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### INFORMING THE SCIENTIFIC AND TECHNICAL EVIDENCE BASE FOR THE POST-2020 GLOBAL BIODIVERSITY FRAMEWORK

*Addendum*

#### DRAFT SUMMARY FOR POLICYMAKERS OF THE FIFTH EDITION OF THE GLOBAL BIODIVERSITY OUTLOOK

*Note by the Executive Secretary*

#### BACKGROUND

1. In decision XIII/29, the Conference of the Parties decided that the fifth edition of the *Global Biodiversity Outlook* should serve as a basis for the follow-up to the Strategic Plan for Biodiversity 2011-2020. In decision [14/35](#), the Conference of the Parties took note of the plan for the preparation of the fifth edition of the *Outlook*, which indicated, among other things, that a draft of the *Outlook* would be available for consideration by the Subsidiary Body on Scientific, Technical and Technological Advice at its twenty-third meeting. Pursuant to this, the present document contains, in the annex, the draft summary for policymakers of the fifth edition of the *Outlook*. In addition, section III of document CBD/SBSTTA/23/2 provides an update on the progress made in preparing the fifth edition of the *Outlook* as well as the working outline and draft narrative. The complete draft of the fifth edition of the *Global Biodiversity Outlook* will also be made available for the information of the Subsidiary Body as well as for public peer review.<sup>1</sup>

2. The Subsidiary Body is invited to consider the draft summary for policymakers of the fifth edition of the *Global Biodiversity Outlook* and to provide any further guidance to the Executive Secretary on the finalization of the Outlook. It may also wish to take into account the present draft when preparing its conclusions and recommendations for the Open-ended Working Group on the Post-2020 Global Biodiversity Framework and for the Conference of the Parties, as appropriate.

\* CBD/SBSTTA/23/1.

<sup>1</sup> Available from the Convention's website.

*Annex*

**DRAFT SUMMARY FOR POLICYMAKERS OF THE FIFTH EDITION OF THE *GLOBAL BIODIVERSITY OUTLOOK***

**OVERVIEW**

1. Humanity stands at a crossroads with regard to the legacy we wish to leave to future generations. Biodiversity is declining at an unprecedented rate, and the pressures driving this decline are each intensifying. None of the Aichi Biodiversity Targets will be fully met, in turn threatening the achievement of the Sustainable Development Goals.
2. Nevertheless, reports provided by the world's governments, as well as other sources of evidence, reveal examples of progress which, if scaled up, can support the type of transformative changes necessary to achieve the vision of living in harmony with nature by 2050. A number of transitions pointing the way to the type of changes required are already in evidence, albeit in limited areas of activity. Examining how such transitions can be replicated and built on, will be critical to using the short window available to make our collective vision for living in harmony with nature a reality.
3. Options are available to the global community that could simultaneously halt and ultimately reverse biodiversity loss, limit climate change and improve our capacity to adapt to it and meet other goals such as improved food security.
4. These pathways to a sustainable future rely on recognizing that bold, interdependent actions are needed across a number of fronts, each of which is necessary and none of which is sufficient on its own to achieve these multiple goals. This mix of actions includes greatly stepping up efforts to conserve and restore biodiversity; addressing climate change in ways that limit global temperature rise without imposing unintended additional pressures on biodiversity; and transforming the way in which we produce, consume and sustainably trade goods and services, most particularly food, that rely on and have an impact on biodiversity.
5. Navigating the available pathways to the global vision involves consideration of all the multiple aspects of our relationship with nature and the importance we attach to it. Solutions need to seek an integrated approach that simultaneously addresses the conservation of the planet's genetic diversity, species and ecosystems; the capacity of nature to deliver material benefits to human societies; and the less tangible but highly-valued connections with nature that help to define our identities, cultures and beliefs.
6. Finding solutions that address all the varying values we attach to nature is challenging, but the rewards are great. Well-considered actions will produce multiple benefits, meeting societies' needs and expectations regarding the long-term balance required to return to a harmonious co-existence with nature.

**I. INTRODUCTION**

7. The strategy agreed in 2010 to guide global action during the United Nations Decade on Biodiversity 2011-2020 recognized the need to address the underlying drivers that influence the direct pressures on biodiversity. The failure to tackle these underlying causes of biodiversity loss was spelled out in the third edition of the *Global Biodiversity Outlook* as one of the factors resulting in the missing of the first global biodiversity target in 2010. Building on this analysis, the Strategic Plan for Biodiversity 2011-2020 structured the 20 Aichi Biodiversity Targets around five Strategic Goals, setting benchmarks for improvements across drivers, pressures, the state of biodiversity, the benefits derived from it and the implementation of relevant policies and conditions.
8. The Strategic Plan for Biodiversity, while formally adopted by Governments through the Convention on Biological Diversity and other biodiversity-related conventions, was intended as a global framework for all sections of society – and its success would depend on bringing about change among a wide range of sectors and stakeholders whose decisions and actions have an impact on biodiversity.

9. The mid-term review of the Strategic Plan for Biodiversity 2011-2020 carried out in the fourth edition of the *Global Biodiversity Outlook* concluded that by 2014, while indicators for the majority of the Aichi Biodiversity Targets were moving in the right direction, progress at that time was not sufficient for the achievement of the targets by 2020. The fourth edition of the Outlook outlined potential actions in each of the target areas that, if advanced, could still result in the achievement of the goals of the Strategic Plan.

10. Biodiversity is critical to both the 2030 Agenda for Sustainable Development and the Paris Agreement<sup>2</sup> under the United Nations framework Convention on Climate Change, each adopted in 2015. For example, around 30 per cent of the net reductions in greenhouse gas emissions required to meet the Paris Agreement's goals could come from "nature-based solutions". Biodiversity is explicitly highlighted in Sustainable Development Goals (SDGs) 14 (Life Below Water) and 15 (Life on Land) but also underpins a much wider set of SDGs: for example, it is a key factor for the achievement of food security and improved nutrition (Goal 2). All food systems depend on biodiversity and a broad range of ecosystem services that support agricultural productivity (through pollination, pest control and soil fertility etc.), as well as water quality and supply.

## **II. PROGRESS MADE IN IMPLEMENTING THE STRATEGIC PLAN FOR BIODIVERSITY 2011-2020**

11. The global summary of progress towards the Aichi Biodiversity Targets is based on a range of indicators, research studies and assessments (in particular the [IPBES Global Assessment on Biodiversity and Ecosystem Services](#)), as well as the national reports on implementation of the Convention on Biological Diversity, which parties are periodically obliged to provide. The national reports provide additional rich information about the steps taken in countries worldwide in support of biodiversity conservation, sustainable use, and equitable sharing of benefit. This body of information demonstrates the wealth of policies and actions developed in all parts of the world to address biodiversity loss, even if cumulatively they have not been sufficient to meet the goals agreed by the global community.

### **A. Summary of target achievement by goal**

12. *Goal A - Address the underlying drivers:*

(a) Progress has been made in public awareness and understanding of biodiversity and its values; there is wide variation across countries and attention to biodiversity in the media remains at a much lower level than coverage of climate change. Nevertheless, the heightened public alarm about the impacts of climate change is frequently expressed alongside dismay at the state of biodiversity, in particular the extinction crisis (Target 1);

(b) Despite examples of biodiversity being integrated into national planning, development and accounting, biodiversity is not yet being brought into the mainstream of decision-making at a global scale (Target 2);

(c) Progress has been made both in reducing agricultural subsidies that are potentially harmful to the environment and increasing the use of taxation to encourage conservation and sustainable use of biodiversity; however, these changes are not on a sufficient scale to minimize or avoid negative impacts on biodiversity (Target 3);

(d) Despite an increase in plans from governments and businesses for more sustainable production and consumption, these are not being implemented on a scale that counteracts the negative impact of unsustainable human activities on biodiversity. While the ecological footprint of human societies appears to have stabilized in recent years due to more efficient use of natural resources, it remains well beyond safe ecological limits (Target 4).

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<sup>2</sup> United Nations, *Treaty Series*, Registration No. I-54113.

13. *Goal B - Reduce direct pressures:*

(a) There has been a slowing in the rate of net deforestation worldwide, including for mangroves; for tropical regions, including for primary forests, other wilderness areas and global wetlands, the loss and degradation of habitats remains high. Land degradation and fragmentation of rivers represent critical threats to biodiversity (Target 5);

(b) A growing proportion of the world's fish stocks continues to be exploited unsustainably, with approximately one third of marine stocks overfished; although an increasing percentage of fisheries, accounting for around 10 per cent of wild-caught seafood, is certified under a standard recognizing progress towards sustainable management (Target 6);

(c) Despite an increasing proportion of land coming under organic agricultural management and certified forestry, biodiversity continues to decline overall in landscapes used to produce food and timber; agricultural expansion also remains one of the main drivers of global biodiversity loss, and rapidly-expanding aquaculture has caused large-scale loss of coastal wetlands (Target 7);

(d) Pollution, most especially the accumulation of reactive nitrogen in aquatic and terrestrial ecosystems continues to be a major driver of biodiversity loss, although nitrogen deposition has levelled off in Europe following decades of reduced emissions; plastic pollution has accumulated at alarming rates in the oceans, with severe impacts on marine ecosystems, and it is not yet clear whether action to minimize plastic waste in many countries has had a significant impact (Target 8);

(e) Good progress has been made during the past decade on identifying and prioritizing invasive alien species, and successful programmes to eradicate such species, especially on islands, have generated substantial benefits to native biodiversity; however, there is no evidence of a slowing down in the number of new introductions of alien species, and native species of birds, mammals and amphibians affected by invasive species are on average moving closer to extinction (Target 9).

(f) Multiple threats continue to affect coral reefs and other vulnerable ecosystems impacted by climate change and ocean acidification. Overfishing, nutrient pollution and coastal development compound the effects of coral bleaching and corals have shown the most rapid increase in extinction risk of all assessed groups; nevertheless, live coral cover on reefs has shown only insignificant global decline in past decades due to highly variable responses and rates of recovery among different reef systems. Other ecosystems, especially in mountains and polar regions, have experienced significant impacts from climate change compounded by other pressures (Target 10).

14. *Goal C - Improve biodiversity status:*

(a) The proportion of the planet's land and oceans designated as protected areas is likely to reach the targets for 2020 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; 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 (Target 11);

(b) Species continue to slide towards extinction at an alarming rate, although the situation would be even worse in the absence of conservation measures. With only 5 per cent of described species having been assessed for extinction risk, the best estimate is that nearly one quarter (23.7%) of all species in well-assessed taxonomic groups may currently be threatened with extinction, and around one million species are estimated to face extinction unless the drivers of biodiversity loss are drastically reduced. Global populations of vertebrate species have fallen by approximately 60 per cent since 1970, with the steepest declines occurring in freshwater ecosystems and in tropical regions. Climate change is anticipated to become an increasingly significant driver of extinction risk in coming decades (Target 12).

(c) Genetic diversity of cultivated plants, farmed and domesticated animals, and wild relatives, continues to be eroded. The wild relatives of important food crops are poorly represented in ex-situ seed banks that help guarantee their conservation and are important for future food security. The proportion of livestock breeds that are at risk or extinct is increasing, although at a slower rate than in earlier years, suggesting some progress in preventing the decline of traditional breeds (Target 13).

15. *Goal D - Enhance benefits to all:*

(a) The capacity of ecosystems to provide the essential services on which societies depend continues to decline. Species responsible for pollination are on average moving closer to extinction, as are species used for food and medicine. However, the expansion and management of protected areas has succeeded in safeguarding and restoring benefits in many areas, especially where indigenous peoples and local communities have been involved in their management (Target 14);

(b) The lack of global data makes it difficult to estimate progress towards the target of restoring 15 per cent of degraded ecosystems by 2020, but available evidence suggests poor progress to date. Nevertheless, ambitious restoration programmes are under way or proposed in many regions, with the potential to deliver significant gains in ecosystem resilience and preservation of carbon stocks (Target 15);

(c) The Nagoya Protocol on Access to Genetic Resources and the Fair and Equitable Sharing of Benefits Arising from their Utilization came into force in October 2014, ahead of the target of 2015 set for this milestone under the Aichi Biodiversity Targets. To date, 122 countries have ratified the Protocol. An increasing number of countries are adopting legislation and policy frameworks to implement the measures set out in the Protocol, although capacity challenges remain (Target 16).

16. *Goal E - Enhance implementation:*

(a) Since 2010, 168 Parties to the Convention have submitted a national biodiversity strategy and action plan (NBSAP), of which 144 submitted revised plans. This means that 97 per cent of Parties have now submitted at least one NBSAP, and 155 have taken the Strategic Plan on Biodiversity (2011-2020) into account. Most national targets included in NBSAPs align with the Aichi Biodiversity Targets, but the level of ambition varies, and the collective ambition of national targets does not add up to the global ambitions of the Strategic Plan (Target 17);

(b) While global information is difficult to assess, poor or moderate progress has been made towards integrating traditional knowledge and customary use into implementation of the Convention. Despite the importance of indigenous peoples and local communities as custodians of extensive lands, freshwater and marine resources in all regions, their role is poorly recognized in the majority of NBSAPs and national targets, with some notable exceptions. Additional information provided in the *Local Biodiversity Outlooks* has helped to provide greater recognition of the role of indigenous peoples and local communities in addressing biodiversity conservation and restoration (Target 18);

(c) Significant progress has been made since 2010 in the generation and sharing of knowledge and data on biodiversity, with big-data aggregation opening up new opportunities for improved understanding of the biosphere. However, major imbalances remain in the location of studies and monitoring, with biodiversity-rich countries in the developing world still greatly under-represented in databases and research projects. Information gaps remain in the consequences of biodiversity loss for people, and application of biodiversity knowledge in decision-making lags behind responses to tackle climate change (Target 19);

(d) Financial resources for implementing the objectives of the Convention have increased but remain inadequate and have not yet made use of the full range of sources from which funding may potentially be available. The proportion of overseas development assistance supporting the Convention on Biological Diversity has increased significantly, and concern about climate change has boosted aid flows for biodiversity even when it is a secondary objective – but the total funds available fall far below the amount needed to meet conservation goals, and are especially lacking in those countries richest in biodiversity and in threatened species (Target 20).

## **B. Overall conclusions on the progress towards the Aichi Biodiversity Targets**

17. As we reach the end of the decade, the inevitable conclusion is that actions since 2014 have not been sufficient to accelerate progress to the extent required – and consequently, that none of the 20 Aichi Biodiversity Targets have been fully met, although some specific components or elements within the targets have been achieved.

18. The failure to achieve the Aichi Biodiversity Targets threatens to undermine also the Sustainable Development Goals. The disproportionate vulnerability of women to the loss of biodiversity and ecosystem services, and the essential role of women in underpinning actions for conservation and sustainable use of biodiversity, have been consistently undervalued, potentially undermining effective steps towards realizing the 2050 Vision for Biodiversity unless gender issues better inform future policy decisions.

## **III. POSSIBLE PATHWAYS TO REACHING THE 2050 VISION**

### **A. Scenarios and pathways to 2050**

19. Available evidence suggests that despite the failure to meet the goals of the Strategic Plan for Biodiversity 2011-2020, it is not too late to slow, halt and eventually reverse current alarming trends in the decline of biodiversity. Moreover, the actions required to achieve this turnaround (or “bending the curve” of biodiversity decline, as it is sometimes termed), are fully consistent with, and indeed crucial components of, the goals and targets set out under the Paris Climate Change Agreement and the 2030 Agenda for Sustainable Development. In summary, realizing the 2050 Vision on Biodiversity depends on a combination of the following outcomes, each of which is necessary but none on its own sufficient:

(a) Efforts to conserve and restore biodiversity need to be scaled up at all levels using approaches that will depend on local context. These need to combine major increases in the extent and effectiveness of well-connected protected areas and other effective area-based conservation measures, large-scale restoration of degraded habitats, and improvements in the condition of nature across farmed and urban landscapes as well as inland water bodies, coasts and oceans;

(b) Climate change needs to be kept well below 2 degrees C and close to 1.5 degrees C above pre-industrial levels, otherwise its impacts will overwhelm all other actions in support of biodiversity. The conservation and restoration of ecosystems can play a substantial role in this. Such “nature-based solutions” can also be an important part of adaptation to climate change. On the other hand, other proposed land-based climate mitigation measures relying on biofuels, if used on an excessive scale, would add pressure on land and drive further destruction of habitat;

(c) Effective steps need to be taken to address all remaining pressures driving biodiversity loss, including invasive alien species, pollution and the unsustainable exploitation of biodiversity especially in marine and inland water ecosystems;

(d) Transformations need to be achieved in the way food is produced and consumed. This will combine adopting agricultural methods that can meet growing global demand while imposing fewer negative impacts on the environment and reduce the pressure to convert more land to production; and limiting the demand for increased food production by adopting healthier diets and reducing food waste;

(e) Transformations are similarly needed in both production and consumption of other goods and services affecting biodiversity for example in forestry, energy and provision of fresh water, as well as reduction in the impact of new infrastructure on the ecosystems in which it is placed.

### **B. Key transitions to sustainable pathways**

20. Each of the conditions necessary to achieve the 2050 Vision for Biodiversity requires a significant shift away from ‘business as usual’ across a broad range of human activities. The shape and nature of such transformative change can already be identified through a series of transitions under way to a limited extent in key areas. This Outlook examines the promise, progress and prospects for the following

interdependent transitions, that collectively can move our societies into a more sustainable co-existence with nature:

(a) Land and forests: moving to a situation in which maintaining and improving food security no longer involves the large-scale conversion of forests and other ecosystems to agricultural land;

(b) Sustainable agriculture: a global shift in the design of agricultural systems to make most efficient use of land and water while minimizing negative impacts on natural resources and biodiversity;

(c) Sustainable food: a transition to healthier diets that include more moderate consumption of meat, promote a greater emphasis on plant-based foods, and dramatically cuts waste in food supply chains;

(d) Sustainable fisheries: a shift in 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;

(e) Sustainable cities: large-scale greening of urban areas, making space for nature within built landscapes, improving the health and quality of life for citizens and reducing the footprint of cities on surrounding and distant ecosystems as well as global climate;

(f) Sustainable freshwater: an integrated approach for urgent recovery and better management of freshwater systems, guaranteeing the river flows required by nature and people, improving water quality, protecting critical habitats, controlling invasive species and safeguarding connectivity;

(g) Sustainable climate action: accelerating action to reduce the scale of climate change by favouring nature-based solutions that simultaneously limit greenhouse gas emissions, enhance carbon storage and provide positive benefits for biodiversity along with other sustainable development goals.

21. Already there are a number of incipient examples of such transitions, which, if scaled up, replicated, and supported by economy-wide measures, could support the transformative changes necessary to achieve the vision of living in harmony with nature by 2050.

22. Such transitions would be enabled by fundamental changes in, institutions, governance, values and behaviour.

### **C. Reflecting the multiple values of nature**

23. Taking the actions necessary to achieve the 2050 vision involves a wide variety of choices that reflect diverse aspects of our relationship with nature, and why we value it. To frame such choices, a new approach is required to ensure that the outcomes of our collective actions respond to the values and behaviours of people measured against multiple dimensions of nature's values. Under the emerging Nature Futures Framework approach, scenarios are under development that assess policy options based on positive outcomes for biodiversity measured against three broad perspectives:

(a) "Nature for Nature", in which value is placed on the diversity of species, habitats and ecosystems that form the natural world;

(b) "Nature for Society", which emphasizes the utilitarian benefits that nature provides to people and society; and

(c) "Nature as Culture", which highlights the role of nature in shaping identities, traditions, faiths and cultural landscapes.

24. A balanced and integrated approach incorporating each of these perspectives will guide us towards the future we want, and ultimately enable the 2050 Vision for Biodiversity to become a reality.