosystem services, and each year we learn more. Table 8 gives estimates of some biodiversity, protected area, and ecosystem services. Drawn from multiple sources and still involving some degree of uncertainty, these numbers indicate the magnitude of their economic value as natural capital.

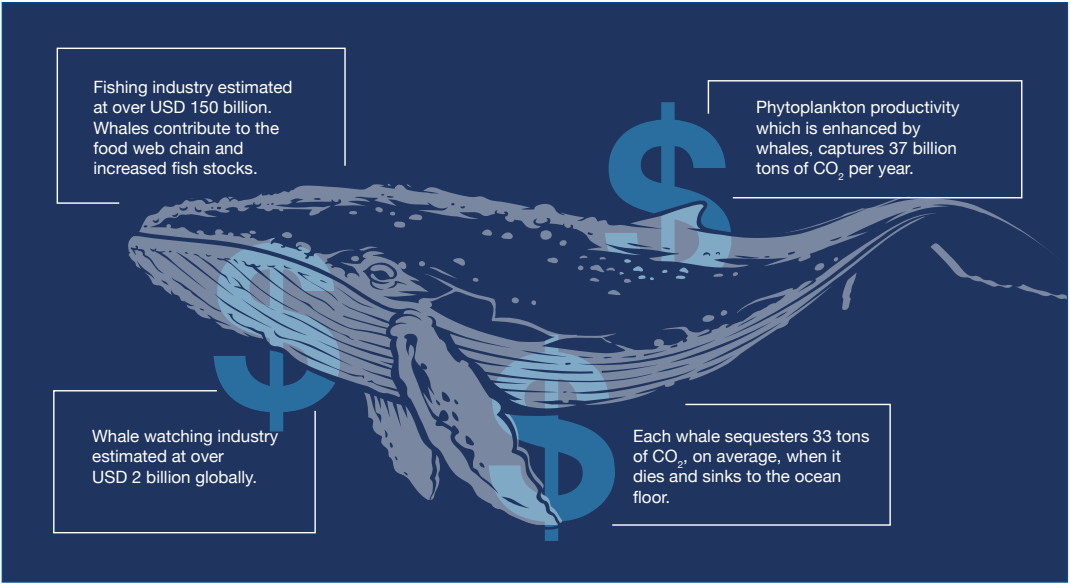


Figure 9: The value of a whale

Source: Modified after Chami et al., 2019. IMF, in WB 2020b, p. 94; GRID Arendal, <https://www.grida.de>

The significant annual monetary value of Earth’s biodiversity, protected area, and ecosystem services as estimated above by the OECD and its member countries underscores the importance of valuing what is called ‘natural’ capital as an essential part of decision-making about sustainable development and investment options. Box 3 gives an overview of growing activity in the application of natural capital.

Table 8: Biodiversity and ecosystem services values

Scale	Good or service	Estimated annual value
Global	Seagrass nutrient cycling	USD 1.9 trillion
Global	Annual market value of animal pollinated crops	USD 235-577 billion
Global	First sale value of fisheries and aquaculture	USD 362 billion
Global	Coral reef tourism	USD 36 billion
Europe	Ecosystem services from Natura 2000 protected areas network	EUR 223-314 billion

Canada	Value of commercial landings from marine and freshwater fisheries	CAD 3.4 billion
France	Recreational benefits of forest ecosystems	EUR 8.5 billion
Germany	Direct and indirect income from recreational fishing	EUR 6.4 billion
Italy	Habitat provision	EUR 13.5 billion
Japan	Water purification from tidal flats and marshes	JPY 674 billion
United Kingdom	Physical and mental-health benefits of the natural environment	GBP 2 billion
United States	Air purification from trees and forest (avoided morbidity and mortality) USD 6.8 billion	

Source data: OECD (2019a) p. 26 (in the OECD document 12 different sources are given for these figures)

Box 3: Natural capital, Natural Capital Protocol and Natural Capital Coalition

Natural capital is one of several commonly recognised forms of capital, including financial, manufactured, social and relationship, human, and intellectual capital. The growing need to conserve and enhance natural capital is well documented. Humans are depleting natural resources faster than the earth can replenish them, and at an accelerating rate. Financial capital has been able to grow in large part through the use, exploitation, and degradation of natural and social capital.

Natural capital is regarded as key to supporting all other forms of capital; it provides the resources to build our societies, economies, and institutions, and ultimately regulates the environmental conditions that enable human life. Furthermore, the benefits of natural capital (e.g., fresh water) are often only realised by applying other forms of capital (e.g. manufactured capital like a water pump, which is purchased using financial capital, and owned and operated thanks to social and human capital). This integration makes it impossible to completely separate any one form of capital from the others and considering trade-offs between them will be part of any decision.

The Natural Capital Protocol (the Protocol) is a framework launched in 2016 to help business managers calculate the real costs and value associated with their use of natural resources. The Protocol was created under the auspices of the 'Natural Capital Coalition', a collaboration among leading organisations in research, science, academia, business, advisory, membership, accountancy, reporting, standard setting, finance, investment, policy, government, conservation, and civil society. The Protocol covers how to measure and value impacts on nature, and how to apply those results and integrate natural capital into existing processes. It aims to support enhanced decisions by including how we interact with nature, or more specifically natural capital, in decision making. Until now, natural capital has for the most part been excluded from decisions and, when included, has been largely inconsistent, open to interpretation, or side-lined by moral arguments. The Protocol responds by offering a standardised framework to identify, measure, and value impacts and dependencies on natural capital. IUCN's Global Business and Biodiversity Programme, along with World Business Council for Sustainable Development and a consortium of organisations, has led the business outreach on the Protocol.

Today, the Natural Capital Coalition has evolved into 'Capital Coalition' and, according to its new website, they espouse a 'capitals' approach which enables organisations to understand how their success is directly or indirectly underpinned by natural capital, social capital and human capital (as well as produced capital), to help them make decisions that offer the greatest value across all capitals. Their common vision is of a world where business conserves and enhances the natural capital that safeguards thriving societies and prosperous economies.

Source data: Natural Capital Coalition website at: <http://www.naturalcapitalcoalition.org/protocol>

2.3.7 Addressing risk

When discussing rate of return, the issue of risk requires special consideration. Investment is by nature a forward-looking tool, and for sustainable investing, and particularly reversing the biodiversity funding gap, this means forward-looking for the long term, decades at least. Longer-term timeframes may present investor risks that may not be so apparent for shorter-term investments. Looking far into the future means there is more uncertainty about environmental, economic, and social change, whether the country will remain stable and able to implement and enforce commitments made, and how other pressures from global change may complicate implementation. One of the main tools for helping to ease the sense of risk and uncertainty is to be able to calculate the true value of the natural resources (biodiversity, ecosystem services) being restored, conserved and maintained. The second essential tool is to have stable and modern investment policies and a regulatory framework that emphasises transparency and predictability, consistency with other laws, fairness and equity, and participation of interested stakeholders.

It can be anticipated that biodiversity-related financial risks may vary in scope and complexity, with more unknowns about future risk as the investment becomes longer-term, 10-20 or even 30 years. There may be risks with transition to an economy that conserves and restores biodiversity including regulatory changes to incorporate natural capital principles and raising costs for some businesses. There may be risks related to the physical impacts of biodiversity loss, including destruction of natural resources that industries are dependent on. Or there may be litigation risks for non-compliance with laws and regulations aiming to stop biodiversity loss, or more far-reaching impacts of biodiversity loss on food security, health, and socioeconomic development.

To combat these risks, it is important to understand the purpose and objectives behind the investment, aiming for projects shown to contribute positively to biodiversity (positive screening), make sure stakeholders are informed, verify the commitment and capacity of the country to implement the project and as far as possible minimise known risks with flexible management practices and regular monitoring. It also is important to decline any investment that will negatively impact biodiversity (negative screening).

In addition to undertaking good analysis (due diligence) of the investment project features and potential for success, there are additional tools for reducing risk. Where the investment plan involves a private-public partnership, for example, a large private investor and a multilateral development bank (such as the World Bank), one of the partners may offer a financial guarantee in case the borrower defaults or the asset loses value. The guarantee bridges the gap between perceived and actual risk, with payout only being triggered when there is a payment default. This becomes a form of insurance against failure.

Another tool to reduce risk is to use more than one source of finance (sometimes called ‘blended finance’). Often this means combining some public and philanthropic capital with the principal private investment so that the risk can be spread, and the public and philanthropic capital can be in the form of a guarantee or concessionary loan thus ensuring that the private capital is fully deployed for project implementation and the anticipated positive environmental benefits (Deutz et al., 2020, p. 146).

A third tool for risk reduction is providing technical assistance alongside the financial investment, perhaps with the aid of some public or philanthropic funds. Because environmental and social impacts are generally complex, technical assistance may be needed during the design or implementation

phase to help Governments in policy implementation, or during monitoring and evaluation when experienced technical assistance specialists can help accurately and efficiently use appropriate metrics to measure impacts (Gommans et al., 2016, p. 6-8).

Finally, another approach to reducing perceived risk to investors with ESG investments is to apply certifications or explicit standards as criteria for screening and ongoing monitoring. The use of explicit standards may tend to reduce the amount of risk fund managers are willing to take. In addition, where they require investees to attain respected certifications in such areas as agriculture or forestry or sustainability in general, this is another indication of socially and environmentally responsible management at the investee level. See Table 9 for examples of such certifications and ESG standards.

Table 9: Examples of certifications and standards for ESG investments

Certification	Relevance to landscape investment/risk mitigation
Certified B Corporation	Must perform minimum verified score to meet rigorous standards of social and environmental performance
Committee on World Food Security	Principles for responsible agricultural investment that respects rights, livelihoods and resources
Forest Stewardship Council Certification	Ensures that products come from responsibly managed forests
Global Good Agriculture Certified	Demonstrative of commitment to advancing good agricultural practice in 3 scopes of production: crops, livestock, aquaculture
Global Standards Certified	Guarantees standardisation of quality, safety and operational criteria; ensures that manufacturers fulfil legal obligations and provide protection for end consumer
OPIC/IFC ESG frameworks	Environmental social governance by which OPIC and IFC operate
Organic Certification	Signals validity of organic practices in agricultural production
Sustainable Forest Initiative Certification	The world's largest forest certification standard by area requiring third-party audits, and covering protection of biodiversity, at-risk species, and wildlife habitat
UN Principles for Responsible Investment	Internationally recognised principles that demonstrate commitment to building a more sustainable financial system
Voluntary Guidelines on the Responsible Governance of Tenure	Voluntary guidelines on the responsible governance of tenure of land, fisheries and forests in the context of national food security

Source data: Gommans et al., 2016, p. 16

2.3.8 Credit rating of the country

Credit rating agencies (CRA) have become more involved with ESG issues as market demand has grown. CRAs are regulated entities whose main role is to assess a country's or business's creditworthiness and ability to repay. Because of the complexity and uncertainty of risk factors for ESG investments, especially those related to the environment, credit rating agencies are increasingly

looking to build in-house capacity and undertake ESG research to be able to properly integrate ESG issues into their ratings. There remain major challenges understanding ESG sovereign credit risk factors because of the lack of formalised standards and difficulties separate ESG factors from traditional indicators present in rating methods.

Nevertheless, CRA ratings are a significant consideration when large investment institutions are examining funding an ESG project. According to the CRAs, if ESG factors are determined to be material, they are always integrated into the country's sovereign credit ratings. However, understanding particular risk factors in order to set a final credit rating is only as accurate and useful as they are clear and material in timing and impact. There are major credit rating agencies worldwide and some specialise in different geographic regions; many have signed the United Nations-supported Principles for Responsible Investment (PRI).

2.3.9 Summary points

1. Increasingly, investments' sustainability is gaining momentum among institutional investors and many of their shareholders. This is stimulated by growing concern that global events such as the COVID-19 pandemic, climate change impacts, and drastic loss and deterioration of nature and biodiversity have significant negative consequences for economies and societies across the world.
2. The movement toward sustainable investing is being triggered by investor concerns over environmental, social, and governance (ESG) issues that may need funding attention in order to achieve a successful investment and sustainable results overall. This is particularly the case in emerging and developing economies.
3. Investment projects focused on a landscape or seascape approach may be large and cut across sectors and government levels. For a holistic approach to investment and implementation, large-scale conservation funding may require a structure that combines different institutional investors and a blend of financial tools including both investments (loans/equity) and grants.

2.4 Key considerations for emerging and developing economies seeking ESG investments

While ESG investing is relatively new as a financing option, its potential for exceptional growth has led a number of organisations to put together guidance on what emerging and developing economies, among others, need to do to attract large-scale ESG financing (see, for example, Boitreau et al., 2020; Boffo & Patalano, 2020; CFA Institute, 2020b; CFA Institute, 2018; Georgieva & Sloggett, 2019; Gratcheva 2021; Inderst & Stewart, 2018; International Finance Corporation (IFC), 2012; Matos, 2020; Monitor Institute by Deloitte, 2009; Nuzzo & Georgieva, 2020; OECD, 2017b; Rosov, 2018; State Street Global Advisors, 2020; and United Nations Principles for Responsible Investment (UNPRI), 2019).

A common message is the importance of showing policy and political commitment for ESG through the government's international and national actions, laws, regulations, policies and programmes for green growth and environmental protection, building debt management capacity, and maintaining a good credit rating. Financial experts stress the need for careful analyses and coordination, rigorous planning to determine eligible sectors for funding and how the proceeds will be used, being informed about the various potential investors and institutions, regulations, and processes that should be in

place before the debt management office of the government or international corporation formally seeks ESG funding from large-scale investors.

The discussion here draws mostly on publications about ESG for emerging and developing economies, governments likely to have basic financial infrastructure to manage ESG debt/equity and deliver positive results. The most common form of debt for these governments could be ESG bonds (green or blue) issued as sovereign bonds (see Chapter 5 on ESG financial instruments). For corporations, the investment instrument could be corporate green or blue bonds, or green or blue equity (stock). For the most part, private finance flows go to the private sector ESG investors in the case of both institutional investors and individual/retail investors. However, the financing of public debt for environmental projects and programmes is gaining traction with private institutional and individual/retail investors for sustainability concerns and mainly to support non-financial nature-based solutions (for example, expansion of protected areas, land/sea restoration, biodiversity conservation, or climate action).

Specific guidance to sovereign debt managers is available from the World Bank (World Bank, 2020a) and for corporations seeking funding for environmental and social projects in qualifying countries, from the International Finance Corporation (IFC) of the World Bank Group (IFC, 2012). The European Investment Bank also promotes conservation financing to governments through its dedicated Natural Capital Financing Facility (EIB, 2019). Particularly for large investments, private investment institutions normally will coordinate with the World Bank or the relevant development bank in the region to help minimise risk by relying on the Bank's due diligence research of the government or corporation in relation to the potential investment opportunity in order to confirm all relevant facts and financial information.

In addition to the EU Natural Capital Financing Facility, there are a number of other investment funds operating around the world or in specific regions promoting green investment. One fund, the Green Climate Fund (GCF), is a hybrid fund created by countries as a principal financial mechanism for the 2015 Paris Agreement and is the world's single-largest source of public finance dedicated to helping developing countries raise and realise their Nationally Determined Contributions (NDC) commitments towards low-emissions, climate-resilient pathways (www.greenclimate.fund). In addition, there are a growing number of private sector facilities setting up special funding programmes with explicit efforts to involve emerging and developing economies and focus on 'impact investing' (aiming for specific impacts). These include the Mirova Natural Capital/Althelia Funds, EcoEnterprises Fund, Ecosystem Investment Partners, Green Century Funds, and Asia Climate Partners. And at the country level, Malaysia's Green Technology Financing Scheme and Environmental Investment Fund of Namibia are two examples of a growing pool of country initiatives.

The rest of this section highlights the kinds of broad policy, law, institutional and operational elements that an emerging market economy or public enterprise should anticipate putting in place to attract ESG funding. (The points below are mainly drawn from 2020 World Bank guidance for what they call 'Emerging Markets and Developing Economies' (EMDE) seeking private international institutional or individual/retail investors for ESG projects; see Boitreaud et al., 2020).

2.4.1 Debt management office or focal point

Where one is dealing with investments to the government directly or one of its public enterprises, or an international corporation interested in undertaking green projects (ESG, conservation,

climate, etc.), it is critical for these entities to have an institutional focal point, commonly known as the debt management office (DMO). This person or unit should have financial expertise to advise on environmental investment needs/strategies and get technical assistance as needed. It should serve as the initial and ongoing contact for potential investors on matters of the green investment strategy, priority projects, and sovereign debt. It should have the responsibility to coordinate across departments involved. The Ministry of Economy, or equivalent, should be a prime player, sometimes along with the Central Bank, especially for large-scale investments. Indeed, for easy access to other financial experts, it may be convenient for the government DMO to be located in the Central Bank or the Ministry of Economy (or equivalent). Coordination functions could include working on specific project proposals with sector ministries involved – for example, Ministry of Conservation/Environment/Fisheries/Nature Protection, Water Resources/Health. It also should be a focal point for channelling questions and data to and from other relevant government departments, and potential investors.

The DMO also should be the entry point and have a similar role where potential private investors can go to understand how the government works for purposes of their involvement with public enterprises, corporations, or directly with government investment. This could include exchanging specific project investment ideas, possible local and international partners, understanding relevant investment laws and regulations, including on ESG, sector or corporate laws that may apply, main implementing and monitoring institutions, and local communities and indigenous groups that should be consulted or may want to participate.

The DMO and involved sector offices also need to get educated about potential investors, their profiles, focus, and experience working effectively with conservation financing in emerging and developing economies.

2.4.2 ESG definitions, standards, and measures of performance

As discussed further below in Part 5, presently there is a lack of clear international standards for green and sustainable investing overall, and ESG investing in particular. A number of organisations and institutions are moving fast to develop guidance and achieve some consistency across governments, investor institutions and corporations in anticipation of a significant inflow of investor funds for sustainable projects in the coming years. Guidelines, standards, definitions, and measures of performance adopted in an investees policy framework, including technical assistance, can help build investor confidence in the ability of the country to guide design and succeed with implementation.

This also helps promote transparency and disclosure of information, essential conditions for successful investor support and investor-investee trust. Local and international investor confidence is critical not only for making informed decisions about proposed ESG or related projects but also to increase investor assurance that the government or public enterprise is also making informed decisions and is committed to effective implementation, achieving the conservation results intended, and repaying the debt in the case of a sovereign or corporate loan or bond. It should not be the responsibility of each DMO to prepare new standards, definitions, or requirements. Much guidance is already available from the international community, as well as through possible examples from other countries which the DMO may wish to contact. Table 16 at the end of this paper provides a sample of organisations working on guidelines and standards for ESG and green investing.

2.4.3 Planning and managing a project pipeline

Among government duties related to adopting or adapting standards and guidance is the task to identify eligible sectors and activities for ESG funding. Eligible sectors could include national parks restoration or expansion, biodiversity conservation, coastal/marine integrated management, sustainable fisheries, afforestation, water and waste management, sustainable agriculture, renewable energy, and climate change adaptation and mitigation. Sectors may be chosen because they are priorities among the government, are already recognised as major contributors to biodiversity loss and environmental harm, are selected to fulfil an international obligation (SDG, Paris Agreement, CBD, etc.), or are existing projects which need significant increased financial support to fully achieve their conservation objectives.

When the government, public enterprise, or corporation is interested in attracting green or more specifically ESG investments, the benefits and costs of each environmental investment should be carefully weighed. Equally important is to consider whether the DMO has the capacity to undertake its core functions managing the government's market development and financial system, in addition to new green-oriented investments into the country. Part of the negotiation process may need to include increasing that capacity.

Table 10: Examples of potential sets of indicators for performance

Response theme	Input	Process	Output	Outcome	Impact
Protected areas	Increase in finance and staff for PAs	Systematic conservation planning	New legislation to increase PAs	Increase in PA coverage	Increase in species abundance
Sustainable fisheries		Inter-Ministerial Committee on Sustainable Oceans	Fisheries management plans	Increase in % of fish from sustainable sources	Reduction in the number of fisheries over-exploited
Pesticide use		Assessment of environmental impacts of pesticides	Reduction in pesticide subsidies; introduction of pesticide taxes	Decline in pesticide use per hectare	Increase in farmland biodiversity (e.g. farmland bird index)
Sustainable agriculture		Assessment of subsidy impacts on biodiversity	Farm-level biodiversity management plans	Increase in uptake of sustainable practices and habitat creation	Increase in farmland biodiversity (e.g. farmland bird index)

Source data: OECD. 2019b, p. 58

Once a sector(s) is selected, the borrower government/public enterprise should assess the project pipeline and plan how the proceeds from the investment will be used along with a general timeline, size of the investment and how the proceeds will be disbursed. ESG investors (potential and current) will normally be focused on management of the proceeds and indicators to represent the changing state of the project as new targets are defined. It is important that any indicators used are defined

by their intended outputs and outcomes. There may be conservation outputs (for example, new legislation for protected areas, with corresponding outcomes (e.g. greater coverage/restoration of protected areas) or impacts (e.g. higher species abundance). There may be indicators to ascertain the availability of baseline data; and to determine the cost of collecting and maintaining new data. Tables 10 and 11 provide a few examples of indicators that can be used for policy responses. (see OECD, 2019b, for an extensive discussion on indicators and data gaps).

Some of the above indicators can be translated into financial return, for example, where sustainable agriculture results in less pollution run-off (saving clean-up costs) or increased production. The reduction of fisheries overexploitation could result in restoration of a commercial fishery with time. These are measures of how well the investment performed both financially and non-financially.

It is clear that investors of conservation projects as well as conservation managers of those projects need to be concerned about how well the project is progressing in non-financial terms (i.e. substantive improvement), from start-up to potentially year 10 or 20 or 30, depending on the financial commitment and sustainability goal. This requires regular monitoring of conservation activities on site. A monitoring schedule should be agreed upon by the investing institution and project manager in the investee country. In addition, from the beginning, there should be some agreement on the kinds of metrics that will be used for monitoring the main conservation activities to understand if the goal is being advanced or if some redesign or other change is needed. This could include acquiring targeted technical assistance or equipment, involving the local community in more hands-on monitoring, incorporating more of the traditional knowledge of indigenous peoples, or recruiting specialised scientific or community expertise. Table 11 offers some examples from OECD analyses on the kinds of metrics that could be considered for monitoring non-financial performance of long-term large-scale conservation investments.

Table 11: Examples of metrics to monitor non-financial performance of conservation projects

Examples of conservation objectives	Possible metrics	Information source
Sustainable management of a wildlife reserve or forest	<ul style="list-style-type: none"> • # hectares under management • % change in indicator species 	<ul style="list-style-type: none"> • Remote sensing data • Field surveys
Sustainable management of species habitat within a production landscape	<ul style="list-style-type: none"> • # hectares of habitat protected • % change in population of key species • threat levels (changes over time) 	<ul style="list-style-type: none"> • Remote sensing data • Field surveys
Climate mitigation	<ul style="list-style-type: none"> • Reduced greenhouse gas emissions as a result of improved land management practices (in tons of CO₂-equivalent, CO₂e) • CO₂e from growth of new biomass 	<ul style="list-style-type: none"> • Localised data to assess CO₂e from intervention (e.g. soils, above- and below-ground biomass, tree growth rates) • Historical data on land use patterns (e.g. from satellite imagery)

Sustainable fisheries	<ul style="list-style-type: none"> • Stock Rebuilding Status • Incidence of IUU31 • By-catch of endangered species • Managed Access Schemes • Right Based Management • Primary Landing Value • Community Leadership 	<ul style="list-style-type: none"> • Stock assessment data • Enforcement surveys • Fishery logbook data • Fishery management data • Vessel monitoring data • Fish port landing data • Commercial auction data • Fishery organisation data
Soil rehabilitation in a municipality	<ul style="list-style-type: none"> • Soil organic matter (SOM) • Soil pH, soil nitrate • Soil structure, bulk density, infiltration • Soil biodiversity and microfauna, soil enzymes, soil respiration 	<ul style="list-style-type: none"> • Field surveys (soils and plants) • Soil databases
Improvement in water quality	<ul style="list-style-type: none"> • Concentration of relevant organic or chemical compounds • Incidence of relevant organism / species 	<ul style="list-style-type: none"> • Experimental measurements, possibly through sensors • Field surveys
Sustainable local livelihoods	<ul style="list-style-type: none"> • # people engaged in sustainable livelihoods / jobs created • # sustainable enterprises created • value / amount of sustainably produced goods and services brought to market (e.g. # tons of sustainable charcoal, eco-tourism revenue) • Extent of indigenous and Community Conserved Areas • Changes in knowledge, attitudes and practices relevant to conservation objectives 	<ul style="list-style-type: none"> • Field surveys • Market data • Participatory mapping

Source data: *Capitalising Conservation/Clarmondial*, 2017, p. 29-30

2.4.4 Grievance mechanisms for affected communities

An important tool for exchanging information about the borrower's environmental and social performance with an ESG investment, and also to receive stakeholders' views, is a mechanism to receive and facilitate resolution of concerns and grievances from communities that may be affected. Under current multilateral finance institutions and their safeguard systems, grievance mechanisms are generally project specific, even though there should be a national law that enables or requires other types of dispute resolution mechanisms.

The grievance mechanism and its procedures should be scaled to the risks and adverse impacts of the specific project and have potentially affected communities as its primary user. It should include safeguards to protect the affected communities' rights, mitigation of negative impacts, and mediation as an option for resolving disputes. It should seek to resolve concerns promptly, using an understandable and transparent consultative process that is culturally appropriate and readily accessible, and at no cost and without retribution to the party that originated the issue or concern.

The mechanism should not impede access to judicial or administrative remedies. The country or business client should inform the affected communities about the mechanism in the course of the stakeholder engagement process. This is also a performance principle of the IFC for environmental and social investing (see IFC 2012/2021, and Table 16 on IFC principles).

2.4.5 Guidance from organisations on ESG and other green investments

Several organisations offer blueprints or decision-making frameworks for governments, public enterprises or corporations interested in pursuing an ESG investment as noted above. These guides are especially useful for emerging market governments or their public enterprises, particularly when there is in-house expertise to complete the necessary paperwork suggested by such guides. This includes providing a description of the envisioned investment need and plan, seeking investors, and addressing questions to show the requisite policy framework and management capacity for reporting, including financial and performance reporting, as well as for implementation over the life of the investment. Such guides provide some flexibility recognising that each government or corporation has unique characteristics, needs, and capacities.

The general purpose of the said guides is to assist organisations and governments scale up their efforts to attract and mobilise higher volumes of private financing in conservation than currently exists, less than 1 % as of 2018 (CPIC, 2018, p. 11). Without major, increased participation by the private sector in the coming years, it is generally acknowledged that the conservation financing gap will not be possible to close with only public and philanthropic funding (see, e.g., CPIC 2021, Deutz et al., 2020). And many leaders in the world of private finance (as noted in the Annex 3 Table) are ready to broaden their share of support and materially contribute to narrowing the conservation financing gap. There is now the need to grow the number of bankable investments coming to emerging markets and developing economies and build larger scale groupings of such investments, rather than only rely on one-off, small-scale projects.

Among the organisations publishing guidance to increase ESG private investment activity are the World Bank, (Boitreaud et al., 2020), the Coalition for Private Investment for Conservation (CPIC) (Stephenson et al., 2018), the European Investment Bank (EIB, 2019), and Clarmondial/WWF/GEF (Capitalising Conservation, 2017). Highlights from these four sources illustrate key undertakings a government or enterprise should take to engage institutional investors:

- Get to know the financial basics: The meaning of debt in the form of loans or bonds and equity (shares of stock in a business enterprise) (see discussion on green financing products below). For governments, a likely instrument will be a sovereign green or blue bond which may be incorporated in the government's 'Local Currency Bond Market'.
- Conduct an in-house assessment of the current situation with respect to the state of market development in the country and the feasibility of adding an ESG investment, or expanding an existing project. As suggested by the World Bank, governments in which sovereign bond markets are just beginning to come into existence will generally not meet all the ESG market readiness factors (Boitreaud, 2020, p. 33). If this analysis finds that some of the readiness factors are weak, the advice is to first remedy those. If there seems to be a positive enabling environment, the government directly, its public enterprises, or interested international corporation could take the next step of identifying specific ESG projects for investment. In the case of a government project, the form of the investment is likely to be a debt instrument called sovereign bond (green or blue).

- An office (or unit) responsible for debt management inside the national government should be established and begin to engage with other government departments and stakeholders on the ESG-related funding needs. It is important to align the proposed ESG strategy with other relevant national strategies and action plans, and international commitments dealing with environmental and social sustainability, including the SDGs, climate change commitments, and good governance.
- The office in charge of debt management should engage with the main credit rating agency(ies) covering that government or region, as well as other external credit rating agencies to understand the government's credit rating and how it can be improved to attract large-scale private investors for long-term investments.
- Once the government has established a sound ESG strategy, it should engage with institutional investors (both national and international) including potential new investors, providing information on their strategy and tailoring presentations to the different investors. This interaction should take advantage of the fact, as reported by the World Bank, that many private institutional investors are increasingly interested in engaging with emerging market governments, especially, with sovereign bond issuers on ESG issues (Sebastien et al., 2020). This suggests that debt managers would be most effective when interacting with such investors if they are knowledgeable about ESG issues generally as well as with the specific ESG strategy.
- Where overall feedback on the conservation investment opportunities continues to be positive, the office of debt management in the country or enterprise should prepare information for potential institutional or individual/retail investors to help them fulfill their 'due diligence' responsibilities on behalf of the company and its shareholders.

Due diligence is the investigation to confirm facts or details of a matter under consideration. In the financial world, it includes an examination of financial records before entering into a proposed transaction with another party. The list below illustrates the kind of information relevant for a due diligence check (adapted from *Capitalising Conservation*, 2017; pp. 39-40):

- A summary of the conservation target and business case underlying the investment opportunity, i.e., the non-financial goal (both conservation and social); the way the investment capital will be used to achieve that goal; the source and timing of financial returns to investors;
- Any experience or insights that are the basis of the proposed strategy, including any comparable investments with a good financial track record, pilot projects or scientific insights supporting the suggested approach;
- Description of the direct and indirect conservation impact that will be achieved with the investment, and what metrics will be used to measure non-financial goals as well as who will measure, collect, and report these non-financial goals;
- Indication of other relevant stakeholders and partners and what role they will play in implementing the investment strategy and delivery of the targeted conservation impact; how those stakeholders may be affected, positively or negatively, and what incentives may be available for their participation;
- What asset(s) will the investors acquire. If the borrower is a public enterprise, the asset could be in the form of shares in the company with the right to dividend payments; if it is a government directly the instrument will likely be a long-term loan or bond, probably in the form of a green or

blue bond with interest payments and at the end of the bond term, return of principal, or some combination. Also, a description of any risk mitigation measures should be mentioned, e.g., guarantees, blended finance, special insurance.

- Financial requirement and where will the funds raised from investors be directed. This should include a clarification on the investment currency and the investment period. International investors are traditionally interested in hard currency issuance (i.e., currency that is not likely to depreciate suddenly or to fluctuate greatly in value), although there is starting to be some foreign participation in local currency bond markets.
- Structure and governance also need to be indicated, particularly which bodies will govern the investment structure and how investors can participate in governance.
- The role of conservation organisations, local communities or Indigenous groups, if any, should be included in such functions as review, fact-finding, monitoring, reporting on substantive progress, and implementation. This information should include the expertise of that organisation and any work it did in developing the investment opportunity.
- Finally, there need to be schedules for financial reporting and non-financial reporting, payment schedules, and implementation progress on the ground. There should be an indication of the frequency and content of such reporting to investors. A description of the proposed accounting standard and valuation method should be included along with any regulatory approvals required for the investment.

2.4.6 Summary points

1. Governments should designate a debt management office/officer (DMO). The DMO should position itself as the most detailed information source on the country's own ESG and climate efforts. The DMO is also in the best position to describe the country's policies and approach to these issues, the existing sustainable development policies, and where policies and capacities should be strengthened. Reduction in information gaps can potentially result in lower risk premiums and reduce the cost of borrowing for the sovereign issuer.
2. Some of the risks of large-scale investment projects in ESG and other green investment can be reduced by having a dedicated technical assistance component funded by the government, a foundation, donor, or some development agency. This entity should be involved from the beginning with design of the investment project or programme, helping to communicate with investors, and monitoring design, reporting and implementation. This may help give private sector investors more confidence in participating in the investment.
3. Governments, NGOs, and local communities and Indigenous peoples have roles to play to promote and catalyse conservation investments by helping new foreign investors and asset managers understand the most critical priorities and incremental steps to take in large-scale funding of protected areas, biodiversity conservation, climate action, and achievement of SDGs.
4. Transparency, clear reporting, and ongoing communication between the investor institutions or individuals and appropriate government entities, public enterprises or international corporations getting support for local conservation initiatives on the social and environmental performance of the project or programme, and how it is contributing to the success of the investment. Partnering with a respected third parties to perform monitoring tasks and adopting and adhering to well-known international standards of monitoring, reporting, and evaluation can signal credibility.

5. Local proponents of investment projects should make sure they understand potential investors, how they function, and their main areas of interest in order to efficiently market each investment opportunity. These features may differ from investor to investor. It is important that messaging is clear and tailored for each investor.

Part 3 Creating national enabling conditions for green investment

It is worthwhile to briefly review what has been covered so far as context for this part. The paper began in Part 1 with multiple data sets estimating the growing global funding gap (approaching USD millions and billions annually) between what is needed and what is available to effectively protect and restore nature, maintain and expand protected areas, reverse biodiversity loss, and build climate resilience. With this shocking news, an overarching question became how to significantly supplement public and philanthropic funds, which cannot by themselves close this gap, with private and public investment. Some investment initiatives have begun but much more is needed and education and knowledge-building of both investors and governments are part of the solution. Thus, Part 2 began reviewing threshold considerations of international and foreign investors for them to be interested in exploring ESG and other green investment in developing countries, especially emerging markets and developing economies. In that light, Part 2 continued in a second sub-part to look at core issues for potential investee governments to respond to and attract international and foreign investors to green financing ('green' used here as a generic term covering sustainable investing, ESG investing, climate investing, conservation investing, and related environmental financing, as explained in the introduction).

Part 3 now turns to specific national policy, law, and institutional enabling conditions critically important for attracting and sustaining private foreign investors to engage in large-scale, sustainable, green investments in partnership with governments and others. It is important to start by recognising that policy and law can be interrelated, but they definitely serve different purposes in most countries and thus have different functions when it comes to developing the right enabling environment to ensure conservation investing is legally grounded. As a general rule, policy outlines what a government is going to do and what it can achieve for the society as a whole; law sets standards, rules, and procedures that must be followed in society and exists at every level of government – local, subnational, national. In most countries, policies lead to new laws where enforcement may be an issue. However, there are a few countries where certain policies may be legally binding, especially if they are recognised in international law or constitutions. There is a related concept called 'soft law' which may reflect certain policies, agreements, principles and declarations that are not legally binding (such as UN General Assembly resolutions). Hard law refers generally to legal obligations that are binding on the parties involved and which can be legally enforced before a court.

For foreign green investment to occur in any country, including in particular an emerging market or developing economy, the enabling environment must be supportive and also clear about what can be done, how the investor is protected and what are associated obligations (e.g. transparency, rules on disclosure, reporting, metrics to measure progress). These elements can be reflected by policy statements but normally will need to be backed up by specific laws and regulations. Some of these laws and regulations will be part of the formal legal investment framework authorising ESG and other green investments; others may relate to institutional roles, good governance, involvement of affected local communities and indigenous peoples, or environmental and social safeguards, including using best available science. The aggregate enabling environment must be sufficiently clear, strong, and fair to have the potential to attract foreign private and domestic investors as well as development finance institutions, philanthropy, and conservation groups. Given the scale of financing gap, making

progress on biodiversity, protected areas, climate change, SDG, and the new 2030 goals and targets for the CBD Global Framework, all possible investment sources must be involved.

In addition, the role of government in mobilising ESG or other green investments goes beyond regulations to several supportive actions (see Figure 11).

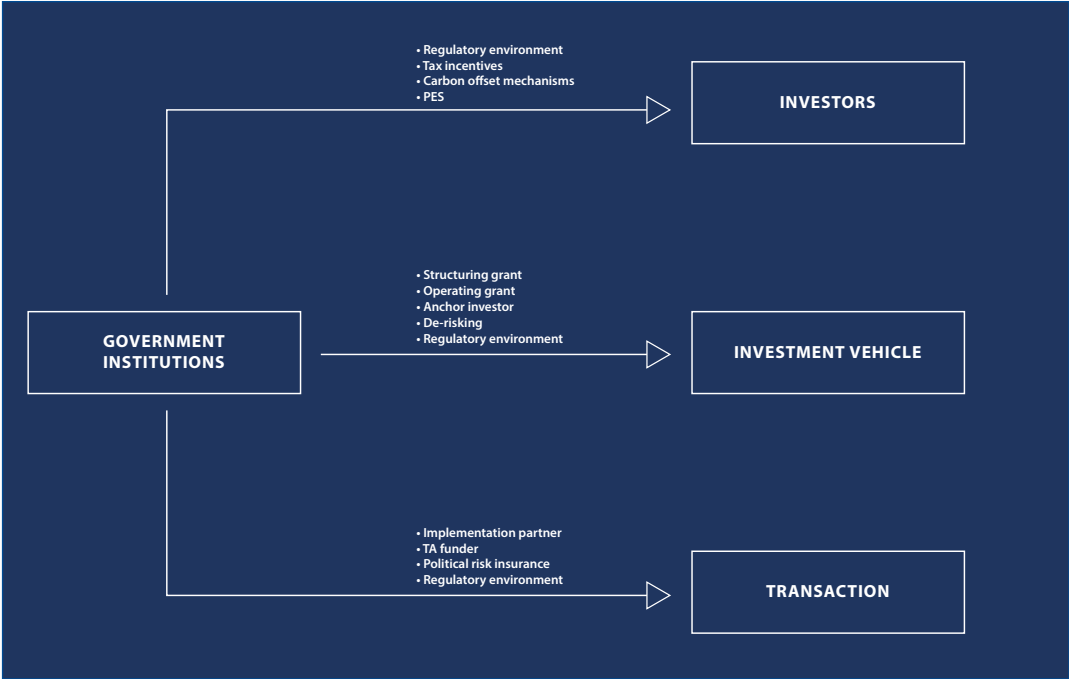


Figure 10: Possible roles of governments in mobilising investment

Source data: Capitalising Conservation, 2017, p. 17

The first step in building a favourable national enabling environment for investing is to have a supportive policy and law framework. While in the end each government must design its policies to fit its particular situation (economic, natural resource, social, cultural), there are some common elements every government should have in place. The remainder of this part turns to key law, policy, and institutional considerations, especially for emerging market and developing economies, important to consider in order to be attractive for sustainable investment overall and green/ESG investment in particular. There are three components to building a supportive policy and law framework: 1) an umbrella investment statute or statutes setting out the rules, protections, and conditions for investing in the country, 2) international investment agreements with foreign investors, and 3) a legal framework for investments that support specific impact projects in the field of conservation (sometimes called impact investing). They are summarised below.

3.1 Investment legal framework

In spite of the growing global call for sustainable investment, the literature reflects disappointment by international organisations on the state of investment statutes and regulatory regimes in many countries needing green and sustainable investment. UNCTAD issues an annual report on the world's

investment picture and its World Investment Report 2020 found that weaknesses in the investment policy framework in many countries include giving no attention to core SDG sectors, including biodiversity and climate change:

Despite commitments to the SDGs by all countries at the highest level, not enough has been done so far to promote investment in SDG sectors. Although many countries have adopted sustainable development strategies and related national development plans emphasising the need to attract more capital into SDG sectors and activities, comprehensive action plans on how to promote investment and how to maximize its impact on sustainable development are to a large extent absent.

Investment promotion schemes in most countries are not specifically targeted at attracting investment in SDG-relevant sectors. To the extent that incentives or other promotional measures that focus on specific SDG sectors are in place, they often leave out core SDG sectors, such as health, education, ecosystems and biodiversity, water and sanitation, and climate change adaptation. Recent years have also witnessed some investment liberalization measures in SDG sectors. The persistent and significant investment gap calls for more systematic efforts to mainstream the SDGs into the overall investment policy framework of countries and to embed SDG strategies into investment promotion schemes. (UNCTAD WIR, p. 221)

UNCTAD's *World Investment Report 2020* includes a set of what it calls “transformative actions” to strengthen SDG investments, especially in developing countries. The report (p. 223) suggests an action plan with broad, overarching actions countries should take to make a big push to mobilise SDG private investment:

- a) Mainstreaming SDGs into the national investment policy framework and international investment treaty regime;
- b) Re-orienting national investment promotion and facilitation strategies towards SDGs investment,
- c) Establishing regional SDG investment compact;
- d) Fostering new forms of partnerships for SDG investment with investment-development stakeholders;
- e) Deepening the integration of ESG in financial markets; and
- f) Changing the global business mindset.

The OECD is a good source of guidance on specific elements a government should consider in its legal framework for investment. Having worked on the issue for more than 10 years, that organisation's 2015 report, *Policy Framework for Investment*, noted above, was undertaken with the objective of mobilising private investment that “supports steady economic growth and sustainable development” as well as advancing implementation of the UN Sustainable Development Goals (OECD, 2015, p. 3). Drawing on international practice, the report proposed guidance in several aspects they considered “critically important for improving the quality of a country's enabling environment for investment” (Id., p. 3). The World Bank Group, UNCTAD, UNESCAP, the European Commission and other international and regional organisations participated in preparation of that policy report.

Key enabling elements in the legal framework are summarised below. It should be stressed that these are guiding points only. If a country, particularly a developing country is considering strengthening or enacting a new investment law, this is a complex area that needs to be fine-tuned to the country's

circumstances; technical legal assistance usually is available from international organisations working in finance.

3.1.1 Organisation of investment law

Investment policy is sometimes reflected in a stand-alone law covering both foreign and domestic investors, and sometimes in two separate laws. It may address the degree of openness to investment that the government needs and protections offered to investors. It often includes a list of sectors where investors face restrictions whether in the law or its regulations. Many governments do not have a specific investment law but rather embed their investment policy in other legislation (e.g. the constitution, laws regulating the behaviour of companies, tax law, or sector-specific legislation such as energy, mining, water). It is important to ensure consistency across these laws, whatever configuration, or issues of uncertainty will likely arise. The same is the case for any negotiated international investment agreement (see below), which should provide complementary protections to foreign investors covered by the treaties.

3.1.2 Emphasise transparency and predictability

Throughout the literature, a recurrent, overarching theme is the need for a government to reflect good governance with fair, transparent, clear and predictable regulations for investments. These elements are considered a critical determinant of investment decisions, especially important for both small and medium-sized enterprises (SMEs) and foreign investors who may have to function with quite different regulatory systems, cultures, and administrative frameworks from their own. Uncertainty about the enforceability of lawful rights and obligations can reduce interest in investing as well as open the door to corruption where there is ambiguity in the investment rules.

The OECD report offers a number of suggestions to governments in terms of ways to enhance the quality of the regulatory framework for investment, particularly with regard to transparency and predictability. These include:

...consulting with interested stakeholders; simplifying and codifying legislation, including sector-specific legislation; drafting in clear language; developing registers of existing and proposed regulations; expanding the use of electronic dissemination of regulatory material; and by publishing and reviewing administrative decisions....ensuring that officials responsible for applying regulations have adequate credentials, are well-trained, provided with fair salaries, and have sufficient resources for carrying out their tasks...[and] be fully accountable for their actions, particularly those involving discretionary decision-making (OECD, 2015, p. 24).

3.1.3 Components of domestic investment policy

Some core investment policy issues underpin efforts to create an attractive and quality investment environment for everyone, including foreign investors. These include the principle of non-discrimination and openness to foreign investment, protection of investor's property (land and tenure rights, as well as intellectual property) and mechanisms for enforcement and settling investment disputes. They are briefly discussed below.

- **Non-discrimination.** This is a central feature of an attractive investment climate. The non-discrimination principle provides that "all investors in like circumstances are treated equally, irrespective

of their ownership” (OECD, 2015, p. 24). This principle may be in the constitution, regulations, sector-laws, or in the investment law. In theory, the idea is that a government will treat foreign-owned or -controlled enterprises no less favourably than domestic ones in like situations. In fact, according to the OECD no government applies equal treatment across the board, but it has been found that restrictions on foreign direct investment (FDI) may result in less FDI overall. Exceptions to national treatment are often in a negative list attached to the investment law and may include land ownership for business, minimum capital requirements, or approval mechanisms for foreign investors.

- Protection of property rights. This issue spans three aspects: expropriation, securing land tenure, and intellectual property rights protection. Expropriation may be direct, where a state formally transfers title or physically seizes property, or indirect, where a state interferes with the use of a property or its enjoyment even though the title or property is not seized. The degree of protection against indirect expropriation varies considerably among countries and the issue of compensation must be determined on a case-by-case basis. Some legislation will take the approach of stating that, except in rare circumstances, non-discriminatory regulatory actions to protect public health, safety or the environment would not constitute expropriation.
- Securing land tenure. Another core principle is the importance of providing secure and well-defined land or marine resource use rights to encourage new investments as well as the upkeep of existing investments, and sustainable land/marine management. Tenure security does not require a formal title or acquisition of private ownership. Other instruments such as a lease or long-term contract can provide tenure security if clear, of specific duration, and with the condition that the contract cannot be unilaterally broken. To have secure land/marine/tenure use rights, the relevant government administration should be accessible, reliable, and transparent, there should be a reliable and transparent tenure rights registry if possible, and where responsibilities are split between central and local authorities this should also be clearly defined. Finally, where disputes may arise, there should be reliable mechanisms available for settling disputes.
- Intellectual property rights protection. Intellectual property can have significant value, so protections given to intellectual property have to balance the need to foster innovation and competition with society’s interests in having affordable new products. To make the system more credible and open, good registration systems are crucial as well as measures to make the system accessible to potential investors in research and development. Evidence suggests that where intellectual property rights are strong and clear, foreign investors are more likely to invest and also more willing to share technologies with local partners and engage in local research and development (see OECD, 2015, p. 27).

3.1.4 Contract enforcement and dispute settlement

It is a well-known principle in the world of finance and business that the ability to make and enforce contracts and resolve disputes is fundamental if investment promises and obligations are to function properly. Good enforcement procedures guarantee investors that their contractual rights will be upheld promptly by local courts. When procedures for enforcing contracts are overly bureaucratic, cumbersome, or unclear, or when contract disputes cannot be resolved in a timely way, investors may reduce the amount of lending because of concerns about collecting debts or having control of collateral pledged against a loan, thus slowing down trade and investment. In addition to a good track record for contract enforcement, alternative dispute resolution mechanisms such as arbitration,

mediation and conciliation should also be available. These tools are increasingly used to resolve commercial disputes. At the same time, it is important to be aware that developing countries, especially least developing countries, may not be able to afford the cost of commercial arbitration. Thus, investors must be aware of the need for flexibility with these types of compliance conditions. Where such disputes are resolved outside the country through arbitration, national laws and domestic courts should recognise and enforce those decisions according to applicable international standards.

3.1.5 An independent, effective, and efficient judicial system

In most countries, the court system has a fundamental role in enforcing contracts and settling disputes both between private parties and between an investor and the state. The integrity, independence and efficiency of the courts are important considerations for all investors including foreign investors. The court system can be made more impressive to investors if there also is ready access to the court, predictable court procedures and effective execution of judgments. In some countries, governments have created specialized courts to handle commercial or business disputes.

3.1.6 International investment agreements

Approaches to international investment treaty making vary across countries and may change with time. The most common approach seems to be bilateral investment treaties. There also may be free trade agreements with an investment chapter. Such agreements provide an additional layer of security to covered foreign investors and recourse to international investment arbitration for disputes.

These agreements give assurance to investors that they will be treated fairly and swiftly, especially in developing countries where domestic structures may not be reliable. In addition, those agreements may also help improve domestic law on investment. Especially in new areas like ESG where risks may also be new and relatively unknown over the longer term, bilateral investment agreements also have proliferated. Still international investment agreements should not be a substitute for improving the domestic investment framework, including measures to improve the capacity, efficiency, and independence of the domestic court system, quality of and compliance with the government's legal framework, and national institutions capable of and with authority for implementation and enforcement.

3.2 National policies favourable to green investments

It is important to begin by stating that policies supporting investment in general will not automatically result in a substantial increase in green investment. Policy makers and elected officials also need to give attention to enabling conditions in the form of effective laws and regulations, first as the foundation, reflecting sound and science-based environmental legal frameworks generally and second, guiding and supporting green investment projects and the necessary sector harmonization. An initial step is to review dedicated protected area laws and regulations, biodiversity laws and regulations, and related nature conservation laws and regulations (as the case may be). These are principal laws for conservation and need to provide for the options available for green/blue financing which, in many cases, will require amending those laws/regulations. Additional legal measures supporting green investment include eliminating harmful incentives, directing tax policy and other

fiscal measures to benefit biodiversity, changing to natural capital accounting, protecting and restoring natural infrastructure, promoting nature-based solutions and carbon markets, and where conditions are correct, providing for biodiversity offsets. These measures all involve efforts to better value nature and environmental services as natural capital. Some of these measures are discussed further below.

3.2.1 Effective environmental law and policy framework

As a foundation for attracting green investment and foreign private investors, a first condition is for the country to have in place and implement as best possible general environmental protection and nature conservation laws and supporting policies. This lends significantly to the image of the government and its credibility and trustworthiness when negotiating and implementing a green investment. Such credibility also is boosted when government is not funding activities through other conventional programmes that may be counter or unfriendly to the environmental policies and laws in place

Having an effective national environmental law and policy framework also means honouring obligations under relevant international, regional, and bilateral treaties and agreements. For purposes here, subjects such as terrestrial and marine protected areas and their living and non-living resources, biodiversity, climate change, and sustainable development are particularly on point. Such international commitments need to be supported at the national level with corresponding policies and legal provisions to support compliance and implementation. Moreover, as international law and policy are evolving to address new and ongoing issues, national law and policy must follow suit. Two important and timely examples here are the new targets being set for the CBD Post-2020 Global Biodiversity Framework for 2030, and new commitments being made in climate change negotiations. These and other instruments, once put in force, will need national policy and law attention as a sign to the international investor and conservation community that the government is serious about improving their programmes to protect nature and respond to climate change and the Paris Agreement.

These kinds of international law initiatives are essential for sustaining life on the planet. However, they are increasing the obligations for action by national governments because the stakes are so high. This means that significant foreign green investment in developing countries will be even more critical and in the spotlight. It is worth noting, as consequential examples, some major new CBD targets in the 2030 Global Biodiversity Framework (GBF). These commitments are more specific and exacting than ever before. The new GBF sets out 23 action-oriented global targets for 2030 and 4 long-term global goals for 2050. Goal A and 6 of the key targets are noted below as examples relevant (among others) for the theme of this paper (see CBD, 2022, pp. 8-9):

Goal A:

- The integrity, connectivity and resilience of all ecosystems are maintained, enhanced, or restored, substantially increasing the area of natural ecosystems by 2050.

Selected targets:

- Target 1: Ensure that all areas are under participatory integrated biodiversity inclusive spatial planning and/or effective management processes addressing land and sea use change, to bring the loss of areas of high biodiversity importance, including ecosystems of high ecological integrity, close to zero by 2030.

- Target 2: Ensure that by 2030 at least 30 % of areas of degraded terrestrial, inland water, and coastal and marine ecosystems are under effective restoration, in order to enhance biodiversity and ecosystem functions and services, ecological integrity and connectivity.
- Target 3: Ensure and enable that by 2030 at least 30 % of terrestrial, inland water, and of coastal and marine areas, especially areas of particular importance for biodiversity and ecosystem functions and services, are effectively conserved and managed through ecologically representative, well-connected and equitably governed systems of protected areas and other effective area-based conservation measures, recognizing indigenous and traditional territories, where applicable, and integrated into wider landscapes, seascapes and the ocean, while ensuring that any sustainable use, where appropriate in such areas, is fully consistent with conservation outcomes, recognizing and respecting the rights of indigenous peoples and local communities including over their traditional territories.
- Target 6: Eliminate, minimise, reduce and or mitigate the impacts of invasive alien species on biodiversity and ecosystem services by identifying and managing pathways of the introduction of alien species, preventing the introduction and establishment of priority invasive alien species, reducing the rates of introduction and establishment of other known or potential invasive alien species by at least 50 %, by 2030, eradicating or controlling invasive alien species especially in priority sites, such as islands.
- Target 7: Reduce pollution risks and the negative impact of pollution from all sources, by 2030, to levels that are not harmful to biodiversity and ecosystem functions and services, considering cumulative effects, including: reducing excess nutrients lost to the environment by at least half including through more efficient nutrient cycling and use; reducing the overall risk from pesticides and highly hazardous chemicals by at least half including through integrated pest management, based on science, taking into account food security and livelihoods; and also preventing, reducing, and working towards eliminating plastic pollution.
- Target 8: Minimise the impact of climate change and ocean acidification on biodiversity and increase its resilience through mitigation, adaptation, and disaster risk reduction actions, including through nature-based solution and/or ecosystem-based approaches, while minimising negative and fostering positive impacts of climate action on biodiversity.

3.2.2 Green investment policy

While each government must devise its own strategies for green investment tailored to its social and economic needs, environmental priorities and political feasibility, a number of common considerations for a policy framework for green investment require particular attention. The OECD study noted above offered a number of such elements specifically for mobilising investment for green growth, including the following (adapted from OECD, 2015, p. 129):

- Ensure strong government commitment at both the international and national levels to support green growth and catalyse private green investment;
- Align the broad system of investment incentives and disincentives and phase out inefficient fossil-fuel subsidies and negative incentives for pursuing biodiversity conservation in order to strengthen efforts at green growth and sustainable development;
- Confirm (either by cross-reference to an umbrella policy or by repetition) that basic investment policy principles will apply as well to any green or sustainable investment policy; including such

principles as non-discrimination, transparency, and property protection in areas attractive for green investment, for example, in renewable energy, biodiversity conservation, water resources management or multi-modal, climate-resilient transport infrastructure systems;

- Address market and regulatory tendencies that favour incumbent resource intensive technologies and practices, for instance in the transport, electricity or water sectors;
- Provide public financial tools, instruments and funds to facilitate access to financing and attract co-financing for green projects including long-term institutional investments;
- Enhance co-ordination and improve public governance across and within levels of government, especially among environment and natural resource management, energy and investment authorities;
- Establish policies to encourage environmentally responsible business conduct and broad stakeholder participation in green growth including in green investment strategies; and
- Address other cross-cutting issues such as: policies to support effective private sector participation (whether foreign or domestic) in green projects, joint ventures and public-private partnerships.

Illinois, USA. An example of new investment legislation focused on and promoting sustainable investing by large-scale investors comes from the State of Illinois in the United States (see Box 4).

Box 4: Sustainable Investment Act of the State of Illinois, USA

On January 1, 2020, the Illinois Sustainable Investing Act, also known as HB 2460, went into effect. This action makes the state one of the leaders among the US states in addressing ESG investment, at a time when the Federal Government is still studying the issue. The new Illinois law, rather than focus on only one agency, requires all public or government agencies managing public funds to consider sustainable investment factors in their decision-making. In passing the law, the General Assembly found that –

consideration of factors relevant to the environmental impact, social impact, and governance of investments is vital for maximizing the safety and performance of public funds (sec. 5).

The new law defines ‘public funds’ broadly to include current operating funds, special funds, interest and sinking funds, and funds of any kind or character belonging to or in the custody of any public agency (sec. 10).

As to substantive provisions, the law requires any public agency or governmental unit to develop, publish, and implement sustainable investment policies applicable to the management of all public funds under its control. This policy may be incorporated in existing investment policies. Importantly, the law also provides guidance to the agencies on what is a sustainable investment policy, as follows:

The sustainable investment policy should include material, relevant, and decision-useful sustainability factors to be considered by the public agency or governmental unit as one component of its overall evaluation of investment decisions. Such factors may include, but are not be limited to: (1) corporate governance and leadership factors; (2) environmental factors; (3) social capital factors; (4) human capital factors; and (5) business model and innovation factors (sec. 15(b)).

Finally and notably, the law explicitly extends to retirement and pension funds. It amends the Illinois Pension Code with a new section that requires “[e]very retirement system, pension fund, or investment board subject to this Code shall adopt a written investment policy and file a copy of that policy with the Department of Insurance within 30 days after its adoption. Whenever a board changes its investment policy, ... it shall file a copy of the new policy with the Department within 30 days (sec. 1-113.17).

Source: Illinois Public Act 101-10473

Chile. It is worth learning about some of the experiences of Chile as well, for its green investment legal framework and policy have grown and produced good results in recent years. According to the World Bank, as a result of its investment legislation and new rules on ESG and climate risk investment, Chile's foreign investments have played a decisive role in its economic growth and development over recent decades.

The World Economic Forum Competitiveness Report 2016-2017 listed Chile as the most competitive economy in Latin America and Chile is recognised as one of the top-rated emerging economies worldwide. In its 2018 World Investment Report, the United Nations Conference on Trade and Development (UNCTAD) identified Chile as the second largest foreign investment recipient in Latin America, after Brazil. (see <https://www.bcn.cl/leychile>).

Box 5 highlights some of the key legal steps Chile took to get to this state of its green investment activity, with some lessons learned along the way.

Box 5: Chilean foreign investment statute, rules on ESG, climate risk, and green bond initiatives

Principal law: Law 20.848 of 2015 established a new framework for foreign investment in Chile and created the Foreign Investment Promotion Agency (APIE), also known as “InvestChile”, as the successor and legal continuation of the former Foreign Investment Committee. This principal law covers the following elements:

1. Defines Foreign Direct Investment;
2. Identifies the forms an investment can take;
3. Specifies who may qualify as a foreign investor; and
4. Authorises ‘InvestChile’ to issue a foreign investor certificate.

(see <https://www.investchile.gob.cl/wp-content/uploads/2017/03/NEW-FOREIGN-INVESTMENT-REGIME.pdf>)

New rules: In November 2020, Chile published new investment rules (Norm 276) for the country's seven private pension fund administrators (AFPs). Under these rules, which entered into force in May 2021, the AFPs must report how they incorporate ESG criteria and climate risk into their investment policies and processes. The rule also applies to unemployment insurance fund administrators. On an annual basis, the AFPs and insurance fund administrator must inform their members how they incorporate ESG and climate risk into their investment policies.

Issuing green debt: In addition, Chile made the recent decision to issue green, social, and sustainable debt instruments. In 2019, Chile issued the maiden sovereign green bond in the Americas. Between this debut offering and May 2021, the sovereign has issued more than USD 16 billion in green, social and sustainable debt, amounting to 16.6% of its total central government debt stock outstanding.

There is a set process for moving the proceeds of green debt issuance to eligible green projects, for example, protected areas and biodiversity conservation. As elaborated in Table 12, one of the green sectors eligible for such financing is “living natural resources, land use, and marine protected areas” within which protected areas in general would fall. This sector covers the country's national-level biodiversity and environmental goals. A decision-making process managed by the Ministry of Finance undertakes the evaluation and selection of eligible green projects for green bond funding in all 6 sectors. A Green Bond Committee, led by the Ministry of Finance with the support of the main ministries in charge of the execution of the public budget, reviews and validates the selection of eligible green projects. Once specific green bonds are issued, the net proceeds are transferred to the general account of Chile and each specific green bond issuance is linked to the specific pool of eligible projects. Annual reporting by sector is required on the proceeds that were allocated, the resulting outputs, and impact indicators involved. Also required is an annual external audit on the allocation of the proceeds by sector, and whether the allocations are consistent with the green bond rules.



A World Bank review of lessons from Chile's experiences with sustainable finance and involving multiple foreign investors included several takeaways for Chile and others, as follows:

Key lessons – Sovereign issuer options:

1. Chile's green bond issuances benefited from both its credible standing as a sovereign debt issuer and increased global and local interest in ESG-labelled products.
2. Chile's green bonds were issued within the context of a credible ESG framework that lent legitimacy to the instruments, the tagged projects, and the reporting process. Learning from experiences in Belgium, France, and Ireland, Chile's green bond framework was developed in early 2019, in coordination with different government entities, international institutions, and with the support of the Inter-American Development Bank.
3. At the time of issuance, sovereign green bonds had already been successfully introduced to market by nine sovereigns; other instruments had a more limited track record. Poland issued the world's first sovereign green bond in December 2016 and since then more than a dozen sovereigns have issued sovereign green bond instruments, making the instrument well known to the market and helping sovereigns track the expected market impact.
4. Issuance of local currency labelled bonds in the short-term may be complicated due to insufficient domestic demand for ESG instruments.

Sovereign issuer opportunities:

1. Chile's governance structure was helpful in reducing implementation costs and speeding up the green bond development process. Chile's inter-ministerial process already involved close coordination between relevant entities; the green bond issuance process was able to leverage these existing institutional features. Debt market transactions are channelled by the DMO and, thus, the office is entrusted with most debt management obligations and decisions. This greatly reduces transaction costs, promotes government coordination, and allows public debt management to be quicker, more efficient, and less bureaucratic.
2. For Chile, the thematic bond issuances were aligned with the DMO's strategy and the country's financing needs because they allowed the government to diversify its investor base consistent with its objectives.

Sovereign issuer challenges:

1. The process of issuing a new labelled instrument can be costly and take time. The functioning of the DMO and coordination with other government entities can play a key role to facilitate the ease, cost, and efficiency of preparing for a labelled instrument issuance. Sovereigns should take advantage of the existing institutional framework for debt management to help facilitate the implementation process of new labelled bond issuances.
2. It is strongly recommended that sovereigns develop a comprehensive framework that clearly backs and regulates the issuance process. This action strengthens budget transparency and provides higher accountability, making the issue more attractive to investors.
3. Labelled instrument issuance is not a panacea – savvy sustainability-oriented investors increasingly are concerned about a coherent sustainable development framework. If a coherent low-carbon transition development framework is not in place, sustainability-oriented investors may prefer to invest in other economies, even if they do not offer a formal labelled bond program. Green bond issuances alone will not be taken kindly if the conventional government programme is funding other less environmentally friendly activities.

Source data: Drawn mainly from Boitreau et al., 2021 (World Bank report on Chile experience)

In terms of green investment priorities, Chile has identified six key green sectors for investment (clean transport, energy efficiency, renewable energy, living resources, efficient and climate resilient water management, green building). The sector on living resources is broken out here (see Table 12):

Table 12: Elaboration of Chile's green sector on living resources

Green sector	Eligible green expenditures	Environmental benefits	SDG related
Living natural resources, land use and marine protected areas	<ul style="list-style-type: none">• Forestry• Programs for the conservation and restoration of native and exotic forest• Management and maintenance of national parks and conservation areas• Marine protected areas protection and surveillance (including research)	<ul style="list-style-type: none">• Conservation and sustainable use of terrestrial ecosystems• Biodiversity preservation and protection of terrestrial ecosystems	SDG 3: Health and well-being SDG 13: Climate action SDG 14: Life below water SDG 15: Life on land

Source data: Boitreaud et al., 2021 (World Bank report on Chile experience), Appendix A, p. 64)

China. A variation on green finance investment policy is being tested by China. In 2017, China established a Green Financial System following the adoption in 2016 of Guidelines for Establishing a Green System. It then set up pilot zones for green finance reform and innovation in six provinces. The goal, if these pilots work, is to extend the policy nationally. Box 6 gives an overview of the provisions and objectives of this initiative.

Box 6: The People's Republic of China green finance pilot zones programme

Date of action and length of project:
2017 to present.

Amount and type of financial investment:
Establishment of a green financial system.

Purpose of investment:
Following the adoption of Guidelines for Establishing the Green Financial System in 2016, the government set up pilot zones for green finance reform and innovation in five provinces: Zhejiang, Jiangxi, Guangdong, Guizhou, and Xinjiang. If successful, these green finance solutions are expected to be replicated nationally. In December 2019, Lanzhou, the capital of Gansu Province, was added to the pilot programme. The goal of these pilot zones is to test green finance innovations and explore practical and replicable solutions. These pilot zones have the following objectives:

- Zhejiang (Huzhou and Quzhou cities): to innovate green finance to support the transformation of traditional industries;
- Jiangxi (Ganjiang New District): to establish fully operational green finance system with numerous products and services;
- Guangdong (Guangzhou city): to develop green fintech and green finance market in cooperation with Hong Kong and Macao;
- Guizhou (Gui'an New District): to build infrastructure in big data information sharing, ecological environment and poverty alleviation through green finance; and
- Xinjiang (Hami City, Changji Prefecture and Karamay City): to support modern agriculture and clean energy through green finance.

↓

Law and policy:

According to a 2020 report on China's progress with the green financial system, law and policy action is beginning to be taken to support the green pilot zones (Green Finance Center, see below for citation). For example:

- As of 2020, Shenzhen was the first municipal government to issue local legislation with legal authority promoting green finance development for public comment.
- In Guangzhou, a joint policy release by the People's Bank of China, China Banking and Insurance Regulatory Commission, the China Securities Regulatory Commission and the State Administration of Foreign Exchange promising financial support for developing the area, and the launch of the Guangdong-Hong Kong-Macau Greater Bay Area Green Finance Alliance.
- The pilots are providing much needed data to help guide policy development toward China's green development broadly as it strives to remain on target with its environmental protection goals.

Special challenges:

- Lack of clear definition for green makes it difficult to identify green projects;
- Lack of information on the latest development in green finance available to the majority of local financial regulators, partially due to a fragmented development of green finance; and
- Lack of local capacity-building.

For more information, please consult the following links:

https://wedocs.unep.org/bitstream/handle/20.500.11822/8459/-Establishing_China%E2%80%99s_Green_Financial_System-2015PBC_UNEP_Inquiry_Green_Task_Force_Report.pdf

<http://www.pbc.gov.cn/english/130721/3133045/index.html>

<https://www.paulsoninstitute.org/green-finance/green-scene/chinas-green-finance-pilot-zones-ready-for-takeoff/>

Green Finance Center at: <https://storymaps.arcgis.com/stories/144d181428064c0e8b9a937fc48491f8>
https://www.greengrowthknowledge.org/sites/default/files/downloads/resource/Establishing%20China%E2%80%99s%20Green%20Financial%20System_Progress%20Report.pdf

Source data: Compiled by IUCN Environmental Law Centre

The rest of this Part highlights specific policy, law, and institutional tools that need attention to support protected areas and biodiversity conservation, including tools that may harm nature. Given the fact that each country's resources, legal and policy tools, and society's needs are different, this cannot be a comprehensive list. However, there are some generic areas where most governments could make progress advancing protected areas and biodiversity conservation and altering some practices to save or reallocate funds for conservation purposes.

3.2.3 Subsidies harmful to biodiversity and the environment

As noted at the beginning of this report, even at the upper estimates of increased financial flows toward biodiversity annually by 2030 (USD 446-632 billion), the global biodiversity conservation gap will not be closed without significant reform of harmful subsidies (Deutz et al. 2020, p.59). The OECD, which began following subsidies in the 1980s to measure support for agriculture, recently expanded its scope to include fisheries, fossil fuels, and more recently industrial subsidies, as in the aluminium value chain. The OECD defines 'subsidies' as current unrequited payments (repayment not necessary) that government units, including non-resident government units, make to enterprises on the basis of the levels of their production activities or the quantities or values of the goods or services which they produce, sell or import (OECD, 2001). In general, national governments use subsidies to influence activities of domestic producers, especially in agriculture, fisheries, and forestry. Subsidies

come in different forms, for example, those that sponsor production (direct subsidies) and those that support inputs, such as fertilisers or pesticides (indirect subsidies).

As reported by the OECD in its study *Policy Framework for Investment*, mentioned earlier, there are likely to be key policies in many countries that become specific barriers to green investment being successful in basic environmental goals such as biodiversity conservation and climate change adaptation and mitigation. These policy barriers include weak or non-existent pricing of negative externalities; subsidies that promote inefficient resource use; an erratic policy and regulatory environment; market and regulatory rigidities that favour the incumbency of existing polluting technologies; a lack of mechanisms to capture the value of biodiversity and ecosystem services as natural capital for sustainable natural resource management so that a more realistic estimate of non-financial investment returns can be calculated (OECD, 2015, p. 128).

There is growing recognition in the literature that subsidies can lead to degradation of natural habitats, loss of ecosystem services and biodiversity resources on both the land and sea if not planned with environmental considerations in mind. This can result in unsustainable exploitation of renewable natural resources, unsustainable water use for crops, deforestation for forestry products and agriculture expansion, chemical pollution, and exhaustion of fish stocks. To give an example of the amount of money involved, the 53 countries monitored by the OECD for agricultural support were found to have spent a total of USD 705 billion per year to support their respective agricultural sectors in 2016-2018 (Deutz et al, 2020, p 65).

Although some progress has been made to decrease government support that distorts markets, subsidies still amount to hundreds of billions of dollars spent every year by governments to sponsor selected businesses or sectors. According to one estimate, for governments to reduce their annual harmful subsidies to agriculture, fisheries, and forestry, the figure would come to about USD 273.9 billion (Deutz et al, 2020, p. 61).

The need to reform subsidies harmful to nature and biodiversity has been explicitly reflected in international development goals, including the 2010 CBD Aichi Target 3, now expired. That target appears again in the 2030 CBD Global Biodiversity Framework by the following Target 18 which provides:

Identify by 2025, and eliminate, phase out or reform incentives, including subsidies, harmful for biodiversity, in a proportionate, just, fair, effective and equitable way, while substantially and progressively reducing them by at least 500 billion United States dollars per year by 2030, starting with the most harmful incentives, and scale up positive incentives for the conservation and sustainable use of biodiversity. (CBD 2022, p. 11).

The *EU Biodiversity Strategy for 2030* calls for phasing out of subsidies harmful to biodiversity and a global treaty working through WTO negotiations on a global agreement to ban harmful fisheries subsidies (EU Biodiversity Strategy for 2030, pp. 21-22). The World Trade Organization is leading a negotiation of a new international agreement, now in almost final stage, covering such main areas as prohibition on subsidies to illegal, unreported and unregulated fishing; prohibition on subsidies for fishing overfished stocks; and prohibition on subsidies that contribute to overcapacity and overfishing; with special provisions for developing and least developed countries (WTO Factsheet, 2020).

Harmful agricultural subsidies, in addition, seem to need immediate attention because agriculture is one of the largest drivers of land use change, degradation, and water pollution, making it one of the

main causes of biodiversity loss and covering about one third of the global land surface. According to the EU Biodiversity Strategy for 2030, over half of global GDP depends on nature and the services it provides, with three key economic sectors – construction, agriculture, and food and drink – all highly dependent on it (Id. p. 2). In addition, natural capital investment, including restoration of carbon-rich habitats and climate-friendly agriculture, is recognised as among the five most important fiscal recovery policies (Id.)

In the ocean, a priority for countries and international organisations should be harmful subsidies to marine fisheries. Aside from the issue of IUU fishing, these subsidies reduce the fixed and variable costs of production and are contributing to the growing crisis of overfishing. According to the latest data from the UN Food and Agriculture Organization (FAO), an estimated 34% of global stocks are overfished compared with 10% in 1974 (FAO, 2020, State of the World's Fisheries. FAO website) (see Figure 12). Global fisheries subsidies are estimated to range from USD 14 billion to USD 54 billion per year. According to the Secretary General of UNCTAD, “nearly 90% of the world’s marine fish stocks are now fully exploited, overexploited, or depleted, and there is no doubt that fisheries subsidies play a big role. Without them, we could slow the overexploitation of fish stocks, deal with the overcapacity of fishing fleets, and tackle the scourge of illegal, unreported and unregulated fishing” (UNCTAD website).

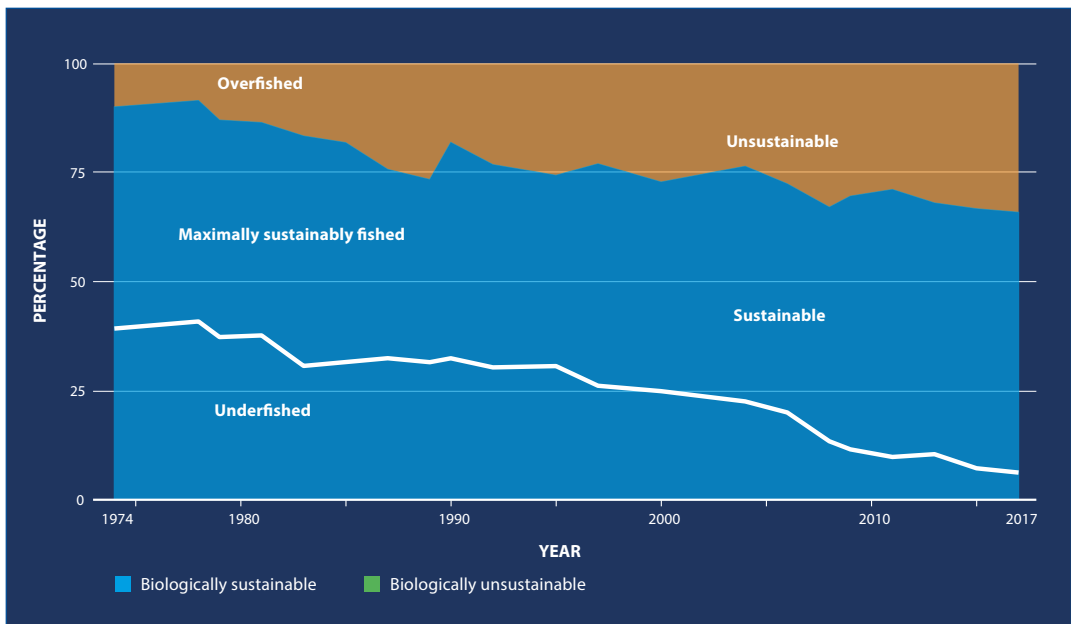


Figure 11: Global Trends in state of world's marine fish stocks 1974-2017

Source: Modified after FAO, 2020, p. 48

The forestry sector is being similarly degraded and over-harvested and harmful subsidies are involved. In particular, forestry subsidies aim to help that sector and in many cases include government interventions on timber exports, authorising access road construction in remote areas and allowing the practice of selling extracted resources at below cost of extraction. According to a recent report, the global rate of tree cover loss has increased by 43 % since 2018 and there has been little progress to deter practices that contribute to deforestation (Deutz et al., p. 70). Destructive logging and illegal

deforestation are partly motivated by subsidies related to resource rents – the surplus economic value that can be gained after costs of extraction. These activities are also partly driven by expanding agriculture.

Fossil fuel subsidies can also be potentially harmful to biodiversity by having incentivizing practices that contribute to climate change and overexploitation of natural resources. According to the OECD and International Energy Agency, who surveyed 77 countries in 2019, those surveyed had spent a total of USD 478 billion on environmentally harmful subsidies to the fossil fuel sector (Deutz et al., p. 65).

As recommended by several technical organisations, the key commitment for national and subnational governments to take is to begin the process of redesigning, reducing, or redirecting existing subsidies away from incentivising actions that harm biodiversity to those that explicitly support it or, at least, result in no harm to biodiversity. This commitment should be part of an overall goal of ‘mainstreaming’ biodiversity into all sectors, for example, the broad government policies as well as the sector policies, business operations and practices in the private sector and financial sector, and at all levels of government activity (global, regional, national, subnational, and local) (see CFA, 2020b).

An initial step is to use the environmental impact assessment process to assess existing subsidies, direct and indirect, across all ministries to determine which subsidies are truly harmful to biodiversity, land, and sea. They could then be prioritized according to which are most harmful to biodiversity. In many countries, the priority will be to identify and reform harmful agricultural subsidies causing land degradation, soil erosion, and water pollution, in turn main causes of biodiversity loss.

It should be stressed that subsidy reforms for positive biodiversity impact will take time to be accepted by policy makers, implemented, monitored with adequate reporting procedures, and evaluated for effectiveness over time. For those who have been reliant on the negative subsidies for their livelihoods, especially the poor and others who may suffer the most immediate negative impacts of subsidy reform, it is important for the government to ensure a phased and equitable transition so as to mitigate the negative social and economic impacts as much as possible. As part of this process, the government should work closely with affected communities to help them understand why reform is needed and how they could benefit by their participation. Governments should introduce graduated payments and other assistance to those who adopt practices with beneficial outcomes to biodiversity and the environment as part of the reform process. This process will take resources and could be the subject of a proposal to institutional investors for conservation financing.

In 2020, the World Economic Forum issued its first of a series of nature and economy studies. In this report entitled *Nature Risk Rising*, WEF observed that the global momentum on safeguarding nature continues to strengthen. The next step is to identify areas in which current business models and production processes can be transformed to contribute the most to halting and reversing nature loss, and to finding ways to finance this transformation. According to WEF: “[I]n the food and land-use sector alone, there is an annual business opportunity of USD 4.5 trillion by 2030 associated with transitions towards a nature-positive economy, including forest restoration, sustainable aquaculture, plant-based meat, precision, and regenerative agriculture, and reducing food waste. This transformation must include replacing harmful subsidies to biodiversity and nature with beneficial subsidies that can support restoration and sustainability of nature.

Various guides are available to help countries assess which subsidies are harmful and how to do subsidy reform. For example, the Institute for European Environmental Policy has published *Guidance*

to identify and address incentives that are harmful to biodiversity (IEEP, 2012) (see Figure 13 on one approach to reforming subsidies for the good of the environment). It may be possible for less developed countries to receive some financial and technical support from donor governments and multilateral development banks to help reform harmful subsidies to the environment and biodiversity by helping to identify beneficial subsidies and design a transition plan to help those benefiting from the harmful subsidies to have alternative sources of income.

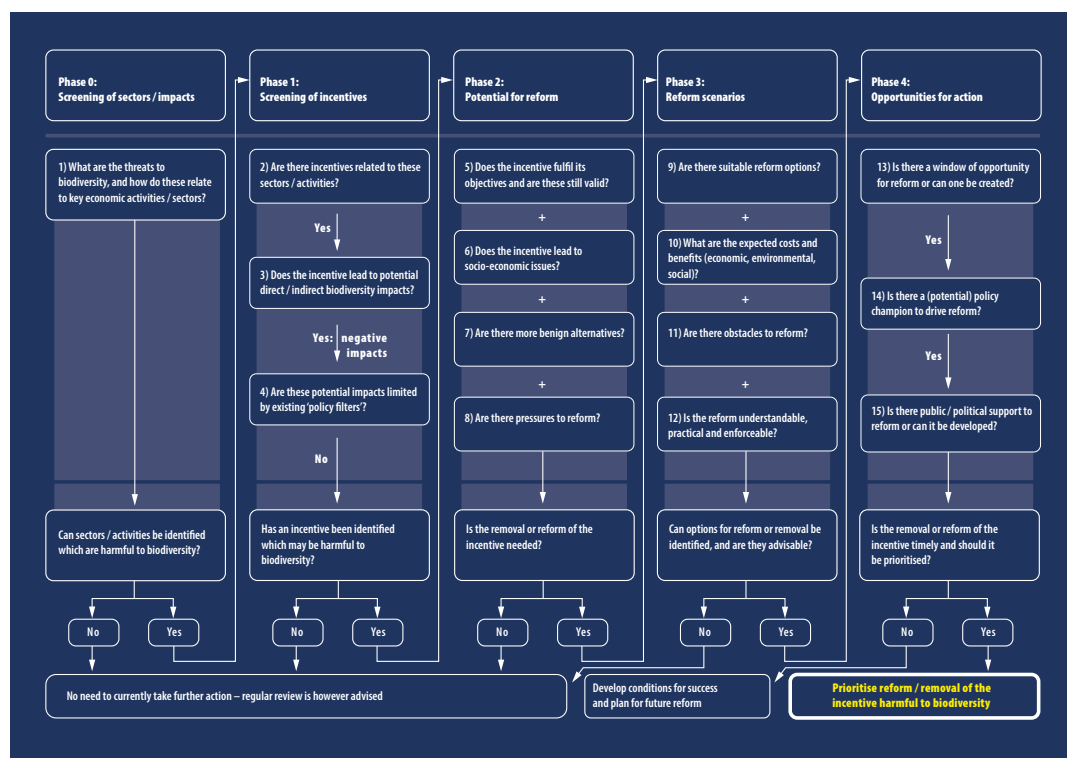


Figure 12: Working through analyses to eliminate harmful subsidies for the environment

Source: Modified after IEEP, 2012, p. 14

3.2.4 Promoting natural green infrastructure

Another major area needing government attention and action for advancing in biodiversity and protected area conservation is to create an enabling environment for investments in natural infrastructure. Although infrastructure is typically understood as human-made structures (roads, buildings, bridges), for the planet and its life-sustaining processes infrastructure also includes natural systems. IISD, an independent think tank working to accelerate solutions for a stable climate, sustainable resources, and fair economies, defines natural infrastructure as “an area or system that is either naturally occurring or naturalized and then intentionally managed to provide multiple benefits for the environment and human well-being” (IISD, 2018, Website blog). It goes on to explain:

Natural infrastructure can be considered an *active* form of nature likely focused on the most important of these benefits. Natural infrastructure comprises an *active management component* aimed at providing (or conserving) the key advantages – such as climate resilience, clean

water, and biodiversity. It differs from traditional ‘grey’ infrastructure, such as pipes, tunnels, and factories, which are completely constructed by humans. Natural infrastructure is a form of ‘green’ infrastructure, a term that also includes systems with positive environmental outcomes, such as renewable energy or electric vehicles (IISD, Id.).

Another related term frequently found in the conservation literature is ‘green infrastructure’. Sometimes green infrastructure is used interchangeably with natural infrastructure and sometimes not. Generally, each is still considered under the broader nature-based solutions umbrella. Again, while there is no universal definition, IUCN defines ‘green infrastructure’ as:

incorporating “green” spaces (or blue if aquatic ecosystems are concerned) and other physical features in terrestrial (including coastal) and marine areas. A green infrastructure approach considers conservation values and actions related to land development, growth management, and built infrastructure planning. They define natural infrastructure as “restoring structure, function, and composition of ecosystems to deliver ecosystem services” (EESI, p. 2).

The European Union has promoted the use of what they call ‘Green infrastructure’ through its EU Green Infrastructure Strategy, officially titled, *Green Infrastructure (GI) - Enhancing Europe’s Natural Capital*, which is considered a key EU level policy for green infrastructure development adopted in May 2013. European Commission staff in a working document defined and elaborated on the concept as follows (EC 2019, p. 4):

Green infrastructure (GI) is a strategically planned network of natural and semi-natural areas with other environmental features designed and managed to deliver a wide range of ecosystem services. It incorporates biodiversity-rich terrestrial and aquatic ecosystems on land and at sea. On land, GI is present in rural and urban settings.

In addition to providing a key tool to halt and reverse the loss of biodiversity, green and blue infrastructure provides a multiplicity of benefits in a simultaneous and cost-efficient way. The delivery of those benefits is maximised when the network of green and blue spaces is planned at a strategic level. The Natura 2000 network constitutes the backbone of the EU green and blue infrastructure.

Among examples of natural infrastructure are natural or constructed wetlands, riparian buffers, urban forests and woodlots, meadows and pastures and community gardens. These features of nature, when actively managed for conservation, can enhance natural systems, providing key advantages in economic and environmental terms, helping to provide climate resilience, cleaner water, habitats for a range of biodiversity, carbon storage, flood control, soil health, and air quality. Protecting watersheds can significantly enhance watershed ecosystem services through ground water recharge when the soils are healthy enough, so that water can filter down to the aquifer rather than simply staying on the surface of compacted soil and ending up in a downstream river or stream with sediment and pollution washing to the sea. Natural infrastructure when coupled with built infrastructure can enhance many human needs as well as needs of nature.

There is a growing body of literature as well as international commentary promoting ‘nature-based solutions’ to help restore and sustain natural systems, including biodiversity. According to the Environment and Energy Study Institute, a think tank dedicated to advancing science, nature-based solutions are often higher-quality, lower-cost, more resilient, and more beneficial to society than maintaining, repairing, or replacing gray infrastructure (EESI, 2019, p. 2).

Natural infrastructure is an area requiring policy and law support in many countries. It is a relatively new tool for resource management and for financing attention. As such, project designers, engineers, infrastructure managers, project developers, and private sector operators need to be enabled to consider this tool to address their infrastructure and management requirements, including use of funds to apply its principles. This includes public utilities, land management agencies, agencies dealing with coastal resilience and sea level rise, flooding control, forest management and other public entities charged with public service tasks. As highlighted in the Paulson Report, a main action for governments to take is to require that natural infrastructure alternatives be evaluated in all infrastructure projects and, where feasible and cost-effective, require its use in public and private development projects through contracts and concessions, procurement processes, and by regulation (Deutz et al., p. 132). In addition, such contracts, concession agreements, or procurement arrangements should include a provision requiring that those involved in the project consider the cost-savings and non-financial benefits of nature-based solutions (Id.).

3.2.5 Payments for ecosystem services (PES)

Financial flows from payments for ecosystem services (PES) programmes can be used to invest in natural infrastructure. Ecosystems such as riparian forests can provide water quality and quantity regulation and in return become a more cost-effective alternative to grey infrastructure. For example, PES mechanisms may be used to conserve watersheds or replenish groundwater or surface water, to fund conservation for climate mitigation, for example, through the REDD+ programme, or to fund protection and restoration of coastal ecosystems to prevent coastal flooding. In order to implement such a tool, it is important that national policy and legislation provide for PES programmes to be authorized in land and marine systems and have regulations for effective reporting, monitoring and management. See Box 7 for a working PES example from Costa Rica. (see Annex 1, another PES example is offered from the Danube River Basin.)

Box 7: Costa Rica's use of payment for environmental services for forest conservation

Costa Rica is considered a pioneer in developing a scheme whereby it paid landowners to protect their forests in return for the benefits the forests provided, such as conserving wild species, regulating river flows, restoring groundwater, and storing carbon. Started some 20 years ago, with challenges along the way, this PES scheme became the first in the country and region. The country had another first by accumulating carbon credits under the Kyoto Protocol from the carbon absorption provided by its recovering forests. Regulations and incentives were enacted, including tax deductions and certificates for compensation for forest protection. In 1997 Costa Rica sold the first carbon certificates to the Government of Norway. Today, the PES programme also issues Certificates for Environmental Services (Pago por Servicios Ambientales) (PSA) for forest ecosystem protection measures of the landowners. Today the PES is considered a success in using innovative financing and regulation to restore forest areas and ecosystem services. Here are some of the legal and financial details:

How the programme works:

A financial mechanism was set up for recovery/restoration and conservation of national forest cover; landowners are compensated to “guard” ecosystem services.

Legal framework:

The programme was authorized by law, the 1996 Forestry Law No.7575, which introduced the concept of environmental services payment, defined as “Services provided by forests and forest plantations for the protection and improvemen of the environment”.



Institutional framework:

The National Fund for Forestry Financing (FONAFIFO), a decentralized unit under the Environment Ministry, was designated by the Forestry Law to be responsible for financing the environmental services payments. FONAFIFO has its own management structure and Administration Council, and manages its financial resources through trust funds.

Sources of financing:

Funds come from the following, some requiring regulatory authority: 1/3 of the oil derivatives tax, 50% of water canon (levies) for water use concessions, environmental services certificates (carbon offsets), cooperative agreements with private and public companies, specific project financing, public funds, international credits, donations.

Programme priorities:

Forest protection (regeneration of forests, hydrological resources protection, conservation of areas needing protection), reforestation, agroforestry systems, natural regeneration, forest management.

Impact:

During the period 1997-2015, the following accomplishments have been made: *more than 1,122,311.80 ha under the programme (90% under forest protection, 6% under reforestation, 3% under forest management, 2% under regeneration); *more than 6,478,254.00 trees planted; *more than 13,500 families involved in the program; *more than USD 450 million invested in rural areas.

Source: Compiled by IUCN Environmental Law Centre

As illustrated by the Costa Rica example, natural systems producing ecosystem services include such natural landscapes and seascapes as forests, floodplains, wetlands, mangroves, coral reefs, marshes, and seagrass beds. These natural systems, when part of a country's efforts to improve sustainability, are nature-based solutions and in the current world of declining biodiversity, climate change exacerbating this decline, and nature-linked pandemics, this natural infrastructure should also be treated as critical infrastructure worth protecting or restoring with incentives such as PES. While different organisations may vary slightly in their definitions of 'nature-based solutions', to provide some baseline, the IUCN, World Bank Group, and World Resources Institute (WRI) define nature-based solutions as:

actions to protect, sustainably manage, and restore natural or modified ecosystems that address societal challenges effectively and adaptively, simultaneously providing human well-being and biodiversity benefits (EESI, p. 3).

3.2.6 Domestic budgets and tax policy

All governments have the responsibility to protect and restore their biodiversity and take measures toward climate mitigation and adaptation as part of their commitments made over the years through international, regional, and national policy and law. In response, most governments have taken the traditional steps to create protected areas, enact environmental laws, and build up some enforcement capacity toward this end. In addition, however, many other important tools under direct government control are available that could be used to shape behaviour of communities and the public and private sector towards safeguarding protected areas and restoring biodiversity. These tools are in the field of domestic fiscal policy. For example, governments have a formal budgetary process, and the power to enact penalties, taxes, subsidies, and incentives. These tools are used to influence actions and development choices. Accordingly, they can be used to promote actions that are beneficial for biodiversity protection and climate change mitigation and adaptation.

The discussion below offers examples of fiscal tools that could be put in place to increase domestic conservation financing to supplement international investment. In this policy area, the Minister of Finance and the Budget office would have a lead role since fiscal policy is part of their portfolio. Typically, these finance authorities would work in collaboration with scientists, resource managers and conservation practitioners to ensure that priority conservation needs are clear, that resulting projects funded through targeted fiscal measures will bring real environmental and social benefits, and will be monitored during implementation to verify results. The information below is an overview. Moving ahead to activate or strengthen any of the policy options highlighted in this section would necessarily require the direct involvement of the appropriate public sector finance and conservation authorities. These and other involved or affected authorities need to work out details in laws, enabling regulations or procedures, assess the feasibility of various actions and plan transition support to help ease impacts on communities, corporations, and individuals who may be negatively impacted in the short-term.

As noted above, one of the most impactful ways that governments can manage their revenues and expenditures to promote more favourable public and private sector actions is to phase out those subsidies (for example, in agriculture, fisheries, forestry) that are harmful to biodiversity. For example, crop insurance, price support measures, low-interest loans or guarantees, certain favourable taxation for industry or resource exploitation may all result in actions that harm the environment. These kinds of harmful incentives should be replaced with incentives and subsidies that promote biodiversity conservation (a CBD target in the post-2020 Global Biodiversity Framework). This could include subsidies for reforestation or making targeted payments to owners and managers of lands that deliver valuable ecosystem services to the public through programmes such as natural infrastructure investments in watersheds and coastal ecosystems (the idea of ‘payment for environmental services’ (PES)). These programmes are related to the expenditure side of fiscal policy.

There is also the revenue side of fiscal policy. Revenues come to governments from many sources, including those from nature activities. For example, national parks and other protected areas normally have some admission fees as well as charges for special events, or fees and taxes on international travellers, tour groups, or cruise ships to support ecotourism. Such funds should be dedicated explicitly to conservation, either by ensuring that the fees and taxes raised go only to their intended conservation purposes (with periodic reporting to ensure this happens) or by setting up a special conservation fund.

In either case, the funds should be explicitly allocated to their intended purposes rather than be integrated and effectively lost within the overall budget process. In many countries, integration of such monies into the general budget has been the traditional approach and some governments still practice this policy. But there is a growing trend to let the protected areas authorities keep fees collected for visitations and other services (e.g., family parties, weddings), in addition to their regular government budgets. This has not only become an essential component of many protected areas budgets, keeping such fees provides an incentive to promote the protected area and keep it in an attractive condition. See Table 13 for examples of various fiscal policies and tools that could benefit biodiversity and be relevant for rights-holders, investors, or developers.

Table 13: Examples of various fiscal policies and tools to benefit biodiversity

Category	Examples
B1. Biodiversity-relevant fees and charges designed to generate revenue to support protection of biodiversity	<ul style="list-style-type: none"> National, state/provincial, or local park and protected area entry or usage fees National, state/provincial, or regional airport entry or exit fees Cruise ship or tour bus ticket fees, added to the cost of tickets Special resource use licences and fees such as fishing, hunting, photography, diving, boating, hiking, trekking, climbing, camping, or other uses Hunting or fishing conservation stamps, on top of regular licence fees Negotiated payment for resource usage, such as hydropower usage payments based on water utilisation, percentage of revenue, or percentage of operating expenses or capital expenditures Tariffs charged to users of water supplies or septic treatment facilities Tariffs assessed on users to provide financing for natural watershed or infrastructure protection and maintenance
B2. Biodiversity-relevant fees, charges, fines, and penalties designed to disincentivise harmful behaviour that may negatively impact biodiversity	<ul style="list-style-type: none"> Mitigation fees such as compensatory mitigation in-lieu fees or infrastructure fees, assessed one time or annually, and assessed based on the land/water/species affected, or against project revenue or total project capitalisation Development impact fees assessed on developers of commercial or residential developments, as a condition of receiving a development permit Environmental damage fee assessment and risk mitigation revolving funds (assessed, for example, on oil transport activities for oil spill risk mitigation) Penalties, fees, fines assessed for environmental damages or violation of regulations and laws set up to protect water, air, wildlife, fish, or other resources
B3. Biodiversity-relevant taxes designed to produce revenue to support protection of biodiversity	<ul style="list-style-type: none"> Taxes on park and conservation area concessions including hotels and other businesses Dedicated taxes on goods and services to secure funding for conservation purposes, such as taxes on sporting goods, recreational vehicles, fuel use, and transportation Resource use royalties placed on certain extractive industries such as oil and gas, mining, or extractive forestry Royalties assessed on the use of species for bioprospecting or biomedical purposes Taxes on the sale or trade of wildlife, where legal Real estate transaction taxes (such as sales or transfer taxes) Licence plate registration taxes Aquaculture levies or taxes
B4. Biodiversity-relevant tax policies designed to incentivise positive behaviour and protect biodiversity	<ul style="list-style-type: none"> Tax credits for project developers or investors as incentives to protect working forests or other biodiverse habitats Tax credits for project developers or investors as incentives for job creation or other social and economic benefits Tax credits for landowners or project developers to promote conservation practices such as best management practices (BMPs), outright gifts of conservation lands, or donations of land development rights and conservation easement



B5. Biodiversity-relevant taxes designed to disincentivise harmful behaviour that may negatively impact biodiversity	<ul style="list-style-type: none">• Taxes assessed against harmful practices, such as pesticide usage taxes• Taxes on carbon usage to provide financing for climate resilience, climate-smart energy production, or other environmental purposes• Fish catch and service levies or taxes (as distinct from quotas and catch shares)
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Source: Deutz et al., 2020, p. 111

3.2.7 Penalties for environmental harm

Another revenue source for governments that could be applied to biodiversity, protected area, and climate change projects comes in the form of penalties (fines, community service, etc.) for natural resource and environmental crimes. Penalties normally are indicated in principal legislation backed up by regulations. Typically, these instruments provide controls and requirements for sustainable use of important natural resources (e.g. forests, fish) and ecosystems (e.g. wetlands, watersheds, coral reefs), authorise protections where needed, and also to authorise the imposition of penalties for abuse, destruction, pollution, illegal harvest or trade, or any other illegal activity specified in the corresponding legal and regulatory framework.

Such provisions should be clear that any penalties collected as a result of environmental crimes should be allocated toward restoration, repair, or regeneration of the natural environment that was harmed to the extent possible. This could be done through transfer of funds to the appropriate conservation agency or into a conservation fund from which funds are designated for specific conservation tasks and may be drawn by authorised persons as needed.

Finally, there is the option of creating favourable conditions to attract foreign investments to support green financial instruments (for example, green or blue sovereign bonds) to significantly supplement government’s domestic efforts to fund biodiversity conservation (see Seychelles and Fiji examples below). As was noted in an earlier part, and repeatedly confirmed in the literature, emerging markets, and developing economies do not have capacity on their own to fully address the funding gap for biodiversity and climate action. Types of green financial products and supporting measures will be discussed in the next part.

3.2.8 Fiduciary duty and ESG investing

The classic approach to investing by financial institutions has been to minimise risk and perform their fiduciary duty to clients by maximising short-term economic returns. A fiduciary duty exists in law when a person or entity places trust, confidence, and reliance on another to exercise discretion or expertise in acting on behalf of the client. Typically, a fiduciary prudently takes care of money or other assets for another person. The institutions to which this duty normally applies include banks, insurance companies, investment companies, and asset managers of such funds as pension funds, mutual funds, and wealth management funds. The operational result of this narrow definition of fiduciary duty is that the investment advisor stays away from risky investment choices (such as biodiversity conservation) that may be less well understood or with potential for high risk of failure, thus losing the client’s capital as well as the reputation of the investor.

Today, with green investing and sustainability gaining momentum among clients/shareholders, and thus drawing attention of large institutional investors, the fiduciary concept has been evolving,

especially in Europe. The result is a broader application of fiduciary duty to include non-financial benefits (clean water, clean air, clean soil) in the analysis of benefits (see Rosov, 2018). But this gradual shift has taken some time and is still underway. Going forward, national legislation should be clear that its interpretation of fiduciary duty should confirm that impact investments, and the consideration of social and environmental benefits are not barred by fiduciary duty (see Wood et al., 2012, p. 26). Such policies might also reduce uncertainty for investors who may occasionally report concern about fiduciary barriers in environmental impact investing.

The financial sector today also plays a central role in funding activities that lead directly to the loss of biodiversity and degradation of ecosystems around the world (Deutz et al, 2020, p. 78). Some innovative investment firms have started to use negative screening when making investment decisions based on whether an asset or sector is linked to negative environmental impacts such as mining, fossil fuels, commercial logging, industrial agriculture, or on the social side such impacts as forced labour and child labour. Others who have become engaged, still have stayed away from biodiversity, and focused on climate change mitigation and adaptation, where science is perceived to be more certain and advanced with potential investment solutions that are more concrete and engineering-oriented (for example, transitioning to renewable energy, electric vehicles).

Only focusing on climate change, as discussed in Part 1, will not address all the causes of biodiversity loss. Before climate change became a serious issue, biodiversity was already suffering accelerated rates of loss due to habitat degradation and fragmentation; expansion of development activities in both land and marine areas; invasive species; mismanagement of species, resources, and ecosystems; plastics; toxic pollution; and overconsumption. Climate change is a major added threat to biodiversity, and indeed biodiversity conservation can help sequester carbon, stabilize land and ocean environments negatively affected by climate change, and restore and maintain ecosystem services that help with climate change adaptation and mitigation.

Gradually, the financial sector as well as governments have recognised the need for some common guidelines and standards for assessing and managing ESG risk, especially biodiversity-related risk. As noted above, known tools are already in use on a case-by-case basis to minimise risk, including blended finance to distribute risk, obtaining guarantees from other institutions such as a development bank, or acquiring insurance in case the project fails and investor money is lost. At the global level, work also has advanced considerably toward some generic principles that ESG investing partners could follow, including an agreed-upon technical definition of ESG, as well as what metrics or benchmarks to use for minimising risk.

To diversify and minimise risk, the MDBs use financial intermediaries (FI) to play a significant role, and have specific Environmental and Social Standards for financial intermediaries (see discussion in Part 5.2).

While that work continues, a number of generic international instruments already exist in soft law³ that can give some guidance. For social principles, such instruments as the Universal Declaration of Human Rights and ILO's International Labor Standards are helpful guides. As for international principles for sustainable development and the environment, examples include the Rio Declaration on the Environment (1992), the UN Sustainable Development Goals (2015/2030), the CBD Strategic Plan for Biodiversity 2011-2020, including the upcoming new CBD targets of the post-2020 Global

3 Soft law is a quasi-legal instrument that is not legally binding but reflects high-level political commitments which could lead to law.

Biodiversity Framework. Governments and investors should look to these guides when developing investment projects for ESG and incorporate relevant principles and reporting measures in any resulting investment agreements.

These are dynamic times for the planet, its peoples and economies. With growing global awareness, concern, and even alarm about worldwide pandemics, biodiversity loss, and climate change, a number of policy actions are important for national governments to consider in order to prepare for, attract, guide, and regulate ESG and green investing particularly with large institutional investors anticipating large-scale investments.

Below is a sampling of the kinds of enabling actions national governments could consider, recognising that such suggestions should be tailored to the particular country and its circumstances. One way to approach efforts to strengthen domestic legislation for large scale institutional investing is to consider what basic requirements would be important for financial institutions as they negotiate and implement green investments in the country. These should be paired with basic rights that such institutions will enjoy once operating in the country. A few key points are worth highlighting:

- Investment plans and conservation financing must be guided by fairness and equity for all, especially for local communities and those most affected.
- Deliberations, project design, and investment decisions should be based on good science using best available technology to assess priorities, risks, appropriate restoration or maintenance measures, and metrics and monitoring for performance.
- Law and policy dealing with green investment should emphasise the need for full transparency and disclosure for both the investor and investee in all transactions.
- Policy and procedures should be based on the expectation of the long-term nature of the investment (one or more decades) in order that non-financial benefits can begin to be verified (re-generated soils, free-flowing and healthy rivers, restored forests, coral reefs, and fisheries, etc.). This longer-term project horizon is essential for biodiversity and climate change investments, as contrasted with more traditional investments which may be designed mainly for short-term economic gain.
- Other regulations and operating procedures with respect to the investor's role should include assessing ESG risks of a proposed private investment and updating those assessments throughout project implementation, especially for biodiversity, if the project goes forward. Some countries already require this, for example, France in 2019 enacted the Law on Energy and Climate, which specified that financial services firms must also consider risks related to biodiversity loss (Deutz et al., 2020, p. 85).
- National finance regulations on fiduciary responsibility could be enacted or strengthened to be explicit that investments in ESG and biodiversity, in particular, should be calculated on a long-term timeline and consider nonfinancial benefits, including the value of improved biodiversity and ecosystem services (see Tables 10 and 11 on examples of indicators and metrics that might be used). These kinds of measures are being taken in a few states of the USA. For example, the State of Delaware amended its Code on Estates and Fiduciary Relations in 2020 with the following language: "To the extent that sustainable investment strategies align with the charitable purposes of the institution, an institution managing and investing an institutional fund may take into account social, environmental or governance values" (Delaware Code: CHAPTER 278, sec. 4703, (2)b. 7).

- Governments may want to consider enacting specific legislation on ‘Sustainable Investing’. This could complement the generic investment statute discussed above or be a chapter in that statute. (see example of the State of Illinois, USA, Box 4).

Overall, the literature reflects expectations that States will develop and enact policies and regulations to require financial institutions to implement and report on investments that impact biodiversity, ways to avoid harmful impacts to biodiversity, and compliance standards for incorporating biodiversity risk analyses into public and private investment processes. And especially for emerging markets and developing economies, many such initiatives come with technical assistance where needed.

3.2.9 Biodiversity offsets

Biodiversity offsets “are measurable conservation outcomes resulting from actions designed to compensate for significant residual adverse biodiversity impacts arising from project development after appropriate prevention and mitigation actions have been taken. The goal of biodiversity offsets is to achieve No Net Loss and preferably a Net Gain of biodiversity on the ground with respect to species composition, habitat structure, ecosystem function and people’s use and cultural values associated with biodiversity” (IUCN, 2016).⁴

An almost identical definition is used by IFC in their Performance Standard 6 on Biodiversity Conservation and Sustainable Management of Living Natural Resources, including the insistence in several different paragraphs of ‘no net loss’ and preferably a net gain for biodiversity (see IFC, 2012/2021, pp. 176+). Similar performance standards for biodiversity offsets have been adopted by most of the multilateral financial institutions, including the regional banks such as the African Development Bank, Asian Development Bank, European Bank for Reconstruction and Development, European Investment Bank, Inter-American Development Bank as well as the several international entities of the World Bank group (Deutz et al., 2020, p. 102). See Box 8 for an example of a biodiversity offset required by the World Bank for a project in Uganda.

Several organisations and the literature addressing biodiversity offsets refer to the need for a mitigation hierarchy to avoid and minimise adverse biodiversity impacts from development, especially in agriculture, energy, and infrastructure sectors (IUCN 2016; Deutz et al., 2020, de la Puente and Mitchell, 2021). According to some projections, these sectors in particular anticipate trillions of dollars in project investments (Deutz et al., 2020, p. 99). The mitigation hierarchy is a decision-making and planning process in four gradations of damage. The priority for a development project always should be to *avoid* harm or damage as a first goal; if that is not possible, the goal should be to *minimise* harm; if that is not feasible, the next action should be *restoring* the damage caused by the project, and the final option would be the *offset*. Thus, biodiversity offsets would be the last element of the mitigation hierarchy, only to be used for unavoidable damage to biodiversity caused by the development project.

4 This definition came out of the work of an IUCN Technical Study Group on biodiversity offsets set up in November 2013 by the IUCN Secretariat.

Box 8: The Kalagala, Uganda, biodiversity offset areaDate of action and length of project:

The Kalagala Offset Area (KOA) was established in 2007 by the government of Uganda & the World Bank.

Amount and type of financial investment:

Biodiversity offset.

Purpose of investment:

The biodiversity offset area was established to offset the biodiversity loss from the World Bank-financed Bujagali Hydropower Project. It was a requirement for World Bank support for the construction of the Bujagali Dam under the Bank's Natural Habitats Policy since the dam's reservoir was going to inundate the Bujagali Falls, rivers, islands and pristine natural habitat.

The project included a number of key actions:

- Enabling tourism development activities at the Kalagala Falls site; and
- Committing not to develop power regeneration in the future that could adversely impact the Kalagala Falls and Itanda Rapids. Conserving and rehabilitating three of the seven Central Forest Reserves in the catchment area. These forests are relied on by local communities for fuelwood, medicine and also some cultivation (albeit illegal).

Monitoring mechanisms:

World Bank Investigation Panel.

For more information on this case study, please consult the following links:

<https://www.inspectionpanel.org/sites/www.inspectionpanel.org/files/publications/Emerging%20Lessons%20Series%20No.%205-Biodiversity%20Advisory.pdf>

<https://pubs.iied.org/sites/default/files/pdfs/migrate/G04404.pdf>.

Source data: Compiled by IUCN Environmental Law Centre

It should be noted that some policies refer to biodiversity offsets, while others refer to compensation. According to IUCN, this may be in part because in some languages there is no separate word for 'offset', so 'compensation' is used. Compensation is a very flexible term that can mean a number of different things. Dictionary definitions often refer to something, typically money, awarded to an individual as recompense for loss, injury, or suffering. Occasionally, compensation is defined more in terms of 'making good' specific damage, in which case it become closer to the definition of 'offset' above (except that it lacks the specific requirement for achieving 'no net loss'). In terms of biodiversity, compensation involves measures to recompense, make good or pay damages for loss of biodiversity caused by a project (IUCN, 2014).

There is recognition with respect to biodiversity offsets and policy options, that no single 'correct' approach exists to designing and implementing biodiversity mitigation measures (including biodiversity offsets) to demonstrate no net loss and if possible net gain (IUCN, 2014). This is mainly because national policies, laws, regulations, development activities, and other circumstances vary across the world. Some laws, policies and standards take a principles-based approach. Provided the principles are adhered to, there is room for flexibility and tailoring the approach to reflect the specific circumstances. There are a number of different ways in which mitigation measures including biodiversity offsets can be designed and implemented and their success verified.

Box 9: Principles for biodiversity offsets from BBOP Advisory Group

Biodiversity offsets are measurable conservation outcomes resulting from actions designed to compensate for significant residual adverse biodiversity impacts arising from project development* after appropriate prevention and mitigation measures have been taken. The goal of biodiversity offsets is to achieve no net loss and preferably a net gain of biodiversity on the ground with respect to species composition, habitat structure, ecosystem function and people's use and cultural values associated with biodiversity.

These principles establish a framework for designing and implementing biodiversity offsets and verifying their success. Biodiversity offsets should be designed to comply with all relevant national and international law, and planned and implemented in accordance with the Convention on Biological Diversity and its ecosystem approach, as articulated in National Biodiversity Strategies and Action Plans.

1. Adherence to the mitigation hierarchy: A biodiversity offset is a commitment to compensate for significant residual adverse impacts on biodiversity identified after appropriate avoidance, minimisation and on-site rehabilitation measures have been taken according to the mitigation hierarchy.
2. Limits to what can be offset: There are situations where residual impacts cannot be fully compensated for by a biodiversity offset because of the irreplaceability or vulnerability of the biodiversity affected.
3. Landscape context: A biodiversity offset should be designed and implemented in a landscape context to achieve the expected measurable conservation outcomes taking into account available information on the full range of biological, social and cultural values of biodiversity and supporting an ecosystem approach.
4. No net loss: A biodiversity offset should be designed and implemented to achieve, in situ, measurable conservation outcomes that can reasonably be expected to result in no net loss and preferably a net gain of biodiversity.
5. Additional conservation outcomes: A biodiversity offset should achieve conservation outcomes above and beyond results that would have occurred if the offset had not taken place. Offset design and implementation should avoid displacing activities harmful to biodiversity to other locations.
6. Stakeholder participation: In areas affected by the project and by the biodiversity offset, the effective participation of stakeholders should be ensured in decision-making about biodiversity offsets, including their evaluation, selection, design, and implementation and monitoring.
7. Equity: A biodiversity offset should be designed and implemented in an equitable manner, which means the sharing among stakeholders of the rights and responsibilities, risks and rewards associated with a project and offset in a fair and balanced way, respecting legal and customary arrangements. Special consideration should be given to respecting both internationally and nationally recognised rights of indigenous peoples and local communities.
8. Long-term outcomes: The design and implementation of a biodiversity offset should be based on an adaptive management approach, incorporating monitoring and evaluation, with the objective of securing outcomes that last at least as long as the project's impacts and preferably in perpetuity.

* While biodiversity offsets are defined here in terms of specific development projects (such as a road or a mine), they could also be used to compensate for the broader effects of programmes and plans.

Source: BBOP 2018, p. 15

In addition, the 2016 IUCN WCC Resolution 059 on biodiversity offsets spelled out some strong policy and guidance on use of biodiversity offsets and its limitations for achieving no net loss and preferably net gain. The bottom-line rationale behind the position and guidance contained in the resolution, as stated in the resolution, is as follows:

No two areas of habitat or species populations are identical, and therefore some biodiversity (e.g. genetic combinations) and related values will always be lost in offset exchanges. Given this reality, and the inherent uncertainties and risks linked to offsets, using biodiversity offsets must be a measure of last resort (IUCN 2016, Res 059-EN, Annex 1, p. 2)

In that context, it is worth highlighting two statements within the IUCN policy for its attempt to balance extra caution and conditions where ‘no go’ must apply to the project with those situations where biodiversity offsets may be better than nothing. First, the summary policy statement:

Under the specific conditions outlined in this policy, it is IUCN’s position that biodiversity offsets can contribute to positive conservation outcomes. However, biodiversity offsets are only appropriate for projects which have rigorously applied the mitigation hierarchy (avoid, minimise, restore/rehabilitate and offset...) and when a full set of alternatives to the project have been considered.

That statement is followed by four specific conditions that must be met to go forward. The second statement important to highlight relates to limits to biodiversity offsets, as follows:

In certain circumstances residual impacts on biodiversity (after completing the avoidance, minimisation and rehabilitation steps of the mitigation hierarchy) cannot be offset. Additionally, there are some components of biodiversity for which impacts could theoretically be offset, but with a high risk of failure. Under these circumstances, biodiversity offsets are not appropriate, and this means that the project as designed should not proceed.

This statement is followed by eight specific situations where offsets must not be used (see IUCN, 2016, Res 059-En, Annex 1). Overall, the Annex to this WCC resolution is comprised of nine pages divided into eleven main headings and is worth serious study by conservation practitioners, planners, legal drafters, financial advisors, and policy makers as to how their legal and administrative framework wants to define and regulate biodiversity offsets should that become an area of concern. According to the Paulson Report, presently most low- and middle-income countries do not have regulatory requirements for biodiversity offsets (Deutz et al., 2020, p. 100).

Internationally, as a final note, efforts to define and guide biodiversity offsets have been ongoing for several years mainly because it is so difficult to truly replicate and trade one biodiversity site for another. In 2004, the Business and Biodiversity Offsets Programme (BBOP) was formed as a partnership of some 80 leading organisations and individuals from around the world, representing companies, financial institutions, governments, conservation organisations and others. Among their goals was to clarify and firmly embed the role of biodiversity offsets in the broader Mitigation Hierarchy (first, avoid; then minimise, then restore, and finally offset) with a view to achieving no net loss and preferably a net gain of biodiversity and to develop principles and methodologies required to support best practice in biodiversity offsets. Among their outputs were a set of principles on biodiversity offsets issued in 2018 agreed by all BBOP members (see Box 9).

3.2.10 Carbon trading and offsets

Carbon markets work hand in hand with natural climate solutions as a mechanism gaining traction in the context of the Paris Agreement goals (Tobin-de la Puente and Mitchell (eds.), 2021, p. 95). For these tools to be used most effectively, government regulation and policy are needed to facilitate private investment and ensure legitimate use with possibility of verification and sustainability.

There is already growing demand for credits for offsetting carbon through transactions on voluntary carbon markets. As more governments and companies commit to net-zero targets, a continuous demand is likely for carbon credits from efforts to pursue natural climate solutions through conservation, restoration, and improved management of forests, wetlands, grasslands, agricultural lands, and marine/coastal vegetation. According to a 2021 estimate, some USD 22.9-34.5 billion could be driven by governments with nationally determined contributions that incorporate natural

climate solutions as part of their overall climate goals (Id.). According to new research, some two-thirds of all countries have included natural climate solutions as part of their mitigation or adaptation strategy in their nationally determined contributions under the 2015 Paris Agreement (id). Even the G7 countries made a priority of commitments to net zero emissions in the third paragraph of their 27-page communique on climate and environment in May 2021. Their statement:

We will help set the world on a nature positive and climate-resilient pathway to bend the curve of biodiversity loss by 2030 and to keep a limit of 1.5° C temperature rise within reach by making our 2030 ambitions consistent with the aim of achieving net zero emissions as soon as possible and by 2050 at the latest (G7 Communique, 2021, p. 1).

The potential for more investment in natural climate solutions is significant since natural climate solutions currently receive just 6% of public climate mitigation funding (Id.). One of the key areas of growth for natural climate solutions will be in green financial products, including green/blue debt products such as green bonds or blue bonds, green/blue loans, and sustainability linked loans. For these instruments to be activated, investors and governments need to become knowledgeable of opportunities, how to compose suitable projects, regulatory needs, and performance and reporting requirements. As can be seen in Table 14, different countries and their institutional settings will face different challenges and opportunities.

Table 14: Challenges/opportunities for Low-Carbon, Climate Resilient (LCR) infrastructure investment

Category of country	Challenges	Opportunities
Developed countries	<ul style="list-style-type: none">• Outdated or poorly maintained infrastructure requiring large investments for renovation• Existing carbon-intensive infrastructure and carbon-intensive urban development patterns (though this varies widely by country)• High greenhouse gas emissions per capita infrastructure development e.g., fossil fuel fired power plants• Climate policies in place but sometimes fragmented and partial• Some adaptation planning but limited policies and actions to adapt	<ul style="list-style-type: none">• Strong institutional development, certainty, and reliability of the investment environment• High adaptive capacity, pockets of high vulnerability (e.g. urban slums or older urbanites)• High capacity to govern climate change• Routine renovation of aging infrastructure offers opportunities for upgrading to take climate change into account at relatively low-cost <div>↓</div>

Emerging economies (BASIC) ⁵	<ul style="list-style-type: none"> Typically low per capita greenhouse gas emissions but rising steeply, improving (but still low) energy efficiency Medium adaptive capacity, relatively high and increasing vulnerability (e.g. rapid urban growth and slum populations in high risk areas) Some adaptation planning (e.g. at local levels) but limited implementation Path dependent infrastructure development, e.g. to build fossil fuel fired power plants to supply rapidly growing power demand 	<ul style="list-style-type: none"> Relatively sound investment conditions Strong economic growth and demographic pressure, rapid urbanisation, large investments in infrastructure occurring today Strengthening institutional capacity and policies to address climate change Rapid growth in new infrastructure build provides opportunity to 'leap-frog' technologically and integrate climate concerns at design phase at relatively low cost
Medium income developing countries	<ul style="list-style-type: none"> Low energy efficiency, limited climate policy Rapid growth and urbanisation with associated infrastructure investment needs Limited adaptive capacity, some adaptation planning yet limited implementation Weak institutional capacity for policy reform, legal enforcement capacity 	<ul style="list-style-type: none"> Investment policy frameworks evolving, strengthening them is a governmental priority Industrialisation and increased energy and material consumption Growing donor support for low-carbon development and adaptation planning New infrastructure build provides opportunity to leapfrog technologically and integrate climate concerns at design phase at relatively low-cost
Low-income and least developed countries	<ul style="list-style-type: none"> Weak enabling conditions for investment Lack of basic infrastructure (e.g. transport, energy and water) Sluggish economic growth, strong demographic growth putting pressure on existing infrastructure High dependence on natural resources (both renewable and non-renewable) High vulnerability to climate change and climate-related disasters Low adaptive capacity, some adaptation planning yet limited implementation or mainstreaming into development planning Insufficient financial and technical capacity in government 	<ul style="list-style-type: none"> Growing donor support for adaptation planning and implementation Opportunities to integrate climate change consideration into development planning and infrastructure planning, which is largely led by the public sector Provision of basic infrastructure provides opportunity for leapfrogging; also where growth is limited and rural decentralised infrastructure solutions may deliver low cost, LCR services (e.g. off-grid electricity) along with other local development benefits.

Source data: OECD, 2011a (Green Growth Strategy). (In Corfee-Morlot et al., 2012, p. 24)

As shown in Table 14, capacities vary among countries in their ability to set and monitor climate credits and offsets to achieve low-carbon, climate resilience (LCR) pursuant to the Paris goals.

⁵ Refers to four large developing countries – Brazil, China, India, South Africa – which have formed a geopolitical bloc in the UN negotiations on climate change.

In addition, this is a market that remains mainly over the counter, with a highly fragmented set of retailers and wholesalers. For the most part, the present system is voluntary and without any standardization. This is worrisome for financial experts familiar with this market because they expect significantly increased demand for carbon credits to offset emissions as more and more companies and organisations pledge to achieve net-zero emissions under the Paris Agreement by 2030 or 2050. It is anticipated that during this decade especially demand will become enormous. According to a private sector-led Task Force on Scaling Voluntary Carbon Markets (TSVCM) established in 2020 and sponsored by the Institute for International Finance (IIF), voluntary carbon markets will need to grow by more than 15-fold by 2030 in order to support the investment required to deliver the 1.5° Celsius pathway under the Paris Agreement (TSVCM, 2021, p. 4).

One example of a pilot project newly underway related to blue carbon finance and aiming to sell carbon credits is the Philippines' Coastal Risk Reduction Project being assisted by Conservation International. Highlights of that project are in Box 10.

Box 10: Philippines' coastal risk reduction pilot project

Name of investor/group:

Conservation International and Global Innovation Lab for Climate Finance.

Date of action and length of project:

- 2019-2029 (10-year project).
- 2019/2020: pre-pilot phase to setup RISCO, negotiate contracts and engage in additional scoping and analysis.
- 2020-2029: pilot implementation.
- 2025+: replication of pilot project in additional countries.

Amount and type of financial investment:

Blue carbon finance: at least USD 10 million, up to USD 200-280 million (if scaled up to 4 countries), from insurance fees and carbon credits.

Purpose of investment:

Coastal risk reduction and mangrove conservation and restoration.

Restoration Insurance Service Company (RISCO) is a social enterprise ensuring insurance companies incorporate the value of mangroves into insurance products through fees and carbon credits that support community-based wetland restoration and conservation efforts.

Description:

- RISCO (Restoration Insurance Service Company) is a first-of-its-kind social enterprise that conserves and restores mangrove forests by generating insurance-related revenue through property damage risk reduction and blue carbon revenue through the sale of credits. For this project, it identifies viable project sites, coordinates and contracts with insurance partners, helps the insurance sector to evaluate risk reduction benefits of the mangroves, provides the mangrove conservation and restoration interventions, and manages the process to generate and sell blue carbon credits. In return, insurance companies pay a fee to RISCO for helping with the valuation of mangrove benefits and mangrove conservation and restoration activities. RISCO also receives funds from investors and blue carbon credit buyers.
- The pilot phase of this project is taking place in the Philippines where a total of 3,400 ha of conservation and 600 ha of restoration are targeted.
- Ultimately, this type of project has the goal to interest insurance providers to incorporate the protective capacity of mangrove ecosystems into flood risk models.



Legal aspects:

- The Climate Change Act of 2009 is considered an important principal law underpinning this project; the Act is considered progressive with a strong emphasis on disaster risk reduction. RISCO, created by Conservation International for this project, contracts with insurance partners. So mostly a contractual approach is being used for project activities.
- RISCO works with the blue carbon rights holders (e.g. project partners holding Foreshore Lease Agreements or other legal tenure, and/or the government) to secure the blue carbon rights. RISCO will assess potential legal mechanisms to secure the blue carbon rights depending on the country context. This may involve understanding and addressing community and collective land rights.
- The project is considered to have high potential for developing blue carbon credits, including significant carbon content, additionality (i.e. threat), and legal structures that allow for crediting.

Special challenges:

For the pilot phase of this project, Conservation International has identified the following challenges:

- RISCO is unlikely to find a single site with enough mangrove cover and insurable assets.
- With premium rates very low in the Philippines, insurance companies will need to pay RISCO from other revenues and will have to be convinced that they can sufficiently benefit from avoided loss.
- There is little history on similar projects meaning fundraising may be challenging and RISCO may be seen as a risky venture for debt and equity investors.
- Securing the legal rights to blue carbon credits may be a challenge (i.e. mangroves and their blue carbon are often owned by the government).

For more information, please consult the following links:

<https://www.climatefinancelab.org/project/coastal-risk-reduction/>

<https://www.iisd.org/articles/investment-case-for-nature-based-infrastructure>

https://www.climatefinancelab.org/wp-content/uploads/2019/03/RISCO_Instrument-analysis-1.pdf
[Mangroves pay their way | Swiss Re \(swissrefoundation.org\)](#)

Source data: Compiled by IUCN Environmental Law Centre

As might be suggested by this Philippines' pilot case, the challenge for experts across industry, academia, and finance is to provide some standardisation and principles to make the current unguided operation into a workable, generally manageable and self-regulating global voluntary market. This includes the need for rules on transparency, disclosure, and careful monitoring to avoid gaming the system. In 2021, the new task force's more than 50 members including buyers and sellers of carbon credits, along with a consultation group of experts from more than 80 institutions, came up with conclusions and recommendations in a consultation paper aimed at improving the current carbon credit/offset system and meeting the goals of the Paris Agreement.

Importantly, for emerging markets and developing economies several findings are particularly insightful for setting up or accepting a carbon credit system. Among these are the following: the quality and verification of carbon credits currently in the marketplace is a concern and buyers are uncertain about the quality of credits being supplied. There also are concerns about permanence—whether projects can maintain GHG reductions or removals on a permanent basis, in which case they must have specific requirements stretching over multiple decades. Other concerns include leakage (where a project results in an increase in emissions outside the project boundary) and additionality (whether projects genuinely yield emission abatement that would not otherwise occur). These last two concerns apply especially to two large categories of projects: large-scale renewable energy, and forestry and land use (TSVCM 2021, p. 37).

Then there is the fundamental question of how to value or price a ton of carbon in the marketplace. The World Bank recognises two main types of carbon pricing: emissions trading systems (ETS) and carbon taxes. An ETS system, sometimes called cap-and-trade, caps the total level of greenhouse gas emissions, and allows those industries with low emissions to sell their extra allowances to larger emitters. By creating supply and demand for emissions allowances, an ETS establishes a market price for greenhouse gas emissions. The cap helps ensure that the required emission reductions will take place to keep the emitters (in aggregate) within their pre-allocated carbon budget. A carbon tax directly sets a price on carbon by defining a tax rate on greenhouse gas emissions or – more commonly – on the carbon content of fossil fuels. It is different from an ETS in that the emission reduction outcome of a carbon tax is not pre-defined but the carbon price is. The choice of the instrument will depend on national and economic circumstances. Some 40 countries and more than 20 cities, states and provinces already use carbon pricing mechanisms, with more planning to implement them in the future (www.worldbank.org/en/programs/pricing-carbon).

Among the findings of the task force, the final report laid out the following four key insights important for governments, companies, and investors to consider (each backed up by detailed recommendations) (TSVCM 2021, p. 69-70):

1. **On the demand side, carbon dioxide removal/sequestration cannot replace the need for urgent and immediate emissions avoidance/reduction but is required even in the most ambitious decarbonization scenarios** (see Box 11). Large-scale emissions avoidance/reduction should be a priority and should start now, with offsets playing a vital yet complementary role. It is important establish principles on the use of offsets – this will help ensure that offsets do not crowd out other climate action. The task force also recommended to align guidance on offsetting in corporate claims – this will clearly distinguish between the roles of avoidance/reduction and removal/sequestration; and offer consistent investor guidance on offsets – this will support investors as they think through their options for climate action.
2. **A diverse portfolio or project types is needed, from avoidance/reduction to removal/sequestration.** In the face of mobilisation challenges involved in expanding the supply of carbon credits, achieving scale will be difficult unless supplies increase from all project types. Additionally, the advantages and disadvantages of different project types mean that decision makers will require a range of options. Lastly, project types are expected to perform different roles over time. In the long term, for example, the importance of technology-based removals is likely to increase.
3. **Buyers and sellers will need to trade credits across the world to ensure sufficient supply and allow everyone to benefit.** This is because there is a geographical mismatch between sources of finance and sources of offset supply. Most of today's demand comes from Europe and the United States, and most of the potential supply is outside these regions. The opportunity to scale up voluntary carbon markets therefore depends on efficient, high-integrity international exchanges for offsets. All market participants, including regulators, need to encourage international allocation of capital for offsets.
4. **Rapid-supply scale-up action across all offset categories is required from today.** Early action at pace is required to overcome mobilisation challenges and long lead times to ensure that demand can be met in the run up to 2050 and beyond. This includes early investment in technology-based removals to ensure sufficient scale at accessible costs in 2050, and innovative action to overcome mobilisation barriers for NCS (Natural Climate Solutions) such as de-risking

investment in projects to improve financial attractiveness for investors. By 2050, we will need to shift toward technology-based removals.

Box 11: Different types of environmental actions for carbon credits and offsets

Carbon credits can be grouped in two main categories: (i) avoidance/reduction credits and (ii) removal/sequestration credits, and within these there are several sub-categories depending on whether the solutions are nature-based or technology-based. The third type of environmental action to deal with climate change is to invest in new climate technologies that are clean and cost-effective over a reasonable timeframe.

- **Avoidance/reduction:** These projects reduce emissions from current sources, such as by funding the implementation of lower-carbon technologies such as renewable energy, and avoiding practices that cause emissions such as by reducing deforestation. There are two approaches. First, to avoid nature loss – limit the loss of nature such as forests and peatlands that store and sequester carbon. Avoided nature loss is part of natural climate solutions (NCS). Second, use technology-based avoidance/reduction: These projects reduce emissions from current sources, which do not have the financial incentive or regulatory requirement to decarbonize. Common projects include setting up clean cookstoves, capturing methane, changing industrial processes to emit less GHGs, and funding the transition to renewable energy in areas where it is not yet competitive or mandated.
- **Removal/sequestration:** These projects take out and use/store CO₂ from the atmosphere, including through nature-based sequestration such as reforestation, peatland restoration, and technology-based removal such as bio-energy with carbon capture and storage (BECCS) and direct air capture with carbon capture and storage (DACCS). Again, there is the nature-based approach and the technology-based approach. Nature-based sequestration uses nature to sequester more carbon in the biosphere, including reforestation and restoring soil, mangroves, and peatlands. Nature-based sequestration is also part of NCS. Projects often have high co-benefits for nature and society such as positive impact on surrounding biodiversity, water quality, soil quality, and livelihoods. Technology-based removal removes and uses/stores CO₂ from the atmosphere with the help of modern technology that uses or stores it in the geosphere or through other secure methods such as in concrete. This is the most permanent storage solution.
- **Scaling up critical climate technologies:** Going forward, voluntary carbon markets can play a significant role driving investments into new climate technologies that are the most difficult to commercialise. These technologies address two critical elements outlined in IPCC's mitigation pathways i) drastic reduction in emissions, including from hard-to-abate sectors and ii) durable removal at scale. Emerging breakthrough technologies are necessary to reach our goals for net-zero emissions by 2050. New innovation in technologies such as clean steel (e.g. using electrification or low carbon hydrogen heating) and low-carbon fuels (e.g., sustainable aviation fuel or sustainable marine fuel) will reduce reliance on fossil products and achieve major emissions reductions down the line. Promoting emerging technology through voluntary carbon markets is critical to help bring these solutions to scale and reduce costs.

Source: TSVMC, 2021, p. 8-9

3.2.11 Sustainable supply chains

As part of the 'environmental' and 'social' concerns surrounding sustainable investment, a connected, new area of concern is the supply chain used by producers. The key is to determine whether there are elements in the supply chain that are harmful or helpful to the environment. This especially applies to issues of deforestation and forest degradation, unsustainable and destructive fisheries, and industrial as well as small-scale agriculture that makes heavy use of agricultural pesticides and wastes land and water. For example, the UK government in 2020 proposed a new law that bans companies from selling products that are harvested on illegally deforested land (Tobin-de la Puente & Mitchell, 2021, p. 143).

Private financial institutions, multilateral development banks and development finance institutions can often provide concessional financing to incentivise producers along a supply chain to engage in more sustainable production practices. In addition, multilateral financial institutions, such as the World Bank and IDB include guidance for primary suppliers in their policy on biodiversity safeguards (World Bank, 2016, p. 72). EBRD references supply chain issues as part of its performance requirements for biodiversity conservation (EBRD, 2020). Similarly, IFC addresses supply chain issues in relation to its performance standards for Biodiversity Conservation and Sustainable Management of Living Natural Resources (IFC, 2013, see especially Box 1). This supply chain concern has generated new trade-related financial products that help producers support sustainable trade transactions. These include sustainable payables finance to help buyers integrate their ESG performance criteria into their supply chain finance programmes so that suppliers can receive some tangible benefits (an award of money) for strong sustainability performance of the production process. Sustainable trade loans are possible to negotiate with which to pay suppliers of goods and services for their procurement of sustainably sourced, manufactured, or converted raw materials. Of course, the contracts between buyers and sellers should emphasise the need for increased transparency and traceability across supply chains.

3.3 Summary points

1. Governments must play an essential role to bring about a favourable environment for large-scale ESG investment by having appropriate regulations, participating in blended finance arrangements, supporting technical assistance, and collaborating with the private sector in identifying potential investors.
2. Policy instruments for biodiversity need to be strengthened and scaled-up to promote conservation and sustainable use. Governments and the financial sector should engage in designing strategies on National Biodiversity Strategy and Action (NBSAP) financing that includes the role of the private sector. Law and regulations should be upgraded to include economic instruments such as biodiversity-relevant taxes, fees, and charges, biodiversity and climate carbon offsets, and payments for ecosystem services.
3. It is critical that governments reform subsidies harmful to biodiversity and enact or strengthen subsidies supportive of biodiversity restoration, conservation, and ecological connectivity.
4. Non-profits can help to support conservation investments by working with local communities and stakeholders to ensure their views are taken into account and, as appropriate, involving such groups in implementation and monitoring.
5. Payments for ecosystem services (PES) are increasingly held up as a new solution to the PA financing crisis. However, implementing PES is no simple task, often requiring substantial investment in technical capacity as well as lengthy processes of baseline research, negotiation with stakeholders, legislative or regulatory reform, as well as elaborate monitoring, evaluation, and enforcement.

Part 4 Green-oriented financial products – innovation with tradition

In parallel with the growth of investor interest in sustainable investing and ESG has come a scaling up of innovative financial mechanisms. Most of the financial mechanisms used by the public and private sectors comprise the following five instruments: grants (for technical assistance and initial seed money), equity (for investment, sharing ownership and risks), guarantees (to reduce counterparty risk), insurance (to protect against unforeseen impacts), and loans (taking on debt either as direct debt or bonds). In various ways, these traditional core instruments are being adapted and applied to meet the ESG/green finance need (see Figure 14 and Table 15). According to the Global Green Growth Institute (GGGI), innovative financial mechanisms have, at a minimum, three characteristics:

1. They use blended instruments (e.g. private investment, guarantees, insurance, and grants);
2. They are designed to reduce investment risks; and
3. They achieve leverage by unlocking additional financing for projects from different capital sources, both public and private (GGGI, 2016, p. 24).

Growth in the development of innovative financial products has been driven by mounting evidence that investments in sustainability, ESG and other green projects can meet (and in many cases exceed) the risk-return expectations of investors and the market returns of comparable investments not viewed as sustainable (see www.marketwatch.com, May 29, 2021). Investors haven't had to sacrifice returns for ESG.) In addition, such actions begin to respond to mounting global non-financial concerns about biodiversity loss, degraded protected areas, climate change, and public health risks (such as the COVID-19 pandemic). Some institutional investors working with emerging markets have been moving into the ESG/green finance space to manage reputational risks, especially if they are members of organisations (e.g. World Business Council for Sustainable Development, CFA Institute) (PI website, 2020). Finance and development organisations such as the World Bank group and the European Union are encouraging national governments to use green financial mechanisms in innovative ways to address these risks as an important part of green recovery plans and a more sustainable economic growth strategy (see, e.g. World Bank 2020b; EU 2020).

Still, it is important to note that there remains activity in relatively traditional conservation financing of biodiversity, protected areas, and ecological connectivity by donors, multilateral development banks, and countries (see for example, Box 12 for a classic example of conservation development assistance by France to Mexico). This likely will continue at least as a transition to more innovative financing as experience grows with investors and developing countries.

Box 12: Jalisco State's paisajes bioculturales/MexicoName of investor/group:

France through its ODA (AFD funding).

Length of project:

At least 10 years.

Amount and type of financial investment:

ODA funding for biodiversity conservation and preservation purposes.

Unclear how much AFD invested in this particular project. But in 2019, EUR 457 million in biodiversity related projects were invested by the AFD.

Purpose of investment:

The AFD is supporting public policies on protected areas and ecological connectivity.

Based upon the model of the French Regional Natural Parks, the AFD has supported the state of Jalisco in creating its programme Paisajes Bioculturales. This programme established new categories of protected natural areas with a new governance model for integrated land management. The preservation of the environment and the protection of local livelihoods are two key components of these new protected areas.

The AFD has also promoted the creation of Areas Voluntarily Designated for Conservation. These are smaller areas, usually owned by private owners, ideally located between larger protected areas. These privately-owned pieces of land will be transformed to serve as natural corridors creating ecological connectivity between isolated conservation spots.

Legal foundation:

The main legislation at federal level on Protected Areas is the Ley General del Equilibrio Ecológico y la Protección al Ambiente which has provisions on financial instruments for environmental protection (Artículo 22 and 22 bis), adopted in 1988 but significantly amended since then and Articles 22 and 22 Bis were last amended in 2012. The state of Jalisco also has its only law called Ley Estatal del Equilibrio Ecológico y la Protección al Ambiente and Capítulo VI, Sección Segunda focuses on financial & economic instruments. The Paisaje Biocultural de Sierra Occidental de Jalisco is managed by a Charter called the Acuerdo de Gestión Territorial which defines conservation and development objectives for 15 years and was adopted by the main stakeholders, including the state and federal level.

For more information on, please consult the following links:

https://www.researchgate.net/publication/298212877_Los_Paisajes_Bioculturales_un_instrumento_para_el_desarrollo_rural_y_la_conservacion_del_patrimonio_natural_y_cultural_de_Mexico

https://www.parcs-naturels-regionaux.fr/sites/federationpnr/files/document/centre_de_ressources/synthese_coe_etude_institutionnalisation_pnr_raport_final.pdf

<https://www.afd.fr/sites/afd/files/2020-10-08-24-39/biodiversity-reconciling-development-with-nature.pdf>

<https://www.afd.fr/en/ressources/mexicos-partnership-biodiversity>

<http://www.paisajebiocultural.org.mx/carta-territorial/#>

Source: Compiled by IUCN Environmental Law Centre

Growth in green finance is expected to continue over the coming decades, in part, to help national governments meet internationally agreed emissions (set through the Paris Agreement) and conservation targets (for example, the post 2020 Global Biodiversity Framework and SDGs) (World Bank, 2020b). Corporations will increase use as well, seeking to reduce environmental impacts to comply with international and national law and relevant regulations. In addition, as briefly noted in an earlier section, a new generation of high-net-worth and ultra-high-net-worth individuals, estimated to inherit USD 30 trillion over the next 25 years, is anticipated to boost demand as they seek investment opportunities with attractive returns plus environmental and social returns.

According to the World Bank in its research on mobilising private finance for nature, there are 10 top investment instruments with high feasibility in emerging market countries (Figure 14). In addition, in

the same paper, the World Bank presented a list of key biodiversity finance instruments/models (see Table 15), explaining that these two illustrations were an effort to provide a qualitative assessment (using scores) of relevant instruments currently being deployed with the hope that those scores will improve over time as policies, regulations, and markets develop further.

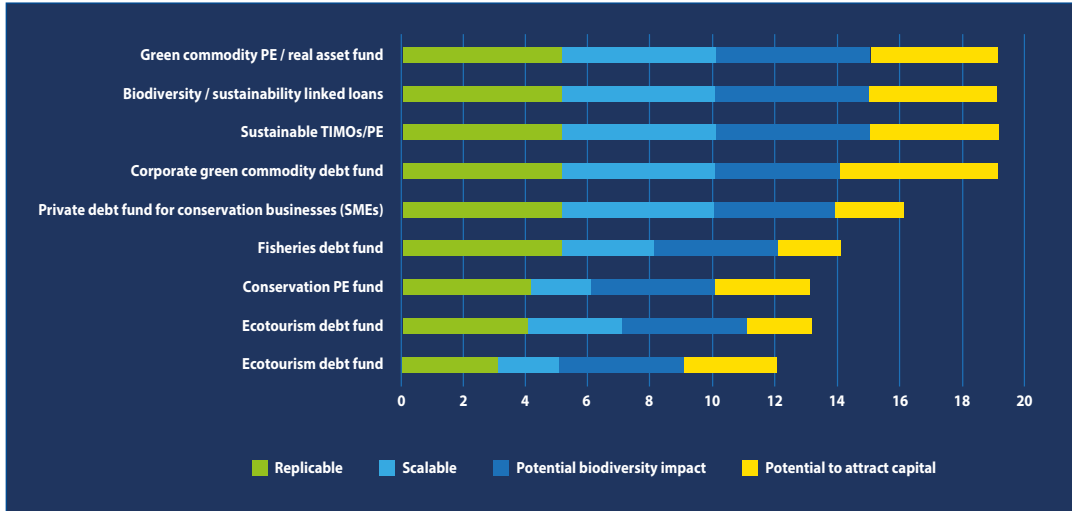


Figure 13: Top ten investment instruments with high feasibility in emerging markets, scored by potential

Source: Modified after World Bank 2020b. (PE=price to earnings ratio; TIMOs=A Timber Investment Management Organization (TIMO), a management group that aids institutional investors in managing their timberland investments; SMEs=small and medium-size enterprises)

Before turning to specific innovative financial instruments and some illustrative cases, it is worth sharing a commentary by the European Investment Bank (EIB) in a 2019 publication “Investing in nature: financing conservation and nature-based solutions”. EIB offered the following advice about the attractiveness of bank financing and the value of using investment tools as part of conservation financing, not only grants or donations:

Grants provided by public institutions, philanthropies or companies have many advantages. However, there can also be inherent limitations from only relying on these sources of finance. For example, they can be limited in size or linked to very specific (often short) funding cycles. Most importantly, if they do not cover the full financing need of a project over its lifetime, project developers will need to re-apply for funding on a regular basis. This application process can be time-consuming, costly and uncertain. Therefore, using a model which generates its own revenues, or consistently saves costs over time, can help to set your project on an independent and financially sustainable path (EIB, 2019, p. 4).

The remainder of this part gives an overview of financial instruments in six areas: debt, debt for nature or climate swaps, equity, blended finance, impact investing, and philanthropy. Philanthropy is included here because it has been an important and sometimes sole source of funding support for many conservation projects around the world, providing environmental and social benefits beyond the market (non-financial benefits). It may have started a project which now needs more substantial financing in the form of private investment. Or, in large-scale ESG or other green investments by

private institutional or retail investors, some philanthropy may become part of a blended package, for example, where start-up support, proposal writing, or technical assistance may be needed. Moreover, with the wealth effect and many individuals and foundations seeking ways to use their excess capital as an investment for some social or environmental good, it is important to promote more large-scale philanthropy as part of the investment package. It may become the catalyst for other investors by giving credibility to government and reducing the sense of risk.

4.1 Debt – bonds and loans

For emerging markets and developing economies seeking conservation financing, the most common financial instrument will likely be debt in the form of a Green Bond or a Sustainability Loan. In financial terms, a bond is a loan that pays interest over a fixed period of time. When the bond matures – reaches the end of this fixed period of time – the principal (or investment amount) is repaid to the lender(s) (Morris & Morris, 2012). Because the rate at which interest is paid and the amount of each payment is fixed, green bonds are also known as ‘fixed-income securities’. Green bonds can be issued by a variety of entities, for example, corporations may issue ‘corporate’ bonds, and municipalities ‘municipal’ bonds associated with any of the uses listed below. Public enterprises also may decide to issue green bonds to support future plans related to the environment and/or climate; these must be approved by and negotiated with the appropriate ministry overseeing the public enterprise (ultimately the Minister of Finance) and possibly even the Central Bank if it is a large investment commitment.

As discussed further in Part 5, with the anticipated growth of green financing, the need for basic standards, definitions, and metrics for assessing performance has spurred efforts by different organisations to produce guidance. One of these organisations is the International Capital Market Association (ICMA). ICMA, in June 2021, issued Green Bond Principles (GBP) reflecting voluntary process guidelines for issuing green bonds with the goal of promoting transparency, disclosure, and integrity in development of the green bond market. These principles include a definition of green bonds as follows:

Green Bonds are any type of bond instrument where the proceeds or an equivalent amount will be exclusively applied to finance or re-finance, in part or in full, new and/or existing eligible Green Projects and which are aligned with the four core components of the GBP (ICMA, 2021, p. 3)

The four core components of the GBP, according to ICMA, are: 1) how proceeds are used, 2) having a process for project evaluation and selection, 3) management of the proceeds, and 4) reporting. These elements should be appropriately described in the legal documents setting up the green bond (Id., p. 4). All four core components are elaborated at some length in the GBP. It is worth noting here what the GBP consider an eligible green project, including the following:

- **Renewable energy** (including production, transmission, appliances and products);
- **Energy efficiency** (such as in new and refurbished buildings, energy storage, district heating, smart grids, appliances and products);
- **Pollution prevention and control** (including reduction of air emissions, greenhouse gas control, soil remediation, waste prevention, waste reduction, waste recycling and energy/ emission-efficient waste to energy);
- **Environmentally sustainable management of living natural resources and land use** (including environmentally sustainable agriculture; environmentally sustainable animal husbandry; climate

smart farm inputs such as biological crop protection or drip-irrigation; environmentally sustainable fishery and aquaculture; environmentally sustainable forestry, including afforestation or reforestation, and preservation or restoration of natural landscapes);

- **Terrestrial and aquatic biodiversity conservation** (including the protection of coastal, marine and watershed environments);
- **Clean transportation** (such as electric, hybrid, public, rail, non-motorised, multi-modal transportation, infrastructure for clean energy vehicles and reduction of harmful emissions);
- **Sustainable water and wastewater management** (including sustainable infrastructure for clean and/or drinking water, wastewater treatment, sustainable urban drainage systems and river training and other forms of flooding mitigation);
- **Climate change adaptation** (including efforts to make infrastructure more resilient to impacts of climate change, as well as information support systems, such as climate observation and early warning systems);
- **Circular economy adapted products**, production technologies and processes (such as the design and introduction of reusable, recyclable and refurbished materials, components and products; circular tools and services); and/or certified eco-efficient products; and
- **Green buildings** that meet regional, national or internationally recognised standards or certifications for environmental performance. (Id., p. 4-5)

One can see that the scope of possible subject areas for green bonds is expansive. In any of these subject areas, when a government issues a green bond directly, it is called a Sovereign Bond and the monitoring is done directly by the country's DMO and central bank. When a government issues a sovereign bond, the government takes on the commitment and risk directly.

As indicated in the list above, green bonds include Climate Bonds. As the name suggests, climate bonds are fixed-income financial instruments used to fund projects that have positive climate benefits. They are issued mainly to raise finance for climate solutions, for example, mitigation or adaptation. Like normal bonds, climate bonds can be issued by governments, multi-national banks or corporations. The issuer normally promises to the investors that all the raised funds will go only to specified climate-related programmes or assets, such as renewable energy plants, or climate mitigation funding. Climate bonds are a relatively new asset class but they are growing rapidly, particularly in light of the 2015 Paris Agreement on Climate Change and commitments by the Parties to reduce greenhouse gas emissions. Box 13 offers an example of sovereign green bonds issued by Fiji for climate change mitigation and adaptation.

Box 13: Fiji's sovereign green bonds

Date of action and length of project:

In autumn 2017, Fiji was the first developing country to offer sovereign green bonds, under 3 tranches (November 2017, December 2017, Sovereign green bond. USD 50 million.

Purpose of investment:

(Among other things) to support climate change mitigation and adaptation, and sustainable management of natural resources which is defined in the Green Bond Programme to include actions taken to



reforest degraded areas, protect/conservate land, reduce habitat clearance, protect areas of ecological importance, including terrestrial, freshwater, marine ecosystems, and particularly afforestation and sustainable forest management that substantially avoids or reduces carbon loss/increases carbon sequestration, and habitat and biodiversity conservation (Republic of Fiji, 2017, p. 7).

Description:

The following projects were supported by the proceeds of these bonds:

- Rural water supply programme (6.3 % of proceeds);
- Rainwater harvesting programme (3.75 %);
- Ongoing rehabilitation and construction of schools damaged by the tropical cyclone Winston (45.9 %);
- Emergency road works (34.5 %);
- New installations of solar home systems (6.28 %);
- Reducing emissions from deforestation and forest degradation (REDD+) (0.3 %); and
- Construction of the largest waste-disposal facility in the country (2.8 %).

Obligations of government receiving outside investment:

Under the 2017 Fiji Green Bond Framework:

- Eligible projects using the bond proceeds have to follow the Green Bond Principles;
- Focus primarily on investments building resilience against the impacts of climate change;
- Support Fiji's commitment to achieve 100 % renewable energy and reduce its CO2 emissions in the energy sector by 30 % by 2030;
- Strict transparency, monitoring and reporting requirements in place to ensure the allocation of proceeds and the eligible projects are compliant with the Green Bond Framework and with any environmental and social risk assessments; and
- Conduct independent external reviews.

Legal context:

- Fiji's main environmental law is the Environment Management Act 2005, with provisions authorising an Environmental Trust Fund in section 55. There also are relevant and supportive policies, including the 5-Year and 20-Year National Development Plan "Transforming Fiji", which includes a goal to Increase Foreign Direct Investment and Review Investment Policy and Legal Framework (p. 88); and the Green Growth Framework. This latter document not only covers biodiversity conservation and resource protection as part of the list of how the proceeds may be used but also sets out procedures for applying, selection, and evaluation of projects for its use.
- Fiji also adopted new investment legislation in 2021; Investment Act 2021 (Act No. 5 of 2021).

For more information, please consult the following links:

<https://www.icmagroup.org/assets/documents/Regulatory/Green-Bonds/Green-Bonds-brochure-150616.pdf>

<https://www.rbf.gov.fj/wp-content/uploads/2020/03/Fiji-Sovereign-Green-Bond-Impact-Report-2018.pdf>

<https://investinfiji.today/wp-content/uploads/2018/01/Fiji-Green-Bond-Framework-October-2017.pdf>

https://www.ifc.org/wps/wcm/connect/news_ext_content/ifc_external_corporate_site/news-and-events/news/cm-stories/fiji-green-bond-for-a-greener-future

<https://www.fiji.gov.fj/getattachment/15b0ba03-825e-47f7-bf69-094ad33004dd/5-Year-20-Year-NATIONAL-DEVELOPMENT-PLAN.aspx>

<https://cop23.com.fj/wp-content/uploads/2018/01/GREEN-GROWTH-FRAMEWORK-Fiji.pdf>

Source: Compiled by IUCN Environmental Law Centre

Climate bonds follow the Green Bond Principles of ICMA, as noted above. They are also monitored by the Climate Bonds Initiative (CBI), an investor-focused not-for-profit international organisation, promoting large-scale investments from institutional and retail investors that will deliver a global low carbon and climate resilient economy. Certification under the Climate Bonds Standard confirms that the projects & assets associated with the bond are consistent with this goal. A key programme

of the CBI is the Climate Bonds Standard & Certification Scheme (Certification Scheme) (www.climatebonds.net).

Climate bonds are generally known as Thematic Bonds, in other words, traditional fixed income instruments which allow investors to finance specific investment themes including SDGs. The most common thematic bonds are green bonds, social bonds, and sustainability bonds. (As a specific example relevant for this paper, thematic bonds may include a wide variety of specific purposes, including aiding parks and protected areas. For example, West Palm Beach, Florida, USA, issued a 20-year bond in the year 2000 that provided USD 20 million for park upgrades throughout the City as part of its Park Master Plan. The repayment of that bond issuance expired in September of 2020, and a new parks bond initiative is underway; see <https://www.wpb.org/government/parks-and-recreation/2020-parks-bond>).

An example of another investment project with green bonds for climate action is in Indonesia, which issued Green Sukuk Bonds focused on climate change resilience and energy conservation (see Box 14). That negotiation also found a method whereby the bonds were interest-free while still generating returns to investors so as not to infringe on Islamic law which prohibits payment of interest. This may prove to be an example for other Islamic law countries. The Climate Bonds Initiative was involved here as part of a Green Sukuk Working Group, a Gulf-based coalition developing finance models for renewable energy that meet the needs of Islamic investors.

Box 14: Indonesia's green sukuk bond

Name of investor/group:

The bond was put together by the Clean Energy Business Council, the Climate Bonds Initiative, and the Gulf Bond and Sukuk Association. Investors were worldwide, and included 32 % asset/fund managers, 25 % banks, 18 % pension funds, 15 % central banks and 1 % private banks. Thirty-two per cent of the investors were Islamic, 25 % from Asia, 15 % from the EU, 18 % from the USA, and 10 % from Indonesia.

Date of action and length of project:

First issuance: March 2018. Amount: USD 1.25 billion.

Second issuance: February 2019. Amount: USD 750 million.

Third issuance: June 2020. Amount: USD 750 million.

All three issuances have a five-year maturity date.

Amount and type of financial investment:

Green sukuk bond.

Sukuks bonds are interest-free bonds that generate returns to investors without infringing the principles of Islamic law which prohibits the payment of interest.

Purpose of investment:

For the 2018 issuance and the 2019 issuance, five sectors were prioritised:

- Resilience to climate change;
- Sustainable transport;
- Waste to energy and waste management,
- Renewable energy; and
- Energy efficiency.

Obligations of government receiving outside investment:

Key obligations for the government:

- To exclude the use of proceeds for new fossil fuel based electric power generation capacity and expenditure, large-scale hydropower plants and nuclear-related assets;
- To track and report the environmental benefits of each eligible project;



- To publish an annual report listing all funded projects, and external auditors' views on use of proceeds and impacts;
- To record the allocation of each green bond or green sukuk proceeds; and
- The proceeds of each green bond or green sukuk can be used both for the financing and/or refinancing of eligible green projects.

Legal aspects:

The sukuk is an innovative financial instrument to support Indonesia's commitment in GHG emissions reduction based on Islamic Law principles.

The sukuk bonds are authorised by Law of the Republic of Indonesia No. 19, year 2008 concerning State Sharia Bonds. According to the law 'State Sharia' bonds may be referred to as sukuk bonds.

Reporting and monitoring:

The National Development Planning Agency and the Ministry of Finance review and approve projects/ budget allocation/subsidies.

The Ministry of Finance prepares and publishes annually a Green Bond and Green Sukuk. This report must contain (at least):

- A list and brief description of funded projects;
- The amount of proceeds allocated to each project; and
- An estimation of the beneficial impact of the project, including reduction in GHG emissions, reduction in resource consumption and number of parties benefiting from funded projects.

Special challenges:

CICERO highlighted the possibility for some eligible projects to include an element of deforestation.

For more information, please consult the following links:

<https://www.djppr.kemenkeu.go.id/uploads/files/dmodata/in/6Publikasi/Offering%20Circular/ROI%20Green%20Bond%20and%20Green%20Sukuk%20Framework.pdf>

<https://www.undp.org/content/dam/LECB/docs/pubs-reports/undp-ndcsp-green-sukuk-share.pdf>

<https://pub.cicero.oslo.no/cicero-xmlui/handle/11250/2720364>

Source: IUCN Environmental Law Centre

Green Lending is a separate category of conservation finance. This is where green debt may be in the form of an outright green loan to fund an environmental or climate-related activity. Green lending operates similarly to conventional lending where a Bank provides a loan to a borrower who is undertaking an environmental or climate-related activity, which is repaid with interest according to an agreed schedule.

If the green bond or green loan is intended to be applied to coastal and marine projects, it could be called a Blue Bond or Loan. Blue bonds have huge potential for mobilising the private sector to support the blue economy (the range of economic uses of ocean and coastal resources, as well as economic benefits that may not be marketed, such as carbon storage, coastal protection, cultural values and biodiversity). The Seychelles is the first country using a blue bond to provide grants for fisheries management activities and loans to encourage further investment in areas like post-harvest value adding opportunities and jobs in the protection of ocean resources. Allocation of funds for individual projects (either grants or loans) are through a Blue Grants Fund and Blue Investment Fund, both of which are managed by the Seychelles Conservation and Climate Adaptation Trust and the Development Bank of Seychelles (World Bank 2020a). These funds will support other publicly funded sustainable fisheries projects and implementation of the Seychelles Marine Spatial Plan for its Exclusive Economic Zone. See Box 15 for more information on how Seychelles set up their first blue bond programme which was combined with a debt for nature swap and involved a blended finance programme with many partners.

In addition to the Seychelles, blue bonds have now also been issued by the Nordic Investment Bank and other banks. In September 2020, the Bank of China issued its first blue bond worth USD 950 million, the first issued by a commercial bank (Davis, 2020). The funds raised by the bond will be used to finance or refinance marine-related green projects in ocean conservation, renewable energy, sustainable water and wastewater management projects, both onshore and offshore. According to one Chinese analyst, these bonds set the stage for further blue bonds in Asia, where the blue economy is the foundation of many countries' economic activity (Davis, 2020). If even a portion of the funding raised for green bonds (a market size of nearly USD 200 billion) could be raised for blue bonds, significant marine conservation efforts could be realised.

Box 15: Seychelles blended finance with financial innovations

Timeline: Debt for nature swap: 2016 for 13 years; Blue bond: 2018 for 10 years.

Type: Blended finance –USD 21.6 million Debt for nature swap; USD 15 million blue bond.

Purpose: Creation of marine protected areas, coastal clean-up, fisheries support, conserving the ocean. More than two thirds of the Seychelles economy is dependent on tourism and fishing, with the fishing industry valued at USD 300 million annually.

How blue finance tools were used:

Debt for nature swap: The Republic of the Seychelles defaulted on its debt in 2008 and its marine ecosystem and biodiversity were also deteriorating at a rapid pace. With a USD 21.6 million debt swap brokered by The Nature Conservancy (TNC) and others in 2016, the Seychelles agreed to designate 30 % of its Exclusive Economic Zone as a Marine Protected Area (MPA) and a greater commitment to protecting the ocean, including the creation of 13 marine protected areas. This is up from 0.04 % protected before the deal.

According to TNC, this was the first debt conversion to focus on marine conservation, and also the first with a policy commitment. The debt was purchased from European Paris Club creditors via a USD 15.2 million loan from TNC and USD 5 million of grants from several foundations. The debt was restructured to extend the average maturity on the notes from eight to 13 years, with approximately a quarter to be paid in local currency and was purchased at a USD 1.4 million discount. The debt is now held by The Seychelles Conservation and Climate Adaptation Trust (SeyCCAT), an independent private trust which disperses blue grants funded by the debt conversion. TNC will be repaid in full, but part of the interest payments the government makes to SeyCCAT will be used to fund conservation and climate adaptation work.

Legal agreement on debt conversion: A Debt Conversion Agreement (DCA) is required in all Debt for Nature Swaps (DFNs). In the case of a third-party DFN, an NGO (TNC) collaborated to bring together the Paris Club creditors and the Seychelles government to develop, negotiate and complete the DCA. Seychelles reached the legally-binding debt buy-back agreement with the Paris Club group of creditors and South Africa in the French capital in 2015.

- As part of this package, the Seychelles created the Conservation and Climate Adaptation Trust by law, Conservation and Climate Adaptation Trust of Seychelles Act 18 of 2015.
- The government amended other legislation in order to become a signatory of the OECD's Multilateral Convention on Mutual Administrative Assistance in Tax Matters which now allows the Seychelles' Revenue Commission to request information from other tax authorities and seek assistance in collecting outstanding tax debts on a reciprocal basis.

Blue bond: In a relatively parallel transaction, Seychelles issued the first sovereign bond explicitly advertised as 'blue'. It was launched in October 2018 by Seychelles (which has a BB-credit rating from Fitch) for an amount of USD 15 million with a maturity of 10 years and interest payments ('coupons') of 6.5%. This was the first blue bond supported by the World Bank as well, providing a repayment guarantee for a third of the principal, while the UN's Global Environment Facility (GEF) offered a USD 5 million concessional loan to help cover the coupon payments. These credit enhancement instruments allowed for a reduction of the price of the bond by partially de-risking the investment for the impact investors, and by reducing the effective interest rate of 6.5% for Seychelles to 2.8%.

Seychelles pays the bond holders from the central budget (BNCFF, 2019, p. 15). Too small to be traded on an exchange, the Seychelles blue bond was sold in a private placement to three US-based impact



investors – Nuveen, the asset management arm of TIAA (which will include the bond in the TIAA-CREF Social Choice Bond Fund), Prudential Financial and Calvert Impact Capital – with each buying USD 5 million of the notes. Notably, two of these social impact investors also have an environmental mandate (Id.). The funding generated by the bond will help make the blue economy that the Seychelles depends on more sustainable by both protecting marine biodiversity and financing the transition to a sustainable economy. A main challenge was to convince people relying on marine resources that this expansion of marine protected areas would benefit them as well. It was particularly true for fishing communities and the tourism industry, partially due to a mistrust between local communities and government officials. To deal with this, temporal protected areas were created allowing for some activities to take place during parts of the year. For instance, during the seasonal nesting and hatching period for green turtles and hawksbill turtles, activities affecting marine ecosystems are restricted in these areas.

Source data: World Bank 2020a. Compiled by IUCN Environmental Law Centre

Another variation on a green debt instrument, is the sustainability bond/loan. This may be a bond, or a traditional loan purposed for certain sustainability activities in an industry. Bonds that intentionally mix eligible Green and Social Projects are most commonly referred to as Sustainability Bonds, and the ICMA also has provided separate Sustainability Bond Guidelines updated in June 2021 (see www.icmagroup.org/sustainable-finance). An example of a sustainability loan newly negotiated for five years is the Thai Union Group's sustainability-linked loan (see Box 16).

Box 16: Thai Union Group's sustainability-linked loan

Name of investor/group:

Lenders include Kasikornbank, Hongkong and Shanghai Banking Corporation, BNP Paribas, Oversea-Chinese Banking Corporation (Bangkok Branch) and Sumitomo Mitsui Trust Bank (Thai PCL).

Bank of Ayudhya, Mizuho Bank and MUFG Bank are the mandated lead arrangers and bookrunners and sustainability coordinators for the loan. Sustainability and other external organisations will give second-party opinions on the performance of the group.

Date of action and length of project:

January 2021 for 5 years.

Amount and type of financial investment:

Thai Union Group (the world's largest seafood producer) has secured its first sustainability-linked syndicated loan amounting to USD 400 million in Thailand and Japan. USD 183 million will be dollar-denominated and the remaining USD 217 million baht-denominated.

Purpose of investment:

A sustainability linked loan incentivises the corporate borrower to achieve agreed upon sustainability performance objectives. This loan is linked to three key performance indicators with the achievement of objectives leading to a reduction in interest rates. The interest rate has not been revealed but will be reviewed periodically over the five-year timeframe depending on how much they have achieved their sustainability targets. If they achieve these targets, the interest rate will be lower than ordinary loans. The three performance indicators are the following:

- maintaining the company's consistently high rankings in the S&P Global Dow Jones Sustainability Indices;
- achieving its greenhouse gas reduction targets; and
- increasing oversight in its international supply chain through an increase in the use of electronic monitoring and/or human observers aboard its tuna vessels.

Analysis over the group's alignment to the Sustainability Linked Loan Principles will also be assessed by Sustainability.



For more information, please consult the following links:

<https://www.wealthandsociety.com/updates-and-articles/thai-union-launches-inaugural-sustainability-linked-loan>

<https://asia.nikkei.com/Business/Finance/Seafood-giant-Thai-Union-secures-400m-in-first-sustainability-linked-loan>

<https://training.theasset.com/article-esg/42929/thai-union-secures-first-sustainability-linked-loan>

Source: Compiled by IUCN Environmental Law Centre

As shown by the ICMA list of green bond categories or subject areas, many innovative variations are emerging on use of debt and other financial instruments for conservation or climate-related causes. To illustrate this, the World Bank, in its 2020 paper on financing nature (noted above), put together what they call ‘model’ biodiversity finance instruments and gave each a score (see Table 15).

These instruments have been deployed in some form and some probably can be replicated and expanded. They are pilot examples put together to show an array of approaches aimed at helping mobilise more private financing for nature. Much experimentation is still needed to move to large-scale investing in many of these examples. Some of the pilot projects were small and local. According to World Bank commentary, it will be important to see which types can be scaled up for large-scale projects handling the significantly greater amounts of capital needed to invest in biodiversity (World Bank, 2020b).

Table 15: An overview of innovative financial instruments for biodiversity and their scoring

Model	Replicable					Aggregated score
	Replicable	Scalable	Appropriate for developing countries	Potential biodiversity impact	Potential to attract capital	
Corporate sustainable timber bonds	5	5	5	5	5	25
Corporate green commodity debt fund	5	5	5	4	5	24
Sustainable TIMOs/PE	5	5	5	5	4	24
Biodiversity/sustainability linked loans	5	5	5	5	4	24
Green commodity PE/real asset fund	5	5	4	5	4	23
Private debt fund for conservation businesses (SMEs)	5	5	5	4	2	21
Conservation green bonds (municipal)	5	3	1	5	5	19
Ecotourism debt fund	4	3	5	4	2	18
Fisheries debt fund	5	3	4	4	2	18

Model	Replicable					Aggregated score
	Replicable	Scalable	Appropriate for developing countries	Potential biodiversity impact	Potential to attract capital	
Conservation ETF	5	3	1	2	5	16
Ecosystem-based carbon offset funds	3	2	4	4	3	16
Ecosystem insurance	3	2	3	4	3	15
EIB for green infrastructure (municipal or corporate)	3	3	1	5	3	15
International biodiversity offsets	3	3	3	4	2	15
Mitigation banking PE fund	3	2	1	5	4	15
Conservation PP	3	1	4	5	2	15
Blue conservation PPP	3	1	4	5	2	15
Conservation impact bond	2	2	3	5	3	15
Debt for nature swap	2	1	5	4	2	14

Source: Modified after World Bank (2020b), p. 89 (PE=price to earnings ratio; TIMOs=Timber Investment Management Organization; PPP=private-public partnership)

4.2 Debt for nature swaps

Debt management has been a preoccupation for developing countries for years. Developing country debt reached USD 8 trillion in 2019 and this has now grown more with the economic crisis caused by COVID-19. According to one study, in 2020 and 2021, debt servicing alone is estimated to be more than USD 3 trillion in developing countries (Steele & Patel, 2020, p. 4).

Today there is growing global awareness of the extra resources needed in many of the most indebted countries to build a low-carbon, climate resilient economy along with investment to protect biodiversity rich environments. And this is where another financial strategy has entered the picture: using green bonds in conjunction with debt for nature or climate change swaps.

Debt swaps have been used since the 1980s when WWF in 1984 first developed debt for nature swaps in the wake of the Latin American debt crisis. The debt swap was attractive to developing country governments with extensive debt who could not otherwise have met the conditions for direct investment, including creditworthiness (as discussed earlier). Today there is a new approach to debt swaps with a focus on much larger-scale transactions that can provide national budget support, possibly be reflected in local currency, and involve a 'whole-of-government' process. This would include relevant government ministries and public agencies domestically as well as international and bilateral creditors.

As a generic concept, debt swaps can be defined as an exchange of an existing debt contract for a new debt contract, a transaction which involves 'writing down' or 'discounting on' the value of the original debt contract (Steele & Patel, 2020, p. 17). The new adaptation is to redirect debt payments to focus on climate and biodiversity. These 'debt for climate and nature swaps' involve the creditor reducing the debt – either by conversion to local currency and/or lowering the interest rate or giving

some form of debt write-off. The creditor conditions this action on a commitment from the government to use the money saved to invest in climate resilience, climate emissions mitigation or biodiversity protection initiatives. The funds are channelled through the national budget and distributed to those agencies needing the funds to carry out this new commitment. Details of the transaction normally would be laid out in a signed agreement by all parties involved, referencing the specific project and the relevant investment and conservation rules that would be followed.

Many developing countries carry sizeable sovereign debt. In such cases, a blended financial arrangement may be attractive using a debt for climate or nature swap combined with green or blue bonds. The recent blended finance project example of Seychelles (discussed above) paired a debt for climate and nature swap for USD 21.6 million investment with its first sovereign blue bond for USD 15 million that was partially guaranteed by the World Bank (see Box 15).

Creditors may view new programmatic approaches to debt swaps for sustainability purposes attractive where debt loads in least developing countries (LDCs) are particularly high and repayment is at risk. With climate change, biodiversity loss, and sustainability growing areas for concern for investors, this focus is compatible with many creditors' long-range goals. Major creditors of developing country debt include OECD governments (known as the Paris Club), private creditors, conservation organisations, and international organisations such as the World Bank and IMF. China is the largest bilateral holder of developing country debt and has a unique opportunity to work with debt swaps for climate and nature in their high-debt countries.

Because debt in lower middle-income countries is typically held by many creditors, facilitating swaps on a large scale requires international coordination. The largest source of low-income developing country debt is official multilateral credits such as the World Bank and IMF. The UN and World Bank, as well as many of the large conservation NGOs, are available to provide technical expertise and awareness building for programmatic debt swaps for climate and nature.

As suggested by one analysis, if a LDC is interested in exploring this option, a practical first step would be to establish a technical working group of creditors and other involved actors under the guidance of an international organisation, for example, the World Bank, to lay out a comprehensive and coordinated climate and nature swap initiative to address the particular issues facing the country by this three-pronged crisis: debt, climate change, and biodiversity loss (Steele & Patel, 2021, p. 5).

A number of international initiatives have emerged to help developing countries deal with their debt crisis and invest in climate action and nature protection, for instance, the LDC Initiative for Effective Adaptation and Resilience (LIFE-AR), begun in 2018 to support a shift away from 'business-as-usual' approaches to a more effective and ambitious climate response. LIFE-AR is a least developed countries (LDC) led initiative, which serves as one of the primary vehicles for delivering the LDC 2050 Vision for a climate-resilient future (see Box 17 on LIFE-AR).

Box 17: Goals of LIFE-AR

LIFE-AR's Vision is for all Least Developed Countries to be on climate-resilient development pathways by 2030 and deliver net-zero emissions by 2050 to ensure our societies and ecosystems thrive.

It is committed to five key principles to support the achievement of the LDC 2050 Vision and a shift away from business-as-usual practice. The principles underpinning LIFE-AR include:

1. Equality: between LDCs and the international community, between government and non-government actors, involving equal decision-making and mutual accountability, that values all contributions to generate shared solutions.
2. Integration: uniting sectors and actors horizontally and vertically to deliver whole-of-society action through long-term planning and programmes. Donors and climate funds can play their part by improving their collaboration and integration, and simplifying procedures to minimise burden.
3. Ownership: emboldening LDCs and their communities to lead on the development of climate solutions, following their direction, guidance and pace, and working with existing LDC institutions, structures and systems in-country to build sustainable capabilities for delivery.
4. Placing local action at the heart, where resources are put into local hands with a target of 70% finance flows that support action on the ground in LDCs by 2030.
5. Inclusion: leaving no country and no one behind, challenging social barriers that exclude and limit people's potentials with a focus on gender transformation and social justice.

Source: <https://www ldc-climate.org/about-us/long-term-initiatives/>

4.3 Equity

Equity can be public or private. An 'equity' investment is where one buys and now owns stock in a particular public or private corporation or public enterprise (where qualified to sell shares). If the stock is issued by a public company, it will be traded on a stock exchange, e.g. the New York Stock Exchange. If the stock is being offered by a private company, the transaction would be directly with that company as private equity stock. The buyer becomes a stockholder or shareholder. Equity is not debt. Buying stock of an entity means that one gains equity in that entity. Typically, the buyer is motivated to buy because of expectations that the stock will increase in value, or because of expectations that the corporation will pay regular dividend income or a portion of its profits (Morris and Morris, 2012). Equity financing allows a company to acquire funds, often for investment, without incurring debt. In contrast, issuing a bond increases the debt burden of the bond issuer because of the interest payments that must be paid over the life of the bond.

The buyer does not need to pay back the price of the stock bought as part of the investment. Instead, when a corporation (public or private) issues its stock, the stock gets traded (bought and sold among investors). The price of the stock moves up or down depending on how much the investors are willing to pay for it at a particular time. One can continue to hold the stock, or sell it at any time, taking the profit or loss at the time of sale.

With equity investments, the regulatory and legal framework that underpins the governance system needs to be flexible enough to meet the needs of the investors as well as strong enough to provide for effective enforcement and implementation. Among other things, this requires an investment legal framework that clearly lays out responsibilities for supervision, implementation, and enforcement among different authorities as well as investor rights (see discussion above about investment law.)

Ensuring equitable treatment of shareholders is particularly important if a company or public enterprise is to attract equity investors. This is because equity investors have certain property rights, including the right to participate in the company's profits, as noted above, as well as the right to obtain information about and influence the company, primarily by voting at shareholder meetings. All these rights carry an intrinsic economic value. In order for investors to buy equity, they therefore need to be confident that their entitlement to these and other rights that they have purchased are properly recognised and protected (see OECD, 2015, p. 66 for different types of ownership). Box 18 is an example of a blended finance fund, the Meloy Fund, involving both equity and debt investments for conservation.

Box 18: Meloy Fund for sustainable small-scale fisheries in Southeast Asia

Name of investor/group:

Wholly owned subsidiary of Rare, a global conservation organisation, and receives financial support from GEF, Conservation International, FMO, the Jeremy and Hannelore Grantham Environmental Trust, USAID and JP Morgan Chase & Co.

Date of action and length of project:

Launched in 2017.

60 months (project investment period), over a 120-month term plus two optional 12-month extensions.

Amount and type of financial investment:

Blended finance fund with a capital of USD 18-20 million. The Fund incentivises the development and adoption of sustainable fisheries through debt and equity investments in Indonesia and the Philippines. Working in partnership with Fish Forever, a global fisheries management programme, it creates monetisable assets for local fishermen that are accessible to private funding partners. Philanthropic partners provide payments if targets are met.

Purpose of investment:

Its purpose is two-fold:

- To generate measurable social and environmental outcomes; and
- To provide reasonable financial returns for investors by making debt and equity investments in fishing and seafood-related enterprises in Indonesia and the Philippines.

Its sector focus includes seafood, aquaculture, fisheries supply chain and logistics, marine biotechnology, marine certification and traceability, coastal and maritime tourism, waste disposal management, recycling, and related industries.

It aims to invest USD 1-5 million in companies that are too large for microfinance loans but have yet to grow enough for private equity. Over its 10-year lifespan, it aims to create a positive impact on 100,000 fishers including their households and place over 1.2 million hectares of coastal habitat under improved management.

Larger goal of supporting projects that will demonstrate financial returns on investment, thus de-risking future investments by the private sector.

Example of investments:

USD 1 million in Meliomar Inc, a Philippines-based fish aggregator, processor and trading company that has agreed to source sustainable fish from local Filipino communities, expected to create over USD 2.5 million in additional annual income to 16,000 local fishers and improve 12,000 hectares of marine ecosystems by 2021.



Monitoring mechanism:

Rare and Meloy Fund are responsible for initiating and organising key GEF monitoring and evaluation tasks. This includes the project inception meeting and report, quarterly progress reporting, annual reporting, documentation of lessons learned, and support for cooperation with independent external E&S audits to be conducted for every investee every 3 years.

For more information, please consult the following:

- The Meloy Fund Environmental and Social Guidelines;
- Meloy Fund website; and
- GEF Project Document.

Source: Compiled by IUCN Environmental Law Centre

Table 16, from the European Investment Bank of the EU, compares the traditional financial tools of equity and debt when used to finance conservation and nature-based solutions, and provides an overview of the pros and cons of these instruments in that context.

Table 16: Comparing direct debt and equity financing

		DESCRIPTION	PROs	CONs
DIRECT FINANCING	DEBT	<ul style="list-style-type: none">• Loans from a bank or other financial institution (similar to a mortgage or car loan)• Repayments consists of (i) interest (variable or fixed rate) and (ii) principal (amortising gradually or bullet payment at end)• Interest margin, decided by the bank, depends on project's risk profile, tenor (length of loan) and potential security (also called collateral, e.g. property or equipment)	<ul style="list-style-type: none">• Predictable repayments (interest and principal) which can be included in forecasts and budgets• No transfer of ownership meaning owners keep control on how the company is run (except if defaulting on payments or materially breaching agreements which can give lenders ability to step in)• Tax deductible interest expenses	<ul style="list-style-type: none">• Need sufficient cash-flow for regular principal and interest payments (for many small or early stage companies cash flow is uncertain)• Security (collateral) may be required (e.g. on property or equipment) or a third-party guarantee• Operational restrictions (e.g. possibly on amount of additional debt allowed or on total new investments)
	EQUITY	<ul style="list-style-type: none">• Capital injection from investors in return for ownership share (based on a due diligence process and assessment of growth potential)• No gradual repayment, investors will receive capital gain/loss at sale (possibly regular dividend for mature companies)• Risk of performance sits until sale (can lose money and are ranking below debt providers. It is a "patient form of capital")	<ul style="list-style-type: none">• Improves credit profile generally (e.g. strengthens the debt/equity ratio) and doesn't require security• Limited cash flow requirements, (unlike debt, no interest cost or debt repayments) as part of normal operations• Strategic input and expertise complementing the management team can come from external investor network	<ul style="list-style-type: none">• Reduced control and autonomy in decision-making as investors will want a say in the operation of the business to drive growth• Generally takes longer to raise equity (thorough due diligence process) and more management reporting required• Divergent views between management and investors on direction of the venture or firm
	HYBRIDS	<ul style="list-style-type: none">• Financing that combine debt and equity features• Mezzanine financing, as an example, gives lender ability to convert to equity at later stage (pre-defined criteria, typically at default)	<ul style="list-style-type: none">• Mezz tend not to require security, good if available collateral has already been offered to other lenders• Mezz potentially treated as equity on borrower's balance sheet (depend on definition, can improve debt/equity ratio)	<ul style="list-style-type: none">• Mezz more costly and still requires regular interest, generally higher interest margin than other senior debt (subordinated = higher risk)• Mezz means more monitoring than for normal debt given equity features of the structure

Source: EIB, 2019, p. 5

4.4 Blended finance

According to the World Economic Forum, blended finance can be defined as the strategic use of development finance from more than one investor and sometimes with philanthropic funds to mobilise private capital investments to emerging markets in support of conservation and the Sustainable Development Goals (WEF, 2020, p. 101). Blended finance mechanisms can often leverage more financing than traditional development projects can. This could be a critical benefit in light of the

massive global funding gap for biodiversity, climate action, and SDGs. See Box 15 for an example of Seychelles using blended finance for marine and ocean conservation through blue bonds and debt swaps.

Blended finance is likely to become an important new accommodation to generate more funds for the major biodiversity and climate action investments needed to meet the 2030 targets, and then further the 2050 targets. As explained by the World Economic Forum, the nature of ESG and other green investments might prove a great challenge in raising capital. One reason is that investment needs are often located in emerging markets, where small and medium-sized enterprises typically lack the direct access to capital markets of larger firms and require smaller average investment size and novel payback models that can increase transaction costs and risks. These challenges are solvable but will require innovations in capital investment processes, such as blended finance, new supply chain models, and the development of shared service models (WEF, 2020c, p. 16).

A joint survey sponsored by the OECD and WEF in 2016 aimed to better understand the view of existing blended finance funds, facilities and supporting mechanisms (the “investment vehicles”), to gain insight into their implementation, and to analyse the additionality, impact and effectiveness of different blended finance approaches. The results of the survey showed that “Blended Finance has contributed significantly to catalysing capital for emerging market investment, resulting in positive development outcomes. The 74 funds and facilities within the scope of the survey accounted for USD 25.4 billion in assets (USD 14.9 billion in direct funding across 61 funds, and USD 10.5 billion supplied through 13 supporting mechanisms). In addition, while only 32.4% of funds and facilities responded to questions on social, environmental and economic returns, the data indicates that development and philanthropic funders (“development funders”) have achieved or outperformed their impact targets, reaching at least 177 million beneficiaries” (WEF, 2016, p. 3)

4.5 Impact investing

‘Impact investing’ is a relatively new term in the world of investing. To varying degrees, all investments have some sort of impact, even if those impacts are not fully known, desired or measured. According to the Global Impact Investing Network (GIIN) (<https://www.thegiin.org>), a non-profit membership organisation founded in 2009, its widely accepted definition of impact investments is:

Investments made with the intention to generate positive, measurable social and environmental impact alongside a financial return (Martin & Platt, 2021).

Thus, the goal of an impact investment is to have a positive, measurable ‘impact’ on one or more distinct conservation or other green purposes (e.g. sustainable forestry, sustainable fisheries, organic agriculture, setting up marine and terrestrial protected areas, conserving biodiversity, climate change, renewable energy). The intention of issuing a ‘green’ bond is to directly serve as an ‘impact’ investment.

As a strategic approach, impact investing is not a separate asset class but can apply to all asset classes—public and private equity, fixed income, private debt, venture capital and real assets. Its purpose is to be part of the core investment decision-making where investors are concerned about aligning their investments with their core values and are interested in ways to do this that can provide some confidence that the intended impact will occur and be possible to measure.

Periodically in this paper, and particularly in Part 5 below, a recurrent issue is the need for basic standards, definitions, and metrics to assess the legitimacy of green investments and not just

‘greenwashing’ (see below). As discussed above, green bonds and climate bond investments are under good practice guidelines from the International Capital Market Association (ICMA) and the Climate Bond Initiative has a certification system to verify that climate investments are consistent with the Climate Bonds Standard of the Paris Climate Agreement to limit warming to under 2° Celsius. Similarly, with impact investing, GIIN has developed a generally accepted system for measuring, managing and optimising impact that the majority of impact investors use to measure social, environmental, and financial success. According to this membership-driven organisation, impact measurement and management is at the heart of impact investing. GIIN provides tools, guidance, and resources to help investors identify metrics and integrate impact considerations into investment management.

GIIN’s database consists of more than 1,700 impact investors across and based on this its current estimate of the total size of the impact investing market is an estimated USD 715 billion. Its mission is dedicated to increasing the scale and effectiveness of impact investing by building critical infrastructure and supporting activities, education, and research to help accelerate the development of a coherent impact investing industry (Id.).

4.6 Philanthropy

Philanthropy will continue to play a role in conservation funding, normally in smaller amounts than can be obtained through a long-term ESG investment by a foreign institutional investor. Nevertheless, philanthropy may provide an important supplement for large-scale investments by helping fund elements that may not be possible to put in an investment package, such as technical assistance, or aspects of project design and monitoring. See Figure 15 for a characterisation of how Credit Suisse views philanthropy as part of the progression of finance tools.

Philanthropy for development amounted to USD 23.9 billion over 2013-2015, and there is significant potential for increasing that amount especially for environmental protection. This was one of the findings of an OECD report published in 2018 on private philanthropy worldwide and how it can be optimised to support development, especially the goals of the 2030 Agenda for Sustainable Development (OECD, 2018a).

Recognising the proliferation of philanthropic foundations since the 2000s and their growing focus on developing countries and sustainable development, the OECD project’s aim was to advance understanding about this area of development funding and the potential of philanthropic giving (both institutional and individual) to help close the funding gap for achieving the Sustainable Development Goals. The findings were based on extensive survey work done by OECD experts to collect data on current philanthropic resource flows, foundation priorities, operational approaches and relationships with other actors in development. For the survey, a working definition of private philanthropic flows for development was developed:

Private philanthropic flows for development refer to transactions from the private sector having the promotion of the economic development and welfare of developing countries as their main objective, and which originate from foundations’ own sources, notably endowment, donations from companies and individuals (including high net worth individuals and crowdfunding), legacies, as well as income from royalties, investments (including government securities), dividends, lotteries and similar (Id., p. 28).



Figure 14: The spectrum from ESG to philanthropy as viewed by Credit Suisse

Source: Modified after <https://www.credit-suisse.com/nl/en/private-banking/secure-your-legacy/impact-investing.html>

A number of recommendations in that report are worth highlighting here for consideration by government policy makers and technical agencies, including finance staff, foundations, investors, conservation organisations, and others working to build and sustain conservation financing. Overall, private foundations have been expanding as part of the wealth effect in several economies and many have become established sources of funding and there is potential for growth (see Box 19). Nevertheless, current data on sources of giving for developing countries indicate that giving is highly concentrated. The study found that of the 143 foundations surveyed, the Bill and Melinda Gates Foundation was the most significant donor, providing almost half of total giving (49%). In addition, during the period 2013-2015, 81% of total philanthropic giving was provided by only 20 foundations. This suggests significant potential for increased participation of foundations if the enabling environment can be strengthened.

Box 19: Wealth effect and philanthropy for development

Due to dramatic growth in global wealth since the 2000s, philanthropic giving and the number of foundations contributing to development have risen around the world. In spite of the economic downturn of 2008-2009, available capital of wealthy individuals, one of the essential actors, has increased. This wealth, briefly described below, has a role to play to reduce the biodiversity and climate change funding gap with supportive enabling conditions.

Wealth effect:

- Global high-net-worth individual (HNWI) wealth grew from USD 28.8 trillion to USD 63.5 trillion over 2003-16.
- Number of HNWI's rose from USD 7.7 million to 16.5 million during the same period.
- Ultra-high-net-worth individuals more than doubled over 2002-16, from USD 70,000 to 157,200. ↓

Regional philanthropic growth:

- Asia-Pacific, North America and Europe were the world's largest HNWI markets in 2017.
- In the United States, the country with the most developed philanthropic system, total number of American foundations rose by a third (from 64,845 to 86,726) over the period 2002-2014.
- In the United States, during the same period, total giving doubled from USD 30 billion to USD 60 billion.
- A boom in philanthropy has also occurred in Europe, which has the largest number of philanthropic organisations worldwide with 130,000 in 2015.
- In Asia, private giving has also flourished, for example, with Chinese foundations growing from fewer than 200 in 2012 to 5,454 in 2016.
- Philanthropy is rising in India as well, along with Pakistan where the volume of corporate philanthropy has increased from USD 4.5 million to USD 56.4 million between 2000 and 2014.
- Foundations based in emerging countries mainly operate domestically.

Related factors:

- Visibility of many foundations has risen considerably along with the numbers.
- Interest in philanthropy for development has grown significantly as official development assistance between 2008 and 2012 diminished.
- Philanthropic funding has emerged as vital for two types of countries: low income and least developed countries where basic needs are not being met domestically.
- Philanthropic funding is also critical for several upper middle-income countries nearing the threshold where they may soon not qualify for development assistance; emerging economies see philanthropy as an alternative source of development finance.
- Major NGOs worldwide who suffered significant funding cuts after the economic crisis are now receiving funding from foundations to support projects ranging from emergency aid after natural disasters to children's health aid.
- In 2013-15, half of philanthropic giving was channelled through NGOs, civil society, public-private partnerships, networks, and the for-profit private sector.
- Networking between foundations is on the rise, but slower in developing countries.

The rise in wealth, expansion in giving, and growth in number of foundations worldwide the past 15 years suggest significant potential for increasing philanthropic giving in areas of growing global concern – biodiversity loss, climate change, and achieving the 2030 Sustainable Development Goals.

Source: Modified after OECD, 2018b, pp. 22-23, Box 1.1

As might be expected, foundation contributions to date are modest compared to official development assistance except for the health and productive health sectors where private foundations have played a significant role in recent years. As for environmental protection, data from 2013-2015 indicate that foundation giving was only about 5% of total giving. Main areas of support were biodiversity conservation, environmental research, biosphere, and site preservation (manuscripts and sites) (Id., p. 60). The study also tracked some cross-cutting areas such as climate change where it found that during the same period less than 1 % of total foundation giving in the EU and USA was devoted to mitigating climate change worldwide (Id., 62). Again, with education, collaboration, and the right enabling environment, it would appear that foundation giving for biodiversity and climate action has significant potential for growth.

Among the key recommendations of the OECD report was the beneficial value of building public-private partnerships as a way to enable collaborations between developing country governments, development aid agencies, donor countries, private foundations, international organisations and

NGOs. Such partnerships are important especially for implementing projects and programmes. For example, the World Bank Group partners with more than 100 foundations on initiatives ranging from health to preserving the Amazon. The OECD survey found that 45% of foundations claim they systematically consider engaging with official development agencies when designing or implementing a programme (Id., p. 97). This suggests significant advantages for developing countries to strengthen their partnerships with donors and foundations for funding biodiversity conservation and climate action. An example of an effort to bring together developed countries as donors, international agencies, and a foundation is the Caribbean Biodiversity Fund (CBF). CBF has total capital of about USD 75 million (from Germany, TNC, and GEF) to serve as an umbrella fund for permanent and non-permanent investment. Box 20 briefly describes this arrangement.

Box 20: Caribbean Biodiversity Fund (CBF)

Date of action and length of project:

Established in 2012.

Amount and type of financial investment:

Conservation fund.

- The total capital of the Conservation Finance Program is around USD 75 million with financial support from several sources, including Germany, The Nature Conservancy, the Global Environment Facility, the World Bank Group.
- Climate Change Program, anchored by a USD 27 million sinking fund focused on Ecosystem-based Adaptation (EbA).
- On August 31st, the CBF opened its third call for proposals through its EbA Facility with a focus on EbA actions that help people adapt to adverse effects of climate change, reduce disaster risk, and build resilient ecosystems and economies. Around USD 10-15 million could be allocated under this Third Call for Proposals, depending on the number and quality of proposals.
- To date, a total of USD 17.4 million was committed to the implementation of the 16 projects under the first two calls for proposals, with another USD 4.6 million in the pipeline for approved projects.

Purpose of investment:

The Conservation Finance Program focuses on the provision of funding towards the protection and management of biodiversity and natural resources and is mainly supported through the Endowment Fund. The proceeds of this Fund are invested in country-based sub-accounts and are channelled through partner National Conservation Trust Funds (NCTFs), who in turn lead grant-making programmes at the national level. CBF and the partner NCTFs work together in the design and implementation of additional financial mechanisms that provide a required match to complement the CBF resources.

The CBF is an umbrella fund with permanent and non-permanent funding. One of CBF's key financial instruments is its endowment. The CBF endowment benefits partner national conservation trust funds in the Caribbean. Partner national funds in turn lead the grant-making programmes at the national level. Eligible Caribbean countries and territories are Antigua and Barbuda, Cuba, Dominica, Dominican Republic, Grenada, Haiti, Jamaica, Montserrat, Saint Lucia, and St. Vincent and the Grenadines. Proposals for regional projects are encouraged.

For more information, please consult the following link:

<https://www.caribbeanbiodiversityfund.org/programs/conservation-finance>

Source: Compiled by IUCN Environmental Law Centre

4.7 Summary points

4.7.1 Generic findings

1. Blended finance is an effective way to make strategic use of public and philanthropic funds to mobilise private sector capital that might not otherwise be attractive, and to spread risk and reward.
2. Establishing regulations, standards, and procedures for use of biodiversity offsets should be undertaken in all countries with this potential, keeping a primary principle that such offsets should only be as a last resort, based on good science, and applying the precautionary principle.
3. Procedures, definitions, and general standardisation of performance and process measures also are needed for governments and organisations to use carbon offsets to reward companies/landholders for efforts to cut emissions and sequester carbon and help meet Paris commitments in a graduated manner.
4. Emerging markets and developing economies need to become better educated about the variety, strengths, operations, and obligations of different investment products (debt/bonds, equity/stocks, offsets) and how they may be tailored and combined for innovative conservation financing and private-public partnerships with an array of players. This includes the banking and development finance community along with different institutional and retail investors that work with such products.
5. Governments should adopt and accelerate use of natural capital principles in all sectors of operation in order to show the true functional value of ecosystems, biodiversity, protected areas, and achieving the SDGs as an integral part of calculating long-term benefits, rates of return, as well as non-financial gains, for green oriented investment projects, whether debt or equity.

4.7.2 Lessons from developing country cases

For this project, the ELC identified and analysed 22 current conservation investment projects using innovative finance tools. Half of these cases have been integrated into the body of this paper; they mainly reflect developing country cases. Annex 1 contains a full list of the cases they assessed along with a description of the additional 10 cases from Europe and the USA. Together they identified some lessons from this research. These lessons reiterate some of the most frequent points raised throughout this paper and in relevant literature.

Due to the complexity and novelty of this topic, the examples identified represent only a fraction of the large-scale sustainable financing initiatives underway for protected areas and biodiversity. Throughout this research process, several challenges were encountered and in sharing these, we hope to provide insights for future research on this topic. The reader should also bear in mind that this is a rapidly evolving and emerging field. The examples found, and the early lessons learned, are tied to this project's timeframe. Early lessons:

- **Transparency:** On multiple occasions, comprehensive information and key documents were missing such as contracts, memoranda of understanding or agreements between investors, governments, and/or other actors of the biodiversity investment. On rare occasions, it was possible to find out the exact number of financial pledges by investors. Lack of transparency, whether or not intentional, renders analysis of the current state of large-scale sustainable financing more complex and incomplete, and less instructive.

- **Reporting and disclosure of relevant data:** Large-scale sustainable financing is relatively new and reporting activities have been side-lined on multiple occasions. This includes financial reporting, impact reporting, or biodiversity risk reporting. Financial audit seems to be the most common form of reporting. But, to better assess impact, impact reporting and biodiversity risk reporting should be required, reinforced, streamlined and automated.
- **Importance of harmonisation and regulation:** In the case of green and sustainable bonds, independent and external review is often taking place to evaluate the green bond framework or the use of proceeds. It is the main approach currently used to ensure environmental integrity. However, the lack of harmonisation and regulation of these ex-ante and ex-post reviews can jeopardise their credibility and complicate their comparison.
- **Need for more current baseline scientific data:** Collecting baseline scientific and social data is critical in an evaluation process and fulfils multiple purposes: point of reference, baseline for changes over time, monitors progress and highlights areas where intervention is most needed. For each of the case studies reviewed, this type of information was not found, but could have helped inform the impact the financing intervention was having.
- **Include more economic and financial perspective:** There is a fair amount of complexity associated with finance and finance theory. Although legal and policy analyses relating to biodiversity loss can clearly help advance solutions for biodiversity and protected area restoration, to fully assess the viability and sustainability of these initiatives they should be analysed also through an economic and financial prism. Cross-sectoral assessments of planned finance mechanisms for conservation could also strengthen the plan and involvement of more investors.
- **Insufficient results to date:** Integrating finance into climate and natural resources policy making is very recent, dating back to 2007 when the very first green bond was issued. Most of the case studies studied for this research span the last five years, are still active, and may not yet have quantifiable results. This ultimately renders the analysis of effectiveness limited. It was decided to still add them to the project as they reflected the current shift towards commercial investing in biodiversity and protected areas.
- **Limited geographic scope:** Out of the 22 case studies reviewed, Europe and Asia are the most represented regions. Although this is a global movement, the greater interest, and presumably capabilities appear to be in developed economies and emerging markets. Large-scale initiatives require a functioning financial system and trained debt managers. In many developing and low-income economies, where biodiversity is facing many severe threats, these financial institutional pre-conditions do not exist. Capacity-building will be crucial for expanding use of these innovative financing mechanisms across the globe.
- **Limited environmental actors involved:** Only a handful of non-governmental organisations appear to be actively involved in conservation finance. For NGO involvement to expand, it is important to educate conservation and social groups on the different investment approaches and supporting mechanisms that are being designed today and how conservation NGOs can participate.

Part 5 Global standards, principles and taxonomies

Green investing and especially ESG-oriented investing have gone mainstream according to many financial analysts and researchers in the financial sector (see Figure 16 reflecting the growth of ESG activity since 2018 according to the S & P Financial Services).

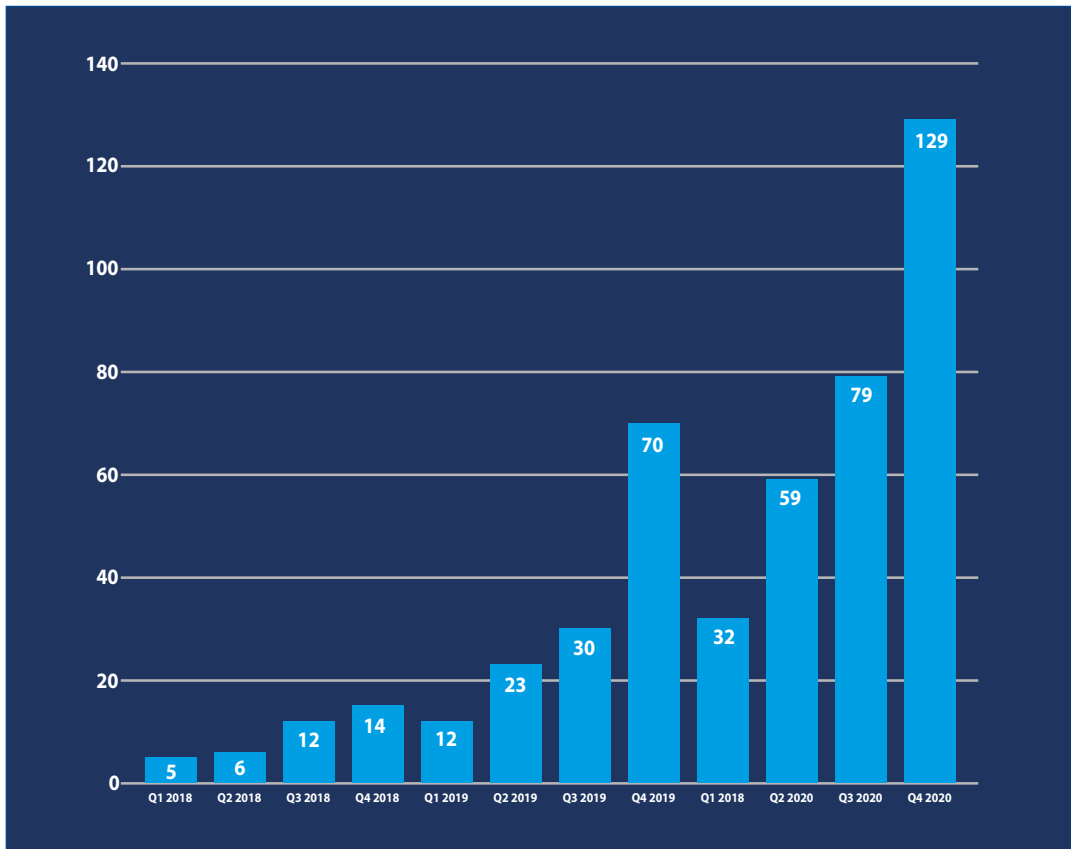


Figure 15: ESG goes mainstream

Source: Modified after S&P Global website: *To Mitigate Greenwashing Concerns, Transparency and Consistency Are Key* | S&P Global Ratings ([spglobal.com](https://www.spglobal.com))

BlackRock (the world's largest asset manager with USD 9.46 trillion in assets under management as of 2021) has suggested there is more ESG data, transparency, and commitment to ESG investing than ever before (see www.ishares.com). However, green investing continues to suffer from a lack of formal, universally accepted standards and definitions, as noted earlier. It is widely recognised that such standards are becoming more urgent as the amount of funds going into ESG and related investment activities expands every year; projections are for this to continue for some years to come, as discussed earlier (Deutz et al., 2020). Without some standards for conducting, documenting,

reporting, and evaluating the results of an ESG investment, there is always greater opportunity for ‘greenwashing’ a project with no results on the ground (see discussion below).

In response, a number of international organisations and some countries have developed or begun to develop principles for responsible investing, including standards for reporting, definitions, and requirements for transparency, and full disclosure of project elements and performance, including for ESG. The movement has started to develop taxonomies⁶ for green, social, SDG, ESG, climate and other environmentally sustainable investing themes. This is happening at international, regional, and national levels. It is important for those involved in large-scale green investment, especially those in emerging markets and developing economies, to be aware of these standards, guidelines, and taxonomies both as guides for developing investable projects and also as public policy tools that may be important to reflect in new regulations or programmes.

This Part starts with a short discussion of key efforts since the 2000s to develop industry principles for sustainable environmental and social investment. This is followed by a brief discussion of ‘greenwashing’. As with any activity involving large sums of money and industry competition, greenwashing has become an area of growing concern and watchfulness.

5.1 Principles

One of the early leaders setting up principles for ESG investing was the United Nations Principles for Responsible Investing (UNPRI) established by the Secretary General in 2006. As an industry-focused group, its founding documents were six principles for responsible investing to which investment institutions or assets managers (e.g. banks) who signed on make the commitment to apply them in their operations. As of 2021, almost 4000 institutional investors and asset managers have become signatories. The titles of the principles are listed in Box 21; each one is further elaborated in the full texts.

With an eye to implementation, the UNPRI developed a reporting framework as a key step towards building an industry standard for reporting responsible investment activities consistent with the principles. PRI defines ‘responsible investment’ as a “strategy and practice to incorporate environmental, social and governance (ESG) factors in investment decisions and active ownership” (www.unpri.org/investment-tools). Transparency reports submitted by the signatories are one of the key outputs of this framework to facilitate information exchange and dialogue between investors and their clients, beneficiaries, and other stakeholders. These reports are publicly disclosed for all reporting signatories on the UNPRI website, helping to facilitate accountability.

6 The word ‘taxonomy’ came from ancient Greek and originally meant the science and practice of naming and classifying, which is still relevant today.

Box 21: UNPRI (United Nations Principles for Responsible Investment)

[UNPRI describes these principles as “a voluntary and aspirational set of investment principles that offer a menu of possible actions for incorporating ESG issues into investment practice”. The following text is what the signatory signs.]

‘Signatories’ commitment – As institutional investors, we have a duty to act in the best long-term interests of our beneficiaries. In this fiduciary role, we believe that environmental, social, and corporate governance (ESG) issues can affect the performance of investment portfolios (to varying degrees across companies, sectors, regions, asset classes and through time).

We also recognise that applying these Principles may better align investors with broader objectives of society. Therefore, where consistent with our fiduciary responsibilities, we commit to the following:

- **Principle 1:** We will incorporate ESG issues into investment analysis and decision-making processes.
- **Principle 2:** We will be active owners and incorporate ESG issues into our ownership policies and practices.
- **Principle 3:** We will seek appropriate disclosure on ESG issues by the entities in which we invest.
- **Principle 4:** We will promote acceptance and implementation of the Principles within the investment industry.
- **Principle 5:** We will work together to enhance our effectiveness in implementing the Principles.
- **Principle 6:** We will each report on our activities and progress towards implementing the Principles.

The UNPRI were developed by an international group of institutional investors reflecting the increasing relevance of environmental, social, and corporate governance issues to investment.

Source: UNPRI, 2023, p. 6-7; also see <http://www.unpri.org>

ESG funding and stewardship are the major focus of PRI's work going forward, according to their 2021-2024 strategy; the theme is ‘building a bridge between financial risk and real-world outcomes’ (PRI, 2021). Eight key actions are outlined in that strategy including helping investors drive real-world outcomes which are in line with the UN Sustainable Development Goals (SDGs), elevating social issues through a five year programme on human rights, and setting minimum ESG reporting standards among its signatories. They also give climate change financing a high priority for its serious threat to the world's economies, investment institutions, and the planet. PRI considers these kinds of priorities will have a positive impact on developing countries' capacity to procure biodiversity and climate change funding from the investment community. As explained in their Strategy, these initiatives are consistent with and reinforced by two significant international agreements, the UN Sustainable Development Goals (SDGs) and the Paris Agreement on Climate Change, both of which recognise the critical role of private finance for reaching their objectives (for more, see PRI 2021, and www.UNPRI.org).

In addition to emphasising biodiversity loss and climate change as core activities for sustainable financing, PRI also urges investors to advocate for stronger supportive policies and actions from governments, including enacting incentives to support biodiversity conservation and phasing out subsidies and incentives that drive biodiversity loss (UNPRI, 2020). Generally, PRI works with the signatories to identify key environmental, social and governance issues in the market, and coordinate engagements, publications, webinars, podcasts, and events to address them. While PRI engages with all asset classes, it gives special attention to ESG engagement with sovereign debt investors. Conversations around ESG topics include how the countries are faring on their sustainability pledges. (see Nuzzo & Georgieva, 2020).

Finally, to track the growing sustainable investment activity and monitor change happening on the ground, in 2016 UNPRI started a regulation database to document existing and in progress sustainable finance policies around the world. Updated in January 2021, this database now covers approximately 500 policy tools and market-led initiatives where ESG factors are to be considered alongside investment across the world's 50 largest economies. It is organised by country or regional action, indicating the specific law or policy, who it applies to, its scope and purpose, and a link to the policy instrument. To date, PRI has identified over 730 hard and soft law policy revisions of these 500 policy tools supporting, encouraging, or requiring investors to consider long-term value drivers, including ESG factors. Reflecting significant growth in this area, 95 % of these policy tools were developed since 2000, with 124 new or revised policy instruments for the year 2020 alone. (The UNPRI Regulation database is available at: <https://www.unpri.org/policy/regulation-database>)

5.2 Performance standards and requirements

There are two areas for attention here. First, the multilateral financial institutions (MFI) themselves have environmental and social performance standards related to their funding support in developing countries, including investment support. Second, separate environmental and social standards have been issued for MFI financial intermediaries (entities that act as intermediaries between two parties in a financial transaction).

With respect to MFI's, the first major international initiative to set global environment and social standards for their operations in developing countries came in 2012 from the World Bank group's International Finance Corporation (IFC). The IFC is the largest global development institution focused on the private sector in developing countries (see www.ifc.org). The performance standards accompanied by extensive Guidance Notes were called 'IFC Performance Standards on Environmental and Social Sustainability'. These standards became early examples for other development institutions in similar roles until they developed their own measures. The IFC standards are worth special note particularly because they are operational 'standards', not just guidance. The Guidance Notes were updated and the entire package republished in June 2021. Biodiversity conservation is the focus of standard number 6 (updated in 2019 and expanded from 6 to 47 pages).

Until 2016 the World Bank applied IFC's Performance Standards (known as World Bank Performance Standards) to projects supported by IBRD/IDA (International Bank for Reconstruction and Development/International Development Association) that are owned, constructed and/or operated by the private sector. At that time, the World Bank adopted a new set of environment and social policies called the Environmental and Social Framework (ESF) and in 2018, that framework began to be used for all new World Bank investment project financing. The Multilateral Investment Guarantee Agency (MIGA) still applies IFC's Guidance Notes associated with the Performance Standards in its operations.

The updated IFC Performance Standards continue to be used by governments, corporations, and investors when exploring, negotiating, or evaluating an ESG or green investment project involving IFC support. There are eight standards; their overall purpose laid out on IFC's website as follows:

IFC's Sustainability Framework articulates the Corporation's strategic commitment to sustainable development and is an integral part of IFC's approach to risk management. The Sustainability Framework comprises IFC's Policy and Performance Standards on Environmental and Social Sustainability, and IFC's Access to Information Policy.

The IFC Performance Standards are directed towards clients, providing guidance on how to identify risks and impacts, and are designed to help avoid, mitigate, and manage risks and impacts as a way of doing business in a sustainable way, including stakeholder engagement and disclosure obligations of the client in relation to project-level activities. Together, the eight performance standards establish standards that the client is to meet throughout the life of an investment by IFC. (Id.)

Table 17 lists the eight standards to illustrate the scope of coverage, which generally are followed by subsequent standards (see IFC 2012/2021, for the full text).

Table 17: Eight IFC Performance Standards on Environmental and Social Sustainability

IFC Performance standard	Description
Performance standard 1: Assessment and management of environmental and social risks and impacts	Managing environmental and social performance throughout the life of a project requires an effective Environmental and Social Management System (ESMS), a dynamic and continuous process initiated and supported by management, involving engagement between the client, its workers, local communities directly affected by the project (the affected communities) and, where appropriate, other stakeholders. Objectives include to identify and evaluate environmental and social risks and impacts of the project, and to adopt a mitigation plan to anticipate and avoid, or if residual impacts remain, compensate/ offset for risks and impacts to workers, affected communities, and the environment.
Performance standard 2: Labour and working conditions	Pursuit of economic growth through employment creation and income generation should be accompanied by protection of the fundamental rights of workers. For any business, the workforce is a valuable asset, and a sound worker-management relationship is a key ingredient in the sustainability of a company.
Performance standard 3: Resource efficiency and pollution prevention	Increased economic activity and urbanization often generate increased levels of pollution to air, water, and land, and consume finite resources that may threaten people and the environment at the local, regional, and global levels. The current and projected atmospheric concentration of greenhouse gases (GHG) threatens the public health and welfare of current and future generations. Objectives include to avoid or minimise pollution from project activities and reduce project-related GHG emissions.
Performance standard 4: Community health, safety, and security	Project activities, equipment, and infrastructure can increase community exposure to risks and impacts. Communities that are already subjected to impacts from climate change may also experience an acceleration and/or intensification of impacts due to project activities. The client has the responsibility to avoid or minimise risks and impacts to community health, safety, and security that may arise from project-related activities, with particular attention to vulnerable groups. ↓

Performance standard 5: Land acquisition and involuntary resettlement	Project-related land acquisition and restrictions on land use can have adverse impacts on communities and persons that use this land. Involuntary resettlement refers both to physical displacement (relocation or loss of shelter) and to economic displacement (loss of assets or access to assets that leads to loss of income sources or other means of livelihood) as a result of project-related land acquisition and/or restrictions on land use. Objectives include to avoid, and when avoidance is not possible, minimise displacement by exploring alternative project designs, avoiding forced eviction, and providing compensation for loss of assets at replacement cost.
Performance standard 6: Biodiversity conservation and sustainable management of living natural resources	Protecting and conserving biodiversity, maintaining ecosystem services, and sustainably managing living natural resources are fundamental to sustainable development. The requirements set out in this performance standard have been guided by the Convention on Biological Diversity.
Performance Standard 7: Indigenous Peoples	Vulnerable populations are frequently limited in capacity to defend their rights to, and interests in, lands and natural and cultural resources because of their economic, social, and legal status. The development process should foster full respect for human rights, dignity, aspirations, culture, and natural resource-based livelihoods of Indigenous Peoples, anticipate and avoid adverse impacts of projects on communities of Indigenous Peoples, or when avoidance is not possible, minimise and/or compensate for such impacts, and ensure Free, Prior, and Informed Consent (FPIC) of all affected peoples.
Performance Standard 8: Cultural heritage	Consistent with the Convention Concerning the Protection of the World Cultural and Natural Heritage, this standard aims to ensure that clients protect cultural heritage in the course of their project activities. In addition, its requirements on a project's use of cultural heritage are based in part on standards set by the Convention on Biological Diversity. Objectives include to protect cultural heritage from the adverse project impacts, support its preservation, and promote equitable sharing of benefits from use of cultural heritage.

Source: Modified after IFC 2012/2021

As part of IFC's story, it is important to mention the Equator Principles (EPs), launched in 2003 as a framework for managing risk in project finance that was originally based on the existing environmental and social policy frameworks of the IFC. Those principles eventually became the IFC Performance Standards. Over the years, the Equator Principles signatories worked closely with IFC to develop practitioner knowledge on environmental and social risk management. Currently 126 financial institutions from 38 countries have officially adopted the EPs, covering the majority of international project finance debt within developed and emerging markets. IFC and EPA collaboration grew stronger in 2020 when they officially joined forces, through a Memorandum of Understanding, to work with emerging markets on training and capacity building for the IFC Performance Standards. (For more on the Equator Principles see <https://equator-principles.com>).

Financial intermediaries are the second focus of environmental and social performance policies coming from the major multilateral financial institutions. Financial intermediaries (FIs) in this context are a key approach used by all the multilateral financial institutions as a vehicle to channel funding to the micro, small and medium-sized enterprise sector. FIs include a variety of financial service

providers including, inter alia, private equity funds, banks, leasing companies, insurance companies and pension funds. EBRD, for example, in 2019 issued a Performance Requirement specifically for financial intermediaries (EBRD 2019, pp. 44-45). This is particularly relevant for green investing in developing countries because EBRD does non-sovereign lending (e.g., companies, public enterprises) as well as sovereign lending. The stated objectives of this performance requirement include:

- Set out how FIs will assess and manage environmental and social risks and impacts associated with the sub-projects they finance;
- Promote good environmental and social management practices in the sub-projects financed by FIs; and
- Promote good environmental and sound human resources management within FIs (EBRD 2019, p. 44).

The World Bank, which does only sovereign lending as its primary purpose, also has a separate Environmental and Social Standard (ESS) for financial intermediaries (FI) (WB 2018, Financial Intermediaries, pp. 91-94). The objectives of this standard include: 1) to set out how the FI will assess and manage environmental and social risks and impacts associated with the sub-projects it finances, 2) to promote good environmental and social management practices in the sub-projects the FI finances, and 3) to promote good environmental and sound human resources management within the FI (Id., p. 91).

The World Bank IFC has taken similar steps to update its environmental and social standards for financial intermediaries with an 'Interpretive Note' issued in 2018. This Note requires that where FIs provide project or long-term (over 36 months) corporate finance to a borrower/investee to support a business activity that may include significant risks and impacts (including risks to the environment, biodiversity, and community health), the FI is required to appropriately assess and require its clients to mitigate these risks and impacts in line with the IFC Performance Standards (IFC 2018, p. 1).

Within the Inter-American Development Bank (IADB), the Inter-American Investment Corporation (IDB INVEST), a member of the IADB Group, is an international organisation that promotes the economic development of its regional developing member countries by encouraging the establishment, expansion, and modernisation of private enterprises in a sustainable way. IDB INVEST supports the private sector and state-owned enterprises that do not have a sovereign guarantee, offering loans, equity investments, guarantees, and advisory and training services to clients. IDB INVEST issued an Environmental and Social Sustainability Policy in 2020 with a primary focus on financial intermediaries and development of an Environmental and Social Management System (ESMS). The objective of the ESMS is to enable the FI to identify, assess, manage and monitor the environmental and social risks of the sub-projects it finances (see IDB INVEST 2020, p. 13).

These financial intermediary policies are an important component of green investment in developing countries. They help ensure compliance with environmental and social standards, tools to minimise risk, and guide and advise on type and content of specific green and ESG investment projects.

5.3 Green taxonomies

As noted above, the sustainable investment movement and especially green finance, though quickly gaining momentum, has lacked clear universal standards, definitions, and performance metrics since the initiative took hold in the 2000s. In recent years international, regional, and some national

efforts have begun to address this problem by developing what is called ‘taxonomies’, an approach generating almost ‘race-like’ competition in addressing different aspects of sustainable investing. Presently, green taxonomies seem to have advanced the most, with work on taxonomies for social and other areas of environmental and socially responsible investment ongoing.

In 2020, the World Bank, appreciating the need for guidance, published a document for developing markets entitled *Developing a National Green Taxonomy: A World Bank Guide* (World Bank 2020c). Its objective was to provide a conceptual framework and procedural guide for regulators engaged in developing a green taxonomy. The intended audience was mainly financial regulators and their environmental advisors in emerging economies as they sought to ‘green’ their countries’ financial systems (Id., p. 13). By this point, the World Bank had been gaining field experience with taxonomic initiatives in Colombia, Malaysia, Mongolia and South Africa, and also had continued to participate in such guidance documents as the Green Bond Principles and Social Bond Principles from the International Capital Market Association (ICMA) and the Network of Central Banks and Supervisors for Greening the Financial System (NGFS).⁷

The World Bank ‘green taxonomy’ guide also offered examples of existing green taxonomies elsewhere to illustrate the different approaches being used. Following the ICMA, the World Bank defines a green taxonomy “as a classification system for identifying activities or investments that will move a country toward meeting specific targets related to priority environmental objectives” (id., p. 14).

These initiatives have inspired others, including countries such as China, to prepare sustainable taxonomies as a way to set some standards relevant to their national circumstances for sustainable investing. In addition to ‘green’ investments, some taxonomies give guidance on social investment, and SDG investment.

At the regional/supranational level, the EU took a lead in coming up with a taxonomy for green investing. Now popularly called a ‘green taxonomy’, the EU taxonomy is a green classification system that translates the EU’s climate and environmental objectives into criteria for specific economic activities for investment purposes. It recognises as green, or ‘environmentally sustainable’, economic activities that make a substantial contribution to at least one of the EU’s climate and environmental objectives, while at the same time not significantly harming any of these objectives and meeting minimum social safeguards (see EU, 2021).

The context for this development was the European Commission’s 2018 Action Plan on Financing Sustainable Growth which contained in Action 2, the Commission’s commitment to create standards and labels for green financial products. A Report on the EU Green Bond Standard was issued by a technical expert group in 2019 (see EU TEG, 2019), and in 2020, based on the TEG input, the European Commission established a Green Bond Standard. In order to direct investments towards sustainable projects and activities, the Action Plan also called for the creation of a common classification system for sustainable economic activities, or an “EU taxonomy”. This was issued along with the Green Bond Standard in 2020. It became known as the “green taxonomy”, requiring that financed green investments follow taxonomy criteria including the following six environmental objectives: climate change mitigation, climate change adaptation, sustainable use and protection of water and marine

7 The Network for Greening the Financial System is a network of 83 central banks and financial supervisors that aims to accelerate the scaling up of green finance and develop recommendations for central banks’ role for climate change. The NGFS was created in 2017 and its secretariat is hosted by the Banque de France. (Wikipedia, accessed 11/8/2021)

resources, transition to a circular economy, pollution prevention and control, and protection and restoration of biodiversity and ecosystems.

5.4 Greenwashing

In financial literature, greenwashing is an attempt to capitalise on the growing demand for environmentally sound products. Greenwashing, with respect to green investment, is an attempt to capitalise on the growing demand for environmentally sound products and projects.

For an example offered in the literature, companies have engaged in greenwashing via press releases and commercials touting their clean energy or pollution reduction efforts. In reality, the company may not be making a meaningful commitment to green initiatives. In short, companies that make *unsubstantiated claims* that their products are environmentally safe or provide some green benefits are involved in greenwashing.

In general, greenwashing is the process of conveying a false impression or providing misleading information about how a company's products are more environmentally sound. 'Greenwashing' has become a concern as the flow of monies into green investments has grown along with momentum inside the finance industry for ensuring sustainable investment. The discussion above focused on developing green and ESG standards and green taxonomies that aim to ensure green investments make a positive contribution to key environmental objectives. Recently, there has developed an associated effort to advise on extending the green taxonomy to significantly harmful activities and identifying kinds of activities that would have a total negative contribution to investments aimed at conserving protected areas and biodiversity, addressing climate change, or achieving the Sustainable Development Goals. As highlighted by the World Economic Forum in a 2021 statement,

- Experts and NGOs have observed that greenwashing has become more common in recent years.
- Greenwashing could slow our progress toward meeting climate and social goals.
- The risk is that stakeholders switch their support to a less sustainable option, worsening the impact on both the planet and society.
- Greenwashing generally takes two main forms:
 - Selective disclosure – advertising positive information regarding a product's environmental performance while hiding the negative, or
 - Symbolic actions – claims that draw attention to minor issues without accompanying meaningful action. (see <https://www.weforum.org/agenda/2021/05/how-spot-greenwashing/>)

It may not always be possible to know when greenwashing is occurring. Work on common definitions and reporting standards built on science will be an essential tool for aiding such assessment. The World Economic Forum suggests two common ways to assess the impact of a given project or operation:

- **Inventory reporting:** Measuring and reporting the impacts of an organisation's or government's operations – such as carbon emissions, biodiversity impacts, or social equality; and
- **Impact quantification:** Measuring the impact of a particular effort or investment to compare what would have happened in its absence. (Id.)

Finally, one suggestion to reduce the possibility of greenwashing in green investing is to have a natural baseline against which the projected positive impacts can be quantified over the life of the project. In addition, it is important to widely publicise incidents of greenwashing as well as identify and reward financial organisations, corporations, and governments who contribute the most to achieving the conservation investment performance goals. (Id.)

5.5 Other entities developing guidelines and standards for ESG/green investing

As indicated above, in the past few years, significant progress has been made in the development of guidance to help create an internationally recognised ESG standard for investing. In addition to the specific examples elaborated above, Table 18 lists some of the main initiatives underway by international standard setting and monitoring organisations. It is important to note that many multilateral finance and development organisations, in addition to the World Bank and EU, have begun to issue ESG guidance or incorporate sustainability into their financial operations. These include the Asian Development Bank Group, European Bank for Reconstruction and Development, African Development Bank, InterAmerican Development Bank, OECD, EIB, International Organization of Securities Commissions (IOSCO), International Organisation of Pension Supervisors (IOPS), and the G20⁸/G7.

Table 19 in Annex 2 turns to the efforts of certain international, supranational, regional, and national governments in supporting green investment. The purpose of these two Tables is to illustrate how widely the ESG movement has spread. In the past couple of years, virtually all major banks, global financial firms, donor countries and leaders in the financial world have bought into this new wave of ESG and green investing, mainly motivated by growing economic risks due to climate change, biodiversity and nature loss and degradation, and pandemics.

It is important to start with an industry leader involved in almost all the green investment standard-setting, International Capital Market Association (ICMA), which sponsors and issues various standards for capital markets around the world. ICMA is a not-for-profit membership association, headquartered in Zurich, with offices in London, Paris, Brussels and Hong Kong. ICMA currently has more than 600 members active in all segments of the sell-side and buy-side of international debt capital markets in over 60 jurisdictions. Its objectives include to provide a basis for joint examination of questions relating to the international capital and securities markets and to issue rules and make recommendations governing their operations. It focuses on a comprehensive range of market practice and regulatory issues which impact all aspects of these markets, including sustainable finance. Among its members are private and public sector issuers, banks and securities dealers, asset and fund managers and other investors, insurance companies, capital market infrastructure providers, central banks, law firms and others. The ICMA is referenced in a couple of the entries below for its contribution of standards or guidelines for that initiative. (<https://www.icmagroup.org/>)

8 In March 2017, G20 countries endorsed and committed to promoting G20 Operational Guidelines for Sustainable Financing. Their aim is to “enhance access to sound financing for development while ensuring that sovereign debt remains on a sustainable path by fostering information sharing and cooperation among borrowers, creditors and international financial institutions, as well as learning through capacity building.” These were endorsed by the G7 in June 2020.

Table 18: A sampling of organisations and associations working with standards for ESG and green investing

Organisation	Work underway or completed
CFA Institute⁹ https://www.cfainstitute.org/	<p>The CFA Institute has developed in draft voluntary, global industry standards on ESG Disclosure for Investment Products with environmental, social, and governance (ESG)-related features, to provide greater transparency and consistency in ESG-related disclosures and clearer communication regarding the ESG-related features of investment products.</p>
Climate bonds standard and certification scheme https://www.climatebonds.net/standard	<p>The <u>Climate Bonds Standard and Certification Scheme</u> is a labelling scheme for bonds and loans, and based on rigorous scientific criteria bonds and loans with Certification are meant to be consistent with the 2° Celsius warming limit in the Paris Agreement. The Scheme is used globally by bond issuers, governments, investors and the financial markets to prioritise investments which genuinely contribute to addressing climate change.</p>
Coalition for Private Investment in Conservation (CPIC) (see Stephenson et al., 2018)	<p>CPIC is a global multi-stakeholder initiative formed of a group of investors, banks, project developers and research institutions, including IUCN, focused on developing ‘blueprints’ for helping package a private investment project in forest landscape restoration; sustainable agricultural intensification; sustainable coastal fisheries; coastal resilience; and watershed management.</p>
European Commission https://ec.europa.eu/info/business	<p>A unified EU Green Classification System – a ‘taxonomy’ – was launched by the European Commission in March 2020 to help direct private capital towards long-term, environmentally sustainable activities, and prevent false claims on the environmental nature of an investment product (called ‘greenwashing’).</p>
European Commission (Climate benchmarks)	<p>In 2019, co-legislators agreed to amend the Climate Benchmark Regulation by introducing two types of climate benchmarks (EU Climate Transition Benchmark and EU Paris-Aligned Benchmark). In addition, they agreed to strengthen ESG disclosures for all benchmarks.</p>

⁹ CFA stands for Chartered Financial Analyst, and to become a CFA charter holder is valued in every sector of the global financial community. The CFA Institute is a major player in the investment world and 85% of CFA Institute members take ESG factors into account in their investing.

<p>European Investment Bank</p> <p>https://www.eib.org/attachments/strategies/environmental_and_social_overview_en.pdf</p>	<p>The EIB Statement on Environmental and Social Principles and Standards sets the EIB's policy for the protection of the environment and human well-being. An EIB Environmental and Social Handbook provides an operational translation of those standards grouped across 10 thematic areas including: assessment and management of environmental/ social impacts and risks, pollution prevention and abatement, biodiversity and ecosystems, and climate-related standards.</p>
<p>Green Bond Principles (GBP). 2021 edition</p> <p>https://www.icmagroup.org/News/news-in-brief/green-and-social-bond-principles-2021-edition-issued/</p>	<p>Voluntary Green Bond Principles (issued by ICMA) support issuers in financing environmentally sound and sustainable projects that foster a net-zero emissions economy and protect the environment. By recommending that issuers report on the use of Green Bond proceeds, the GBP promotes transparency to track funds for environmental projects, while helping understand estimated impact.</p>
<p>GRI (Global Reporting Initiative)</p> <p>https://www.globalreporting.org/</p>	<p>GRI, an independent, international organisation, helps businesses and other organisations by providing global common language to communicate their impacts on sustainability. The Global Sustainability Standards Board (GSSB) is the world's first globally accepted standards for sustainability reporting. GRI is headquartered in Amsterdam, with a network of seven regional hubs.</p>
<p>Green Finance Platform</p> <p>https://www.greenfinanceplatform.org/financial-measures/browse</p>	<p>The Green Finance Measures Database (GFMD) builds on data and analysis compiled by UNEP Design of a Sustainable Financial System, country analysis, and the Green Finance Progress Report to G20 finance ministers. The GFMD comprises 500+ policy and regulatory measures. They work with 15 key themes: 1. Environmental, social and governance and ESG criteria in investment. 2. Standards and regulations related to industry-standards on sustainable investing. 3. Climate change adaptation and mitigation. 4. Risk and resilience. 5. Stewardship. 6. Sustainable, green and social bonds for development projects. 7. Infrastructure. 8. Stock markets and regulators. 9. Impact investment. 10. Natural capital. 11. Indicators and measurement. 12. Digital finance. 13. Cities and sustainable urban solutions. 14. Gender. 15. Trade and supply chains.</p>
<p>Institute for European Environmental Policy (IEEP)</p> <p>https://ieep.eu/uploads/articles/</p>	<p>Guidance to identify and address incentives which are harmful to biodiversity (Volume 3, Incentive Measures and Biodiversity – A Rapid Review and Guidance Development).</p> <p style="text-align: right;">↓</p>

SASB (Sustainability Accounting Standards Board) https://deloitte.wsj.com/	<p>The SASB standards guide reporting the non-financial information investors are increasingly looking for when making investment decisions. Companies consider what non-financial information they report and whether it meets investor needs for their applicable sector and industry to assess if they are reporting relevant non-financial information.</p>
SDG Compass https://sdgcompass.org/wp-content/uploads/2016/05/019104_SDG_Compass_Guide_2015_v29.pdf	<p>Developed by GRI (see above), the UN Global Compact, and the WBCSD, the SDG Compass incorporates feedback from companies, government agencies, academic institutions and civil organisations worldwide on the planet's massive economic, social and environmental challenges, and has developed a guide explaining how SDGs affect one's business and how to practice sustainability.</p>
Sustainability Bond Guidelines, 2021 https://www.icmagroup.org/News/news-in-brief/green-and-social-bond-principles-2021-edition-issued/	<p>Sustainability bonds (issued by ICMA) are bonds where the proceeds will be exclusively applied to finance or re-finance a combination of both green and social projects. The Sustainability Bond Guidelines (SBG), updated as of June 2021, facilitate the application of their guidance on transparency and disclosure to the sustainability bond market, use of external review and impact reporting.)</p>
Task Force on Climate-related Financial Disclosures (TCFD) https://www.fsb-tcfd.org/about/	<p>The TCFD, established by the Financial Stability Board¹⁰, develops recommendations for more effective climate-related disclosures to promote more informed investment, credit, and insurance underwriting and, in turn, enable stakeholders to understand better concentrations of carbon-related assets in the financial sector and financial system's exposures to climate risks.</p>
UN Global Compact https://www.unglobalcompact.org/what-is-gc/mission/principles	<p>The UN Global Compact, founded in 2000, is a non-binding voluntary initiative based on CEO commitments to implement universal sustainability principles and to take steps to support UN goals. To achieve this, they call upon companies to align strategies and operations with universal principles of human rights, labour, environment, and anti-corruption, among others.</p>
UNPRI https://www.unpri.org/policy/regulation-database	<p>UNPRI in 2016 started a regulation database to document existing and in progress sustainable finance policies around the world. Updated in January 2021, this database now covers approximately 500 policy tools and market-led initiatives where ESG factors are to be considered alongside investment across the world's 50 largest economies. To date, PRI has identified over 730 hard and soft law policy revisions of these 500 policy tools, including ESG factors.</p>

¹⁰ The Financial Stability Board is an international body that monitors and makes recommendations about the global financial system. It was established after the G20 London summit in April 2009 as a successor to the Financial Stability Forum.

Conclusion

“A Healthy Planet is good for Business.”

(Henry M. Paulson, 2020, former CEO of Goldman Sachs)

“Many individuals are doing what they can. But real success can only come if there is a change in our societies and in our economics and in our politics.”

(David Attenborough)

Awareness of the importance of biodiversity and protected areas conservation for sustaining life on Earth is growing and the need for major investments in conservation have gained the attention of investors and finance professions. This is a critical trend because governments, conservation experts and international financial institutions agree that public funds alone will be insufficient to address the growing biodiversity crises, support effective climate change action, ensure that countries can achieve the 2030 UN Sustainable Development Goals, or the new goals and targets being finalised as part of the new CBD Global Framework for Managing Nature through 2030. As this paper has endeavoured to show, the conservation and climate change funding gaps between what is needed and what currently is being given are astounding, in the hundreds of billions and over time in the trillions. Moreover, economists also have been estimating the cost of inaction on biodiversity loss, including loss of ecosystem services, and the numbers are in the trillions.

Action from all segments of society is required – policy makers, business and financial institutions, international organisations, and civil society. And, reflecting the theme of this paper, significantly increased and long-term investment from private institutional and retail investors, collaborating with all other funding sources is a key action. But that action needs two key government initiatives: 1) supportive enabling conditions in emerging markets and developing countries for attracting and effectively implementing such investments as elaborated below, and 2) adopting natural capital accounting (NCA) practices and providing relevant data to the public.

Below are key observations drawn from the theme, content, and findings of this paper. There is no way the human species and its non-human travelers will overcome the critical dangers and dire consequences facing our planet with biodiversity loss, climate change, and future pandemics unless everyone works together according to their own capacities toward a new global system of finance, investing, consumption, recycling, sustainable resource use, science and technology for human and nature welfare, and austerity in life.

1. With the growing global nature funding gap, foreign private institutional and retail investors working with investees (governments, public enterprises, corporations) and other actors must identify, develop, and increase activity to support sound large-scale and long-term green investment projects, especially in emerging markets and developing economies. These nature-based challenges include such priorities as biodiversity loss, protected area and habitat degradation, ecosystem service degradation, climate change, meeting the UN 2030 Sustainable Development Goals (SDGs) and new Convention on Biological Diversity (CBD) Targets of the 2030 Global Biodiversity Framework, and general environmental degradation.
2. Increased collaboration in information sharing and strategic planning from institutional investors, development finance institutions, governments, companies, individual investors and donors

could facilitate development of large-scale green investment projects with blended finance and partnerships, including private-public partnerships.

3. More examples of successful large-scale conservation projects are needed to create the required track record to get institutional investors on board. It will be important to increase the sharing of lessons learned and good examples of technical assistance facilities matched with well-designed and implemented science-based projects.
4. Enhanced awareness, transparency, and open communication within the financial world and with potential investee governments and public enterprises are needed on the social and environmental issues in their countries (e.g. biodiversity loss, fragmentation of natural or semi-natural areas, pollution, non-sustainable resource use, climate damage).
5. Initiatives are required to facilitate integration of protected areas and biodiversity conservation principles and threats (both marine and terrestrial) by businesses and financial organisations into their production and supply chain policies. Mobilising a common approach for measuring and integrating protected area, biodiversity, climate change and other environmental safeguards in business and investment decisions can help mitigate negative effects.
6. At the international level, business and finance leaders could launch multi-stakeholder advisory investment groups on protected areas and biodiversity, climate impacts, and other green issues to help set up strategies and advise their communities and governments of options for the way forward.
7. Strategic partnerships can strengthen adherence to large, long-term investment commitments for protected areas and biodiversity conservation as well as following through on climate commitments to meet the Paris goals. Public-private partnerships can provide technical expertise to investees on conservation investment strategies and designing and integrating specific ESG investments as part of national programme budgets. Other strategic partnerships are also needed with local leaders, cooperatives, social organisations, and NGOs that are in close contact with local communities, indigenous peoples, and other affected persons. They can play an intermediating role to ensure that the voices of these groups are heard and taken into account and that all local stakeholders understand the value of specific conservation investments that may be planned, how they can benefit, participate through pilot projects, offer their local knowledge, and collaborate with implementation.
8. Increasing funding through investment in terrestrial and marine protected areas, biodiversity conservation, and connectivity conservation is no longer an option, it is a necessity. Many protected areas are under-funded from the government budgets and likely to remain that way. Protected areas and biodiversity financing needs and opportunities will continue to grow across the globe, in some areas in an accelerated pace in view of climate change impacts and spreading uncontrolled development. All aspects of the global economy must shift to play a greater role for large institutional investors and retail investors working with developing country governments, financial experts, and conservation practitioners to help tackle large-scale conservation issues, including fully integrating green components into public budgets and public finance management.
9. Sustainable protected areas financing requires supportive policy and market conditions from a wide range of actors and across all public sectors of activity, as well as local and indigenous communities. General economic conditions as well as specific policies promoting certain activities through incentives and subsidies may have a critical negative impact on the health and

condition of protected areas, local biodiversity, and the general condition of the natural environment. Adverse policy, pricing and market conditions can seriously undermine efforts to conserve protected areas and significantly increase costs where there is further nature degradation. Subsidies that support and reward conservation can strengthen and expand efforts of business and individuals to act in ways that advance biodiversity conservation, climate action, achievement of SDGs, and future CBD targets. Shifting to positive incentives and subsidies, because money is fungible, can actually help reduce the massive global funding gap for protected areas, biodiversity, climate action, maintaining and restoring ecosystem services (air, water, soils), and other green funding needs.

10. As the demand for ESG-driven investing has accelerated, so too has the number of reporting requirements, data providers, technology aids, blueprints, and planning frameworks – each with varying requirements and methodologies. In this context, a collaborative effort that involves investors, asset managers, standard-setting institutions, and international organisations will be key to achieving quality ESG data, agreeing on universal definition and disclosure standards, monitoring methods and reporting requirements, performance metrics, and lessons being learned.

Roles of individual parties

Governments have the primary role:

- Adequate enabling conditions need to be in place before the investment finance needed to meet biodiversity and protected area goals, climate actions, SDG progress, and new CBD goals and targets.
- Develop and apply standards, laws and regulations to create and guide biodiversity and environmental investments to ensure effective projects, cross-sector involvement, strong financial support and management, address risks, require regular measurement of impacts, monitoring and adaptation as needed.
- Work with the private sector to mainstream biodiversity conservation and protected area investments in all relevant sectors to build a government-wide green financial system; main sectors for ESG integration and green investment include agriculture, environmental restoration, forest management, water management, renewable energy, infrastructure, fisheries and marine management.
- Promote policy and implementation effectiveness across sectors, operations, and levels of government, including areas where private sector companies are contractors, to take advantage of potential synergies and reduce trade-offs that harm biodiversity.
- Enact incentives that help increase flows of new private foreign investment capital.
- Enact supportive policies at national and local government levels so they can access private capital markets to increase their budgets for biodiversity, protected areas, climate change, and pollution control, and sustainable development projects using green bonds, debt for nature and climate swaps, other thematic bonds and equity tools, and blended finance.

Investment organisations, private financial institutions and retail investors have a key role to expand flows of investment capital for green financing:

- Develop internal capacity to understand nature-based issues and problems, in order to be able to effectively monitor and assess conservation and other green investments;

- Innovate through new financial products and approaches with blended financial arrangements and a variety of players; and
- Partner with project developers, conservation NGOs, and scientific research groups to develop metrics and scientifically-based monitoring programmes for measuring the effectiveness of impact investments and set targets and timelines for public reporting for transparency and accountability.

Conservation and philanthropic organisations have an initiating and supportive role:

- Help start-up efforts by providing funds for project or programme design, technical assistance, impact and performance monitoring;
- Serve as a catalyst, working with the public, local community organisations and indigenous and traditional groups, to ensure best available knowledge about how to preserve nature and natural capital is reflected in green investment calculations about benefits and risk of different conservation projects; and
- Support government efforts to increase investment flows for conservation by helping design, promote investors, and monitor projects and substantive outcomes, including when adaptation or other adjustments are needed.

Historically, philanthropic foundations have not been required to do much public disclosure of their giving and project priorities which hindered cooperation with other development actors. With today's improvements in data availability and growth in technology and communication networks, foundations have a significant opportunity to improve knowledge-sharing, join platforms, networks, and associations and participate in developing collective data-sharing and planning strategies for green financing.

The Multilateral Development Banks (MDBs) and other multilateral financial institutions can play a supportive role by helping developing countries build or strengthen enabling policy, law, and institutional components of government. This includes such critical elements as the following (adapted from WB2020b, p. 92):

- Provide sector policy advice on removing harmful subsidies/incentives and put in place beneficial subsidies and incentives (e.g., tax policy) to support protected areas and biodiversity conservation, including restoration;
- Provide advice and technical assistance on developing innovative approaches to funding biodiversity projects and nature-based solutions;
- Support countries and help train professionals in producing natural capital accounts;
- Work with standard setters to ensure biodiversity and protected areas measures are included and harmonised in green taxonomies;
- Help build tools and train financial sector regulators to incorporate environmental risk into their own regulatory, oversight, and risk assessments;
- Help countries develop plans for greening financial systems using a whole-of-government approach and including a role for the private sector; and
- Provide support and guidance to private financial intermediaries on how they can help with specific green investments.

A summary on the kinds of enabling recommendations important for governments, the economic sector (the real sector) and the financial sectors came from a stakeholder group organised by the World Bank team researching how to increase nature finance. Recognising that so many recent publications on biodiversity and protected areas conservation have put together tables and charts, it seemed appropriate to end with this consolidated table (see Table 19).

Table 19: A summary of recommendations by stakeholder group

Summary of recommendations		
Governments	Private sector	MDBs
Levelling the playing field via real sector policies	Risk management and financial instruments	Supporting implementation
Standards and regulations <ol style="list-style-type: none"> 1. Land planning and governance reform 2. Pollution standards 3. Mandatory standardised environmental impact assessments that integrate biodiversity criteria 4. Biodiversity offsets regulation and best practice guidance 5. Voluntary sustainable certification and supply chain transparency 6. Biodiversity friendly procurement practices 7. Strengthen regulation protecting high biodiversity areas and ecosystems supporting endangered, endemic, migratory species 8. Strengthen regulations protecting biodiversity and ecosystems with significant economic value Subsidy and tax reform <ol style="list-style-type: none"> 9. Environmental fiscal reform Financial sector policy frameworks and biodiversity strategies <ol style="list-style-type: none"> 1. Green financial sector roadmaps 2. NBSAPs 	Incorporating risks <ol style="list-style-type: none"> 1. Standards 2. Scenario analysis 3. Engagement Developing investment opportunities <ol style="list-style-type: none"> 4. Application of new instruments – scale, replication, and aggregation 5. Sequencing of instruments 6. Private equity and pipeline development 7. Strategic allocation of capital through public equity 8. Development of biodiversity funds, ETFs, and indices 9. Labelled bonds 10. Labelled loans 11. Pooled debt vehicles 12. Carbon and biodiversity offset markets 13. Incorporating biodiversity criteria into investment processes 14. Blended finance and risk mitigants 	<ol style="list-style-type: none"> 1. Developing new instruments 2. Blended finance 3. Strategic application of ODA funds 4. Alignment between the conservation agenda and the nature-based climate solutions agenda 5. Mainstreaming biodiversity across lending portfolios 6. Develop transparent accountability and reporting standards for biodiversity protection 7. Support governments in developing enabling environments 8. Acting as cornerstone investors in funds and other instruments that aggregate projects and scale investment vehicles



Summary of recommendations		
Governments	Private sector	MDBs
Levelling the playing field via real sector policies	Risk management and financial instruments	Supporting implementation
Data and accounting 3. Natural capital accounting 4. Planetary health metrics and contextual reporting 5. Technology for data Regulation and supervision 6. Taxonomies 7. Labelling 8. Supervisory risk assessment 9. Disclosure 10.Solvency and capital regulations Developing investment opportunities 11.Serve as cornerstone investor by providing catalytic capital to funds and other financial instruments that aggregate projects		
Foundation for success		
Enforceability, resources and capacity	Transparency and capacity	Innovation and global coordination

Source: World Bank 2020b, p. 98.

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Annex 1A Developed and developing country case studies in finance

(Research by Carolyne Clermont and Léah Khayat, ELC/Bonn)

I. Emerging markets and developing economies (in text):

ASIA

1. Meloy Fund: A fund for sustainable small-scale fisheries in Southeast Asia (see Box 18)
2. Philippines' coastal risk reduction pilot project (see Box 10)
3. Indonesia's green sukuk bonds (climate change and energy) (see Box 14)
4. Thai Union Group's sustainability-linked loan (see Box 16)
5. The People's Republic of China: Green finance pilot zones programme (see Box 6)
6. Rise of ESG investments in the People's Republic of China (Box 2)

EASTERN AND SOUTHERN AFRICA

1. The debt-for-nature swap and blue bond in the Republic of Seychelles (see Box 15)
2. The Kalagala, Uganda, biodiversity offset area (see Box 8)

MEXICO, CENTRAL AMERICA AND THE CARIBBEAN

1. Caribbean Biodiversity Fund (CBF) (see Box 20)
2. Jalisco State's *paisajes bioculturales*/Mexico (see Box 12)

OCEANIA – Fiji's sovereign green bonds (see Box 13)

II. Developed countries – see below in this Annex:

NORTH AMERICA – BlackRock Investment Stewardship (BIS) (*in this annex*)

INITIATIVES ACROSS REGIONS

1. Green Fund (Norway) (*in this annex*)
2. HSBC's green bonds (*in this annex*)
3. Philanthropy co-managed by Conservation International and BHP Alliance

EUROPE

4. Payment for ecosystem services in the Danube Basin (*in this annex*)
5. SLMS Silva – Irish sustainable forest (NCFF) (*in this annex*)
6. France's sovereign green bonds (*in this annex*)
7. Sweden's sovereign green bonds (*in this annex*)
8. Germany's sovereign green bonds (*in this annex*)
9. Île de France region's green, social and sustainability bonds (*in this annex*)

OCEANIA – Australia's reef credits (*in this annex*)

Cases from developed countries

Box 22 Case 1: Payment for ecosystem services in the Danube Basin

Name of investor/group:

Global Environment Facility (GEF).

Date of action and length of project:

October 2009–December 2014.

Amount and type of financial investment:

Total project budget: USD 2,314,049 (GEF: USD 964,676).

Payment for ecosystem services or PES (a new market mechanism in which service suppliers are paid by beneficiaries to manage the ecosystems in such a way as to enhance or continue the ecosystem service provision).

Purpose of investment:

The purpose of the project was to demonstrate and promote payment for ecosystem services and related financing schemes in the Danube River Basin and to other international water basins.

Target areas: Bulgaria (Rusenski Lom Nature Park and Persina Nature Park) & Romania (Maramureş, Ciocăneşti and Iezerul Călăraşi).

2 private sector-driven PES pilot schemes were developed:

- One with a water utility company in the Maramureş area to protect the watershed from which the company draws its water, including possible PES to local farmers, foresters and other land users; and
- One with fish producers in the Călăraşi area to develop and market “green” fish that can be sold at a premium price to support extensive environmentally-friendly fisheries management.

Lessons learned:

A legal framework is crucial for the whole functioning of a PES scheme. Where it does not exist, it is important to create such a framework from scratch, with the support of legal and financial advisors. Trust is something that should exist even before the legal framework is set up because if by being too suspicious of private companies and putting too many limitations on them, the scheme may never start. Cooperation needs to be based on trust in addition to legal agreements.

It is important to clearly state from the beginning to all partners that PES is not meant to solve social problems but it can contribute to it. Primarily, this is an economic instrument to conservation, showing clearly to stakeholders the link between their economic activities and nature, and benefits that they can get. It should also be noted that benefits from nature are not like financial income – ecosystems cannot run immediately but need time to re-generate (be restored), improve and be self-sustained.

For more information, please consult the following links:

<https://www.cbd.int/doc/meetings/fin/rmws-2014-04/other/rmws-2014-04-presentation-day3-03-en.pdf>

https://wwfint.awsassets.panda.org/downloads/design_and_implementation_of_pes_schemes_1.pdf

https://wedocs.unep.org/bitstream/handle/20.500.11822/244/Terminal_Evaluation_of_the_UNEP_GEF_Project_Promoting_PES_and_Related_Sustainable_Financing_Schemes_in_the_Danube_Basin.pdf?sequence=1&isAllowed=y

Box 23 Case 2: SLM Silva Fund – Irish Sustainable Forest Fund (NCFF)Name of investor/group:

SLM Partners (agriculture and forestry investment manager), the EU Commission, the European Investment Bank (EIB) and other Irish investors and European institutional investors.

An Irish forestry company – Purser Tarleton Russel Limited – is responsible for managing the forest properties after acquisition.

Date of action and length of project:

The SLM Silva Fund was established in 2018 and has a 10-year tenure.

Amount and type of financial investment:

EU guaranteed loans.

Concerns about 20,000 hectares of Irish forests .

EUR 50-60 million investment in total, incl. EUR 12.5 million from the EIB.

Purpose of investment:

The fund will acquire existing forest plantations in Ireland, aggregate these properties and provide grants to farmers restoring forests in the country. Where possible, the fund will implement a sustainable form of forest management known as Contiguous Cover Forestry (CCF). CCF-managed forests have a higher biodiversity and amenity value and resiliency to pests, diseases and windthrow than forests under a clear-felling regime.

Obligations for the fund:

The Forest Investment Policy adopted by the SLM Silva Fund requires that:

- Investments are environmentally sound and sustainable and meet specific criteria under the LIFE Biodiversity and Adaptation objectives.
- A two-stage investment decision making process is set up with thorough due diligence.

European Investment Banking requirements:

- To establish an Environmental and Social Management System; and
- To implement and engage with technical assistance under the NCFF Support Facility for the successful implementation of the project.

Reporting and monitoring:

Assessment of key environmental and biodiversity aspects has been enshrined in the project and include:

- Identify and assess social and environment impacts, both adverse and beneficial;
- Establish biodiversity and ecosystems baseline indicators;
- Identify ways of mitigating negative impacts and enhancing positive impacts;
- Comply with all national forest management standards and rules incl. Sustainable Forest Management Standards; and
- Obtain an informed view concerning the forest certification according to an internationally accepted certification standard.

Special challenges:

The fund has a smaller than expected size, failing to achieve its fundraising target, meaning the manager may not ultimately sell the full aggregation of land to one buyer committed to CCF on a long-term basis. This basically raises the risk of converting the land back to traditional forestry.

For more information, please consult the following links:

<https://www.eib.org/attachments/registers/64465730.pdf>

<https://www.agriinvestor.com/exclusive-slm-final-stretch-e60m-debut-irish-timber-fundraising/>

<https://www.100percentsustainability.com/investments/slm>

<https://www.independent.ie/business/farming/forestry-enviro/forestry/european-investment-bank-backs-first-project-to-encourage-continuous-cover-forestry-in-ireland-36956953.html>

Box 24 Case 3: France's sovereign green bondsDate of action and length of project:

First issuance: January 2017-June 2039.

Second issuance: announced for 2021 (maturity of about 20 years).

Amount and type of financial investment:

Sovereign green bonds.

First issuance: for an initial amount of EUR 7 billion. Successive tap issues have brought the total outstanding volume to EUR 27.4 billion as of January 2021, with a coupon of 1.75 %.

Purpose of investment:

These bonds fund the central government budget expenditure to protect biodiversity, fight climate change, adapt to climate change and fight pollution. In 2019, up to 12 % of the proceeds were used for the protection of biodiversity.

Proceeds are allocated to 6 sectors: building, living resources, transport, energy, adaptation and pollution.

Obligations of government receiving outside investment:

Proceeds from these bonds are managed like those of a conventional sovereign bond but allocations to Eligible Green Expenditures are tracked and reported.

Green Eligible Expenditures exclude any French State expenditure financed by a dedicated resource, in order to avoid any "double accounting".

Green Eligible Expenditures will exclude any State expenditure to a French agency or to a local authority that could issue its own green bonds.

Reporting and monitoring:

Reporting will be provided to investors on:

- The allocation of bond proceeds reviewed by an external auditor.
- The outputs of Eligible Green Expenditures, i.e. existing state performance indicators.
 - The latest in 2019 details the measures taken, the amount allocated and the performance indicators to assess the relevance and effectiveness of these measures.
- An ex-post reporting on environmental impacts of Eligible Green Expenditures.
 - An independent Evaluation Council, comprising internationally-renowned experts, has been established to supervise evaluations on the environmental impacts of the expenditures.

The Green Bond Evaluation Council is chaired by Manuel Pulgar-Vidal, a former Minister for the Environment in Peru and President of the UNFCCC COP20. So far, reports from this Evaluation Council only cover a portion of the expenditures matched to bonds proceeds, focusing on 3 initiatives: a tax credit for energy transition, the proceeds allocated to the French inland waterways office, and the public subsidy granted to the National Forestry Commission.

For more information, please consult the following links:

https://www.aft.gouv.fr/files/medias-aft/3_Dette/3.2_OATMLT/3.2.2_OATVerte/Agence%20France%20Trésor_Green%20OAT%20UK.pdf

<https://www.aft.gouv.fr/en/publications/communiqués-presse/20210125-green-oat-eligible-green-expenditure>

<https://www.aft.gouv.fr/files/archives/attachments/25562.pdf>

Box 25 Case 4: Sweden's sovereign green bondsDate of action and length of project:

September 1, 2020.

Amount and type of financial investment:

Sovereign green bonds.

About SEK 30 billion (approx. EUR 3 billion).

Purpose of investment:

The proceeds are linked to central government expenditures and will meet Sweden's environmental and climate objectives. They can cover measures for valuable natural environments and marine and aquatic environments, and measures to improve the environment in agriculture.

So far, selected expenditures concern (1) climate investments, (2) seas and water, (3) biodiversity and (4) railway maintenance. But the majority of funds are so far planned for clean transportation, i.e. maintenance and operation of electrified railways.

Obligations of government receiving outside investment:

Expenditures on nuclear and fossil energy, new investments in large-scale hydro power or exclusively administrative appropriations are excluded.

Eligible green expenditures are limited to central government budget expenditures and do not include foregone central government tax revenue resulting from environmental or climate considerations, or expenditures financed by state-owned companies, regions or municipalities. They are selected among realised expenditure from the previous year and expenditure for the current year.

Reporting and monitoring:

The Swedish National Debt Office is to publish an investor report no later than the fourth quarter of the year following the bonds issuance and every year thereafter, if deemed necessary.

The report will specify the distribution of the proceeds between the eligible expenditures in the portfolio. The report will also include output and impact statements outlining the positive environmental impacts of the green expenditures. The output and impact statement will be linked to the objectives of the expenditures.

In addition, the National Debt Office's documentation on bond proceeds is subject to financial audit procedures applicable to all government agencies.

Special challenges:

According to CICERO's review of the green bond framework (highest grade):

- There may be elements of fossil fuel use for maintenance of railway networks, and in management of ecosystems and natural living resources because of machinery and vehicles.
- Natural gas in hybrid vehicles may get funded.
- The broad scope of the framework creates some uncertainty as to the type of projects that can be found eligible under the framework.
- A vigorous selection procedure aiming at the highest standards can correct this.

For more information, please consult the following links:

<https://www.government.se/49bcc9/contentassets/ed959d7b700e429a98cc85bdb64ef1af/swedens-sovereign-green-bond-framework.pdf>

<https://www.government.se/49ca3c/globalassets/government/dokument/finansdepartementet/pdf/green-bond-framework/green-bond-second-opinion-cicero>

Box 26 Case 5: Germany's sovereign green bonds

Date of action and length of project:

First issuance: September 2020–2030.

Expected to be a yearly issuance.

Amount and type of financial investment:

Green twin bonds (green bond is issued alongside a conventional bond to not negatively influence the overall liquidity in government bonds).

EUR 6.5 billion worth of bonds with a maturity of 10 years.

Purpose of investment:

Proceeds may be allocated to transport, international cooperation, research, innovation and awareness raising, energy and industry, and agriculture, forestry, natural landscapes and biodiversity.

Obligations of government receiving outside investment:

- Federal expenditures only;
- Expenditures for real and intangible assets;
- Exclude any expenditure already used by other public German issuers with their own green bonds;
- Exclude expenditures for armaments, defence, tobacco, alcohol, gambling, fossil fuels and nuclear energy; and
- Exclude expenditure contrary to EU Charter of Fundamental Rights.

Reporting and monitoring:

As of 2021, every calendar year, an allocation report will be published by the Federal Ministry of Finance on expenditures of the preceding year.

An impact report will be published by the Federal Ministry of Finance for each sector, at least once in each bond's lifetime. This report may include:

- Quantified metrics of environmental impacts or key performance indicators;
- Analytical reports on environmental efficiency and performance of selected expenditure; and
- Listing or description of exemplary projects.

An Inter-Ministerial Working Group will review these allocation and impact reports. An independent external body will provide third-party verification on the allocation reports and their conformity with the Green Bond Framework.

Special challenges:

A large portion of proceeds will be allocated to trains and rail infrastructure, which could also include the freight transport of fossil fuels.

Germany's green bond receipts will be entirely allocated to green projects that have already been executed in the past.

In Germany, green public investment happens at the level of local and regional government rendering the effectiveness and the scope of federal expenditures limited.

For more information, please consult the following links:

https://www.deutsche-finanzagentur.de/fileadmin/user_upload/institutionelle-investoren/pdf/GreenBondFramework.pdf

<https://www.issgovernance.com/file/spo/spo-germany-20200824.pdf>

<https://www.ceps.eu/germanys-inaugural-green-bond-not-so-green-after-all/>

<https://www.marketsmedia.com/germany-introduces-concept-of-green-twin-bond/>

Box 27 Case 6: Île de France region's green, social, and sustainable bonds (French region includes Paris)

Date of action and length of project:

First issuance in 2012; second issuance in 2014; third issuance in 2015; fourth issuance in 2016; fifth issuance in 2017, sixth issuance in 2018 and seventh issuance in 2020 for EUR 800m.

Amount and type of financial investment:

Regional bonds (green, social and sustainable).

This represents up to EUR 4 billion in investments.

Purpose of investment:

To pursue one or more of the sustainable development goals defined in the regional intervention strategy, SDGs and environmental objectives defined by the European Taxonomy.

Obligations of government receiving outside investment:

- Eligible green projects under one of four categories: green buildings, clean transportation, renewable energy, and terrestrial and aquatic biodiversity conservation and their related criteria;
- Proceeds entirely allocated to already executed projects;
- Exclude expenditures in nuclear energy and fossil fuel production, electricity generation from fossil fuels, weapons and ammunition, alcoholic beverages, tobacco, any product or activity illegal under international agreements, or subject to international prohibitions;
- Exclusively conducted in Île-de-France's territories and in strict compliance with national legislation.
- Include direct expenditures on tangible fixed assets and on intangible assets; and
- Exclude expenditures financed by revenue subject to earmarking.

Reporting and monitoring:

For each bond issue, two reports will be published:

- The allocation report on the allocation of funds for selected projects, earmarking them by using SDGs or their contribution to the EU environmental objectives; and
- The impact report describing the project: purpose, allocated proceeds, how it meets the eligibility criteria and project management criteria, evaluation of 3 impact indicators (CO2 emission prevented, creation of jobs, number of beneficiaries), related- SDG or EU environmental objective.

A Sustainable Finance Committee validates the selection of projects presented in the allocation and impact report to investors, and an external review is also scheduled to control the regularity of expenditures.

Special challenges:

- Lack of external verification of indicators used to report on environmental and social benefits of the eligible projects;
- Need to integrate ESG factors in evaluation and selection of the contractors/suppliers in charge of the construction and/or operation of the projects;
- Lack of monitoring and control of the performance of contractors/suppliers throughout the life of the projects; and
- No environmental and social impact assessments for all eligible projects.

For more information, please consult the following links:

https://www.iledefrance.fr/sites/default/files/2021-03/green_social_and_sustainable_bond_framework.pdf

<https://www.iledefrance.fr/sites/default/files/medias/2021/03/VE-SPO-IDF-2021-03.pdf>

Box 28 Case 7: Australia's reef credits

Date of action and length of project:

October 2020.

Amount and type of financial investment:

Credit scheme mechanisms.

A private and public partnership between the Queensland Government and HSBC to buy about AUD 1 million in reef credits.

Purpose of investment:

The money has been earmarked to help farmers in the Tully River Catchment to implement better fertiliser management that would prevent more than 3,000 kilograms of nitrogen from entering the Great Barrier Reef area.

Description:

The reef credit scheme pays landholders (landowners and land managers) for on-farm actions that improve water quality by reducing pollutants entering the Great Barrier Reef. An independent crediting body will issue reef credits to landholders that have implemented projects in compliance with approved methods for reducing nitrogen, sediment or pesticide losses.

The reef credits can then be sold to buyers seeking to invest in water quality improvements such as the Queensland Government and HSBC.

Strict eligibility requirements for landholders interested in participating in the reef credits scheme have been established. Monitoring and reporting mechanisms are also in place to ensure these on-farm actions improve water quality.

The first reef credits were issued in October 2020 for a project in the Tully River Catchment. The Tully Nutrient Run-off Reduction Project #1, generated 3,125 reef credits between January 2018 and December 2019.

The Reef Credit Interim Steering Committee approved the issuance of reef credits for the project following validation and registration of the project by the Reef Credit Secretariat. An independent verification by an accredited auditor also confirmed project eligibility, baseline and project pollutant reduction calculations, reef credit quantity and compliance with reef credit standard.

Reporting and monitoring:

Reporting and monitoring requirements are set for landholders interested in the scheme.

For more information, please consult the following links:

<https://www.reefcredit.org/>

<https://www.about.hsbc.com.au/news-and-media/hsbc-and-the-queensland-government-purchase-world-first-reef-credits>

<https://www.reefcredit.org/wp-content/uploads/2019/03/Reef-Credit-Guide-Version-1.0.pdf>

<https://www.reefcredit.org/wp-content/uploads/2020/04/Reef-Credit-Standard-Version-1.1.pdf>

<https://www.qld.gov.au/environment/climate/climate-change/land-restoration-fund/co-benefits/other-markets>

<https://www.hsbc.com/news-and-media/hsbc-news/protecting-the-great-barrier-reef>

Box 29 Case 8: BlackRock Investment Stewardship (BIS)Date of action and length of project:

The guidelines were published in March 2021.

Amount and type of financial investment:

Applicable to BIS's assets which represent in value USD 8.7 trillion at the end of 2020.

Purpose of investment:

Make sustainability a key component of BIS investment approach.

Description:

BIS require companies in which it holds stakes to disclose how natural capital risks and opportunities affect their operations, long-term strategy, capital expenditures and risk management, and communities in which they operate. BIS' natural capital focus areas are (1) biodiversity preservation, (2) deforestation risk management and (3) freshwater and oceans protection.

In addition, for companies that have material dependencies or impacts on biodiversity, they are encouraged to disclose:

- Habitat restoration and preservation policies and practices;
- Responsible land usage and management practices;
- Efforts to limit the introduction of invasive species;
- Efforts to purchase sustainably sourced raw materials;
- Soil and water contamination controls in place;
- Practices that minimise use of chemicals, protect biodiversity, reduce environmental degradation and spread of antibiotic resistance; and
- Initiatives to improve land use to meet market demand, optimise resource efficiency and land preservation.

For companies materially dependant on natural capital, they are encouraged to contribute to programmes supporting the conservation of those resources.

BIS has announced that it will ask companies to explain the board's role in overseeing management's approach to these issues. It may vote against directors who fail to act, or vote on shareholder proposals to better manage natural-capital risks or improve reporting of these practices.

Reporting, monitoring and compliance mechanisms:

BIS encourages reporting aligned with the recommendations of the Task Force on Climate-related Financial Disclosures and the metrics identified by the Sustainability Accounting Standards Board.

Special challenges:

- Reporting requirements are not mandatory;
- Unclear how often BIS will be willing to impose sanctions; and
- Reporting requirements occur after the investment is made by BIS.

For more information, please consult the following links:

<https://www.blackrock.com/corporate/literature/publication/blk-commentary-engagement-on-natural-capital.pdf>

<https://www.ft.com/content/11285871-f0a7-4573-b638-5391e713eac8>

<https://www.bloomberg.com/news/articles/2021-03-18/blackrock-to-press-companies-on-human-rights-and-nature>

Box 30 Case 9: &Green Fund

Name of investor/group:

NICFI, Norway's International Climate and Forest Initiative (USD 100 million), the Unilever Group (USD 25 million) and the GEF (USD 2 million).

Date of action and length of project:

Launched in 2017.

Managed by Sail Ventures.

Amount and type of financial investment:

Blended Finance Fund with a capital of USD 127 million.

Target to mobilise USD 2 billion.

Purpose of investment:

Protect 5 million ha of tropical forests and peatlands and improve the lives of half a million smallholder farmers.

Description:

&Green invests in commercial projects in agricultural production value chains to protect and restore tropical forests and peatlands and make agriculture more sustainable and inclusive – involving local communities, producers, financiers, supply chain companies, local and national government and civil society. The Fund's investments support its investee companies in developing and implementing a plan to protect the wider landscape around the area of production by including other stakeholders in the landscape.

&Green provides credit or guarantees to finance commodity supply chain projects in tropical forests countries and approved jurisdictions only (Brazil, Colombia, Ecuador, Gabon, Indonesia, Liberia and Peru). Its sector focus is generally all commodity supply chains which source from tropical forest regions and specifically, the soy, livestock, palm oil, rubber and forestry sectors.

Projects are expected to provide substantial environmental returns that can be monitored throughout the investment period, and must adhere to strong social and environmental covenants as well as plan for the protection of the wider landscape around the project.

Example of project funded:

Agropecuaria Roncador Ltda (30 April 2020): USD 10 million loan from &Green, with co-investment from local bank of BRL 150 million, is financing Roncador for the upscaling of their sustainable farming system that integrates crops with livestock to their full farming operations. In addition, the project includes the restoration of degraded pastures and conservation of over 70,000 hectares of forest.

Reporting, monitoring and compliance mechanisms:

SAIL Ventures is responsible for the monitoring of &Green's investments. &Green monitors all projects through 1) satellite monitoring of the landscape and 2) independent on-the-ground verification of the E&S performance within the landscape.

An exit report will also be published at the end of every project.

For more information, please consult the following links:

[&Green Fund website](#)

[&Green Fund investment strategy](#)

Box 31 Case 10: HSBC's green bondsDate of action and length of project:

As of 2015, six green bonds have been issued.

(A Green Bond Framework was drafted in 2015).

Amount and type of financial investment:

Corporate bonds.

First issuance: November 2015 for EUR 500m with a 5-year tenure.

Second issuance: March 2017 for EUR 38m with an 8-year tenure.

Third issuance: March 2017 for EUR 40m with a 15-year tenure.

Fourth issuance: March 2017 for EUR 50m with a 15-year tenure.

Fifth issuance: March 2017 for EUR 100m with a 15-year tenure.

Sixth issuance: March 2017 for EUR 1,250m with a 5-year tenure.

Purpose of investment:

To finance eligible businesses and projects promoting low-carbon transition, climate resiliency and sustainable economy, and provide clear environmental sustainability benefits.

Description:

- Eligible sectors: renewable energy, energy efficiency, efficient buildings, sustainable waste management, sustainable land use, clean transportation, sustainable water management, and climate change adaptation.
 - Schemes for allocation and protection of environment, local community and biodiversity are specifically provided for.
- Excluded sectors: nuclear power generation, weapons, alcohol, and gambling/adult entertainment
- Include fossil fuels if used within an eligible sector.
- Eligibility criteria:
 - Sustainable values and practices core to business' operations
 - Eligible sectors only
 - A significant positive sustainability net impact achieved
 - Eligible business if it derives 90 % or more of revenues from activities in eligible sectors.

Reporting and monitoring:

A Green Bond Committee made up of sustainability experts, senior director and managers is in charge of governing the HSBC Green Bond Framework.

The HSBC Green Bond issuing entity will publish a publicly available Green Progress Report on an annual basis including:

- Aggregate amounts of funds allocated to each of the eligible sectors with a description of the types of business and projects financed;
- Remaining balance of unallocated Green Bond proceeds; and
- Confirmation that the use of proceeds complies with HSBC Green Bond Framework.

Special challenges:

- Not all projects will be made available to the public; and
- Framework lacks procedures for impact reporting.

For more information, please consult the following links:

<https://www.hsbc.com/-/files/hsbc/investors/fixed-income-investors/green-and-sustainability-bonds/pdfs/201110-hsbc-green-bonds-report-2020.pdf?download=1&la=en-gb&hash=9429BEC855D325976CCCF41E56E56F3EBCF9BE4B>

<https://www.environmental-finance.com/content/news/hsbc-named-largest-green-social-and-sustainability-bond-manager.html>

Box 32 Case 11: Philanthropy activities co-managed by Conservation International and BHP AllianceName of investor/group:

BHP Alliance (BHP is one of the world's leading diversified resources companies.)

Date of action and length of project:

First phase: 2011-2016 (a five-year collaboration to protect areas of high conservation value).

Second phase: 2016 issuance of Forests Bond in collaboration with the IFC.

Amount and type of financial investment:

Philanthropy (protection of areas of high conservation value and Forest Bonds).

First phase: USD 50 million.

Second phase: USD 152 million.

Purpose of investment:

Biodiversity objectives and REDD+.

Description:

In 2011, BHP and Conservation International started a five-year collaboration to protect areas of high conservation value around the world. Projects of high value were selected in regions where BHP operates – in Australia, Chile, Kenya and Peru – and were required to reach a high standard for effective conservation management. These activities have concerned more than 440,000 hectares of habitat for 16 threatened species, with USD 50 million of investments on account of BHP. Fifty direct jobs were created as a result and it has ensured the conservation of watersheds that generate 900 million cubic meters of fresh water in both Chile and Australia. More precisely, BHP committed voluntary USD 30 million and contributed to the establishment of the Five Rivers Conservation Areas in Tasmania, Australia, and in the Valdivian Coastal Reserve in Chile. In 2016, a USD 10.9 million endowment for the Valdivian Coastal Reserve was also established.

In addition, in 2016, Conservation International and BHP Alliance also developed Forests Bonds to unlock private financing for REDD+ in the Kasigau Corridor in Kenya. The Bond was issued by the International Finance Corporation to give investors the choice of a cash coupon or a coupon in the form of forest carbon credits. In the following five years, BHP Alliance has been providing a price support mechanism to ensure the pre-defined minimum quantity of carbon credits – necessary to ensure the project is sustainable – is sold each year. Other investors are invited to participate and contribute to this Bond. A Knowledge Sharing Platform was also established to encourage investments in REDD+ projects.

For more information, please consult the following links

<https://www.conservation.org/corporate-engagements/bhp-billiton>

https://www.conservation.org/docs/default-source/publication-pdfs/five-rivers-reserve_factsheet.pdf?Status=Master&sfvrsn=cab688ee_3

https://www.conservation.org/docs/default-source/publication-pdfs/valdivia-coastal-reserve_factsheet.pdf?Status=Master&sfvrsn=40b2c330_3

<https://www.ifc.org/wps/wcm/connect/982eb7ef-1daa-49ca-b9c0-e6f3a2ddcd88/FINAL+Forests+Bond+Factsheet+10-5.pdf?MOD=AJPERES&CVID=IxS1w0E>

<https://www.cbd.int/financial/2017docs/ifc-forestbond2017.pdf>

Annex 1B Green Finance Platform


The Green Finance Platform (GFP) is a global network of organisations and experts that address major knowledge gaps in sustainable finance (see: <https://www.greenfinanceplatform.org>).


According to their website, members include the World Bank, UNDP, UNEP, and UNIDO at the international level and more than 30 other organisations at the regional and non-governmental levels working with climate and green finance. These many organisations form a Green Growth Knowledge Partnership (GGKP) as a global community of policy, business, and finance professionals and organisations committed to collaboratively generating, managing, and sharing knowledge on the transition to an inclusive green economy.

Their website explains that the GGKP has three knowledge platforms - the Green Policy Platform, [Green Industry Platform](#), and [Green Finance Platform](#). These platforms are charged with offering quick and easy access to the latest research, case studies, guidance, and tools to empower policy makers and advisors, small and medium-sized enterprises (SMEs), and banks, insurance, and investment firms to make evidence-based decisions about how to green their operations. Webinars, courses, and academic programmes are also featured on the platforms to facilitate ongoing learning and capacity building for green growth professionals. Users can browse knowledge and learning by 193 countries, 6 regions, and 49 sectors and themes. These platforms are a good source for knowledge and learning about green finance.

Annex 2 Leading financial and development institutions supporting ESG and sustainable investing

Table 20: Leading financial and development institutions supporting ESG and sustainable investing

Name of institution	Excerpts from their writings or speeches on ESG/sustainable Investing
Credit Suisse Group, Switzerland (A global investment bank and financial services firm founded in 1856 and based in Zurich, Switzerland)	Their focus is on sustainable investing and taking into consideration environmental, social and governance (ESG) aspects in addition to traditional valuation criteria. The Bank pursues positive social and environmental change in line with the UN's Sustainable Development Goals (SDGs).
European Union (Supra-regional, political and economic union of 27 member states located primarily in Europe)	The European Union has been a leader in ESG, ahead of many other developed countries; especially in newly implemented obligations for ESG disclosures and likely forthcoming mandatory human rights, environmental and governance due diligence, as well as the new 'Taxonomy' for green investing.
BlackRock (American multinational investment management corporation, the world's largest asset manager, with over USD 8 trillion under management as of Jan. 2021)	As stated by Larry Fink, BlackRock CEO, we must confront the global threat of climate change more forcefully and consider how, like the pandemic, it will alter our lives. The biggest crises, whether medical or environmental, demand a global ambitious response. In a survey to clients around the world, our findings were clear: The tectonic shift towards sustainable investing is accelerating.
Deutsche Bank (German multinational investment bank and financial services company in 58 countries; especially in Europe, the Americas, Asia)	"ESG investing is no longer something clients should view as a sacrifice," said Claudio de Sanctis, Global Head of Deutsche Bank's International Private Bank (IPB), in a new video. "It's becoming a precondition to actually doing proper investments....(2021)". DB established an ESG Centre of Excellence in Singapore in May 2021.
BNP Paribas (French international banking group, the world's 7th largest bank by total assets and largest bank in Europe, currently operates in 72 countries)	BNP's aim is to achieve long-term sustainable investment returns for clients. Among its main operating principles: pursue sustainable investing with precise targets and commitments; focus on key sustainability issues; invest for the long term; promote awareness about the role of finance for a sustainable world. Sustainable investment is no longer an option, but a necessity.
HSBC Holdings (British multinational investment bank and financial services holding company; second largest bank in Europe, total assets USD 2.984 trillion)	In the words of HSBC's Group Chief Executive Noel Quinn: "How we do business is as important as what we do. Reporting on our environmental, social and governance performance transparently is essential to building stakeholder confidence and creating value for all our stakeholders....[consistent with] the UN Global Compact and commitment to the Compact's principles." 

<p>Banco Santander (Spanish multinational financial services company, maintains presence in all global financial centres as the 16th-largest bank in the world)</p>	<p>In September 2020, Santander has made a number of green commitments including raising over EUR 120 billion in green finance between 2019 and 2025. This figure will increase to EUR 220 billion in 2030 and includes the Group's overall contribution to green finance: project finance, syndicated loans, green bonds, capital and export finance, advisory and other products.</p>
<p>Bank of Japan (The Bank of Japan is the Central Bank of Japan)</p>	<p>In July 2021, the Bank of Japan launched a new strategy on Climate Change, likely increasing the availability of capital for green projects both domestically and internationally. The BOJ's strategy addresses both its own role and that of Japanese financial institutions (FIs). Foreign-currency green bonds from non-Japanese issuers will become eligible for purchase as part of its foreign-exchange reserves, bringing it in line with policies recently introduced by the European Central Bank and the Bank of England. These policies will increase opportunities for the ESG bond market.</p>
<p>Commonwealth Bank of Australia (CBA) (The CBA is Australia's multinational bank with businesses across New Zealand, Asia, the United States and the United Kingdom)</p>	<p>Recognising that the demand for sustainability-linked bonds will grow significantly, CBA has increased the size of its sustainability division. There also is investor pressure on the banks to do more in climate change action. CBA is active in the green bond market, having been the joint lead manager on the first Australian green Asset-Backed Securitisation (ABS) for FlexiGroup, and as sole arranger and lead manager on the world's first certified climate bond from a university, for Monash University.</p>
<p>Goldman Sachs (American multinational investment bank and financial services company)</p>	<p>According to Goldman Sachs CEO, David Solomon, a record of USD 732 billion in sustainable debt was issued in 2020, and Goldman Sachs achieved USD 156 billion in sustainable-finance activity. "Definitively, sustainability is not an offshoot of our business; it is our business and our two priorities of climate transition and inclusive growth."</p>
<p>J.P. Morgan Chase and Co. (American multinational investment bank and financial services holding company; major provider of investment banking and financial services)</p>	<p>In 2021, ESG ranked as the top asset class for increased allocations in J.P. Morgan's U.S. Fixed Income Strategy client survey. Growth of the ESG fund universe exceeded 100% over the past year and total ESG assets now estimated at USD 7.2 trillion versus last year's USD 3 trillion estimate. U.S.-domiciled sustainable investments increased to USD 17.1 trillion at the beginning of 2020, up 42% from USD 12 trillion two years earlier.</p>
<p>Bloomberg Green (company headquartered in New York City. In 2020 launched 'Bloomberg Green', a daily digest of climate, science, environmental impacts, zero-emission tech and 'green finance' news)</p>	<p>In addition to 'Bloomberg Green', Bloomberg has created an ESG dataset which offers ESG metrics and ESG disclosure scores for more than 11,500 companies in 80+ countries. Several key sustainability topics are monitored, including Air Quality, Climate Change, Water & Energy Management, Materials & Waste, Health & Safety, Diversity, and Shareholders' Rights. </p>

<p>World Bank Group</p> <p>(With 189 member countries, staff from more than 170 countries, and offices in over 130 locations, the World Bank provides loans and grants to the governments of low- and middle-income countries for capital projects. The group is comprised of the IBDR, IDA, IFC, MIGA, and ICSID)</p>	<p>In October 2019, The World Bank launched the Sovereign (country) ESG Data Portal: a free, open, and easy to use online platform that provides users with sovereign-level ESG data. The portal is designed to help investors better align ESG analysis with key sustainable development policy indicators and analysis, as well as to increase data transparency and support private sector investments in emerging markets and developing countries. The Sovereign ESG Data Framework incorporates data relevant to all 17 Sustainable Development Goals. The World Bank also provides technical assistance of proposed ESG projects for the countries in which they work, possibly some seed money support as part of a blended finance package and serves as a guarantor against risk for an ESG investor.</p>
<p>Asian Development Bank (ADB)</p> <p>(Regional development bank established in 1966; Manila, Philippines; It also maintains 31 field offices around the world to promote social and economic development in Asia)</p>	<p>According to the ADB, ESG investment can bridge the gap between traditional capitalism and the newer concepts of shared economic and social value and sustainable and inclusive finance and can also incentivise the private sector to tackle environmental and social challenges. It has many issues of concern, such as unclear criteria for sustainable investment, low quality of non-financial data, lack of disclosure, and resource misallocation risks. These obstacles are critical for many countries in Asia and the Pacific whose development have not yet reached those of more developed countries.</p>
<p>Inter-American Development Bank (IDB)</p> <p>(Regional development bank established in 1959 and the largest source of development financing for Latin America and the Caribbean)</p>	<p>IDB is focused on climate change and promoting environmental and social sustainability. Its Board of Executive Directors in 2020 adopted an updated, integrated policy framework to manage environmental and social risks. It sets ambitious new standards in several areas and provides IDB's clients with new provisions to tackle environmental and social issues, respect human rights, and address risks from pandemics.</p>
<p>African Development Bank (AfDB)</p> <p>(Regional development bank, established in 1964, headquartered in Abidjan, Côte d'Ivoire since September 2014; a financial provider to African governments and private companies investing in the regional member countries)</p>	<p>The AfDB recognises that achieving sustainable development outcomes requires greater assistance to its member countries and proposed development actions to manage their potential adverse social and environmental risks and impacts. For this reason, the Bank developed its Integrated Safeguard System – a cornerstone of its Ten Year Strategy (2013–2022) – to facilitate growth that is socially inclusive, environmentally sustainable, and meets ESG international standards.</p>
<p>European Bank for Reconstruction and Development (EBRD)</p> <p>(International financial institution founded in 1991. As a multilateral developmental investment bank, the EBRD uses investment as a tool to build market economies. Undertakes both sovereign funding and non-sovereign funding. Financial intermediaries have distinct environmental and social standards in their work with clients)</p>	<p>A climate finance leader, planning to become a majority green bank by 2025. Through policy reform and investment, they help their countries meet goals and commitments under the Paris Agreement, and beginning in 2023, expect all its activity will be aligned with the Paris Agreement. The Bank's Green Economic Financing Facilities (GEFFs) develop local financing markets for sustainable energy and resource efficiency projects. EBRD's Finance and Technology Transfer Centre for Climate Change (FINTECC) promotes advanced climate technologies in its early transition countries, Kazakhstan, Ukraine and in the Southern and Eastern Mediterranean.</p>



<p>European Investment Bank (European Union’s investment bank, owned by the EU Member States. It is one of the largest supranational lenders in the world)</p>	<p>The EIB Statement on Environmental and Social Principles and Standards sets the policy context. An EIB Environmental and Social Handbook provides an operational translation of those standards grouped across 10 thematic areas. In order to achieve sustainability objectives, the EIB relies to a large extent on activities undertaken by clients – the borrowers and project promoters.</p>
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