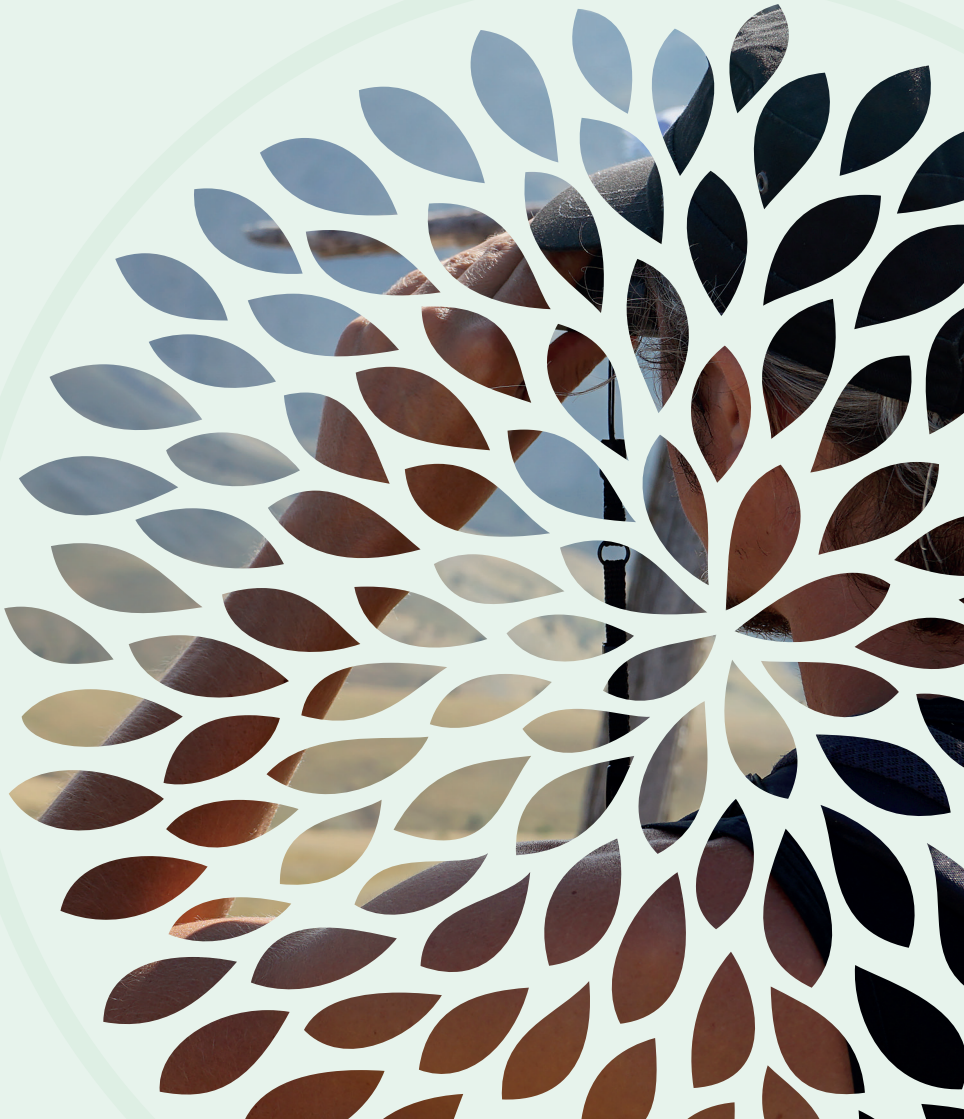
EKLIPSE

Knowledge & Learning Mechanism
on Biodiversity & Ecosystem Services

Moving Towards Transformative Change for Biodiversity: Harnessing the Potential of the Post-2020 Global Biodiversity Framework

An EKLIPSE Expert Working Group report



Horizon 2020
European Union Funding
For Research & Innovation
Grant agreement 690474

Moving Towards Transformative Change for Biodiversity: Harnessing the Potential of the Post-2020 Global Biodiversity Framework

An EKLIPSE Expert Working Group report

Harriet Bulkeley*[1], Marcel Kok*[2], Jiska van Dijk*[3], Tim Forsyth[4], Gabriella Nagy[5] and Sebastian Villasante[6]

[1] Durham University, Department of Geography, South Road, Durham DH1 3LE, UK.

[2] PBL - Netherlands Environmental Assessment Agency, P.O. box 30314, 2500 GH The Hague, NL.

[3] Norwegian Institute for Nature research (NINA), Høgskoleringen 9, 7034 Trondheim, Norway

[4] London School of Economics and Political Science, Department of International Development Houghton Street, London WC2A 2AE, UK.

[5] CEEweb for Biodiversity, H-1021 Budapest, Széher út 40, Hungary.

[6] University of Santiago de Compostela, Department of Applied Economics, Praza do Obradoiro, 0, 15705 Santiago de Compostela, A Coruña, Spain

* Working Group Co-Chair

Published by: UK Centre for Ecology & Hydrology, Wallingford, United Kingdom.

This publication needs to be cited as follows:

Citation: Harriet Bulkeley, Marcel Kok, Jiska van Dijk, Tim Forsyth, Gabriella Nagy and Sebastian Villasante. (2020). *Harnessing the Potential of the Post-2020 Global Biodiversity Framework*. Report prepared by an Eklipse Expert Working Group. UK Centre for Ecology & Hydrology, Wallingford, United Kingdom.

ISBN: 978-1-906698-73-7.

Cover photo: Photo by Allan Watt.

Edited by: Jorge Ventocilla, Ute Jacob, Karla E. Locher Krause, Heidi Wittmer, Tyler Kulfan, and Allan Watt.

Series editors: Karla E. Locher-Krause, Jorge Ventocilla, Heidi Wittmer, Marie Vandewalle, Hilde Eggermont, Allan Watt and Juliette Young.

Graphics by: Heather Harris, UK Centre for Ecology & Hydrology, United Kingdom.

Print: Seacourt Limited, Oxford, United Kingdom.

This document is printed using processes that are:

100% carbon positive | 100% EMAS | 100% renewable energy | 100% ISO14001 | 100% eco-friendly simitri® toner | 100% recycled FSC® stock | Zero % waste to landfill

Printed by seacourt – proud to be counted amongst the top environmental printers in the world

Contents

1. Executive Summary 3
2. Background 6
2.1 Context 6
2.2 Background document and workshop 7
2.3 Making the results available at the international level 7
2.4 Introduction 7
3. Transformative Change: The Key Ingredients 9
3.1 What is Transformative Change? 9
4. Making Progress on Critical Issues 13
4.1 Production and Consumption 14
4.1.1 The Potential for Transformative Change 15
4.1.2 Taking Steps Towards Transformative Change 16
4.1.3 Embedding Transformative Change through Sustainable Production & Consumption 17
4.2 Climate Change 18
4.2.1 The Challenge 18
4.2.2 The Potential Contribution to Transformative Change 19
4.2.3 Taking Steps Towards Transformative Change 20
4.2.4 Embedding Transformative Change in the GBGF – the role of climate action 20
4.3 Cities 22
4.3.1 The Challenge 22
4.3.2 The Potential Contribution to Transformational Change 22
4.3.3 Taking Steps Towards Transformative Change 23
4.3.4 Embedding Transformative Change 23
4.4 Terrestrial landscapes and Inland Waters 25
4.4.1 The Challenge 25
4.4.2 The Potential Contribution to Transformational Change 25
4.4.3 Taking Steps Towards Transformative Change 26
4.4.4 Embedding Transformative Change: terrestrial landscapes and inland waters 26
4.5 Coastal and marine areas 28
4.5.1 The Challenge 28
4.5.2 The Potential Contribution to Transformational Change 28
4.5.3 Taking Steps Towards Transformative Change: coastal and marine areas 29

4.5.4 Embedding Transformative Change *29*
5. Governance and Finance for Transformative Change 31
5.1 Implementation *31*
5.2 Reporting & Review *32*
5.3 Capacity Development *33*
5.4 Finance *34*
6. Harnessing the Transformative Potential of the Global Biodiversity Framework 35
6.1 Establishing the Enabling Conditions *35*
6.2 Targets & Indicators for Transformative Action *36*
6.3 Implementation Mechanisms *39*
6.4 Accountability *40*
6.5 Taking the Next Steps *42*
7. Glossary 43
8. List of Acronyms 47

List of Tables

Table 1: Seeds of Transformative Change? 13
Table 2: Transformative Change for Biodiversity through Sustainable Production & Consumption 17
Table 3: Transformative Change for Biodiversity through Climate Change Action 20
Table 4: Transformative Change for Biodiversity through Urban Action 24
Table 5: Transformative Change for Biodiversity through Terrestrial Landscapes and Inland Waters 27
Table 6: Transformative Change for Biodiversity through Coastal and Marine Areas 30

Acknowledgements

As the main authors of the paper, the co-chairs of the working group would like to thank the other 3 authors (Tim Forsyth, Gabriella Nagy and Sebastian Villasante) and the EWG members Peter Goethals and Pieter Vullers for their contributions to the report. Furthermore, the co-chairs also like to express their thanks to the EKLIPSE Secretariat for their support in handling the communications, workgroup meetings and providing advice and direction. Particular thanks go to Jorge Ventocilla, Heidi Wittmer, Ute Jacob and Karla Estela Locher Krauze in this respect. The co-chairs are particular grateful to Marco Fritz and his team (DG Research & Innovation Biodiversity Team) from the European Commission who initiated the EKLIPSE request and organized the remarkable and very fruitful EU workshop for which this report served as a background document.

Moving Towards Transformative Change for Biodiversity: Harnessing the Potential of the Post-2020 Global Biodiversity Framework

1. Executive Summary

The global community has accepted the IPBES conclusion that transformative change will be required to meet ambitious goals and targets for biodiversity. This strong message has given the negotiations for a new post-2020 Global Biodiversity Framework (GBF) a sense of urgency and purpose. As the world faces the challenge of rebuilding the economy and fostering social cohesion in the wake of the COVID19 crisis, the imperative of ensuring that transformative action is built into our collective recovery has become ever more urgent. Yet in practice, there has been limited attention given to how we can embed transformative change within global governance and specifically what this means for the GBF.

While important steps have been taken, the currently Zero Draft of the GBF largely sees transformative change as something that means that ambitious goals are met by getting national implementation right. Our analysis suggests that such a narrow framing misses the significant opportunity that exists to bring transformative change to the heart of the post-2020 agenda.

The GBF can provide the leadership needed to put the world back on track to protect and restore biodiversity by 2030 and ensure its sustainable use supports societal needs and values. It can provide a compass for all levels of government and actors from across the whole of society – guiding the action that is needed for transformative change and providing a signal as to whether we are continuing on the right path. To achieve this, transformative change must be regarded as something to be addressed in each and every part of the GBF. Without this, it is likely that the stated ambition of the Parties to the Convention to enable widespread transformative change on the ground will not be realised and goals for conserving and sustainably using biodiversity will not be met.

This report tackles this challenge - how can transformative change be embedded within the GBF as a whole. Its aim is to identify how transformative change can be made more tangible and to illustrate how this might be done in practice in order to seize the opportunities for enabling action on the ground. Drawing on the conclusions of the IPBES Global Assessment, UNEP, EEA and others, the report seeks to identify how transformative change can be leveraged at the level of global governance. It argues that the post-2020 GBF is critical in creating the collective vision, ambition and momentum for transformative change, giving a direct mandate to Parties under the convention and providing an enabling and supportive framework for non-state actors who contribute to goals for biodiversity. Realising this potential we suggest will require identifying and embedding core principles for transformative change throughout the GBF. Section 2 of this report identifies six principles, based on our digest of relevant research and positions on transformative change, that need to be embedded within the GBF (Table 1). These principles can act as levers for achieving transformative change, generating new levels of ambition, enabling new agents of change to engage, and at the same time ensuring that action for biodiversity also enables just and sustainable outcomes for society.

Table 1: Seeds of Transformative Change?

Principles of Transformative Change	Explanation
Address Root Causes	The pursuit of transformative change requires that the root causes and underlying/indirect drivers of the problem in question are addressed
Take Multiple Paths	Transformative change cannot be achieved through 'silver bullet' solutions or blueprint plans. Multiple efforts will be required, through diverse development pathways that are compatible with biodiversity goals
Expand Action Arena	Transformative change for biodiversity cannot be achieved through action which is confined to traditional action arenas, but needs to be expanded to encompass multiple areas of the economy and society
Realise Diverse Co-Benefits	Efforts to generate transformative change generate multiple trade-offs and co-benefits. Harnessing positive co-benefits can enable greater traction for ambitious biodiversity action and also achieve other societal goals
Design Deliberative & Inclusive Processes	As well as necessarily taking place through inclusive processes, transformative change will generate disagreements and contestation which require space to be heard and in-depth consideration
Adopt Proactive Approach to Resistance	Resistance is an inevitable part of transformative change and approaches need to be designed to ensure that appropriate account of how to ensure 'just transitions' whilst also overcoming those with a vested interest in the status quo

We suggest that embedding these principles in the Global Biodiversity Framework can generate an agenda for transformative action on biodiversity over the next decade and beyond by providing the compass that directs action through:

- Creating a positive vision/narrative of the possibilities that transformative change holds for nature & people;
- Fostering new shared understandings, relationships and intentions about the need and scope of biodiversity action, the multiple values involved and how diverse approaches can be mobilised;
- Setting the direction of travel for state and non-state actors, encouraging and recognising diverse contributions to enrol more, and more diverse, actors;
- Enabling action by creating spaces for actors from the whole of society, encouraging participation and interaction among state and non-state actors;
- Ensuring that progress is effectively monitored and reported to celebrate success and maintain ambition levels

To establish how these principles can be embedded to generate leverage for transformative action, we analyse five critical issue areas: sustainable consumption and production; climate change; cities; terrestrial

landscapes and inland waters; and costal and marine environments (Section 3). We focus on identifying how direct requirements on Parties for the implementation of and reporting on the GBF could be used as levers to advance transformative change, or where the GBF can provide leadership, direction, capacity-building and resources to support all levels of government and a whole of society response. In doing so, we build and reflect on the Open Ended Working Group meetings and its ongoing consultations so far, as well other relevant processes within CBD such as on mainstreaming and capacity building.

Transformative change requires advancing the development of implementation mechanisms that have transformative potential (Section 4). To date discussions on the shape and nature of the post-2020 GBF have tended to favour on building on existing mechanisms – including National Biodiversity Strategy Action Plans (NBSAPs), National Reporting (NR) and traditional tools of capacity building and finance that have been part of international environmental agreements for the past thirty years. It appears clear from current consultations that there is little appetite for a fresh approach. The question then becomes one of how to ensure that these mechanisms are used to advance transformative change, alongside new forms of mainstreaming, capacity building and resource mobilisation. This is particularly challenging as these mechanisms were designed primarily for national government biodiversity policies addressing the direct drivers of biodiversity loss, rather than for also tackling the indirect drivers, expanding the action arena, and realising the multiple benefits of biodiversity action for diverse actor groups. Simply expanding existing mechanisms is unlikely to be sufficient. Instead, we suggest that they need to be repurposed with additional mechanisms introduced in the GBF in order to advance a transformative change agenda. In so doing, one needs to be mindful of how the capacities and responsibilities for transformative change are unevenly distributed between Parties and across the whole of society and develop mechanisms that recognise this to ensure a just and equitable approach.

In order to realise the kinds of transformative change required to advance goals for biodiversity on the ground, this report suggests that the six core principles of transformation (Table 1) need to be embedded throughout the GBF. International environmental agreements of this kind carry limited legal force within national contexts. Instead, their power rests in their capacity to persuade and enable others to act on the critical levers and leverage points through which biodiversity goals can be met. Advancing transformative change requires a reorientation of the Convention, through the GBF, to ensure that the imperatives of addressing direct and indirect drivers of biodiversity loss and of mainstreaming biodiversity in order to reduce threats and ensure its sustainable use are at the heart of a shared vision that guides all levels of government and actors across the whole of society.

Creating a shared vision and agenda for transformative change is only in part about establishing new and ambitious rules of the game (e.g. goals, targets). It also requires that the fundamental building blocks of the strategy – the assumptions about the ingredients required for success, the operation and implementation of the strategy to achieve the necessary changes, and how success will be measured and verified – are aligned. The report (section 6) suggests options to embed an agenda for transformative change in four key parts of the GBF: its statement of the required enabling conditions; the development of targets and indicators; the key means of implementation through which action is to be enabled; and the accountability mechanisms that will be needed to ensure progress. Ultimately the question facing CBD negotiators is not one of accelerating and embedding the current approach towards more ambitious goals, but of recognising the need to repurpose and reorientate the CBD through a GBF that places these principles for transformative change at its heart.

2. Background

EKLIPSE is a Horizon 2020 funded project which has developed a self-sustaining EU support mechanism for evidence-informed policy on biodiversity and ecosystem services. EKLIPSE fulfils several roles including knowledge synthesis, identifying and prioritising research needs and supporting the interaction between the European and global biodiversity research and policy. It does so by responding to requests from policy makers and civil society.

Following on the results of an initial request put to EKLIPSE by ALTER-Net[1], the European Commission (DG R&I) engaged in a dialogue to promote transformative change- which has been highlighted as indispensable to achieve the objectives of CBD and other multilateral agreements, SDGs, and the Paris Agreement - through a request to EKLIPSE focussing on "What can researchers offer to understand Transformative Change and to translate it into actions, goals, targets and pathways for the Global Biodiversity Strategy to 2030?"

As part of the EKLIPSE response to this request, this report served as a basis for a workshop organised in June 2020 by the European Commission and the Croatian Presidency of the Council of the European Union and supported by EKLIPSE.

2.1 Context

Transformative change (or transformational change; the terms are used interchangeably) refers to a fundamental, system-wide change that includes technological, economic and social factors as well as paradigms, goals or values (IPBES Deliverable 1c, 2019 IPBES 7/6). There is increasing agreement, e.g. in the IPBES Global Assessment, the Planetary Boundaries concept, and the "bending the curve of biodiversity loss" discussion, that transformative change is essential for tackling biodiversity loss and climate change. However, understanding "how" transformative change can be achieved and what role the new global biodiversity framework could play in this process is still a challenge. An increasing amount of literature, particularly from the social sciences is becoming available on the challenges and opportunities for bringing transformative change into action, not only in abstract terms but via practical examples. The aims of the request include to make this experience and literature available for the negotiators of the GBF, jointly discuss potential options that might be agreed at the global level and against this background to obtain insights into the type of further research that could support these aims in the future.

The objective of this request was to initiate a Science-Policy dialogue to bring together and engage scientists and policy makers in a transparent dialogue, to identify and discuss options how the post-2020 process can contribute to transformative change, building on respective work of SBSTTA and the Open-Ended Working Group of the CBD (OEWG).

An open call for experts was launched in February 2020 to invite experts representing various perspectives and disciplines, to form an Eklipse Expert working group (EWG). Ten experts were selected to ensure balance in disciplines, geography, gender and sectors.

[11] The initial request sought to answer the question of how "To significantly contribute to the development of the EU post-2020 Biodiversity Strategy and the success of its implementation by, inter alia, ensuring the policy relevance of the ALTER-Net conference sessions and maximise uptake of its outputs" – for more information on this request, including the processes put in place by EKLIPSE, please visit https://www.eklipse-mechanism.eu/post2020_request

2.2 Background document and workshop

The initial idea was to conduct a workshop on the topic where the selected experts would discuss with negotiators from approximately 50 countries, including EU member states, other European countries and representative from countries outside Europe. As the pandemic required postponing and then moving the workshop to an online format, the tasks for the members of the Eklipse Expert Working Group (EWG) changed in the week they were selected.

The EWG was asked to prepare this Background Document in order to illustrate how their knowledge on transformative change could be operationalized in the context of the new Global Biodiversity Framework. The background report was made available to workshop participants in advance for comments and consultation, who selected the examples to be further discussed at the workshop. The science-policy workshop on "Transformative Change for the post-2020 global Biodiversity Framework" was organised by the European Commission and the Croatian Presidency of the Council of the European Union and supported by EKLIPSE and Expertise France, and held online over four session on three different days.

The workshop brought together delegates from 48 countries, including representatives from science and NGOs and the requesters. The first day was dedicated to discussing different concepts and properties of Transformative Change. On the second day participants discussed the suggestions from the Background Document against the current discussions at SBSSTA and the open-ended working group, and thereby identified options for making the GBF more transformational as well as needs for further research; several cross-cutting themes emerged during the discussions. The final session on day 3 presented all results and discussed them in view of the further CBD process.

2.3 Making the results available at the international level

EKLIPSE supported DG R&I in summarizing all results in an information document for the CBD negotiations, which includes this background report, a summary of the results of the online consultation as well as the discussions during the workshop. The document provides options for consideration by Parties and partner organisations for implementing Transformative Change in the development of a post-2020 global biodiversity framework. This INF document can be found in the website of the European Commission[2].

2.4 Introduction

"Goals for conserving and sustainably using nature and achieving sustainability cannot be met by current trajectories, and goals for 2030 and beyond may only be achieved through transformative changes across economic, social, political and technological factors" (IPBES 2019)

Following a request by the European Commission, EKLIPSE launched a call for experts to share their knowledge on the topic and join a science-policy workshop on "Transformative Change for the post-2020 global Biodiversity Framework". Selected experts, representing various perspectives and disciplines, joined an Eklipse Expert Working Group to work on what Transformative Change is, how biodiversity policy can trigger it and how this can be translated into actions, goals, targets and pathways for the Global Biodiversity Strategy to 2030. The results of this work are presented in this Background Document, which

[2] https://ec.europa.eu/info/events/workshop-transformative-change-global-post-2020-biodiversity-framework-2020-mar-18_en

served as the basis for a workshop organised in June 2020 by the European Commission and the Croatian Presidency of the Council of the European Union and supported by EKLIPSE.

Since the IPBES Global Assessment laid out its conclusions so starkly the global community has accepted that transformative change will be required if global goals for biodiversity are to be met, giving negotiations for a new post-2020 Global Biodiversity Framework (GBF) a renewed sense of urgency and purpose. As the world faces the challenge of rebuilding the economy and fostering social cohesion in the wake of the COVID19 crisis, the imperative of ensuring that transformative action is built into our collective recovery has become ever more urgent. Yet it remains uncertain what in practice it will mean to embed transformative change within a global governance framework for biodiversity. In part, this is because the term transformative change itself has many meanings. also because we lack a collective vision as to how a global governance framework can generate transformative change for biodiversity. Visions of transformative change often suggest critical leverage points or governance processes that need to be activated in order to realise transformative outcomes over which international environmental agreements have limited direct control. It is in this context that this report responds to the urgent need to embed transformative change in the post-2020 Global Biodiversity Framework.

To date, transformative change has been included within the development of the GBF in two main ways. First, it has been used to frame what is required overall from any new agreement. The Background to the Zero Draft prepared in January 2020 refers to the conclusions of the IPBES report that transformative change will be essential for achieving progress. Second, transformative change is positioned as an issue related to how the GBF will be implemented. Paragraph 8 of the Background to the Zero Draft refers to "ensuring implementation of the Global Biodiversity Framework is participatory, inclusive, gender-responsive, transformative, comprehensive, catalytic, visible, knowledge-based, transparent, efficient, results-oriented, iterative and flexible." Here, transformative action is positioned as one element of effective implementation. Elsewhere transformative action is seen as encompassing all forms of implementation for the GBF, with its stated purpose being to "galvanize urgent and transformative action by Governments and all of society (including indigenous peoples and local communities, civil society, and businesses) to achieve the outcomes it sets out in its vision, mission, goals and targets." Given these different statements, it is clear that what transformative change is and how it should be achieved within the GBF has yet to be agreed. At the same time, and perhaps unintentionally, these statements generate the impression that transformative change will be achieved through the implementation of the GBF, a process which is understood to be undertaken largely by individual nation-states.

We suggest that such a narrow framing misses the significant opportunity that exists to bring transformative change to the heart of the post-2020 agenda. The Global Biodiversity Framework must provide the leadership needed to put the world back on track to protect and restore biodiversity by 2030 and ensure its sustainable use supports societal needs and values. It will provide a compass for all parts and levels of government and actors from across the whole of society – guiding the action that is needed and providing a signal as to whether we are continuing on the right path. Transformative change must be at the heart of this endeavour. Without Parties harnessing the transformative potential of the GBF as a whole it is likely that the stated ambition of the Parties to the Convention to enable widespread transformative change will not be realised and goals for conserving and sustainably using biodiversity will not be met.

This report is intended to help advance our knowledge on transformative change and address the challenge of how transformative change can be advanced by the GBF. Its aim is to identify how transformative change can be made more tangible and to illustrate how this might be done in practice in order to seize the

opportunities for guiding and enabling action on the ground. We suggest that this can be achieved by embedding six key principles for transformative change, which in turn generate the vision and momentum needed to harness and enable action across all levels of government and the whole of society. These principles act as levers for achieving transformative change, generating new levels of ambition, enabling new agents of change to engage, and ensuring that action for biodiversity also enables just and sustainable outcomes for society.

Our report builds on the IPBES Global assessment alongside various other influential reports which have made the case for transformative change and have provided insights as to how this can be achieved in various societal domains and issue areas (EEA, 2019; IPCC, 2018; UNEP, 2019). To date, these assessments and reports have not explicitly tackled the question of how international environmental agreements, such as the CBD, can be harnessed to achieve transformative change. Although the IPBES Global Assessment, for example, identifies a series of levers and leverage points through which transformative change can be accelerated, most of these cannot be directly addressed through global environmental agreements. At the same time, such agreements are critical in creating the collective vision, ambition and momentum for transformative change, giving a direct mandate to Parties under the convention and providing an enabling and supportive framework for non-state actors who wish to contribute to goals for biodiversity.

In this report we therefore aim to identify high-level principles of transformative change that can be used to underpin a transformative agenda within the GBF (Section 3) and to establish how these principles can be embedded to generate leverage for transformative action in five critical issue areas: sustainable consumption and production; climate change; cities; terrestrial landscapes and inland waters; and costal and marine environments (Section 4). Beyond specific issue areas, we suggest that a transformative agenda requires an enabling governance and financing framework (Section 5) and be embedded in four key parts of the GBF: its statement of the required enabling conditions; the development of targets and indicators; the key means of implementation through which action is to be enabled; and the accountability mechanisms that will be needed to ensure progress (Section 6).

3. Transformative Change: The Key Ingredients

3.1 What is Transformative Change?

The need for significant and rapid action to address the challenge of the continued loss of biodiversity and decline in the capacity of nature to be sustainably used for society has been starkly set out in the 2019 IPBES Global Assessment. Rather than being able to rely on either business as usual or incremental improvements when it comes to the governing of biodiversity, the IPBES Global Assessment makes it clear that transformative change is required (IPBES, 2019). This echoes similar calls that have been put forward by the IPCC, whose Special Report on 1.5 Degrees concluded that transformative change would be required to meet this goal, and through agencies such as the European Environment Agency and UNEP (EEA, 2019; IPCC, 2018; UNEP, 2019). The widespread demand for a transformative agenda to tackle global sustainability challenges demonstrates a growing consensus across science and policy communities that current approaches for addressing global challenges fall short of what is required. Yet despite this growing consensus, there remains a significant challenge in translating the relatively abstract concept of transformative change into effective governance frameworks to guide and enable meaningful action on the ground. The Global Biodiversity Framework represents a significant opportunity to create a transformative global policy framework.

The term transformative change is open to multiple definitions and meanings, as is the case with all essentially contested concepts. Yet different definitions share two central concerns - that a step-change is required in both the extent (how much) and essential character (what kind) of change. For some, this equates to scaling up current efforts to ensure that widespread, system-level change is taking place at a pace and scale commensurate with the urgency of the biodiversity challenge. The IPBES Global Assessment, drawing on socio-ecological and socio-technical system perspectives defines transformative change as "a fundamental, system-wide reorganization across technological, economic and social factors." System-level change of this kind starts through social innovations, for example, the introduction of new technologies, new processes of production, consumer products, regulations, incentives, participatory processes, which change how socio-technical and socio-ecological systems operate and their environmental impact. For IPBES, these actions can be understood as "levers" through which deeper "leverage points" including the internalisation of externalities, developing incentives and widespread capacity, promoting integration across sectors and how diverse visions of a good life can be activated (Abson et al., 2017; IPBES, 2019: 40). While such interventions can take place in a reformist manner, more significant reconfiguration of systems is required to yield transformative change (Geels et al., 2015). The idea behind this system-level or 'system wide' change is that through creating enabling conditions emerging sustainable practices start to challenge existing unsustainable practice and act as 'levers' after which incentives are developed and integration across sectors are promoted.

Alternative perspectives suggest that transformative change would instead necessarily involve shifts in the structures and conditions that have generated environmental harm in the first place, such as social, economic and political inequality (i.e. 'structural transformation'). As articulated by the IPCC, the kinds of transformative change needed to reach a 1.5 degree world will involve "climate-resilient development pathways ... trajectories that strengthen sustainable development, including mitigating and adapting to climate change and efforts to eradicate poverty while promoting fair and cross-scalar resilience in a changing climate" (IPCC, 2018: 73). Pelling et al. (2015: 117), for example, suggest that viewed in this light transformative change would involve the forging of new social contracts and relations of power which would in turn "surface alternative development priorities, preferences and pathways." Transformative change would then take place not within specific institutional systems or sectors, but rather require changes at a more fundamental level, such as in identities, the things we value, our expectations of the future, the nature of the economy, how power is shared and so forth (Blythe et al., 2018; Tschakert et al., 2013). While such approaches are often associated with radical or disruptive change and overt contestation, such forms of transformation can also emerge in a more incremental, experimental fashion (Bouzarovski and Harstad, 2018).

This is not to suggest that those advocating for system-wide transformation do not also recognise the important way in which such processes are constrained (and enabled) through existing socio-material structures, or that those calling for structural transformation do not also recognise the significance and value of achieving transformation through existing socio-ecological or socio-technical systems. The point is that the benchmark for changes need to be radically different to the ones that have guided development solutions thus far, while simultaneously recognizing the incremental steps it takes to get to fundamental change (Göpel, 2016). And depending on which issues are brought into focus, the challenges, the scope, and leverage points of transformation will be seen in a different light, and pathways towards these goals set out differently. Equally important, in practical terms, elements of both system-wide and structural transformation are often found together within assessments and interventions designed to be transformative. Nevertheless, it is important to recognise that each approach has significantly different consequences for how transformative change takes place.

Whether either a system-wide or structural approach to transformation is adopted, another important distinction in approaches to transformative change is how the challenge of responding to a problem requiring transformative change is understood. Broadly speaking this takes one of two forms – either problems are positioned in relatively narrow, 'technical' terms or they are viewed with a broader adaptive, emergent perspective. Technical problems are framed as "those than can be successfully addressed by applying greater expertise, more innovation, and better management" and are often accompanied by attempts to control societal responses (O'Brien, 2018: 154; see also Stirling, 2014), whereas adaptive challenges are those which are framed as requiring "a new way of viewing both problems and solutions" (O'Brien 2018: 154). There is a clear distinction to be made in how the challenge of transformative change is taken up between those approaches which assume that the solutions are already known and just require better application, to those which regard the process as transformation itself as one through which new solutions are generated. In this report we adopt the second approach, i.e. the adaptive approach. Rather than being prescriptive about which particular interventions will lead to transformative change, we therefore suggest a more pragmatic, and we think ultimately more productive, approach: to focus on a number of underlying principles that can be adopted within the post-2020 Global Biodiversity Framework to guide policy and action towards transformative outcomes where through transformative change biodiversity is safeguarded, the 2030 goals met and the 2050 vision can be reached.

3.2 Principles of Transformative Change for the Post-2020 Global Biodiversity Framework

Drawing on the range of research and practical application of the idea of transformative change introduced above, we suggest that despite the necessary diversity in how the term is used, six key principles can be distilled that can underwrite a transformative agenda for addressing biodiversity and help to identify what the Global Biodiversity Framework can do to enable transformative change (Table 1).

First, the pursuit of transformative change requires that the root causes and underlying/indirect drivers of the problem in question are addressed.

Transformative change is seen to require a 'fundamental reorganisation' of the basis of socio-technical and socio-ecological systems, economies and political processes. Within the IPBES Global Assessment these were seen to include "paradigms, goals, values and identity", while others point to unequal power relations, patriarchal systems, inequalities and dominant social and material conditions as determining the deep-rooted causes of environmental harm and hence as the focus for transformative change (IPBES, 2019; Pelling et al., 2015).

Second, there is no one size fits all approach to transformative change.

Given the scale and urgency of the challenge facing society, it can be tempting to seek blueprints for action or single silver bullets that can provide quick resolution. Instead, evidence suggests that multiple efforts will be required, through diverse development pathways that are compatible with biodiversity goals. It will be critical to open up rather than close down the possibilities for diverse responses to the challenge and to create space for failure as well as success.

Third, and related, achieving transformative change will mean opening up the action arenas which have to be enrolled in order to realise (diverse) goals for biodiversity.

Rather than being confined to familiar territories or sectors where the links between activities and biodiversity outcomes can be simply drawn, transformative change requires that the scope of what

constitutes 'biodiversity action' is expanded and that places, activities and actors who do not consider themselves as related to biodiversity concerns come to see themselves as both part of the problem and part of the solution.

Fourth, transformative change is never singular: interventions of this kind will bring trade-offs and co-benefits.

Pursuing transformative change for biodiversity will also result in transformative dynamics and outcomes for other environmental issues, development pathways, economic sectors, social groups and individuals. Transformative change in the biodiversity arena can therefore yield "co-benefits" for other societal goals, but entails trade-offs. However by achieving these co-benefits will likely include developing appropriate interventions to guard against possible detrimental outcomes from biodiversity actions in order to ensure "just transitions" for people and places.

Fifth, transformative change requires not only the proactive inclusion of affected groups and individuals in processes of decision-making and intervention, but also space for deliberation and disagreement about visions, values and emotions, pathways and actions going beyond rational arguments.

Significant weight is placed on the importance of new processes of decision-making that involve the inclusion of diverse knowledge, views and values, as well as forms of co-production. While much of this focuses on the importance of achieving consensus in order to enable difficult or radical changes to be undertaken, it is also important to acknowledge that diverse and opposing views will persist, that this will shape who is/not included in decision-making, and that such forms of friction are not only inevitable but can also be generative for new kinds of transformative action to emerge (Bouzarovski and Harstad, 2019).

Finally, transformative change will encounter resistance.

Although such forms of resistance are often attributed to individuals, most evidence suggests that it is most likely to come from powerful societal actors with vested interests in the status quo. While overt contestation and struggle is therefore a likely outcome of transformative approaches, addressing concerns about who will loose and who will gain from transformative action for biodiversity proactively whilst also adopting strategies to build diverse 'coalitions of the willing' and generate radical incrementalism through multiple forms of intervention towards transformative outcomes may be means through which such forms of resistance can be countered.

While it needs to be acknowledged that different Parties to the Convention will have more or less capacity to pursue each of these principles (see Sections 5 & 6), and that in some contexts the full implementation of existing frameworks will yield significant benefits for biodiversity, we suggest that embedding these principles in the Global Biodiversity Framework can generate an agenda for transformative action on biodiversity over the next decade and beyond by providing the compass that directs action through:

- Creating a positive vision/narrative of the possibilities that transformative change holds for nature & people;
- Fostering new shared understandings, relationships and intentions about the need and scope of biodiversity action, the multiple values involved and how diverse approaches can be mobilised;
- Setting the direction of travel for state and non-state actors, encouraging and recognising diverse contributions to enrol more, and more diverse, actors:

- Enabling action by creating spaces for actors from the whole of society, encouraging participation and interaction among state and non-state actors;
- Ensuring that progress is effectively monitored and reported to celebrate success and maintain ambition levels

In the following section, we examine how principles and actions for transformative change are emerging in relation to five key issue areas (Section 4), before then turning to examine what they might mean for developing the governance and implementation mechanisms for the post-2020 Global Biodiversity Framework (Section 5).

Table 1: Seeds of Transformative Change?

Principles of Transformative Change	Explanation
Address Root Causes	The pursuit of transformative change requires that the root causes and underlying/indirect drivers of the problem in question are addressed
Take Multiple Paths	Transformative change cannot be achieved through 'silver bullet' solutions or blueprint plans. Multiple efforts will be required, through diverse development pathways that are compatible with biodiversity goals
Expand Action Arena	Transformative change for biodiversity cannot be achieved through action which is confined to traditional action arenas, but needs to be expanded to encompass multiple areas of the economy and society
Realise Diverse Co-Benefits	Efforts to generate transformative change generate multiple trade-offs and co-benefits. Harnessing positive co-benefits can enable greater traction for ambitious biodiversity action and also achieve other societal goals
Design Deliberative & Inclusive Processes	As well as necessarily taking place through inclusive processes, transformative change will generate disagreements and contestation which require space to be heard and in-depth consideration
Adopt Proactive Approach to Resistance	Resistance is an inevitable part of transformative change and approaches need to be designed to ensure that appropriate account of how to ensure 'just transitions' whilst also overcoming those with a vested interest in the status quo

4. Making Progress on Critical Issues

To reach the 2030 goals to restore and recover biodiversity and to ensure a world of people 'living in harmony with nature' by 2050 requires a transformational change in economy, society and governance systems (i.e. mobilizing actions including the whole of society, governance and economy). In this section, we examine how the principles of transformative change can be embedded in the GBF through five critical issues - sustainable production and consumption, climate change, cities, terrestrial landscapes and inland waters, and coastal and marine areas. These issues have also been highlighted by the IPBES Global

Assessment (2019) and the review draft of the GBO-5 as essential for action all be it under different headings[3]. I. These critical issues are not intended to mirror the structure of the zero draft of the GBF per se, but rather to identify arenas where the GBF will need to be able to guide action if it is to realise transformative outcomes. For each critical issue area, we examine the challenge, the potential contribution action on this issue can make towards a transformative agenda for biodiversity, the steps that are currently being taken in this direction, and how transformative change can be further embedded using the Principles set out in Section 3. We distinguish between the ways in which these issues provide important arenas for action and their potential to provide new agents of change that can generate and implement transformative change for biodiversity. We focus on the identifying how direct requirements on Parties for the implementation of and reporting on the GBF could be used as levers to advance transformative change, or where the GBF can provide leadership, direction, capacity-building and resources to support all levels of government and a whole of society response. Sections 5 and 6 draw on these initial suggestions to further elaborate on the measures that can be taken within the GBF.

4.1 Production and Consumption

Underlying the core direct drivers of biodiversity loss – land use change, the direct exploitation of organisms, climate change and pollution – are unsustainable patterns of production and consumption (IPBES, 2019: section D). The form and extent of economic production and infrastructure provision, for example in the agricultural, marine, forest, minerals and construction economies, not only leads to direct effects on biodiversity but also generates unequal patterns of economic development that in turn reduce the capacities of nation-states, local authorities and communities to respond to biodiversity loss or to make the sustainable use of nature a priority. Likewise, the highly uneven nature of consumption globally is a critical driver of resource exploitation, waste and pollution, and as continuing to instil materialist values at the expense of those that enable society to forge closer connections with nature.

This challenge of addressing the unsustainable nature of trends in production and consumption has long been recognised within the biodiversity arena and have been embedded in the Aichi Targets (Aichi Target 4). Yet despite concerns for sustainability rising up in both business and consumer agendas, there is little evidence that these Targets have been met or that the unprecedented levels of use of resources and materials has slowed during this time. In fact, the trends appear to be heading in the opposite direction. This situation arises as a result of the 'lock-in' of current patterns of production and consumption within sectors of the economy, socio-technical systems, and cultures of consumption and the absence of interventions that have been able to generate transformative change (Smith et al., 2010).

Given their fundamental role in shaping our economies and our societies (see Aichi Targets 5-10 on sustainable use), production and consumption lie at the heart of the challenges of ensuring transformative change across each of the issue areas we explore in this report. At the same time, it is important to realise that an agenda for sustainable production and consumption can never be solely focused on biodiversity. As the building blocks for economic development, social equity, reducing poverty, addressing climate change and multiple other sustainable development goals, aligning systems of production and modes of consumption with biodiversity goals will inevitably require that biodiversity is mainstreamed into the

[3] The IPPES chapter five addresses 'feeding humanity', 'meeting climate goals', 'conservation and restoring nature on land', 'maintaining freshwater', 'balancing food provision from oceans and coasts' and 'resourcing growing cities'. GBO-5 addresses 7 thematic areas: 'land and forest', 'agriculture', 'food', 'fisheries', 'cities', 'fresh water' and 'climate action'

workings of the economy and the values of society, but also that other sustainable development goals and socio-economic considerations are mainstreamed into the biodiversity agenda.

4.1.1 The Potential for Transformative Change

The transformative potential of sustainable production and consumption is often seen in terms of specific **arenas for action**. Firmly in focus here are specific economic sectors – especially those which involve primary production such as agriculture, forestry, fisheries and mineral extraction. There has been particular attention paid to the importance of reforming farming systems (e.g. reducing chemical use, traditional land management practices, making agriculture nature-inclusive). Yet while no doubt effective, these interventions remain relatively small scale and focused on particular parts of the value chain. There is less evidence that systematic approaches are being developed that take account of the links between activities at different parts of the value chain or link production and consumption explicitly. Where they are being established, such approaches tend to be led by non-state actors and to address one product at a time (e.g. sustainability certification schemes). Critical players – from large retailers to investors – tend not to be involved in calls for, or debates about, transformative change for biodiversity. Equally, the 'biodiversity footprint' of manufactured goods, the financial sector or the service industry are rarely considered within the scope of action, potentially limiting the ways in which transformative change is being envisioned and enacted.

When it comes to consumption as an **arena for action**, attention is most often focused on the values, behaviour and choices made by individual (household) consumers. Yet consumption also takes place elsewhere. Governments at all levels are large consumers of goods and services, and manufacturers and retailers are consumers of primary resources. Tackling consumption will therefore necessarily require direct action at all levels of government through effective procurement processes. At the same time, integrating biodiversity values into the decisions of large consumers of raw materials, resources, water and energy within the private sector, as well as the investment community that sustains these sectors of the economy, also offers significant potential for transformative change.

Effective transformative action in terms of production and consumption necessarily involves active partnership with multiple **agents of change** across all levels of government and the whole of society. Across the investment sector, business, civil society organisations, community groups, local authorities and beyond, a host of initiatives for enhancing sustainable consumption and production are already taking place, for example to develop new forms of circular economy, cut waste from the food chain, reduce carbon footprints in production processes and minimise the use of plastic in the economy, all of which could have benefits for biodiversity but which are rarely brought into the policy arena. The level of widespread interest across the private sector in aligning their strategic plans with the SDGs and amongst the investment community in considering the environmental risks to future returns suggests that there may be latent appetite to engage further with taking transformative action for biodiversity in partnership with nation-states, local and subnational governments. Likewise, interest in sustainable consumption amongst the middle classes in both the global North and global South has increased, suggesting that there may be additional scope for leveraging these value changes towards biodiversity goals. At the same time, there remains a significant challenge in seeking to drive such changes in production and consumption whilst also enabling access to biodiversity and climate-compatible development pathways for those who currently consume the least and are vulnerable to wholesale shifts in the global economy. Generating forms of sustainable production that also create fair and equitable development for those currently most

marginalised within global economic systems will perhaps be the 'acid test' as to whether any post-2020 GBF can deliver transformative change.

4.1.2 Taking Steps Towards Transformative Change

As **arenas for action** production and consumption feature extensively in the Targets proposed for the GBF. In relation to Targets which focus on sustainable use and benefit sharing the intention to recalibrate production systems to address biodiversity are included in terms of enhancing the sustainable use of wild species (Target 7) and ensuring the equitable sharing of genetic resources and related knowledge (Target 11), though is most prominent in terms of the intention to ensure that managed ecosystems conserve and enhance biodiversity (Target 8). In order to further enhance mainstreaming through Target 8, Parties at OEWG-2 sought to extend and expand the definition of managed ecosystems beyond the agricultural sector and to include other primary sectors of the economy where the integration of efforts to conserve and enhance biodiversity should be an explicit focus.

In relation to Targets which seek to generate *tools and solutions for implementation and mainstreaming* production and consumption again feature explicitly and appear in two main ways.

First, there is a focus on *government-led reform of key economic instruments and sectors.* Target 12, like previous Aichi Target 3, focuses on the removal of economic incentives and subsidies harmful to biodiversity, while Target 14 calls on governments to reform economic sectors towards sustainable practices in order to reduce the harmful effects of economic production on biodiversity. Much of the debate at OEWG-2 focused on *how* this could be achieved, with some calling for a more expansive approach that recognised the importance not only of subsidies but of more widespread reform to government fiscal, budgetary and financial policies, while multiple mechanisms for achieving reform within economic sectors, from the promotion of the circular economy to the use of payment-for-ecosystem services were advocated. Importantly, there was much less debate about *who* should be undertaking such action, with reform of economic production primarily regarded as a matter for national governments.

A second focus is on *consumer-led behavioural and value change*. Target 17 asks that "people everywhere take measurable steps towards sustainable consumption and lifestyles" while Target 20 suggests that new visions of the good life need to be fostered in order to "unleash values of responsibility, to effect by 2030 new social norms for sustainability", drawing on two key leverage points identified by IPBES for transformative change. Discussion at OEWG-2 raised concerns about the relatively vague nature of these Targets and their potential overlap with one another as well as with the Target 14 focus on enabling sustainable production. Yet again there was little discussion of *what* consumption involved – with a focus remaining on households rather than on the whole production chain – or *who* might be responsible for enabling more sustainable consumption patterns (i.e. in terms of where decisions that determine the lion's share of consumption are taken), with the implicit assumption being that this is a matter for individuals. In a step towards a more effective approach, some Parties advanced proposals that meeting such targets will involve effective plans and policies being developed by governments, businesses and communities.

As ***agents of change*** producers, largely in terms of those in the primary economy, and consumers, as individuals, are represented primarily as *implementers* of the GBF. There is less evidence that a wider range of actors involved in the generation of sustainable production and consumption – from the financial sector through to public procurement, or key retail, manufacturing or service industries – have been enrolled or that such actors might be regarded as important innovators, examples of best practice or leaders in their

own right and as important partners for nation-states, local and regional governments in seeking to implement the GBF.

4.1.3 Embedding Transformative Change through Sustainable Production & Consumption

The discussion above suggests that there is additional scope to embed the transformative change agenda in the post-2020 GBGF through explicit action to include cities as both important arenas of action and agents of change. Using the Principles set out in Section 3, Table 2 provides examples of the kinds of action that could be pursued through the GBF.

Table 2: Transformative Change for Biodiversity through Sustainable Production & Consumption

Principle	Action
Address Root Causes	Require governments at all levels to identify those key value chains with a significant impact on biodiversity and to develop action plans together with relevant stakeholders through which to reduce their harmful impact on biodiversity by 50% by 2030. Encourage governments at all levels to develop strategies, incentives and support mechanisms through which businesses and households can monitor and reduce consumption practices that have adverse impacts on biodiversity. Foster experimentation with alternative production processes and consumption practices that reduce harmful impacts on biodiversity through the provision of incentives, capacity-building and recognition for pioneers in businesses, civil society and community organisations. Ensure that the indirect impacts of consumption on biodiversity are acknowledged, monitored and addressed through strategies and measures undertaken by governments in partnership with business and civil society.
Take Multiple Paths	Support businesses to invest in alternative products and production processes using nature's innovation potential and that minimise the use of resources and the generation of waste through building capacity, incentivising innovation, and requiring transparent reporting of their impact on biodiversity. Encourage all levels of government to engage citizens and communities in building alternative visions of a good quality of life and taking individual and collective steps towards them through education programmes, demonstration projects and community action.
Expand Action Arena	Require governments at all levels to 'biodiversity proof' procurement policies, contracting processes, infrastructure provision, and investment portfolios in order to align with the goals of the GBF. Reform economic and regulatory incentives in order to encourage forms of economic production and consumption that foster the sustainable use of biodiversity and to mainstream biodiversity considerations across the economy as a whole. Enable transparent reporting systems for business and the financial sector on their impact on biodiversity and provide mechanisms for learning and recognising best practices to become 'net positive' by 2030.

Principle	Action
Realise Diverse Co-Benefits	Require governments to include reports on progress made under SDG12 within national reporting for the CBD and to demonstrate how those actions taken have generated biodiversity benefits.
	Enable governments to foster capacity building for nature-inclusive production processes across diverse economic sectors that meet goals for biodiversity alongside those for sustainable development.
Design Deliberative & Inclusive Processes	Encourage all levels of government to develop citizen juries or other deliberative fora through which the impacts of production and consumption on biodiversity can be debated, and the potential advantages and limitations of different mechanisms and policies for addressing these impacts considered.
	Ensure that the relevant knowledge, practices and diverse values of local communities and indigenous peoples are recognised in the development of relevant policies and measures to promote sustainable consumption and production.
Adopt Proactive Approach to Resistance	Identify sector champions to promote strategies and measures for enhancing sustainable production in key parts of the economy.
	Support transnational 'coalitions of the willing 'through providing a robust and legitimate reporting and accountability mechanism through which business & finance sector actors can demonstrate the potential for reducing the impact of production & consumption on nature.

4.2 Climate Change

4.2.1 The Challenge

Recognition of the close interlinkages between the challenge of addressing climate change and of the global loss of biodiversity has grown significantly in the last five years. The IPBES Global Assessment found that climate change was the third most important direct driver of biodiversity loss globally and is "increasingly exacerbating the impact of other drivers on nature and human well-being" (IPBES, 2019). In turn, a continued loss of biodiversity, particularly in relation to existing forests and the degradation of soils, will reduce existing carbon stores and the capacity for ecosystems to sequester carbon. In short, continued loss of biodiversity will negatively affect society's ability to reach its climate change goals, while continued increases in the level of greenhouse gas emissions in the atmosphere will cause climate impacts which severely limit society's ability to reach its goals to protect biodiversity and nature.

At the same time, there are growing concerns that responding to climate change could create risks for biodiversity. First, initiatives that seek to develop carbon storage and sequestration capacity through 'natural climate solutions' may do so without paying due attention to the possible negative effects on biodiversity (Seddon et al. 2019). Mono-species forestry plantations or commercial crops may be labelled

as carbon offsetting schemes, but bring potential risks of changes in land use that reduce biodiversity whilst also having questionable carbon credentials. Second, the growing interest in nature-based solutions for climate adaptation, although often motivated by the multiple benefits they are capable of generating, can also raise potentially negative impacts for biodiversity without careful design and implementation. For example, urban tree planting can reduce water availability in the city for other natural areas while coastal management interventions can have an impact on species diversity. Therefore, while goals for addressing climate change and biodiversity are highly interdependent, co-ordinated action is needed in order to ensure that transformative action for climate change does not come at the expense of biodiversity and vice versa.

4.2.2 The Potential Contribution to Transformative Change

Developing an integrated response to both the threat and opportunity of climate change for realizing biodiversity goals has the potential to make a significant contribution to an agenda for transformative change within the post-2020 global biodiversity framework.

It is critically important to develop an explicit mandate for action on climate change under the GBF due to the direct threat it poses to biodiversity. This will enable Parties and other non-state actors to address one of the primary root causes of biodiversity loss and enables action on the underlying drivers of both climate and biodiversity challenges to be undertaken in a coordinated way. Integrating climate change as a core concern of the GBF could also mean that existing climate change policy efforts – such as the NDCs and the design and implementation of climate compatible development pathways – come to be subject to biodiversity policy considerations, ensuring that measures to tackle climate change do not undermine the potential for achieving biodiversity goals. Without such coordination, it may be the case that the UNFCCC continues to advance the use of nature-based solutions for climate change without proper considerations of their implications for biodiversity, whilst the links between rapid climate change and its damaging effects on nature fail to drive further and deeper climate action.

Integrating climate change into the GBF is also critical in terms of *realizing the benefits of protecting and restoring biodiversity*. Nature-based solutions are increasing recognized as interventions that can provide multiple benefits for society, from protecting water quality and addressing air pollution to enhancing health and well-being – as has so strongly been shown by the importance of nature to societies globally during the COVID19 crisis. With proper consideration for how they can meet biodiversity goals, nature-based solutions can provide a powerful means through which the message about the importance of nature can be implemented across policy arenas and within society at large.

Further, demonstrating that action for biodiversity can also generate benefits in terms of climate adaptation and mitigation opens up the possibility of accessing additional and more diverse forms of finance to support biodiversity action. While some Parties are rightly concerned that bringing the biodiversity and climate change agendas together may reduce the total funding available for action under the auspices of the UN System, this can be addressed with the right safeguards in place. At the same time, failing to make the link between biodiversity and climate action could mean that a whole host of (often private) sources of finance and investment fail to be directed towards supporting action that protects and restores nature. Finally, including climate within the GBF also generates opportunities to involve a whole host of actors, from ministries of finance and development within nation-states to the private sector, civil society and subnational government who have shown significant commitment to climate change over the past decade but whose energy, innovation and passion has yet to be directed to the biodiversity agenda.

4.2.3 Taking Steps Towards Transformative Change

Including climate change within the GBF has attracted significant opposition. At OEWG-2 Parties openly disputed whether it was within the scope of the CBD to include action, let alone concrete commitments, for climate change. While initially included as one of the overarching goals of the Zero Draft (Goal 4, Part D), this explicit link looks set to be reversed if the tone and direction of the negotiations held in Rome are continued. There have also been strong differences of view as to whether or not addressing the threat of climate change should be included as an explicit Target (Target 6). Some Parties have suggested that it should be removed altogether with others suggesting that Target should focus on protecting biodiversity from the adverse impacts of climate change. This may be a challenging strategy to advance politically, particularly where choices in terms of investing resources in the protection of vulnerable populations, critical infrastructures or important biodiversity from climate change might have to be made, but may also be a challenging message for the public to understand, given the widespread support that exists for tackling climate change as a whole.

Other formulations sought to stress the importance of biodiversity, ecosystem-based approaches, the protection of carbon stocks and so on as a means through which effective action on climate change could take place, reducing its risks to nature and to people. Such formulations are well-intentioned, but likely to suffer in terms of their complexity and a lack of adequate indicators and processes for measuring and monitoring progress (especially when it comes to linking such a Target to adaptation and disaster risk reduction). Rather than seek a form of words that accommodates those Parties who feel that climate change has no place in a biodiversity convention, it may be more effective to make the case for why such action is in scope and to more firmly focus on how Parties can reduce this threat.

At the same time, Parties recognized that, as currently formulated, Target 8 focuses only on one potential benefit of nature-based solutions – water quality – and could be expanded in order to demonstrate their wider potential for a range of sustainable development goals as well as for climate change mitigation, adaptation and disaster risk reduction. More clearly separating the action needed under the GBF to reduce the threat of climate change from actions that could generate benefits for both nature and society under conditions of a changing climate may be an effective way to focus efforts in order to generate transformative change.

4.2.4 Embedding Transformative Change in the GBGF – the role of climate action

Table 3 provides examples of the kinds of action that could be pursued through the GBF.

Table 3: Transformative Change for Biodiversity through Climate Change Action

Principle	Action
Address Root Causes	Ensure that the role of biodiversity protection and restoration in reducing the causes of climate change is embedded within the CBD. Require that any measures that seek to use ecosystems and nature-based solutions to address climate change do so with no detriment to the pursuit of biodiversity policy goals.

Principle	Action
Take Multiple Paths	Create nature compatible development pathways that are aligned with national, regional and local climate and biodiversity goals & strategies. Encourage experimentation with diverse nature-based solutions that meet climate, biodiversity and sustainable development goals and which are appropriate to national & local contexts and values. Include safeguards to ensure that nature-based solutions are designed to provide climate mitigation, adaptation and disaster risk reduction which incorporate the diverse values that citizens (i.e. indigenous, youth, women, socially or economically marginalized groups) hold for nature.
Expand Action Arena	Ensure that national strategies for biodiversity are required to have endorsement from the Ministry that leads the development and implementation of climate strategies and vice versa. Require climate change strategies and action plans at all levels of government to report on any adverse implications that their implementation may have for biodiversity goals. Encourage private sectors to report on the potential benefits of actions and investments being taken towards climate change for biodiversity and vice versa.
Realise Diverse Co-Benefits	Recognize the contribution that climate change strategies can make towards biodiversity goals and vice versa through reporting and monitoring requirements that require a 'whole of government' approach. Develop monitoring and reporting frameworks that enable all levels of government to assess the benefits of biodiversity action & NBS for SDGs and climate goals. Include the contributions made by subnational and local authorities through their climate action plans and the use of nature-based solutions in assessments of progress towards national and global biodiversity goals.
Design Deliberative & Inclusive Processes	Encourage the use of participatory and deliberative processes in the design and management of nature-based solutions, taking account of the views of those often marginalized from decision-making, and to use participatory methods where appropriate. Build capacity amongst all level of government to evaluate and deliberate the multiple benefits of nature-based solutions for climate and biodiversity and to determine how to resolve trade-offs.
Adopt Proactive Approach to Resistance	Support biodiversity sound processes around building 'coalitions of the willing' for action at the local level. Encourage evaluation mechanisms around trade-offs between development objectives and biodiversity plans and include these in reporting mechanisms.

4.3 Cities

4.3.1 The Challenge

The IPBES Global Assessment (2019) identifies the pace, scale and extent of urbanisation as one of the key challenges facing the global community as it seeks to meet goals for biodiversity by 2030 and beyond, both as a direct result of increasing land area occupied by urban development and as a result of the changing nature of consumption that is associated with a growing urban population. For example, it is predicted that 40% of strictly protected areas will be within 50 km of an urban area by 2030 (McDonald et al. 2018), while urbanisation is rapidly driving up the use of resources for construction materials, notably steel, cement and sand (IRP, 2018). Cities are also important drivers of the climate change risk to biodiversity, with estimates suggesting 70% of energy-related GHG emissions are urban. As well as being important direct and indirect drivers of biodiversity loss, cities are critical to how the majority of the world's population will come to understand and value nature – it is through experiences with nature in and through daily lives that these values come to be established and practices to protect nature secured.

It is vital to recognize that cities are not able to address biodiversity as a stand-alone issue. Most cities face multiple, competing sustainability challenges – from addressing poverty and social inequality, to tackling immediate risks from natural disasters and longer-term threats of climate change alongside concerns about air pollution and health. This represents a challenge to the biodiversity agenda – it will have to compete with issues which are inevitably regarded as more pressing – but is also an opportunity to demonstrate how action to conserve and restore nature can enable cities to thrive by pursuing more inclusive, equitable pathways to development.

4.3.2 The Potential Contribution to Transformational Change

As *arenas for action for the direct drivers* of biodiversity loss cities have a critical role to play in terms of managing biodiversity within the urban realm and in the peri-urban fringe. Effective land-use management often relies on the appropriate use of land-use planning and protected area status, but can also require local authorities to work in partnership with other land owners to recognise and safeguard nature. When designed and implemented effectively, processes of co-design and participatory planning can enhance the effectiveness of such measures. At the same time, the powers and competences of local authorities to undertake effective land-use planning vary significantly across different nation-states and, especially in the most rapidly urbanising countries, land use control and management can be inadequately resourced or enforced. Building greater land-use planning capacity is unlikely by itself to overcome this challenge, given its roots on the pressures for shelter, food, sanitation and economic development. Adequate protection for nature and biodiversity in these contexts is likely only to result where it can be effectively demonstrated that conserving and restoring nature will also address these key sustainable development challenges. In short, it will be vital to *mainstream* concerns for biodiversity within these other pressing imperatives in the urban context.

Alongside efforts to conserve nature in the urban arena, transformative action can also be enabled through restoration of urban ecosystems and the development of nature-based solutions. The restoration of wetlands, coastal areas, river systems and forested areas can open up habitats for wildlife, as well as generating new green and blue spaces within cities. At the same time, a wide range of nature-based solutions are being deployed in cities to address multiple sustainable development goals, although their impacts on biodiversity are not always explicitly recognized. Realising the opportunity of harnessing these efforts for biodiversity outcomes will requires the full recognition of the importance of nature-based

solutions in enabling the sustainable use of biodiversity and its mainstreaming within broader development goals.

For cities as *arenas for action for the indirect drivers* of biodiversity loss three key issues can provide significant leverage for transformative change. First, changing consumption patterns and reducing food waste through the direct procurement policies of cities and through engaging and enabling action by citizens and businesses. Second, decreasing resource use for infrastructure and construction e.g. in terms of sand, cement and steel. Third, aligning with actions already underway to address climate change. Over 10,000 cities have committed to action to reduce greenhouse gas emissions, and this could also support action on the indirect drivers of biodiversity loss.

As vital *agents of change* local authorities have been recognized as important actors within the CBD for the past decade. Yet their role is relatively confined, with a key focus on the development and implementation of Local Biodiversity Action Plans. A transformative agenda for biodiversity action will require an expansion of the mandate of local authorities in order that they can bring their full range of capacities and competencies to achieve actions as set out above, for example, in terms of their direct roles as consumers and providers of services, their significant role in innovation and experimentation, as well as in their critical capacity as educators, enablers and partners for communities, civil society and business.

4.3.3 Taking Steps Towards Transformative Change

As ***arenas of action*** cities currently feature in only two Targets: (a) Target 10, which focuses on enhancing the benefits of green space for urban residents; and (b) Target 13, mandating the integration of biodiversity values into national and local spatial planning. Discussions at OEWG-2 sought to expand the remit of these Targets to extend the role of cities, while also noting the importance of addressing waste and pollution in the urban arena specifically in order to reduce threats to biodiversity (Target 4). Cities remained absent from discussions on key areas where their role will be critical in terms of enabling transformative change - production, consumption, climate change, the use of nature-based solutions, and mobilising a change in values to protect nature.

As ***agents of change*** cities are primarily positioned as part of 'all levels of government' that need to be involved to move the agenda forward, with limited consideration of their diverse competencies and capacities. Enabling cities to engage in a transformative agenda will require explicit recognition of, for example, their potential role in relation to sustainable procurement, enabling citizens, communities and businesses address biodiversity, direct implementation of nature-based solutions and restoration projects, educational and behaviour change programmes and so forth.

4.3.4 Embedding Transformative Change

The discussion above suggests that it is possible to embed the transformative change agenda in the post-2020 GBF through explicit actions where cities are seen as both important arenas of action and agents of change. Using the Principles set out in Chapter 2, Table 4 provides examples of the kinds of action that can be pursued through the GBGF.

Table 4: Transformative Change for Biodiversity through Urban Action

Principle	Action
Address Root Causes	Acknowledge, safeguard and restore biodiversity within cities (e.g. green-blue infrastructure, gardens, protected areas) and their surrounding areas through inclusive spatial and land-use planning. Enable local government and their partners to work towards reconnecting citizens to nature (through education, awareness, experience) for creating stewardship. Ensure that the indirect impacts of urbanization and urban consumption on biodiversity are acknowledged, monitored and addressed through strategies and measures undertaken by local government in partnership with business and civil society.
Take Multiple Paths	Foster urban pro-biodiversity experimentation through inclusive participatory planning processes, demonstration projects, living laboratories and partnerships across diverse sectors. Require local authority plans and reports to identify diverse values that citizens hold for nature, including from indigenous, youth, women, and socially or economically marginalized groups, and ensure that these forms of nature are also safeguarded and given appropriate status.
Expand Action Arena	Ensure that local authority plans and reports demonstrate the value of biodiversity action in relation to key SDGs at the urban level and that biodiversity reporting is mandated in key policy areas locally (e.g. economic development plans, climate change action plans). Recognize the contribution that cities can make to key targets within the GBF for waste, production, consumption and NBS by explicitly including 'all levels of government' as responsible actors for their delivery and incentivizing/building capacity for local authorities to use the full range of their powers and competencies. Develop targets which demonstrate how biodiversity action provides benefits for cities through high quality and accessible green spaces, as well as through providing NBS that can support urban sustainable development goals and protect cities from climate change/risks.
Realise Diverse Co-Benefits	Require local authority plans and initiatives to be undertaken in consultation/partnership with local communities and businesses to ensure benefits of biodiversity action are widely recognized and shared equitably. Develop monitoring and reporting frameworks nationally and internationally that enable local authorities and their partners to assess the benefits of biodiversity action & NBS for SDGs and climate goals. Stimulate local initiatives and community building with regard to livelihoods and provide resources for these initiatives.
Design Deliberative & Inclusive Processes	Require local plans and reports to be inclusive, taking account of the views of those often marginalized from decision-making, and to use participatory methods where appropriate. Build capacity amongst local authorities to undertake deliberative decision-making, particularly with respect to controversial issues or where competing demands for land and water may risk biodiversity goals/targets being achieved.
Adopt Proactive Approach to Resistance	Build capacity amongst local authorities and their partners to evaluate trade-offs between biodiversity goals and other development objectives and include these within biodiversity plans and reporting mechanisms.

	Build capacity for partnership working at the local level between public and private sector organisations, as well as with civil society, local communities and indigenous people to build 'coalitions of the willing' for action at the local level.

4.4 Terrestrial landscapes and Inland Waters

4.4.1 The Challenge

Harmful economic incentives and policies associated with unsustainable practices across the economy are associated with land-use change and overexploitation of natural resources, as well as inefficient production and waste management that in turn threaten terrestrial and inland water biodiversity. Many of the drivers that have negative impacts on biodiversity (land use change, overexploitation, pollution) are at least partially caused by inappropriate agricultural practices (FAO, 2019). Land conversion to agriculture remains the main driver of land degradation and deforestation (IPBES, 2018). Deforestation, particularly in the tropics continues albeit at a slightly slower pace (GBO-5).

Despite being central to the Aichi Framework, action to address the loss of biodiversity in terrestrial and inland water environments has made only limited progress to date. Because most of the terrestrial and inland water environments are heavily intertwined with production and consumption systems we need to secure basic ecosystem functions and the provision of regulating/cultural services by focusing on natural habitats and through adequately connecting the Protected Areas.

4.4.2 The Potential Contribution to Transformational Change

Terrestrial and inland water ecosystems are critical ***arenas for action*** to address the *direct drivers* of biodiversity loss. Effective use of land use planning policies and instruments (e.g. protected area status, land zoning) is essential in order to prevent further land conversion and to ensure that existing conservation areas are maintained and/or expanded. At the same time, transformative action which addresses the systemic causes of land-use change requires actions that go beyond land-use management systems or area-based protection, to address the causes of underlying demand (e.g. increasing production to serve growing consumer markets or urbanization as discussed in earlier sections of this report).

Additional actions are also required to reduce the impact of managed ecosystems, such as regulating the use of chemicals and waste water treatment and removing subsidies and incentives that promote poor land-use management practices whilst providing incentives for integrating nature conservation and restoration within agricultural and forestry sectors. Issues related to the ownership of production and land tenure are also critical to address. Governments can work in partnership with or incentivize new economic production models, such as cooperative farming systems, to enable the development of new approaches to managing land sustainably for both biodiversity and market benefits. Working to harness the knowledge and capacities of local communities and indigenous people through recognizing diverse forms of land tenure and the benefits of ILK for managing biodiversity will also be critical for achieving transformative change. Alongside a focus on terrestrial environments, action is needed for restoring and safeguarding water courses and their surrounding habitats for biodiversity. Catchment area partnerships and initiatives that bring together regulatory and voluntary actions from all levels of government and the whole of society can generate an all-inclusive perspective from the source to the ocean which produce multiple benefits in terms of soil and water retention, flood prevention and storm water pollution.

Furthermore, it is likely that transformative change will also require recognizing ***new agents of change*** in terrestrial and inland water environments. Voluntary action by the range of stakeholders and sectors involved in land use (e.g. agricultural producers, forest owners, food retailers, the extractive industry sector, land holding companies, institutional investors, local communities and indigenous people) over and above what it is possible to achieve through planning and regulation. It will then be critical not only to mainstream biodiversity action across different policy areas and all relevant sectors of the economy, but also to make sure biodiversity actions are aligned with the values and priorities of the diverse actors required to implement transformative change on the ground. Parallel efforts to increase awareness and shift values amongst consumers in order to reduce demand for products that produce environmental harm and increase demand for sustainably sourced resources will also be required in order to harness the potential of all forms of consumer – from individual householders to large retailers and governments – to provide a proactive force for transformative change.

4.4.3 Taking Steps Towards Transformative Change

The agenda for transformative change in relation to biodiversity in terrestrial and inland waters is primarily being pursued through the use of ambitious targets for the areas of specific ecosystems that are subject to spatial planning (Target 1) or specific area-based conservation initiatives (Target 2). Negotiations to date have focused on seeking to increase the ambition levels in terms of both the extent of the areas to be considered under these targets, the importance of ensuring that existing ecosystems are protected and restoration efforts stepped up, and of including Local Communities and Indigenous Peoples in these efforts.

In addition, actions to address systemic drivers of the loss of biodiversity are also contained within the Zero Draft, in relation to Targets to manage the impacts of invasive species, reduce pollution, ensure sustainable use of resources and address climate change (Targets 3-6). In general, ambitious action to reduce the threats to biodiversity in terrestrial and inland waters has been widely supported by Parties, with efforts focused on how to enhance these Targets to make them more comprehensive and practical. For example, there has been extensive discussion on how to extend the type and impact of pollutants covered in Target 4. However, as discussed above in Section 4.2, Parties remain divided as to whether explicit action to reduce the threat of climate change on these environments (Target 6) should be included within the GBF. Further action to reduce threats to biodiversity are also included within measures aimed at reducing harmful subsidies and increasing regulatory and economic incentives for biodiversity protection (Target 12) and the integration of biodiversity values into local and national spatial planning (Target 13).

At the same time as seeking to reduce threats to terrestrial and inland water environments, the GBF focuses on the benefits of mainstreaming biodiversity considerations in managed ecosystems - with a focus on agriculture – in order to enhance their productivity, sustainability and resilience (Target 8). Here, some Parties have signalled the importance of considering a full range of managed ecosystems (including e.g. forestry, aquaculture and fisheries) as well as the potential for extending this Target to include a focus on how biodiversity considerations are mainstreamed in all primary sectors of the economy (e.g. including the energy, minerals, tourism sectors). Whether or not such an extension is required depends in large part on whether Target 14 provides a means through which the mainstreaming of biodiversity action across all sectors of the economy can be galvanized.

4.4.4 Embedding Transformative Change: terrestrial landscapes and inland waters

Using the Principles set out in Chapter 2, Table 5 provides examples of the kinds of action that could be pursued through the GBF.

Table 5: Transformative Change for Biodiversity through Terrestrial Landscapes and Inland Waters

Principle	Action
Address Root Causes	Require measures that enable agricultural producers to shift to agroecology (e.g. agricultural finance, organic agriculture practice, knowledge exchange) are included within policy and reporting Reduce (economic) incentives that are harmful to biodiversity and their habitats, including subsidies
Take Multiple Paths	Foster experimentation and building more resilient agricultural communities through inclusive participatory planning processes, demonstration projects, living laboratories and partnerships across diverse sectors Rethink conservation areas and protected area management to further increase the involvement of local communities, to increase connectivity in the wider landscape, restore areas highly relevant for ecosystem functions and services supply as well as fair access to them
Expand Action Arena	Develop targets which demonstrate how biodiversity action in land use planning and protected areas provide benefits regarding the provision of regulating and cultural services.
Realise Diverse Co-Benefits	Provide resources and incentives to support restoration and develop monitoring systems that account for the diverse benefits that such schemes produce for nature and society Include incentives for planning and development processes which prioritize land conservation and restoration.
Design Deliberative & Inclusive Processes	Develop local action plans and reporting mechanisms, taking account of the views of those often marginalized from decision-making and using participatory methods where appropriate, particularly with respect to smallholder agricultural producers. Build capacity amongst local authorities to undertake deliberative decision-making, particularly with respect to controversial issues or where competing demands for land and water may risk biodiversity goals/targets being achieved.
Adopt Proactive Approach to Resistance	Build capacity amongst regional and local authorities and their partners to evaluate trade-offs between biodiversity goals and other development objectives and include these within biodiversity plans and reporting mechanisms. Build capacity for partnership working at the local level between public and private sectors, as well as with civil society, local communities and indigenous people to form 'coalitions of the willing' for action at the local level. Generate strategic partnerships amongst key financial actors, land owners, and retailers along the supply chain as a means through which to encourage proactive approaches to reducing the impact of economic activities on biodiversity and enable the sustainable use of resources.

4.5 Coastal and marine areas

4.5.1 The Challenge

Healthy oceans and coastal waters play a fundamental role in the global climate system and in supporting communities, jobs and livelihoods, food security, human health, biodiversity, economic prosperity and good quality of life. Oceans, however, are facing many challenges. Illegal, unreported and unregulated fishing and overexploitation of fish stocks threaten entire species and food security. Ocean warming, acidification, rising sea levels, unsustainable fishing, pollution and development are compounding the threats faced already by degraded marine ecosystems and the services they provide. These stressors are expected to accelerate with severe consequences for marine biodiversity.

At the same time, the proportion of the planet's land and oceans designated as protected areas is likely to reach the targets set for 2020 within the Aichi Framework, and will likely be exceeded when other effective area-based conservation measures such as private reserves and territories managed by indigenous peoples and local communities are taken into account. As of December 2018, over 24 million km2 (17.2%) of waters under national jurisdiction (0–200 nautical miles from a national border) were covered by protected areas, a significant increase from 12% in 2015 and more than double the extent covered in 2010. The global mean percentage of each marine key biodiversity area covered by protected areas increased from 31.2% in 2000 to 44.7% in 2015 and to 45.7% in 2018. However, much more modest progress has been made to ensure that protected areas safeguard the most important areas for biodiversity, that they protect a representative portion of global biodiversity, are effectively and equitably managed and are adequately connected to one another as well as to the wider landscape. The expansion of protected areas for marine biodiversity and existing policies that encourage responsible use of ocean resources are still insufficient to combat the adverse effects of overfishing, growing ocean acidification and worsening coastal eutrophication. As billions of people depend on oceans for their livelihood and food source, increased efforts and interventions are needed to conserve and sustainably use ocean resources at all levels.

4.5.2 The Potential Contribution to Transformational Change

The protection of coastal and marine areas is important not only for their vital biodiversity, but also provide a critical means through which to mitigate climate change, facilitate trade and create jobs. They will be crucial to the eradication of hunger and extreme poverty, particularly in Small Island Developing States (SIDS) and the Least Developed Countries (LDCs). The importance of protecting life below water has been explicitly recognised in the SDGs (Goal 14) and to be effective any GBF will need to align closely with this goal. It is essential that governments adopt a holistic, integrated approach to SDG14 that aligns with the systemic nature of the ocean to minimise negative and unintended outcomes if transformative change is to be achieved.

As ***arenas for action*** coastal and marine areas are crucial for transformative change to address the *direct threats* to biodiversity presented by the *over exploitation of resources* and *pollution*. Fisheries management, through the monitoring, control and enforcement of regulatory requirements for different systems of production and measures that encourage the consumption of fish from sustainably managed fisheries is needed, alongside regulation and international cooperation to prevent the harmful impacts of exploitation of other marine resources (e.g. deep-sea mining). Likewise, regulatory measures and strategic planning are required to reduce the use of plastics alongside robust waste management systems to prevent marine pollution and the growing threat of microplastics in the ocean (given that waste management is usually under the control of local authorities, and that plastic waste moves through the environment from

source to sea, it is vital that all levels of government across all regions are involved in addressing this challenge).

At the same time, it is evident that without robust action to address climate change and ocean acidification resulting from atmospheric GHG, goals for conserving and restoring marine biodiversity will not be met. Any transformative agenda for marine and coastal biodiversity must therefore include reducing the threat of climate change. While intact coastal ecosystems can prove to be resilient in the face of the impacts of climate change – such as increased storms and sea level rise – further efforts are required to enhance these ecosystems to ensure that even under conditions of climate change they continue to provide ecosystem services and livelihood benefits for the millions of coastal communities who depend upon them. Further developing the use of nature-based solutions and measures to restore coastal and marine ecosystems is therefore likely to be essential in order to develop the capacity to adapt to climate change, reduce disaster risk and ensure sustainable development goals are met.

4.5.3 Taking Steps Towards Transformative Change: coastal and marine areas

Initial steps have been taken through the development of the GBF to date that could provide the basis for enabling transformative change within coastal and marine environments. At OEWG-2 marine environments were recognized as a distinct category requiring consideration in terms of the use of spatial planning for conservation and restoration (Target 1) and area-based protection (Target 2) within the proposed Zero Draft, with Parties advancing proposals to extend the area designated under special protection. There was also considerable discussion about the importance of including plastic pollution within Target 4 in order to reduce its threat to marine biodiversity and of the importance of recognizing the impact of illegal fishing on the sustainable use of wild species under Target 5. However, as discussed above in Section 4.2, Parties remain divided as to whether explicit action to reduce the threat of climate change on these environments (Target 6) should be included within the GBF.

When it comes to ensuring sustainable use and benefit sharing for biodiversity, discussions on how to further develop Target 8 explicitly recognized fisheries as a managed ecosystem within which additional measures to enhance productivity, sustainability and resilience are required. However, in general the potential for sustainable use and benefit sharing in coastal and marine environments has received limited attention (e.g. in relation to the debate about how nature-based solutions or ecosystem based adaptation should be included in the GBF), and their relevance to wider discussions concerning reforming subsidies, sustainable production and consumption, or enhancing education and values for biodiversity, are largely absent from debates to date.

4.5.4 Embedding Transformative Change

Using the Principles set out in Chapter 2, Table 6 provides examples of the kinds of action that could be pursued through the GBGF.

Table 6: Transformative Change for Biodiversity through Coastal and Marine Areas

Principle	Action
Address Root Causes	Require all levels of government to consider issues of marine and coastal biodiversity protection across their policy portfolios (e.g. infrastructure development, waste strategies, energy policy) and report on progress to the CBD periodically. Support the development of measures to mainstream marine and coastal biodiversity protection and sustainable use in the strategies and actions of business and finance actors in relevant economic sectors through inclusion of measures across key supply chains. Ensure that governments at all levels implement long-term and robust strategies addressing waste issues (e.g. bi-catch, spills of production processes, ballast) working in partnership with local producers and communities. Develop robust waste management strategies that effectively reduce the use of plastics and remove existing plastic waste from the environment, including by partnering with stakeholders at relevant levels to address the production, marketing and use of plastics and to implement producer responsibility principles to accelerate the removal of plastics from waste streams, waterways and the ocean.
Take Multiple Paths	Require governments at all levels to work together to develop coastal management plans that enable climate resilient and nature inclusive development pathways, especially in critical biodiversity hotspots or where costal ecosystems are under significant threat. Ensure that issues of equity and environmental quality are paramount when designing and designating marine protected areas, clearly identifying rights and responsibilities for marine protection and addressing past inequalities in terms of access to marine resources.
Expand Action Arena	Involve actors across the value chain in taking responsibility for the management of global fishing such that marine and inland water ecosystems are protected and restored, food security is maintained and profits from fishing are protected into the long term.
Realise Diverse Co-Benefits	Develop and implement effective adaptation and mitigation measures that contribute to increasing and supporting resilience to ocean and coastal acidification, sea-level rise, and increase in ocean temperatures, and address other harmful impacts of climate change on the ocean, coastal and blue carbon ecosystems.
Design Deliberative & Inclusive Processes	Ensure that the relevant knowledge on the importance of coastal and marine biodiversity, practices and diverse values of local communities and indigenous people are recognised and transferred through fostering of networking and capacity building initiatives. Ensure the inclusion of local producers, communities and indigenous peoples in the design and implementation of coastal management plans that can encompass diverse visions of a good quality of life and which account for the multiple stressors affecting coastal areas

Principle	Action
Adopt Proactive Approach to Resistance	Develop 'coalitions of the willing' for action at the local level, including local communities, indigenous people, and different actors along the supply chain as a means through which to encourage positive action for coastal and ocean biodiversity protection as the enhancement of increased livelihoods. Ensure that proactive measures taken by non-state actors and subnational and local authorities are recognized and rewarded as a means of fostering learning and encouraging a 'race to the top' in terms of performance.

5. Governance and Finance for Transformative Change

Transformative change requires not only advancing action in critical issue areas (Section 3) but also the development of implementation mechanisms that have transformative potential. To date discussions on the shape and nature of the post-2020 GBF have tended to favour on building on existing mechanisms – including National Biodiversity Strategy Action Plans (NBSAPs), National Reporting (NR) and traditional tools of capacity building that have been part of international environmental agreements for the past thirty years. In this section we reflect on the issues which have arisen and consider how an agenda for transformative change can best be advanced.

It appears clear from the consultation process that has taken place so far, that building on the existing architecture of NBSAPs and NR is non-negotiable. The question then becomes one of how to ensure that these mechanisms are used to advance transformative change, alongside new forms of capacity building and resource mobilisation. This is particularly challenging as these mechanisms were designed primarily for national government biodiversity policies addressing the direct drivers of biodiversity loss, rather than for also tackling the indirect drivers, involving all levels of government and taking a whole of society approach as required for transformative change. Simply expanding these mechanisms is unlikely to be sufficient. Instead, we suggest that they need to be repurposed with additional mechanisms introduced in the GBF in order to advance a transformative change agenda. In so doing, one needs to be mindful of how the capacities and responsibilities for transformative change are unevenly distributed between Parties and across the whole of society and develop mechanisms that recognise this to ensure a just and equitable approach'.

5.1 Implementation

In the past few years there has been a growing recognition that implementing the Convention cannot be done through biodiversity and environmental policy alone, but requires mainstreaming biodiversity as a priority across the whole of government and embedding it within the strategies and actions of non-state actors in relevant economic sectors[4]. The priority given to mainstreaming as a critical component of advancing biodiversity action is at odds with the continued focus on NBSAPs, which tend to be produced by

[4] A CBD Informal Advisory Group on Mainstreaming of Biodiversity (IAG) was established to advise Parties on a long-term approach to mainstreaming biodiversity (LTAM), including on ways to integrate mainstreaming adequately into the post-2020 Global Biodiversity Framework . It will also address how mainstreaming approaches can address the indirect drivers of biodiversity loss. See: https://www.cbd.int/doc/c/bb51/b5cd/7710cb4ac2d839522477404d/wg2020-02-mainstreaming-en.pdf

national environmental ministries, which have limited recognition or integration within other key policy areas and which are rarely aligned with subnational and local authority strategies and actions.

To overcome these challenges, some have argued for an expanded remit for the NBSAP – to encompass actions across more policy areas related to indirect drivers of biodiversity, to include subnational and local strategies and action plans, and to demonstrate their value for strategic policy areas such as climate change or the SDGs. At the same time, given that NBSAPs are already regarded as unwieldy, taking several years to produce, and the conflicts that might arise as a result if (more powerful) ministries felt environmental departments were setting their agenda, this may neither be practically or politically feasible.

It may therefore be necessary to conceive of a new generation of NBSAPs that consist of two parts. First, a 'core' focused on the traditional remit of action planning for the national implementation of measures to address the key direct drivers of biodiversity loss and to realise opportunities for the sustainable use of nature that lie within the remit of the environmental ministry. Second, a series of additional elements which report on strategies and actions developed across all levels of government to address the indirect drivers of biodiversity and to mainstream biodiversity action (e.g. on subnational/local action, on action to reduce waste, to address climate change, to advance sustainable consumption and production). It will then be imperative that the targets, and the indicators chosen to monitor them, can be aligned with other policy priorities.

In terms of establishing mainstreaming across key sectors of the economy, the CBD and its Parties have started to work with agriculture, fisheries, forestry, tourism and resource extraction to build a common knowledge base, identify what options for mainstreaming biodiversity are available, the guidance that can be given to sectors and what in turn the implications are for biodiversity policy (seeing mainstreaming as two-way street). As a result of joint efforts, FAO adopted for example a "Strategy on Mainstreaming Biodiversity across Agricultural Sectors"[5] in 2019 as a contribution to developing sustainable agricultural- and food-systems. Similar efforts are underway between WHO and CBD on health and biodiversity. These activities have also mostly focused on public policies for sectors with a direct relationship with biodiversity (in terms of impacts or dependencies), while business and finance initiatives for biodiversity only in recent years are starting to gain traction. The focus on mainstreaming as a whole of society approach therefore would need further strengthening.

5.2 Reporting & Review

The Zero Draft of the post-2020 Global Biodiversity Framework suggests that a crucial element, currently missing from the CBD, will be to develop an enhanced transparency and accountability framework. To date National Reports have not proven effective in this regard and there has been reluctance to develop transparency let alone compliance mechanisms to either facilitate learning and/or build pressure amongst countries to improve implementation.

However, an increasing number of countries seem to agree on the need to include an accountability mechanism in the new biodiversity framework[6]. To make this a transformative mechanism it needs to be relevant in a "whole of government" and a "whole of society" approach. For this it may be necessary to

[5] See: http://www.fao.org/3/ca7175en/ca7175en.pdf

[6] See report of the thematic consultation on transparent implementation, monitoring, reporting and review, 20-22 February 2020, Rome: https://www.cbd.int/doc/c/8e6f/ef4f/b7d30589fb00d97b900d17af/post2020-ws-2020-01-03-en.pdf

think about a combination of accountability mechanisms for different actors that need to be developed: (a) for direct action taken on biodiversity as reported within the NBSAP (biodiversity policy makers, mandatory); (b) for actions/policies that effect indirect drivers of biodiversity loss (whole of government, mandatory); and (c) for non-state actors and their actions on both direct and indirect drivers (whole of society, voluntary and with a light approach of reporting, building on reporting approaches already taking place).

Different actors could then be responsible for reporting on their various contributions towards the 2030 targets in different ways. Parties will have to provide their commitments to the CBD. These commitments would naturally be undertaken through national biodiversity strategies, but as our analysis in Section 3 demonstrates transformative change cannot be limited to biodiversity policy alone. Consequently, Parties will need to periodically report on their overall contribution to the realisation of international targets, for example drawing on progress being achieved in relation to the SDGs and climate goals and this will need to encompass reporting on action across all levels of government. Further, a whole of society approach will be required if we are to understand the level of progress we are making towards critical outcomes for biodiversity – if governments act while the rest of society makes no progress, we will not achieve transformative change. Progress reporting could be developed through voluntary commitments of non-state actors as contribution to the CBD Action Agenda. Under this platform, non-state actors and subnational and local authorities could be required to report on progress made in realising their commitments. To enhance the robustness and legitimacy of such reporting, third Parties could provide analysis and assurance on the reported results of non-state actors, for example using the Environment, Social and Governance (ESG) reporting obligations of business or through establishing peer review mechanisms amongst groups of non-state actors and subnational and local authorities.

Based on this reporting a periodic global stocktake in the CBD could take place. Such analysis would help Parties and non-state actors with insights in progress so far, both success and remaining ambition gaps and implementation gaps. This would contribute to strengthening transparency and responsibility and allow to identify issues that require further attention and joint learning, as well as creating political pressure as results of policies open up to public scrutiny. A 'ratcheting mechanism' could help to over time raise ambition towards achievement of the 2050 goals of the convention (Rankovic et al., 2020).

5.3 Capacity Development

Advancing transformative change requires that we stop building capacity to undertake traditional, incremental policy making and start generating capacity for transformative action. Capacity-building has traditionally been short-term and based on single interventions (WCMC, 2020) and focussed on supporting countries in developing and implementing their NBSAPs. Currently, within the CBD a long-term strategic framework for capacity-building beyond 2020 is under development[7]. While recognizing the urgent need to galvanize transformative action and providing a menu of core guiding principles, strategies and methods assuming a whole-of-government and whole-of-society approach, it adopts an expansive account of what is needed rather than identifying the new kinds of capacities that are needed to support different forms of action by diverse actors to ensure transformative change.

[7] See background document for the consultations on the long-term strategic framework for capacity-building beyond 2020, March 1-2, 2020, Rome: 2020 https://www.cbd.int/doc/c/ba35/9df9/4936692c0cab08d3c20552d9/post2020-ws-2020-02-03-en.pdf

It will be important to actively consider from a transformative change perspective what kinds of capacity - to do what - are to be built for whom? Is increasing capacity for environmental ministries actually what we need, or do we need capacity for economic ministries, local government, private sector actors etc.? New priorities for capacity building may be identified as a result of analysis of implementation successes and failures, enhanced by increased transparency on progress. To further develop and implement transformative change it is important that the capacity building framework emphasizes sharing and promoting application of best practices and lessons learned to improve future interventions (incl. mainstreaming), as well as regularly monitoring capacity-building efforts to maximise learning and adapt as necessary. On the domestic level a voluntary peer review mechanism may support such learning and identify capacity development needs to support domestic policy development towards transformative change (through whole of government and whole of society approaches). Voluntary peer review mechanisms with a focus on direct and indirect drivers could support revision of NBSAPs, including its capacity building dimensions.

The suggested focus on multi-stakeholder partnerships for capacity-building and triangular cooperation (as well as south-south, or south-north learning) holds promise to further develop a whole-of -society approach for the post-2020 framework. Such capacity building approaches could benefit from the emerging non-state action agenda in the CBD, as one of the often stated advantages of non-state actors in the CBD is the opportunities it would provide to develop new capacities to deal with contentious issues concerning, for example, agriculture and biodiversity (Pattberg et al., 2019).

5.4 Finance

A key element in the development of pathways for living in harmony with nature, the IPBES Global Assessment concluded, will be the evolution of global financial and economic systems towards a globally sustainable economy, steering away from the current limited paradigm of economic growth. This requires a shift in capital allocation from unsustainable to sustainable economic activities that have a positive biodiversity impact. Financial institutions affect biodiversity while they are at the same time exposed to the financial risks associated with biodiversity loss have to be aware of these risks while also recognising the opportunities to support nature positive investments.

Within this context, to advise Parties to the CBD on resource mobilization component of the post-2020 biodiversity framework, an expert panel is currently exploring various aspects of resource mobilization: (a) options and approaches for mobilizing and providing additional resources from all sources; (b) ways to strengthen the engagement of a wider range of financial and private institutions; (c) ways to further mainstream biodiversity into national economic budgets and development plans, including key productive sectors; (d) ways to improve the readiness and capacity of Parties to access and utilize financial resources in support of the implementation of the post-2020 framework.

It is clear that transformative change for biodiversity (as with any environmental issue) cannot be financed through dedicated 'biodiversity finance' alone[8]. Resource mobilisation for the GBF may be the part of the CBD most directly impacted by the COVID19 crisis. The financial resources needed and currently invested for the worldwide recovery after the economic crisis because of the pandemic dwarf the financial resources needed for biodiversity finance, but may limit the availability of financial resources to invest in nature. In

[8] Report on thematic workshop on resource mobilization for the post-2020 global biodiversity framework, 14-16 February 2020, Berlin: https://www.cbd.int/doc/c/15fa/4604/83d577ffba0cc6abeb1a51f0/post2020-ws-2020-03-03-en.pdf

efforts to rebuild the world's economy greener to get out of the economic crisis that we are facing, it is probably most urgent to ensure sustainable, nature positive stimulus packages. Possibilities in this respect are redirecting financial flows (loans) and subsidies away from biodiversity harmful practices to pro-biodiversity practices for which political will and, particularly, political courage is needed to counteract vested interests in the status quo, and lobbying to recover as quickly as possible to the economic situation before the COVID19 crisis.

Biodiversity concerns will need to be integrated into mainstream financing decisions (by banks, insurance companies and other financial institutions in the sectors within countries, national banks, institutional investors, development banks and so on) to address the direct and indirect drivers of biodiversity loss and to finance biodiversity and low carbon development trajectories. For this to happen it will be imperative to make sure that subsidies harmful to biodiversity are re-oriented and that climate investment is not detrimental to biodiversity outcomes and only take place when neutral or beneficial for biodiversity. A closer linkage of the two agendas in the GBF would be one way of doing that.

6. Harnessing the Transformative Potential of the Global Biodiversity Framework

In order to realise the kinds of transformative change required to advance goals for biodiversity on the ground, this report suggests that six core principles of transformation need to be embedded throughout the GBF. International environmental agreements of this kind carry limited legal force within national contexts. Instead, their power rests in their capacity to persuade and enable others to act on the critical levers and leverage points through which biodiversity goals can be met. As our analysis of critical issue areas (Section 3) and the means of governing and financing action (Section 4), advancing transformative cfhange requires a reorientation of the Convention, through the GBF, to ensure that the imperatives of addressing direct and indirect drivers of biodiversity loss and of mainstreaming biodiversity in order to reduce threats and ensure its sustainable use are at the heart of a shared vision that guides all levels of government and actors across the whole of society.

Creating a shared vision and agenda for transformative change is only in part about establishing new and ambitious rules of the game (e.g. goals, targets). It also requires that the fundamental building blocks of the strategy – the assumptions about the ingredients required for success, the operation and implementation of the strategy to achieve the necessary changes, and how success will be measured and verified – are aligned. In the remainder of this section, we draw from the analysis conducted in Sections 3 and 4 of this report to identify how an agenda for transformative change can be embedded in four key parts of the GBF: its statement of the required enabling conditions; the development of targets and indicators; the key means of implementation through which action is to be enabled; and the accountability mechanisms that will be needed to ensure progress.

6.1 Establishing the Enabling Conditions

As set out in the Zero Draft, the appropriate consideration of what is required in terms of enabling conditions is vital in terms of supporting and facilitating the implementation of the post-2020 GBF. In turn if the outcome sought from the post-2020 GBF is a transformative one, then the ingredients for this must be established from the outset.

As currently formulated within the Zero Draft, the enabling conditions contain the potential for some aspects of transformative change to be realised. There is recognition of the need for alignment with other multilateral environmental agreements (Address Root Causes), of the participation of local communities and indigenous people alongside all relevant stakeholders and partnerships (Expand Action Arenas), the importance of inclusive governance (Design Inclusive & Deliberative Processes) as well as of integrative approaches (Realise Co-Benefits) and securing adequate political will and recognition at the highest levels of government (Adopt Proactive Approach to Resistance).

Drawing on the analysis we have conducted of how transformative change can be further enabled through action in key issue areas (Section 4), we suggest that **further steps could be taken to cement a transformative agenda within the enabling conditions of the GBF through by incorporating the following elements:**

- Explicitly identifying the key roles and capacities that relevant stakeholders bring to the table (e.g. recognising the varied powers and competences of subnational and local authorities, identifying key stakeholders in critical economic sectors whose participation is vital for addressing issues of sustainable consumption and production).
- Specifying how alignment with national and international policy goals and action plans for climate, food-systems, sustainable production and consumption and other SDGs can be achieved, given their central role in tackling the root causes of biodiversity loss (climate change, agriculture, urbanisation) and as a means through which the multiple benefits of sustainable use of nature can be realised.
- Identifying the importance of a learning approach to foster biodiversity-inclusive development pathways that are based on participatory planning processes across sectors, agricultural landscapes and cities. Alongside integrative and inclusive governance processes, experimentation which fosters innovative, diverse and alternative approaches is required and can be given a mandate through the GBF. This could be supported through capacity-building approaches which emphasise demonstration projects, living laboratories and partnerships across diverse sectors.
- Recognising the importance of the diverse values that multiple actors hold for nature by explicitly stating that these values need to be accounted for, and ensuring that, these forms of nature are safeguarded and given appropriate status throughout the GBF. Upcoming IPBES assessments could play a central role in supporting such processes with diverse forms of knowledge.
- Including the financial sector (national banks, insurance sector, commercial banks and pension funds) as an actor that is crucial for the success of the GBF. This explicit recognition of the financial sector will be critical if we are to develop nature inclusive portfolios for loans and investments to reduce risks of biodiversity loss for the financial sector and start developing approaches for financing net-positive biodiversity and low carbon development trajectories whilst also bringing the experience of the financial sector in addressing climate change to bear on the biodiversity challenge.

6.2 Targets & Indicators for Transformative Action

There is an emerging consensus that ambitious goals and targets are agreed for the post-2020 GBF in order to ensure that it can accelerate transformative change. While the potential trade-off between ‘ambition’ and ‘realism’ needs to be taken into account (Rankovic et al., 2020), the scope, nature and wording of Targets remains subject to ongoing debate and concerns are growing that without due care and attention the potential for these Targets to drive transformative change will be lost. Furthermore, it is crucial to recognise that the indicators against which progress in meeting targets will be measured are as important

as the targets themselves in ensuring that transformative change is embedded in the GBF, as these indicators signal the specific actions, mechanisms, tools and outcomes needed to make progress.

As discussed throughout Section 4, there have been elements of progress towards transformative change in the design and expression of the Targets both in the Zero Draft and the subsequent negotiations. Efforts have been made to address the underlying drivers of climate change, production processes and consumption (Targets 6, 9, 12, 14, 17; Address Root Causes), with the discussions at OEWG-2 further extending the range of actors and economic sectors to be involved (Expand Action Arena). There has also been a focus on including Targets that focus action on addressing key leverage points identified by IPBES in terms of reducing consumption and waste (Target 17; Address Root Causes) and fostering diverse visions of a good quality of life and unleashing values of responsibility (Target 20; Take Multiple Paths). The formulation of Targets has also sought to demonstrate the significant benefits that biodiversity action can have (Targets 7-11), with extensive debate taking place as to how these could be strengthened even further, for example through including the multiple benefits of nature-based solutions rather than just those that relate to water (Realise Diverse Co-Benefits) and by ensuring that the benefits that are generated from biodiversity action are shared equitably, for example in terms of access to urban green space or to genetic resources (Design Deliberative & Inclusive Processes; Take Multiple Paths).

At the same time, our analysis suggests that the current formulation of the Targets means that they are likely to fall short of realising their transformative potential. First, common across most Targets is a narrow understanding of the roles that different actors can play, which in turn will limit the actions that they are mandated and enabled to undertake. For example, local and subnational governments are recognised for their planning competencies, but not for their roles as innovators, investors, consumers or partners with the private sector. Economic actors are considered as producers but not also as consumers or investors, and national government has not yet been identified as an important consumer, investor and producer alongside its regulatory and partnership roles and in addition they need to clearly identify how they will achieve the target sets at the national level. Many Targets also currently fail to identify the actors who will be responsible for their implementation, or appear to suggest that this is a matter for individual citizens (Targets 17 & 20), perhaps one reason why they have so far failed to be considered sufficiently concrete to be included as Targets in their own right.

Second, many Targets as presented in the Zero Draft are narrow in scope, in terms of scale, the specific ecosystems in focus, the sectors of the economy identified as critical to engage, or the mechanisms and instruments through which action might be taken. Subsequent negotiations at the OEWG were in large part focused on expanding the remit of these Targets, and many advances have been made, for example in terms of recognising the multiple managed ecosystems that could benefit from measures (Target 8) or the diverse benefits that nature-based solutions can generate (Target 9). At the same time, there are concerns that if Targets become too wide ranging it will become challenging to measure progress towards them. This could be alleviated by a more concerted effort to align Targets and the indicators used to measure progress towards them with those which are already routinely monitored at the national level, through for example the use of relevant SDG indicators. To ensure that the biodiversity agenda is seen as relevant and enabling, it will be important to ensure that any formulation of Targets that relate to key aspects of the SDG agenda (e.g. waste, sustainable consumption and production) are formulated in such a way as to enable integration and the recognition of multiple co-benefits.

Finally, we note that it has been in relation to those Targets that tackle the underlying drivers of biodiversity loss (e.g. climate change, sustainable consumption and production, fostering new values)

which have attracted the highest level of debate and may be at risk of being removed or watered down as the GBF comes to be revised. If such Targets are unable to attract sufficient political support and are removed from the negotiating text, it is of course unlikely that the GBF will be able to foster transformative change.

To further harness the potential of the GBF in general and Targets specifically to deliver a transformative agenda we suggest that the following steps could be taken:

- Identify which part of getting the transformative change agenda needs a COP decision and which parts could be addressed at other international bodies in charge of multilateral environmental agreements.
- Explicit inclusion of all levels of government and diverse societal actors of relevance to achieving Targets, either within each individual Target or through a paragraph that explicitly states that it is recognised that these actors will be necessary to reach the levels of ambition set out in the GBF and that national governments will work to enable and support their contributions. This would be an important step to create a whole of society approach and whole of governance approach through the Targets and provide the clarity on the longer term goals that are often requested by societal actors.
- New approaches for conservation will be needed, to better manage conflicts between people and nature especially in a context of increasing claims on land. A start for this has been made with recognizing 'Other Effective Conservation Measures'.
- Building strongly on the mainstreaming agenda in the context of CBD Article 6(b), including the reform of subsidies and incentives.
- Ensure that bold, new targets for area-based conservation can be achieved through various efforts by multiple actors and are combined with safeguards for the equitable and effective governance for conservation, especially through the recognition of indigenous peoples, local communities and the recognition of their rights to their lands and territories, by requiring that these provisions are included within national biodiversity action plans and reporting mechanisms.
- Raise the profile of NBS and ecosystem restoration in the targets as a means of addressing other agendas such as the Climate Change, land degradation, and disaster risk reduction.
- Explicit inclusion of the roles of economic sectors and governments, not only in terms of adjusting production processes, but also in terms of their roles as consumers of resources and in relation to their roles as investors. This will require Targets applying a supply chain perspective focussed on sustainable sourcing to address upstream biodiversity impacts, address distant impacts and reduce biodiversity footprints. Here alignment with the implementation of the SDGs is important, addressing the issues of eradicating poverty and sustainable production and consumption.
- Ensure that responsibility for reducing consumption is not only given to individuals, but that it is recognised explicitly that all levels of government and business also need to reduce their consumption and waste. Action plans and reporting mechanisms should explicitly require evidence that such actions are being taken care of and have a tangible effect.
- Include a set of targets that reflect the multiple benefits that biodiversity action can have for a broad set of societal issues, while ensuring that the benefits that are generated from biodiversity action can be shared equitably. Explicit attention to 'nature's contribution to people' and 'nature based solutions' may help to ensure that the GBF becomes a 'whole of government' and 'whole of society' approach.

6.3 Implementation Mechanisms

The question of how the GBF itself can be implemented is an important one when it comes to the question of transformative change. Rather than being a matter of how nation-states (and non-state actors) develop policy and measures through which to realise the goals and targets to which they commit, which is often the focus of discussions related to transformative change, here we focus instead on the mechanisms through which the GBF itself will be taken up and adopted across all levels of government and by actors across the whole of society. Compared to the negotiations on Targets, the discussions in the CBD on the means of implementation are less far advanced with so far only the consultations on resource mobilisation; monitoring, reporting and review; and capacity building taking place. As a result, these parts of the GBF are relatively briefly developed in the Zero Draft and some Parties have refrained from discussing them in OEWG-2. These sections will be updated in the First Draft, based on the outcomes of the consultations and the results of the Subsidiary Body on Implementation (SBI-3).

The Zero Draft argues for implementation support mechanisms commensurate with the ambition set out in the goals and targets and with the transformative changes required to reach them. The question is if and how National Biodiversity Strategy Action Plans (NBSAPs) and National Reporting (NR) supported by financial resources and capacity building, can indeed advance transformative change for biodiversity. Our analysis suggests that NBSAPs will need to be repurposed to develop a whole of society approach for biodiversity, as well as becoming more effective in supporting a whole of government approach for biodiversity (Expand Action Arenas). However only building and improving on NBSAPs and NRs will likely be insufficient to achieve this aim with additional mechanisms required for transformative change. A critical decision facing Parties is therefore whether they are prepared to develop the whole of society approach further and actively create space for voluntary commitments of non-state actors (and subnational and local authorities) to be recognised as a legitimate part of a transformative agenda and hence to include such action as one of the implementation mechanisms of the GBF (building on the CBD Action Agenda for Nature and People).

It may also be necessary to conceive a new generation of NBSAPs that consist of two parts. First, a 'core' focused on the traditional remit of action planning for the national implementation of measures to address the key direct drivers of biodiversity loss and to realise opportunities for the sustainable use of nature that lie within the remit of the biodiversity/environmental ministry. Second, a series of additional elements which develop strategies & actions developed across all levels of government to address the indirect drivers of biodiversity (Address Root Causes) and to mainstream biodiversity action (Take Multiple Pathways), e.g. on subnational/local action, on action to reduce waste, to address climate change, to advance sustainable consumption & production. It will therefore be imperative that the targets, and the indicators chosen to monitor them, are relevant for multiple actors across all levels of government and can be aligned with other policy priorities (Realise Diverse Co-benefits).

Implementation is also crucially tied to the provision of resources. Next to dedicated biodiversity funding biodiversity concerns will need to integrate into mainstream financing decisions (by sectors within countries, national banks, institutional investors, development banks and so on) to address direct and indirect drivers of biodiversity loss and to finance biodiversity and low carbon development trajectories. In efforts to rebuild the world's economy in the face of the economic crises that we are facing, it is most urgent to ensure that sustainable, nature positive stimulus packages are agreed across diverse national contexts (Take Multiple Pathways, Expand action Arenas).

Drawing on the analysis of how transformative change can be further enabled through action in key issue areas (Section 4), we suggest that further steps could be taken to further develop implementation mechanisms:

- Ensure that NBSAPs will be further developed to enable a 'whole of government' and 'whole of society' approach to develop strategies for transformative change for biodiversity. NBSAPs would then consist of two parts. First, a 'core' focused on the traditional remit of biodiversity action; and second, a series of additional elements with strategies and actions developed across all levels of government to address the indirect drivers of biodiversity and to mainstream biodiversity action. This requires that Parties will accept a rethinking of their NBSAPs.
- NBSAPs will need to be aligned with long term climate planning and NDCs, with SDG implementation, and with restoration plans in the UNCCD. This is necessary as the root causes of all sustainability problems are much the same in biodiversity. To be able to identify trade-offs and deal with the opportunities nature offers for solving societal challenges requires coherent approaches. The post-2020 framework offers an opportunity to make progress on this, together with other multilateral processes and make domestic action more effective and efficient.
- Additional implementation CBD mechanisms may be required for transformative change. This could for example be done by creating space for voluntary commitments of non-state actors to further develop the all of society approach for the GBF. This requires formalising non-state action as one of the implementation mechanisms of the post-2020 framework, for which further development could build on the CBD Action Agenda for Nature and People.
- To further develop and implement transformative change it is important that the capacity building framework emphasizes sharing and promoting application of best practices and lessons learned to improve future interventions, as well as regularly monitoring capacity-building efforts to maximise learning and adapt as necessary. A special focus could be on innovation with biodiversity in different sectors to capture the opportunities nature offers for alternative pathways and learning how vested interested and resistance can be overcome in addressing root causes.
- Support knowledge transfer on addressing indirect and direct drivers of biodiversity loss to all relevant sectors in coherence with addressing climate change, dealing with trade-offs in developing nature inclusive pathways in cities and landscapes, for example between conservation, sustainable use and agriculture or climate change and biodiversity. Both CBD long term strategic frameworks on capacity building and mainstreaming could play a central role in this.

6.4 Accountability

Including a responsibility and transparency mechanism is in itself an important step forward to make the GBF transformative (Section 5). Increasingly Parties seem to agree on the need to include a mechanism for ‘responsibility and transparency’ in the new biodiversity framework. Some countries have suggested that such a mechanism could include the idea of voluntary national commitments similar to Nationally Determined Contributions under the UNFCCC. For now, it appears that NBSAPs and NR will remain the key mechanisms for national implementation, through which countries will have to report on their progress against their commitments and on their contribution to the new post-2020 targets. For this a limited number of global and national headline indicators could be used, requiring better alignment between the post-2020 framework and ongoing national policy processes (and international agreements). Synergies with other international progress reporting is essential because transformative change is crucial also for these

policy areas (climate, SDG). This would form the basis for regular review processes and global stocktake to track progress towards global goals and targets. The GBF could include procedural obligations to ensure commitments are adequate and are followed up. Based on this the CBD could provide 'principled guidance' to coordinate scaling up of ambition and commitments ('ratcheting mechanism').

At OEWG-2 a proposal was made that the ways Parties and non-Parties participate in the responsibility and transparency framework should be differentiated. This has so far not been advanced, but will require recognising non-state actors for their role and capacities in transformative action for biodiversity. The responsibility and transparency framework then would become relevant for a whole of government and a whole of society approach (Take Multiple Paths, Expand Action Arenas). Different actors will have to show their progress on realising their commitments and will be responsible for reporting on their contribution to achieve the new 2030 targets. In doing so, it may be useful to think of the 'responsibility and transparency' mechanism as containing a set of instruments relevant for Parties and non-Parties and differentiating between implementation and monitoring, and reporting and review, with different levels of self-reporting, scrutiny and progress tracking required for each element and delivered by different mechanisms.

Drawing on the analysis of how transformative change can be further enabled through action in key issue areas (Section 3), we suggest that further steps could be taken to further develop the accountability mechanisms to create trust, enhance learning and build pressure in implementing the GBF towards the realisation of agreed goals and targets:

- A combination of accountability mechanisms for different actors may need to be developed to address actions taken on direct and indirect drivers of biodiversity loss (whole of government) and by non-state actors on their actions on both direct and indirect drivers (whole of society). The starting point would be national biodiversity commitments by Parties as well voluntary commitments by multiple stakeholders (as contribution to the Action Agenda for Nature and People).
- Parties could actively engage in voluntary country-review mechanisms. While the previous point addresses international accountability, voluntary peer-review is merely intended to support domestic implementation and would ideally be planned in early stages of the development of a new NBSAP. How to harness the transformative potential of a next NBSAP and additional domestic policy programmes could be the central question for such review. Common issues arising from voluntary peer reviews could inform the SBI-agenda and capacity development efforts.
- Parties can enhance transparency by ensuring that nature is included in public and private sustainability reporting, either through voluntary means or under existing reporting obligations. In support of stocktaking, intermediary organisations could be facilitated to bring the information from these reporting mechanisms together. Since most progress with reporting so far is made with respect to climate goals, it is important to build on this for biodiversity to not add to the burden of reporting.
- National reporting will need to be aligned with global targets to allow global stocktake. In reporting a sufficiently broad set of headline indicators will need to be used to capture the multiple values of nature and its co-benefits to multiple actors in multiple action arenas. The post-2020 framework will need to provide for the creation of a mechanism or platform in which progress made by Parties and non-parties is collected as a basis for review.
- Based on this reporting, a periodic global stocktake in the CBD could take place to provide Parties and non-state actors with insights on progress so far. This would allow to identify issues that require further attention and joint learning, as well as creating political pressure. A 'ratcheting mechanism' could help to over time raise ambition towards achievement of the 2050 vision of the convention. The

results of this stocktake could be discussed during SBI to prepare for COPs decisions about follow up action (such as a 'ratcheting moment').

6.5 Taking the Next Steps

Our review of the potential for taking forward a transformative agenda for biodiversity action has pointed to the importance of recognising the key role that the Global Biodiversity Framework plays in determining the scope and nature of the agenda for Parties and for a non-State actors alike, providing a mandate for pursuing policy and strategy at all levels of government and across the whole of society.

Our report, and in particular Section 6, has sought to focus on the key opportunities for further embedding an agenda for transformative change within the design and development of the post-2020 Global Biodiversity Framework itself – in short, what are the elements that will need to be present within this framework if it is to generate the potential for transformative change? Working from the basis of six core principles and evidence gathered in the review of five critical issue areas this report has started the task of sketching the contours of what is needed.

At the same time, any international agreement will only ever be as good as the way it is adopted and put to use. We note the vital importance of bringing the whole of society on this journey. The critical task for the architects of the GBF is therefore to provide a framework that can be implemented by Parties, but at the same time creates the enabling conditions, legitimacy and call to action for non-state actors as well as subnational and local authorities. This will require not only recognising the legitimacy and authority of multiple actors and the varied contributions they can make towards the goals of the GBF, but also being sufficiently resilient to withstand the inevitable opposition that will arise in relation to any attempt to fundamentally alter the status quo and achieve transformative change.

7. Glossary

Term	Definition
Aichi Targets, the Aichi Framework	The Convention on Biological Diversity's tenth meeting of the Conference of the Parties, held 18-29 October 2010, in Nagoya, Aichi Prefecture, Japan, adopted a revised and updated Strategic Plan for Biodiversity, including the Aichi Biodiversity Targets, for the 2011-2020 period.
Biodiversity or Biological diversity:	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 part; this includes diversity within species, between species and of ecosystems. (Art. 2, CBD)
CBD Action Agenda for Nature and People	Launched by the Secretariat of the UN Convention on Biological Diversity, with the Governments of Egypt and China, to inspire and take meaningful steps towards building a future global sustainable economy. It has three main objectives: (1.) Raise public awareness about the urgent need to stem biodiversity loss and restore biodiversity health for the sake of humanity and the global ecosystem; (2.) Inspire and help implement nature-based solutions to meet key global challenges, and;(3.) Catalyse cooperative initiatives across sectors and stakeholders in support of the global biodiversity goals.
Coastal and blue carbon ecosystems	Refers to the carbon captured by living coastal and marine organisms and stored in coastal ecosystems such as mangroves, tidal marshes and seagrass meadows, which sequester and store more carbon per unit area than terrestrial forests.
Convention on Biological Diversity (CBD	(a.k.a. the Convention) is an international legally-binding treaty with three main objectives: the conservation of biodiversity; the sustainable use of the components of biodiversity, and; the fair and equitable sharing of the benefits arising from the use of genetic resources. The CBD covers biodiversity at all levels: ecosystems, species and genetic diversity.
COP decision	A decision by the Conference of Parties, which is the highest decision-making body from different international environmental conventions.
Drivers of biodiversity loss	Are divided into direct drivers: Land and sea use change; Over-exploitation; Climate change; Pollution; Invasive alien species; and indirect drivers: demographic and socio-cultural; economic and technological innovation; institutions and governance; conflicts and epidemics. (IPBES, 2019).
Ecosystem services	The services, other than goods, provided by ecosystems, and from which humans benefit, such as nutrient cycling, water purification, shelter, etc.

Term	Definition
	Includes regulating and cultural services, also referred to as “nature’s contribution to people”.
IPBES Global Assessment (Report on Biodiversity and Ecosystem Services)	Produced in May 2019. The overall scope of the assessment is to assess the global status and trends with regard to biodiversity and ecosystem services, the impact of biodiversity and ecosystem services on human well-being and the effectiveness of responses, including the Strategic Plan and its Aichi Biodiversity Targets (IPBES 2019).
IPBES	The Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services was established in 2012 with four objectives: Assessment, Policy Support, Knowledge Generation, and Capacity Building.
IPCC Special Report on (the impacts of) 1.5 Degrees	A special report on global warming of 1.5 °C above pre-industrial levels and related global greenhouse gas emission pathways, in the context of strengthening the global response to the threat of climate change, sustainable development, and efforts to eradicate poverty (IPPC 2019).
National Biodiversity Strategy and Action Plans (NBSAPs)	Under Article 6 of the CBD each Contracting Party shall develop national strategies, plans or programmes for the conservation and sustainable use of biological diversity or adapt for this purpose existing strategies, plans or programmes to attain the objectives of the Convention.
National Reporting (NR)	Refers to the exercise by Parties on reporting on the implementation of a convention. This usually happens at specific intervals for all the Parties.
Nationally Determined Contributions	The UNFCCC Paris Agreement (Article 4, paragraph 2) requires each Party to prepare, communicate and maintain successive nationally determined contributions (NDCs) that it intends to achieve. Parties shall pursue domestic mitigation measures, with the aim of achieving the objectives of such contributions.
Nature-based solutions (NBS)	Interventions that can provide multiple benefits for society, from protecting water quality and addressing air pollution to enhancing health and well-being. The protection/use of mangrove to prevent tidal erosion and provide nurseries is an example of a NBS.
Open Ended Working Group	Refers to one of three meetings of the Open-ended Working Group on the Post-2020 Global Biodiversity Framework that convene to advance preparations for the development of the post-2020 global biodiversity framework. The co-chairs of the OEWG prepare the initial drafts, including the Zero Draft, of the document that will be used during the negotiation process that will culminate in the adoption of a post-2020 global biodiversity

Term	Definition
	framework by the Conference of the Parties to the Convention on Biological Diversity.
Parties (to the Convention)	Refers to signatory countries which are Parties to a convention.
Post-2020 agenda	In the context of this document it refers to the post 2020 global biodiversity framework, to protect and restore biodiversity by 2030 and ensure its sustainable use supports societal needs and values.
Post-2020 Global Biodiversity Framework (GBF) or the post-2020 framework	The current strategy of the CBD, which represents the global biodiversity framework, expires in 2020. Parties to the CBD are currently negotiating the targets and other details for the post-2020 framework.
Ratcheting mechanism	A mechanism based on a wheel that has teeth cut out of it and a pawl that follows as the wheel turns, allowing continuous linear or rotary motion in only one direction.
Resource mobilisation	Refers to securing new and additional resources for biodiversity from sources other than conservation/environment.
Subsidiary Body on Implementation (SBI-3)	One of the CBD's governing bodies created to support the Conference of the Parties in keeping under review the implementation of the Convention pursuant to Article 23, paragraph 4.
Transformative change	"a fundamental, system-wide reorganization across technological, economic and social factors." (2019 IPBES Global Assessment)
Triangular cooperation	Collaboration in which traditional donor countries and multilateral organizations facilitate South-South initiatives through the provision of funding, training, management and technological systems as well as other forms of support (UNOSSC).
Zero Draft (of the GBF)	Refers to the first version of the negotiation text of the GBF, produced by the co-chairs of the OEWG.

References

Abson, D.J., Fisher, J., Leventon, J., Newig, J., Schomerus, T., Vilsmaier, U., von Wehrden, H., Abernethy, P., Ives, C.D:, Jager, N.W., and D.J. Lang (2017), *Leverage points for sustainability transformation*. Ambio, 2017. 46(1): p. 30-39.

Blythe, J., Evans, L., Armitage, D., Bennett, N.J., Moore, M., Morrison, T.H., and K. Brown (2018), *The Dark Side of Transformation: Latent Risks in Contemporary Sustainability Discourse*, 50(5): p. 1206-1223.

Bouzarovski, S. and Haarstad, H. (2018), *Rescaling low-carbon transformations: Towards a relational ontology*, Transactions of the Institute of British Geographers, doi: 10.1111/tran.12275.

EEA (2019), *Sustainability transitions: policy and practice. European Environment Agency Report* No 09/2019 Luxembourg: Publications Office of the European Union. ISSN 1977-8449 doi:10.2800/641030.

FAO. 2019. *The State of Food and Agriculture 2019. Moving forward on food loss and waste reduction*. Rome. Licence: CC BY-NC-SA 3.0 IGO.

GBO-5. *Global Biodiversity Outlook 5*, Montreal, Canada (in prep.)

Geels, F.W., McMeekin, A., Mylan, J., and D. Southerton (2015*), A critical appraisal of Sustainable Consumption and Production research: The reformist, revolutionary and reconfiguration positions*. Global Environmental Change, 34: p. 1-12.

Göpel, M. (2016), *The Great Mindshift - How a New Economic Paradigm and Sustainability Transformations go Hand in Hand*. Springer. ISBN 978-3-319-43766-8.

IPBES (2018), *The IPBES assessment report on land degradation and restoration*. Montanarella, L., Scholes, R., and Brainich, A. (eds.). Secretariat of the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services, Bonn, Germany. 744 pages. https://doi.org/10.5281/zenodo.3237392.

IPBES (2019), *Summary for policymakers of the global assessment report on biodiversity and ecosystem services of the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem* Services. S. Díaz, J. Settele, E. S. Brondízio E.S., H. T. Ngo, M. Guèze, J. Agard, A. Arneth, P. Balvanera, K. A. Brauman, S. H. M. Butchart, K. M. A. Chan, L. A. Garibaldi, K. Ichii, J. Liu, S. M. Subramanian, G. F. Midgley, P. Miloslavich, Z. Molnár, D. Obura, A. Pfaff, S. Polasky, A. Purvis, J. Razzaque, B. Reyers, R. Roy Chowdhury, Y. J. Shin, I. J. Visseren-Hamakers, K. J. Willis, and C. N. Zayas (eds.). IPBES secretariat, Bonn, Germany. 56 pages. https://doi.org/10.5281/zenodo.3553579

IPCC (2018*), Global Warming of 1.5°C. An IPCC Special Report on the impacts of global warming of 1.5°C above pre-industrial levels and related global greenhouse gas emission pathways, in the context of strengthening the global response to the threat of climate change, sustainable development, and efforts to eradicate poverty*. Masson-Delmotte, V., P. Zhai, H.-O. Pörtner, D. Roberts, J. Skea, P.R. Shukla, A. Pirani, W. Moufouma-Okia, C. Péan, R. Pidcock, S. Connors, J.B.R. Matthews, Y. Chen, X. Zhou, M.I. Gomis, E. Lonnoy, T. Maycock, M. Tignor, and T. Waterfield (eds.).

International Resource Panel (2018). *The Weight of Cities: Resource Requirements of Future Urbanization.* Swilling, M., Hajer, M., Baynes, T., Bergesen, J., Labbé, F., Musango, J.K., Ramaswami, A., Robinson, B., Salat, S., Suh, S., Currie, P., Fang, A., Hanson, A. Kruit, K., Reiner, M., Smit, S., Tabory, S. A Report by the International Resource Panel. United Nations Environment Programme, Nairobi, Kenya.

McDonald, R.I., Colbert, M., Hamann, M., Simkin, R., and B. Walsh (2018). *Nature in the Urban Century – A global assessment of where and how to conserve nature for biodiversity and human wellbeing*. The Nature Conservancy.

O'Brien, K. (2018). *Is the 1.5°C target possible? Exploring the three spheres of transformation. Current Opinion in Environmental Sustainability*, 2018. 31: p. 153-160.

Pattberg, P., O. Widerberg, and M.T.J. Kok (2019), *Towards a Global Biodiversity Action Agenda*. 10(3): p. 385-390.

Pelling, M., O'Brien, K., and D. Matyas (2015), *Adaptation and transformation. Climatic Change*; 133 (1): p. 113–127.

Rankovic, A., Chabason, L., Jouve, M., and M. Kok (2020), *A good working basis in the making. How to handle the zero draft of the Post-2020 Global Biodiversity Framework*. IDDRI, Policy Brief N°01/20.

Seddon, N., Turner, B., Berry, P., Chausson, A., and C. Girardin (2019). *Grounding nature-based climate solutions in sound biodiversity science*. Nature Climate Change 9: p. 84-87.

Smith, A., Voβ, J.P., and Grin, J. (2010), *Innovation studies and sustainability transitions: The allure of the multi-level perspective and its challenges*. Research Policy, 39, p. 435-448.

Stirling, A. (2014*), Emancipating Transformations: From controlling 'the transition' to culturing plural radical progress*, STEPS Working Paper 64, Brighton: STEPS Centre.

Swilling, M., Hajer, M., Baynes, T., Bergesen, J., Labbé, F., Musango, J.K., Ramaswami, A., Robinson, B., Salat, S., Suh, S., Currie, P., Fang, A., Hanson, A. Kruit, K., Reiner, M., Smit, S., Tabory, S. *A Report by the International Resource Panel*. United Nations Environment Programme, Nairobi, Kenya.

Tschakert P, van Oort, B., St Clair A.L., and A. LaMadrid (2013), *Inequality and transformation analyses: a complementary lens for addressing vulnerability to climate change*. Climate and Development, 2013. 5(4): p. 340-350.

UNEP (2016), *Global Material Flows and Resource Productivity. An Assessment Study of the UNEP International Resource* Panel. H. Schandl, M. Fischer-Kowalski, J. West, S. Giljum, M. Dittrich, N. Eisenmenger, A. Geschke, M. Lieber, H. P. Wieland, A. Schaffartzik, F. Krausmann, S. Gierlinger, K. Hosking, M. Lenzen, H. Tanikawa, A. Miatto, and T. Fishman. Paris, United Nations Environment Programme.

WCMC (2020), *Overview of the outcomes of the study to inform the preparation of a long-term strategic framework for capacity-building beyond 2020.* CBD/POST2020/WS/2020/2/INF/1.

8. List of Acronyms

CBD: Convention on Biological Diversity

COP: Conference of the Parties

EEA: European Environment Agency

ESG: Environment, Social and Governance

FAO: Food and Agriculture Organization

GBF: Global Biodiversity Framework

GBGF: Global Blue Growth data Framework

GBO: Global Biodiversity Outlook

GHG: Greenhouse gases

IAG: Informal Advisory Group

ILK: Indigenous and Local Knowledge

IPBES: Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services

IPCC: Intergovernmental Panel on Climate Change

IRP: International Resource Panel

LDCs: Least Developed Countries

LTAM: Long-Term Approach to Mainstreaming [biodiversity]

NBS: Nature-Based Solutions

NBSAP: National Biodiversity Strategy & Action Plans

NDC: Nationally Determined Contributions

NR: National Reporting (NR)

OEWG: Open-Ended Working Group

UNEP: United Nations Environment Programme

SBI: Subsidiary Body on Implementation

SDGs: Sustainable Development Goals

SIDS: Small Island Developing States

UNCCD: United Nations Convention to Combat Desertification

UNFCCC: United Nations Framework Convention on Climate Change

WCMC: World Conservation Monitoring Centre

WHO: World Health Organisation

www.eklipse-mechanism.eu

EKLIPSE
Knowledge & Learning Mechanism
on Biodiversity & Ecosystem Services

Horizon 2020
European Union Funding
For Research & Innovation
Grant agreement 690474