

IUCN views on the preparation, scope and content of the Post-2020 global biodiversity framework

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This is IUCN's response to **Notification 2018-063**. As requested, we focus on a) the scientific underpinning of the scale and scope of actions necessary to make progress towards the 2050 Vision; b) a possible structure for the post-2020 biodiversity framework and c) views on the financial gap and resource mobilisation (Annex I, Target 20).

IUCN offers the following views. We consider it premature to offer suggested wording for post-2020 'Aichi' Targets because the precise wording of such targets will be determined by the proposed framework. However, views on the content of future targets are offered in Annex I.

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1. The conservation imperative and the need for transformational change

- Continuing strong efforts to work towards the achievement of the Aichi Targets by 2020 is essential.
- The conservation imperative is clear and more urgent than ever. Biodiversity loss continues; the *Earth's sixth mass extinction* and loss of ecosystem extent and intactness are so severe that humanity must take measures to address the decimation of biodiversity immediately.
- Conservation actions are having significant impacts in reducing this loss, but are not implemented at sufficient scale to stabilise and ultimately reverse current declines. The action is not yet commensurate with the challenge we face, particularly in the face of catastrophic climate change.
- The severe consequences for humanity of biodiversity loss are a hidden terror already prevalent but rarely understood by society. To secure life on Earth, we need bold transformative action, underpinned by sound science and effective policy.
- A recently published IPCC Special Report asserts that a global warming scenario of 1.5 degrees Celsius (almost unavoidable unless significant transformative change takes place in both the land-use sector and other sectors), will lead to devastating impacts on biodiversity, including biodiversity located in protected areas.
- It is now incumbent on all to support the leadership role that the Convention on Biological Diversity must take to match the challenge with a comprehensive and achievable framework of action.
- The content of the post-2020 global biodiversity framework must reflect the need for transformational change to achieve the 2050 Vision for biodiversity: Living in Harmony with Nature: “By 2050, biodiversity is valued, conserved, restored and wisely used, maintaining ecosystem services, sustaining a healthy planet and delivering benefits essential for all people.”
- The new framework must be a global framework, not just a CBD framework; a framework to unify all Parties and stakeholders.
- It is important that the post-2020 framework does not reduce the level of ambition of the current targets. Some of the targets that were adopted in 2010 have proved difficult to implement owing to political challenges and constraints. The post-2020 global biodiversity framework needs to include policy mechanisms to ensure that the action taken is commensurate with, and therefore adequately addresses, the challenge.
- The post-2020 global biodiversity framework must express necessity as well as feasibility.
- A great deal of political will and courage is will be needed to do what is necessary to secure life on earth.

2. The conservation of biodiversity

- *"Biological diversity" – or biodiversity – as defined by the CBD means 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.*
- It is very important that this definition is borne in mind for the post-2020 global biodiversity framework and that it is oriented to the conservation of all three components of biodiversity. Ecosystem services are delivered through all three levels of biodiversity. Species are fundamental components of the ecosystems that we rely on to live, in a way that we are only just beginning to understand. Genetic diversity is essential for all species to thrive and to adapt to changing environments. We assume that the definition embraces ecological, species, and genetic pattern and processes.
- Against a backdrop of climate change, habitat alteration, anthropogenic movement and elevated disease transmission, species lacking genetic diversity will be less able to respond, adapt and survive.
- There will be a need to ensure that ocean, land, and freshwater environments are represented sufficiently across the post-2020 global biodiversity framework.
- IUCN stresses the importance of all three objectives of the CBD: conservation of biodiversity, the sustainable use of biodiversity and the fair and equitable sharing of the benefits arising from the use of genetic resources.

3. The 2030 Agenda for Sustainable Development

- The conservation of biodiversity is the basis for sustainable development, and therefore, a pre-requisite to achieve the Sustainable Development Goals (SDGs). The SDGs are dependent on the integrity of the biosphere, and every sectoral development goal is underpinned by biodiversity elements to a greater or lesser degree. Biodiversity conservation needs to be at the heart of the development mainstream.
- It is essential that the post-2020 global biodiversity framework is designed and adopted as an integral part of the 2030 Agenda for Sustainable Development. Although 2020 is the achievement date for the SDG targets that directly reflect the Aichi targets of the current Strategic Plan for Biodiversity 2011 - 2020, there is now an excellent opportunity to review and strengthen the biodiversity-related targets in the 2030 Agenda.
- The framework should be developed as an integrated strategy and action plan to help achieve the SDGs. Synergies and complementarities between the SDGs and the global biodiversity framework in the post-2020 period should be strengthened and harmonised.
- A key challenge we will be to ensure that funds for development assistance (ODA), e.g. in support of achievement of SDGs 2, 7, 9 and others, do not have negative impacts on the biodiversity – that is fundamental for the achievement of sustainable development.
- The SDGs provide an enabling framework for mainstreaming biodiversity and ecosystem services across scales and sectors.

- As yet there is no ‘official’ process to amend the SDG targets that ‘end’ in 2020. Whilst it is acknowledged that this will be a complex process, it must be addressed urgently so that the SDGs continue to call for action to ensure the essential underpinning of nature conservation to society and the economy. The Convention (e.g. through the High Level Panel to be set up after the COP14 decision), and the biodiversity community at large, needs to engage with the UN as soon as possible to achieve this.
- Thematic gaps in the SDGs (such as the absence of any reference to the environmental underpinnings of health in SDG 3) should be identified throughout the SDG framework, and addressed through the post-2020 global biodiversity framework.

4. Vision for 2050

- The current vision is a world of “Living in harmony with nature” where “By 2050, biodiversity is valued, conserved, restored and wisely used, maintaining ecosystem services, sustaining a healthy planet and delivering benefits essential for all people.”
- IUCN supports this Vision, and given its 2050 timeline, recommends that it be retained for the post-2020 global biodiversity framework.
- However, it is essential that the CBD should establish a small number of long-term 2050 science-based targets to underpin the Vision. These would both operationalise the 2050 Vision, and provide “landing lights” towards which the shorter-term targets to be established under the post-2020 biodiversity framework should be heading.
- Such long-term 2050 targets could include, for example, “Improve the survival probability of all species to that natural over Earth’s history” and “Reduce the risk of collapse of all ecosystems to background rates”. Given the decadal timeframes necessary for ecological recovery and restoration, delivery of such targets will not be possible by 2030, but clearly articulating a level of ambition for 2030 and for 2050 would reveal the necessity (and urgency) of implementation of short-term actions necessary for their achievement.

5. Mission for 2030

- A new Mission for 2030 is essential to galvanise the action necessary to deliver the 2050 Vision. Such a Mission should be set for 2030 to link to the 2030 Agenda for Sustainable Development. Such a 2030 Mission has also been described as an ‘Apex target’.
- The Mission should be a science-based planetary target for biodiversity (an appropriate equivalent of the 2°C/1.5°C temperature rise cap agreed under the Paris Climate Change Agreement) as the foundation for the future for humanity and all life on Earth, that can be quantified and tracked through implementation. It should be succinct, action-oriented, bold, measurable (focusing on biodiversity components: species, ecosystems, genetic diversity) and be totally consistent with the CBD’s definition of biodiversity.
- Such a Mission should aim at flattening current negative trends in species, ecosystems, and genetic diversity, as a step in the road towards reversing these trends to recovery by 2050. This is in line with “bending the curve” (reducing and then

stabilising the loss of biodiversity) or “retention” (ensuring conservation of remaining biodiversity, encompassing genetic diversity, species and ecosystems). Both of these (and others under discussion by IUCN Members), imply “no more net loss” as a milestone towards net gain, and so are directly equivalent to stabilising negative trends.

- These formulations are consistent with a “global mitigation hierarchy” which expresses a new means of working to ‘no net loss’ by 2030. The conservation hierarchy draws from the well-established mitigation hierarchy approach to structure biodiversity targets, clearly illustrating how they collectively contribute to an overarching vision for nature (see Annex II).
- Analytical modelling from IIASA and others demonstrates that it would be possible to stabilise trends by 2030 while also feeding humanity and halting climate change.
- The Mission for 2030 should be phrased in active language and be forward looking and enabling; a ‘call to action’ and communicate why this matters to people.
- It should be measurable (e.g. by focusing on component parts of biodiversity: species, ecosystems, genetic diversity), and justified by inclusion of the phrase “contributing to achievement of all Sustainable Development Goals”.
- It should be possible to disaggregate nationally and sectorally to reflect the range and diversity of supporting targets and associated commitments.
- Suggested wording for such a 2030 Mission is as follows: *Implement all actions necessary and sufficient to, by 2030, stabilise [or improve] [negative] trends in species, ecosystems, and genetic diversity, as the foundation for the delivery of the Sustainable Development Goals and the 2050 Vision for Biodiversity.*
- Such a formulation would allow individual countries, and indeed individual sectors and other entities, to determine the specific actions in specific places that they could contribute towards achievement of the overall Mission (see Section 9 below).
- The Mission could be accompanied by a popular slogan such as *Save Life on Earth Now, Forever.*

6. The five Strategic Goals: towards a re-framing

- The five Strategic Goals of the current Strategic Plan for Biodiversity 2011-2020 (encompassing tackling the underlying causes of biodiversity loss, alleviating the direct pressures, improvement of biodiversity status, enhancing the benefits to all, and supporting implementation of responses) are robust and coherent and need to be reflected in the new structure.
- They align well with the DPSIR (Driver-Pressure-State-Impact-Response) framework. It is clear however that implementation of all five Goals will require transformational change, including mainstreaming of biodiversity into development considerations.
- The framework should be framed as what we should do – i.e. positive.

- The relationship and inter-dependence between all the targets that form the post-2020 global biodiversity framework should be recognised and made explicit.
- All parts of the framework: Vision, Mission, and inheritors to the Aichi Targets should allow for inputs (and thus be scalable) for individual countries and non-state actors, businesses (and even individuals) – as well as regionally and globally.
- The transformational change that is required needs to be formulated in terms of outcomes. The achievement of the Mission 2030 therefore needs to be through a series of biodiversity targets that speak directly to the status of biodiversity (mostly Current Goal C); inheritors of Targets (5, 12, 13) expressed as outcomes.
- Outcome targets need to be supported by targets to tackle pressures on biodiversity and the drivers of these pressures. Post 2020, tackling the direct pressures on biodiversity loss as well as the underlying causes needs much more attention (Current Goal B). Supporting measures, structured in relation to desired outcomes, would address the drivers of loss (habitat loss and degradation, climate change, invasive alien species, excessive nutrient load and other forms of pollution, over-exploitation and unsustainable use). As now, targets could be structured under these drivers (inheritors of Targets 6, 7, 8, 9, 10).
- This work needs to be underpinned by addressing the underlying causes of biodiversity loss (Current Goal A: inheritors to targets 1, 2, 3, 4), including through synergies with other relevant policy mechanisms. Ideally, targets under Goal A would have parallel targets established under the non-environmentally related SDGs, as a practical mechanism to advance this mainstreaming. For example, an inheritor to the current Aichi Target 1 could be mirrored with addition of a new target on environmental education under SDG4, an inheritor to the current Aichi Target 2 mirrored with a new target on biodiversity planning under SDG17, and an inheritor to the current Aichi Target 3 mirrored with a new target on subsidies under SDG8.
- Achievement of biodiversity outcomes would be supported by targets for the benefits (to people and nature) of conserving biodiversity (Goals D; inheritors to Targets 14 - 16) and enabling targets (Goal E; inheritors to targets 11 & 17 - 20).
- In this way, the five Strategic Goals of the current Strategic Plan, which are robust and coherent would be a part of the framing. We envisage that the current Aichi Targets, albeit modified to an extent, would also fit recognisably within such a framework. A suggested framework is illustrated below:



7. Post-2020 global 'Aichi' targets for 2030

- The 20 Aichi Targets are overall well-conceived; even though overall biodiversity trends are negative, there has been progress towards meeting some elements of most of them, with progress more advanced for some than others.
- One feature of the Aichi Targets where significant progress has been made is the level of quantification and attribution that is possible. Targets that clearly state a measurable goal and ensure accountability by Parties tend to be much further advanced. Further analysis is required to identify success factors, weaknesses and other gaps. Other targets are phrased in a way that makes them hard to measure.
- It is very important to move towards increased specificity and measurability across all targets. Post-2020, specific measurable science-based targets should have clear quantifiable outcomes that demonstrably contribute to the 2030 Mission. They should also be able to be disaggregated into potential contributions and commitments towards their achievement by individual entities (see 9 on science -based targets).
- This will require each Party using a consistent framing for national level targets, using the same metrics as the global targets.
- New targets need to be supported by a clear, analytical rationale (why is the target set at a particular level?). Outcome-oriented targets (such as current Aichi Targets 12 and 13) should be differentiated from process-oriented ones; as noted above the current structure of five Strategic Goals organised across a DPSIR framework is a good way to achieve this.
- Post-2020, mechanisms to address both commitment gaps (where the necessary action has not been encapsulated in a target) and implementation gaps (where the appropriate target has been formatted but not implemented) need to be established; this will be an important role for the Subsidiary Body on Implementation.

- Targets should be set as milestones towards the endpoint of “Living in Harmony with Nature”. Therefore, clear links need to be established between the targets, Mission and Vision, and their contribution to the SDGs.
- Targets should be supported by a rationale and by a means of implementation. Here we suggest ‘borrowing’ from the SDGs which contain clear supporting Targets. This could be a good model for the post-2020 Targets.
 - For example: SDG Target 15.7 (By 2030) states *Take urgent action to end poaching and trafficking of protected species of flora and fauna, and address both demand and supply of illegal wildlife products*
 - This target is supported by the following supporting target: SDG 15.C states *Enhance global support for efforts to combat poaching and trafficking of protected species, including by increasing the capacity of local communities to pursue sustainable livelihood opportunities*

8. Gaps / issues that require additional emphasis in the current framework that need to be addressed post-2020

- Gaps include sustainable use of terrestrial species (and addressing the illegal wildlife trade; SDG Target 15.7 – could be addressed in the inheritor to Aichi Target 6); contributions of biodiversity to human health (could be addressed in the inheritor to Aichi Target 14); human rights, gender in relation to both gender responsiveness and gender balance, participation and key role of indigenous peoples (could be addressed in the inheritor to Aichi Target 18); nature and culture (could be addressed in the inheritor to Aichi Targets 14 and 15); land tenure issues (could be addressed in the inheritor to Aichi Target 3); plastics and other pollution (could be addressed in the inheritor to Aichi Target 8); biodiversity and peace, conflict and migration of peoples (could be addressed in the inheritor to Aichi Target 2); services delivered by soils (could be addressed in the inheritor to Aichi Targets 14 and 15); nature in cities and the role of cities in biodiversity conservation (could be addressed in the inheritor to Aichi Target 1); inland waters and high seas (need to be cross-cutting across all Aichi Targets, as with terrestrial and coastal environments).
- Some of these issues are addressed below; others are discussed in Annex I under the commentary on the current individual targets.
- **Human rights and biodiversity (see also gender considerations in section 16 below):** Biodiversity and human rights are part of the 2030 Agenda and are strongly interconnected. Biodiversity is necessary for the ecosystem services that support human existence through a wide range of human rights, including the rights to life, health, food, water and culture. More than 90 % of the SDG targets are linked to international human rights and labour standards. In order to protect human rights, biodiversity must be protected. Without a peaceful and safe existence, supported by livelihoods no conservation commitment can be expected from local people.
- Land and resource tenure is a major issue which connects the rights of IPLCs and vulnerable populations with conservation. There is an urgent need to protect the rights of those who are most vulnerable to the degradation and loss of biodiversity. Likewise, there is an urgent need to safeguard the rights of IPLCs to their lands, territories and resources which are essential for the fulfilment of their rights to food, water and health.

- Rights based approaches: The development and implementation of a rights-based “Social Performance Standard for Conservation” based on human rights frameworks and obligations should be encouraged and promoted as part of the post-2020 global biodiversity framework.
- Environmental human rights defenders: Measures, including legal instruments, should be developed in order to improve safety of environmental defenders.
- **Nature and culture:** The connection between culture and nature is a crucial untapped focus for achieving life for humanity in harmony with nature. Human heritage has been built on our roles as actors in functioning and evolving ecosystems. As an example, the number of cultural World Heritage Sites that overlap with Key Biodiversity Areas, is almost the same as the number of natural sites that overlap with KBAS. 10% of the world’s linguistic diversity is associated closely with natural World Heritage Sites, even though they account for only 1% of the Earth’s surface.
- Putting culture at the heart of the post-2020 agenda is not only ethically sound, it is also a practical means to support delivery. The priorities need to be discussed, but could include sustaining traditional land stewardship through farming and pastoralism, acceleration of right-based approaches that empower conservation led indigenous peoples and local communities as well as the connection of nature to the cultural life and experience of the 55% of people who live in urban areas.
- **Inland waters (INF/CBD/COP/14/45):** Water services are essential for sustaining all communities on the planet, and source catchments must be conserved to ensure the continued provision of those benefits. Far more emphasis needs to be placed on the importance of conserving freshwater biodiversity post-2020, given that a sustainable future depends upon targeted actions for conservation of inland waters. As much as 75% of the world’s inland wetlands (rivers, lakes, springs, and other freshwater ecosystems) may have been lost during the 20th century, less than 40% of large rivers remain free flowing, and approximately one-third of the freshwater species assessed by The IUCN Red List of Threatened Species are threatened with extinction.
- The current approach to conserving inland waters biodiversity is falling far short. SDG 6.6 calls for an ambitious target to “protect and restore water-related ecosystems” by 2020. In 2018, a High Level Panel on Water convened by the UN and Secretary-General and President of the World Bank Group urged greater collective action to address the growing water crisis. The CBD has an important role to play in supporting these ambitious objectives.
- Often perceived as components of the lands in which they are embedded, inland waters conservation targets have been combined with terrestrial targets (e.g. Target 11). This lumping obscures the distinct threats that inland waters face; inland waters should be explicit where specific environments are named throughout.
- Post-2020 targets must avoid the current trend of viewing the conservation of inland water ecosystems principally in terms of delivery of water. Clearer links must be made between SDG goals 6 and 15 in the revision of targets for post-2020. The conservation of inland water ecosystems should be addressed in all relevant targets to sustain life and consequently provide human water security.
- **Marine and coastal biodiversity:** The importance of the marine ecosystems has long been underestimated. Research has only recently advanced to a stage where we

understand the critical contributions these ecosystems make towards food, habitable land, weather and livelihoods as well as climate change mitigation.

- The post-2020 framework must explicitly include the protection, conservation and sustainable use of all marine and coastal ecosystems in all relevant targets, supported by indicators.
- Consideration must be given to the need to build the resilience of the marine and coastal realm to help combat global climate change. Improved resilience will come from better management of urbanized coastal, deep seabed, deep water column and pelagic areas. Other threats such as pollution (plastic waste and other marine debris) needs to be addressed. In such cases the “tap on land will need to be closed”.
- More attention needs to be given to ecosystems that connect land and sea (the interface zone) e.g. mangroves, seagrass, saltmarsh, kelp, coral and major riverine zones; see also remarks on Target 10 in Annex I.
- **Biodiversity and health:** The issue of health needs to be addressed in the post -2020 global biodiversity framework either through a specific health/biodiversity target or as part of the inheritor to the current Aichi Target 14. There is a compelling case for the integration of health perspectives in biodiversity policy and practice, and an equally compelling case for ensuring that biodiversity considerations are fully integrated into health policy and practice.
- It is necessary to articulate a transformative agenda for integrated health and biodiversity policy in a post-2020 framework towards SDG3 on Health and Well-Being, which currently does not make the requisite health-biodiversity link clear or measureable. Such an agenda should be fully mainstreamed: the mutual integration of biodiversity into health policy and health into biodiversity policy.
- It is also necessary to strengthen knowledge, awareness and good practice, including through education and training programmes to support capacity development among both nature conservation and health professionals, and building an economic and business case to support integration of biodiversity into health policy.
- **Soil biodiversity:** Soil biodiversity plays a fundamental role in the carbon, nitrogen and water cycles – influencing food production, water cycles, climate change mitigation and many other ecosystem services. All forms of sustainable agriculture—agroforestry, zero tillage, management of natural pastures etc.—work by protecting this soil biodiversity and capturing the multiple benefits that this generates. Soil biodiversity is the key to unlocking the multiple economic and environmental benefits—the multi-functionality—of land, but in most cases the agriculture sector has little incentive to provide many of these “positive externalities”.
- Soil biodiversity is of particular importance for maintaining soil fertility and moisture and therefore in determining agricultural productivity, but many agricultural practices deplete soil biodiversity (unsustainable land management practices, soil erosion and other land degradation processes). FAO has estimated that globally we have on average only 60 harvests left before the world’s soil is depleted. Globally, soil biodiversity has been estimated to contribute between US\$ 1.5 and 13 trillion annually to the value of ecosystems services. Yet despite its global importance, soil biodiversity is often neglected in public policy. Between one quarter and one third of all land worldwide is estimated to be degraded, resulting in lower agricultural production, disrupted water cycles, and release of sequestered greenhouse gases.

- This issue needs to be addressed in the post 2020 global biodiversity framework, perhaps through an inheritor to Target 7.
- **The Global Strategy for Plant Conservation (GSPC):** This is not a 'gap' currently but may become one post-2020. Adopted in 2002, this strategy and its 16 targets is due to 'finish' in 2020. The Strategy has galvanised tens of thousands of individuals and hundreds of institutions to work to contribute to the Aichi Targets and the SDGs. Given the importance of plants for the delivery and support of ecosystem services, and the ongoing threats to many species, the contents of the GSPC need to be demonstrably carried forward in the post-2020 global biodiversity framework, particularly as the Strategy is not well represented in the current Strategic Plan or SDGs.
- Updated GSPC targets (or sub targets) could be nested appropriately within the overall global biodiversity framework as contributors to high level outcome targets on species, genes and ecosystems. They should be ambitious, specific, time-bound, action-oriented, simple to understand and supported by indicators. Such an approach would ensure the continued commitment and effective contribution of the plant conservation community to the post-2020 global biodiversity framework.

9. Specific science-based targets

- Given the widespread consensus towards a new science-based Mission for 2030, method development to support determination of the *actions* necessary not just by CBD Parties but by all sectors of society (cities, sub-national governments, indigenous & local communities, the private sector, etc.) becomes an urgent priority.
- The success of a truly transformative post-2020 global biodiversity framework is clearly dependent on the contribution of both State and non-state actors. Recognition of the contributions will be essential to highlighting their potential to ramp up biodiversity conservation and unleash transformational systems change.
- As of now, the process needs to make space for the views and contributions by non-state actors, such as the business and financial sectors, youth, indigenous peoples and local communities, women's and youth organizations, civil society organizations and cities, all of whom are making substantial inputs that need to be heard and taken account of. Any sector or entity with demonstrable commitments to implementation of the post-2020 global biodiversity framework should be given the space and time to be heard and to make commitments to contribute. A re-structuring of the Convention's workings (see section 18) would provide a place and a space to help facilitate this.
- The development of mechanisms to disaggregate global targets into specific science-based targets for uptake by individual sectors (agriculture, climate change, energy, fisheries and commercial forestry), cities, etc. in addition to countries is recommended to harness the fundamental importance (and contribution) of different non-state actors to stabilising trends in species, ecosystems, and genetic diversity. Pre 2020 these would be voluntary commitments (see below). Such targets have played a crucial role in giving the private sector and other entities the space to creatively innovate, advancing the worldwide response to climate change.

- IUCN is addressing science–based targets in a number of ways. The IUCN SSC post-2020 Task Force has is currently engaging with a number of Parties on potential national pilots for assessment specific “science-based targets”. The Coalition for Private Investment in Conservation is exploring similar methods development with the financial sector, while Conservation International is in the process of developing a project to such methods for cities and companies.
- Increasing attention is being paid to incorporation of exported and imported impacts (“telecoupling”) through a range of biodiversity “footprinting” techniques. This allows the import and export of impacts through trade flows to be addressed.
- Across this diversity of sectors, IUCN proposes to showcase a suite of proof-of-concept specific “science-based targets” at the 2020 IUCN World Conservation Congress in Marseille, helping to build momentum towards final negotiations at CBD COP 15 later that year.

10. Others conventions / synergies

- There is a need to substantially enhance coherence and cooperation (the ‘synergies’) between the CBD (and its Protocols), the other two Rio Conventions, and the other biodiversity-related conventions, as well as other processes. The initiative taken by the Government of Egypt to bring this about for the three Rio Conventions must be fully supported.
- Aligning, as much as possible, the instruments for the implementation of these conventions could reduce implementation costs and optimize efficiencies. Commitments made across other Conventions which, if implemented, could also positively influence biodiversity need to be taken account of in National Biodiversity Strategies and Action Plans (NBSAPs), and ultimately at the global level. In this way, countries can identify additional sources of progress regarding biodiversity targets when implementing action on climate change or desertification, for example.
- To truly address the underlying causes and direct drivers of biodiversity loss, there needs to be links made to other relevant conventions. Parties are now discussing post-2020 frameworks for The Strategic Approach to International Chemicals Management (SAICM), a policy framework to foster the sound management of chemicals. Links to the post-2020 global biodiversity framework need to be made, notably through UNEA.
- Given that some Conventions are already preparing post-2020 global biodiversity frameworks, it is important that the CBD works to encourage Parties to ensure that Convention focal points work at the national level to harmonise their approaches.
- It is clear that these Conventions need to take part in the development of the post-2020 global biodiversity framework so that there is genuine buy-in from their own constituencies and the new framework and targets reflect the obligations within those agreements.
- NBSAPs should be strengthened and refined to support such synergies: implementation of the three Rio Conventions and the biodiversity-related Conventions and contribute to the 2030 Agenda for Sustainable Development.

11. Voluntary Commitments and proposed Nationally Determined Contributions (NDCs) for biodiversity

- **Voluntary biodiversity commitments** should be used to build momentum for biodiversity conservation post 2020 and represent an increase in ambition by Parties. They should not only aim to contribute to the achievement of the three objectives of the Convention but also contribute to an effective post-2020 global biodiversity framework (as called for in paragraph 11 of the relevant COP14 Decision).
- Voluntary biodiversity commitments from non-state actors should be strongly encouraged from all sectors who have important contributions to make to biodiversity conservation.
- Beyond encouraging these actors to consider developing biodiversity commitments before COP15 and making this information available as a contribution to the Sharm El Sheikh to Beijing Action Agenda for Nature and People (as called for in paragraph 12 of the relevant COP14 Decision), further thought must be given to the modalities and mechanisms to gather and account for such inputs and commitments.
- A mechanism or public platform to share relevant commitments could be a powerful tool to incentivize further action.
- Voluntary biodiversity commitments to be made before COP15 should help transform the political landscape of the CBD in a more positive direction, by promoting country-led action, and provide a more productive means for international cooperation on biodiversity conservation post-2020.
- **Nationally determined contributions for biodiversity:** From 2010 - 2020, Parties were asked to develop their national level targets within a flexible framework. In some cases, this has resulted in the likely under achievement of global targets because ambition levels for some countries are too low. Alternatively, a significant commitment gap may exist.
- Post-2020, the links between global and national level biodiversity targets need to be addressed, with the need to increase a sense of responsibility, accountability and commitment from Parties and stakeholders for implementation (i.e. action) without hindering national sovereignty.
- Post-2020, all Parties will need to 'map' the targets in their NBSAPs to all global targets. Each national target should be mapped in relation to all global targets (as appropriate) so that it is clear what the national level contribution to the global target needs to be; i.e. the national level targets take into account the precise conditions of each country.
- Therefore, in order to bring about action commensurate with the biodiversity challenge, it will be necessary to develop a nationally determined contributions system; in other words, post-2020, it should be recognized that different Parties have different conditions and therefore differentiated responsibilities.
- A nationally determined contributions system should be based on different conditions in the world. Some targets can be implemented differentially according to differing strategies appropriate to the prevailing national conditions.

- It is relevant to recall that the CBD has adopted Rio Principle 7 (enshrined in several articles): *States shall co-operate in a spirit of global partnership to conserve, protect and restore the health and integrity of the Earth's ecosystem. In view of the different contributions to global environmental degradation, States have common but differentiated responsibilities. The developed countries acknowledge the responsibility that they bear in the international pursuit of sustainable development in view of the pressures their societies place on the global environment and of the technologies and financial resources they command.*
- In the development of (NDCs), the typology under development by the IUCN WCPA post-2020 task force may be helpful: 'Three Global Conditions for Biodiversity Conservation'. Countries may have only one or all three conditions (Annex III).
- For Parties, a template for NDCs could be designed to link to the successor of the Aichi targets and the 2030 Mission. These will form the content of NBSAPs.
- Monitoring effort will need to be scaled up to assess whether national level targets would 'add up' in terms of their impact, to the intent of the global target. Nationally Determined Contributions will need to be reviewed periodically (to determine both ambition gaps' and 'commitment gaps').
- National reporting needs to encompass a process for conducting 'global stocktakes' to monitor progress on implementation against established global biodiversity targets at fixed intervals to enable countries to periodically enhance ('ratchet up') global ambition and action over time.
- The NDCs approach would also have the benefit of supporting the harmonisation of the Rio Conventions and biodiversity-related conventions through the creation of common reporting frameworks that would maximise synergies and minimise national reporting burdens.

12. Communication and outreach strategy

- A comprehensive communication strategy will be essential to mobilise engagement for support of a strong post-2020 framework. There is a need to raise awareness of all stakeholders of the existence of biodiversity-related targets across the SDGs and precisely how they relate to the subject matter of the Aichi Targets. Such a strategy needs to be rolled out to optimise impact at the many events to take place between now and COP15. (See also Annex I).
- The high-level biodiversity summit of Heads of State/ Heads of government scheduled for September 2020 should address the need to reinforce the biodiversity conservation underpinning essential for achievement of the SDGs and the renewal of relevant SDG targets finishing in 2020 and raise the level of political support for the development and implementation of the post-2020 framework.
- Maximum use should be made of the UN Secretary General's Climate Summit in September 2019 to emphasise the close links between combatting climate change and conserving biodiversity.

13. Indicators

- IUCN believes that it is essential to build synergies in both implementation and reporting. The Indicator framework for the post-2020 global biodiversity framework needs to be designed at the same time as it is developed, in order to strengthen future monitoring, reporting and verification.
- This requires the development of crisp and measurable targets (with elements that can be disaggregated) reflecting both process as well as status outcomes.
- Indicators for the post-2020 framework should be based on the existing suite of indicators, as reflected by those indicators mobilised through the Biodiversity Indicators Partnership.
- The process should allow for the development of global indicators that can be disaggregated to the national level. Such a review process could be expanded to focus also on potential sectoral targets that seek to implement global targets.
- The post-2020 global framework must be fully aligned to the 2030 Agenda for Sustainable Development and, through simultaneous reporting, tracked systematically to demonstrate its contributions towards achievement of the SDGs.
- Targets in the post-2020 framework should be structured as contributions towards an overall Mission for 2030 or Apex target, and thus indicators for these targets should also be structured so as to reflect explicit contributions of specific actions (e.g. PAs) towards this apex target.
- IUCN maintains the standards underpinning many of the indicators used to track progress towards the current 2011 - 2020 Strategic Plan for Biodiversity (e.g. ~1/3 of the indicators used in the fourth Global Biodiversity Outlook), as well as the Sustainable Development Goals. We will continue these contributions in support of the post-2020 biodiversity framework.
- IUCN both contributes to and supports the work of the Biodiversity Indicators Partnership. There has been a significant investment in the indicators used to measure progress towards the Aichi Targets. It is essential that all indicators are sustainably funded and will be available throughout the reporting period. Furthermore, all indicators should be championed by an identified responsible organisation, which is committed to producing and contributing their indicator(s) into the future. Focusing on a smaller number of relevant indicators is a priority post-2020.
- The BIP dashboard and the Integrated Biodiversity Assessment Tool (IBAT) are valuable tools for supporting the availability and visualisation of such indicators.
- Any voluntary national commitments will also need to be supported by indicators to measure and report on progress.

14. IUCN World Conservation Congress, Marseille, June, 2020

- The next IUCN World Conservation Congress will be hosted by France, 11 - 19 June at Parc Chanot in Marseille (<https://www.iucn.org/about/world-conservation-congress>).

- In 2019, IUCN will hold Regional Conservation Forums in all IUCN statutory regions to prepare for the Congress and discuss the new work Programme (2021 – 2014) of IUCN. These will include a specific agenda items on the post-2020 biodiversity framework.
- A strong communication and influencing strategy will be developed for the IUCN World Conservation Congress in June 2020, also linked to the post-2020 global biodiversity framework.

15. The workings of the CBD and its Programmes of Work

- The use of time for meetings of the Convention needs a complete and full overhaul, to increase efficiencies in the workings of the CBD and its subsidiary bodies.
- For example, post-2020, the Programmes of Work of the Convention should be aligned with and addressed under the successor to the Aichi Targets. Their achievement could be linked to discussion of progress with implementation. This could bring about efficiencies in the way that the Convention is run and how time is managed - and help Parties (and other sectors) align their work to the targets and Mission, as well as with reporting. Such a change in the workings of the Convention would be cost neutral – it is a matter of time management.

16. Other issues for consideration

- **Synthetic Biology and Digital Sequence Information:** These are divisive topics in conservation generally, with the challenge exacerbated by political issues of the degree to which they are already addressed under existing CBD mechanisms (specifically, the degree to which synthetic biology is addressed under the Cartagena Protocol, and the degree to which digital sequence information is addressed under the Nagoya Protocol).
- The fact that the Open-Ended Working Group (OEWG) on the Post-2020 process will consider the outcome of the Ad Hoc Technical Expert Group on Digital Sequence Information is positive and will help consideration of this issue in a more holistic way in the design of the post-2020 global biodiversity framework.
- Ongoing IUCN work is well-placed to help guide the way forward in consideration of both the positive and the negative interactions between biodiversity conservation and synthetic biology, with the IUCN assessment of the subject, mandated by RES 086 from the 2016 Hawai'i World Conservation Congress to be published in early 2019.
- Moreover, IUCN Council will lead the process of development of an IUCN policy on the subject, which will benefit from consultation through the IUCN Regional Conservation Fora over 2019, building up to consideration for adoption by IUCN's Membership in the 2020 Marseille World Conservation Congress.
- **The Nagoya Protocol and the Cartagena Protocol:** It is clear that the post-2020 global biodiversity framework must be relevant to and include the two Protocols to the Convention: this relates to both the process of preparation of the post-2020 global biodiversity framework as well as its actual content and design.

- MOP 9 of the Cartagena Protocol and MOP 3 of the Nagoya Protocol in Sharm El Sheikh both took decisions regarding the preparation and follow-up to the Strategic Plan for Biodiversity 2011-2020 (and the Strategic Plan for the Cartagena Protocol on Biosafety for that particular instrument), which state that interrelationship.
- However, while Parties to the Cartagena Protocol decided to develop a specific post-2020 implementation plan which is anchored in, and complementary to, the post-2020 framework, the Parties to the Nagoya Protocol decided to encourage Parties to undertake further measures to enhance implementation of the Protocol in the context of the post-2020 framework.
- It is advisable that, as much as possible, measures to enhance implementation of the Protocols remain within the scope of the post-2020 global biodiversity framework. With respect to specific targets under the new framework, further thought is needed as to their particular content and nature.
- **Gender:** A gender-responsive, socially inclusive process is fundamental to developing, agreeing and ultimately enabling effective implementation of a post-2020 global biodiversity framework that empowers women, men, indigenous peoples and local communities. Gender-responsive approaches to biodiversity conservation should be integrated throughout the post-2020 biodiversity framework,
- Women's empowerment is a prerequisite to fully achieving effective conservation and strengthening natural resource management through effective and equitable governance and a systematic adoption of rights-based approaches (see below). Women's rights, gender equality, social equity and good governance, and responsive actions towards that end, should be embedded in the post-2020 global biodiversity framework.
- It is critical that gender equality, social equity and good governance are well integrated into all aspects of framework structure and development.
- The post-2020 global biodiversity framework offers a strategic opportunity to synergize actions and advancement across the Rio Conventions.
- Women, particularly rural and indigenous women, are typically underrepresented in biodiversity-related decision-making. It will be important to incorporate the challenges, needs, priorities and leadership of women in biodiversity conservation in the structure of the post-2020 global biodiversity framework, including through their meaningful contribution and participation in the development of the framework.
- **Business and Biodiversity:** The post-2020 global biodiversity framework must be "owned" by all relevant actors. IUCN endorses the proposal being put forward by the Global Partnership for Business and Biodiversity regarding the engagement of Business in the post-2020 global biodiversity framework. The business community has much to contribute to biodiversity conservation targets, and a clear framework for contributions by non-state actors (see sections 9 and 11 above) prepared with the involvement of Business, can and will have substantial impact. Further, Business has a strong role to play in issues such as contributions to science, knowledge, and data-generation, generation of guidelines such as the role of Business and KBAs, the application of the mitigation hierarchy, the application of Other Effective Area-based Conservation Measures and Private Protected Areas, and awareness-raising, among other actions.

- **Compliance:** A focus on compliance with existing environmental laws, policies, licenses, permits etc. must be maintained. If all the existing environment management and protection rules were followed, there would be vastly improved biodiversity conservation outcomes. It is important to note that compliance does not mean just enforcement; it means a holistic and integrated analysis of what compliance activities/resources/systems are in place (from education to HR capacity to equipment to institutional systems); a consideration of the challenges and gaps, and analysis of problems and developing implementation strategies to address them. A major challenge is capacity building regarding environmental compliance.

Annex I: Comments on possible inheritors to individual targets

Target 1: *By 2020, at the latest, people are aware of the values of biodiversity and the steps they can take to conserve and use it sustainably.*

- Understanding, awareness and appreciation of the diverse values of biodiversity underpin the willingness of individuals to make the necessary changes and actions, and create the “political will” for governments to act.
- While they remain critically important, efforts to increase awareness and understanding of biodiversity and its values, and of actions that can be taken, are not enough. A shift in behaviour will require moving from awareness to action if we are to create the transformational change necessary.
- The inheritor to Target 1 should not only address increased awareness but also increased connectedness of people from all walks of life with nature in order to inspire significantly-enhanced, broad-based public and cross-sectoral action on biodiversity conservation.
- Concepts related to building awareness and inspiring conservation action should be a component of other goals and targets. For example, a renewed ecological restoration target should refer to public awareness benefits of opportunities for increasing connectedness with nature through engagement in ecological restoration activities (e.g., tree planting; stream rehabilitation, etc.).
- A number of measures of connectedness have been developed in recent years and used to explore the relationship between connectedness and action. Post-2020 measures of individual and sectoral conservation action should be explored.
- Given the concentration of people in cities, it would also be valuable to highlight urban issues in this Target post-2020.

Target 2: *By 2020, at the latest, biodiversity values have been integrated into national and local development and poverty reduction strategies and planning processes and are being incorporated into national accounting, as appropriate, and reporting systems.*

- The inheritor for Target 2 needs to call for Natural Capital Accounting following agreed international standards to be applied by all local, sub-national and national governments and by all large businesses (e.g. \$100 million turnover, 2000 employees), and used to reduce impacts on nature throughout the value chains and through changes to government policy.
- The inheritor to Aichi Target 2 could also reflect the importance of biodiversity conservation for peace, and for mitigating conflict and human migration.

Target 3: *By 2020, at the latest, incentives, including subsidies, harmful to biodiversity are eliminated, phased out or reformed in order to minimize or avoid negative impacts, and positive incentives for the conservation and sustainable use of biodiversity are developed and applied, consistent and in harmony with the Convention and other relevant international obligations, taking into account national socio economic conditions.*

- The current target 3 has not elicited the necessary response, perhaps because it demands significant change across political sectors. Encouraging positive incentives

and removing perverse incentives are hugely important steps in reducing pressures on biodiversity.

- The target is also very general and hard to report against. A post-2020 target should include a broader definition of subsidies, and be more specific, naming the precise subsidies and incentives to be addressed. A clear timetable for promotion or elimination should be provided.
- Positive incentives that could help support biodiversity conservation and should be encouraged include Payment for Ecosystem Services (PES) schemes; solar, wind and small scale hydropower technology; pesticide reduction strategies and sustainable agricultural intensification; and support for a range of nature-based solutions including carbon capture in vegetation and soils.
- Perverse incentives to remove include: support for fossil fuels; clearance of native vegetation; intensive livestock raising units; blanket pesticide and fertilizer subsidies that encourage wasteful use; and farming practices that exacerbate soil erosion, salinization and loss of soil carbon.
- Subsidies for fishing at levels that exceed agreed carrying capacity (a link should be made to SDG 14.6 which addresses the need to prohibit certain forms of fisheries subsidies which contribute to overcapacity and overfishing).
- For freshwater the target should include reference to the perverse impact of using subsidies for hydropower (perceived as 'green energy'), irrigation, water abstraction and wetland drainage.
- The inheritor to Aichi Target 3 could also reflect the importance of land tenure arrangements in providing incentives for biodiversity conservation.

Target 4: *By 2020, at the latest, Governments, business and stakeholders at all levels have taken steps to achieve or have implemented plans for sustainable production and consumption and have kept the impacts of use of natural resources well within safe ecological limits.*

- The inheritor to Target 4 needs to be linked closely with the implementation of SDG12 *Ensure sustainable consumption and production patterns.*
- Increased engagement with UNEA is a good way forward to tackle this target.

Target 5: *By 2020, the rate of loss of all natural habitats, including forests, is at least halved and where feasible brought close to zero, and degradation and fragmentation is significantly reduced.*

- Re-phrase as an outcome target in the post-2020 global biodiversity framework.
- The specific mention of "forests" has made this a "forest" target. Post 2020 the target should emphasise the need to stop the loss of all natural habitats.

Target 6: *By 2020 all fish and invertebrate stocks and aquatic plants are managed and harvested sustainably, legally and applying ecosystem based approaches, so that overfishing is avoided, recovery plans and measures are in place for all depleted species, fisheries have no significant adverse impacts on threatened species and vulnerable ecosystems and the impacts of fisheries on stocks, species and ecosystems are within safe ecological limits.*

- Post-2020 this target should be expanded to cover sustainable/legal use of biodiversity more broadly (terrestrial as well as marine and freshwater), and include demand reduction. The scope should embrace 'declining species' as well as 'depleted species'. Specify that the focus is beyond species level - on stocks/populations of species.
- The inheritor of this targets should embrace unsustainable use and its means of implementation should include advice on ensuring sustainable use/harvests. It should include the illegal wildlife trade, relevant to all realms and across all species.
- In the marine realm there should be reference to the need to address Illegal, Unreported and Unregulated (IUU) fishing and the need to eliminate destructive gears and methods, especially bottom trawling.

Target 7: *By 2020 areas under agriculture, aquaculture and forestry are managed sustainably, ensuring conservation of biodiversity.*

- Post 2020 the elements of this target should be made more focussed and specific. The term 'sustainably' needs to be defined.
- Marine based aquaculture must be managed to ensure no negative impacts to inland freshwater biodiversity, with particular reference to migratory species. The sourcing of animal and aquaculture feed is of deep concern, since so much is marine based. (e.g. >3kg of wild marine protein (animals) to produce 1 kg of farmed fish).
- See comments on soil biodiversity above.

Target 8: *By 2020, pollution, including from excess nutrients, has been brought to levels that are not detrimental to ecosystem function and biodiversity.*

- Links should be made to the Strategic Approach to International Chemicals Management (SAICM), a policy framework to foster the sound management of chemicals; and also to addressing plastics and other pollutants.

Target 9: *By 2020, invasive alien species and pathways are identified and prioritized, priority species are controlled or eradicated, and measures are in place to manage pathways to prevent their introduction and establishment.*

- The 2030 invasive alien species (IAS) target needs quantitative elements that are both ambitious but attainable, and set within the broader 2050 timeframe.
- The objective of a new 2030 target should be to reduce the rate of introductions of alien species, reduce the impacts from currently established IAS, and mitigate impacts from alien species that have the potential to become invasive due to climate change.
- While current Aichi Target 9 focuses on the prioritisation of species for management, and of pathways of introduction for prevention, the 2030 target needs to incorporate the prioritisation of vulnerable areas in order to achieve the greatest conservation benefits. These vulnerable areas are sites that are important for the persistence of biodiversity and sensitive and susceptible to the impacts from IAS, and include islands, protected areas, and Key Biodiversity Areas.
- The 2030 target should focus on IAS that cause, or have the potential to cause, significant impacts on such areas, which can now be identified using existing

assessment schemes, such as the Environmental Impact Classification of Alien Taxa (EICAT), and the Socio-economic Impact Classification of Alien Taxa (SEICAT) developed by the IUCN ISSG (as requested by Parties to the CBD).

Target 10: By 2015, the multiple anthropogenic pressures on coral reefs, and other vulnerable ecosystems impacted by climate change or ocean acidification are minimized, so as to maintain their integrity and functioning.

- This target is interpreted as having a focus on coral reefs despite that fact that it includes 'other vulnerable ecosystems'. Post-2020 the wording should be strengthened.

Target 11: *By 2020, at least 17 per cent of terrestrial and inland water areas, and 10 per cent of coastal and marine areas, especially areas of particular importance for biodiversity and ecosystem services, are conserved through effectively and equitably managed, ecologically representative and well connected systems of protected areas and other effective area-based conservation measures, and integrated into the wider landscapes and seascapes.*

- IUCN supports increasing ambition on land and sea for *in situ* conservation: we must retain the remaining natural or near-natural ecosystems over the planet's terrestrial, marine, and freshwater surface, in order to retain life on earth and all essential ecosystem services. This includes all aspects of biodiversity and will need to be supplemented with extensive restoration. Quality as well as quantity is critical. Achieving such bold conservation targets will require numerous tools, including among others: effectively managed and carefully located protected and conserved areas (including key biodiversity areas, EBSAs and other relevant national approaches); other effective area-based conservation measures (OECMs); enhanced ecological connectivity; *ex situ* conservation; sustainable use and harvest; invasive species management; climate change response; and pollution control. Each will need their own targets for effectiveness, and encompass conservation areas and measures governed and managed by many different rights-holders and stakeholders.
- World Heritage Sites are the places that the global conservation community should be most proud of as examples of conservation success; a litmus test for our global conservation efforts. Thus, it is of great concern that in 2017 only 64% of natural World Heritage sites have a positive outlook, and threats from invasive species, climate change, tourism and infrastructure are growing. There is an urgent need to set ambitious targets to improve the conservation status of World Heritage Sites, as an integral part of the post-2020 framework.
- The current Aichi Target 11 aspires to a sound vision for the management and governance for site-based conservation outcomes. It has elicited a sustained response in terms of the designation of new areas for protection.
- Other elements of the target that concern protected area quality, e.g. governance quality and equity will require more attention. Post-2020, these other elements of the inheritor to Aichi Target 11 will need to be addressed to ensure genuine gains for biodiversity conservation - to ensure the effective and equitable conservation of all Key Biodiversity Areas and areas of particular importance for ecosystem services. The recent establishment of the Key Biodiversity Areas Partnership and Programme (<http://www.keybiodiversityareas.org/home>), accompanies [Protected Planet](https://www.protectedplanet.net/)[®] (<https://www.protectedplanet.net/>) and the [IUCN Green List of Protected and Conserved Areas Standard](#) as core resources and mechanisms to support implementation of such a target.

- On spatial conservation targets, we note two key IUCN Resolutions from 2016. One encourages Parties to the CBD to consider a new process for developing post-2020 targets to increase the percentage of highly protected marine areas highly protected to 30% by 2030.
- A second resolution invites governments to use Key Biodiversity Areas to support the identification of sites for establishing new and expanding existing protected areas and OECMs.
- The ecological integrity of all remaining primary ecosystems (wild areas) of the world should be maintained, further fragmentation avoided, and ecological connections restored where areas have been fragmented.
- Other Effective Area-Based Conservation Measures (OECMs), more usefully referred to as “conserved areas” are, and can continue to complement protected areas to deliver greater ecological representativeness, improved connectivity and social equity across protected and conserved area systems. Care will be needed to ensure that these remain or become ‘effective’.
- Concerted efforts to improve functional and spatial connectivity across systems of protected and conserved areas are required where necessary to develop ecological networks and mitigate fragmentation. Such connectivity will also enhance conservation outcomes and the ability of biodiversity to adapt to climate change.
- Improved management effectiveness and governance effectiveness are required. The application of the IUCN Green List of Protected and Conserved Areas Standard facilitates assessment and enhancement of both good management and governance effectiveness, linked to documented conservation outcomes.
- The percentage elements of the current Aichi Target 11 have resulted in the establishment of many new Protected Areas. Post-2020 there is a need to place far more emphasis on the effectiveness of protected areas for achieving conservation outcomes, to ensure that protected and conserved areas achieve ecological representation, are protecting all areas of particular importance for biodiversity and ecosystem services, and are demonstrably equitable, and are yielding social outcomes.
- For post-2020 we suggest a minimum target of N% of the total land surface should be conserved as Protected Areas and Conserved areas (OECMs). This percentage should emerge bottom-up from analysis of site conservation targets within each country that are sufficient to achieve the global mission and ultimately vision; see above on NDCs.
- It will be essential to identify and protect all areas of importance for biodiversity (Key Biodiversity Areas and other sites of global significance for biodiversity). The value of all key biodiversity areas and other sites of global significance for biodiversity should be documented and retained through protected areas and other effective area-based conservation measures.
- Areas of importance for the provision of ecosystems services are addressed under Target 14.

- A target for the retention of freshwater ecosystems could be considered. At a minimum it should include protection of all threatened species, and given the integrated nature of freshwater ecosystems and the ecosystem services that sustain human livelihoods, also address minimum requirements to achieve basic human rights to water
- One other important effect of Aichi Target 11 was to stimulate the process to define “other effective area-based conservation measures” Post-2020, it will be of crucial importance is to identify and recognize appropriately those areas that are already conserved through the actions of indigenous peoples and local communities, as well as private actors, and those areas that will be established that meet the definition of OECMs agreed at COP14.

Target 12: *By 2020 the extinction of known threatened species has been prevented and their conservation status, particularly of those most in decline, has been improved and sustained.*

- Target 12 is framed as an outcome target which is perhaps one reason why its achievement has proved so challenging. Post-2020 it is suggested that this target be one of the three key outcome targets framed to achieve the Mission or Apex Target.
- Commitment and action to halt extinctions, halt and reverse declines of abundance of species in general and recovery of populations of threatened species are all essential.
- The most significant threats to threatened species are unsustainable agriculture (including non-timber crop farming and livestock farming), unsustainable logging, hunting and trapping, and invasive alien species. These threats are addressed by Targets 5, 7 and 9, for which progress has also been slow.
- Halting extinctions and improving the status of threatened species will require effective action addressing these direct pressures in combination with targeted site based conservation and action for those species that need specific additional conservation interventions.
- Conservation of key sites through protected and conserved areas, and promoting targeted action for threatened species all need to integrate the ongoing and expected the impacts of a changing climate. For interventions to prevent extinctions and recover threatened species, this will require actions to help species adapt to climate change.
- The illegal wildlife trade, and unsustainable hunting and trapping of terrestrial animals as well as unsustainable use of all species (in all realms) is a major threat that is only tangentially referred to in the Aichi targets. It is addressed by Sustainable Development Goal 15.7 (for 2030) and needs to be incorporated into the post-2020 global biodiversity framework. (Synergies with CITES are relevant here)
- A strong commitment to assess the extinction risk of species is important. Extinctions themselves are difficult to detect and there are often time lags before it can be confirmed that the last individual of a species has died.
- Post-2020 more attention need to be paid to species conservation planning. Formal action plans, developed from the knowledge base (species conservation assessments), are a compilation of all the measures necessary to bring about the recovery of a species. Recovering threatened species and achieving progress towards extinction risk targets takes time and so setting milestones may be useful. At the

national level the objective should be to develop a species conservation action plan for all threatened species requiring targeted site based conservation action.

- The Red List Index is an essential metric for assessing genuine changes in the extinction risk of species. The IUCN Red List currently provides assessments of extinction risk for 96,951 species. An increasing number of taxonomic groups have been comprehensively assessed more than once, and are therefore suitable for incorporation into the Red List Index. Resourcing such assessments and reassessments, and funding the underlying monitoring of species remains challenging but essential.
- IUCN stresses that on the whole conservation works. We need to do more, and scale up. Conservation work carried out in response to Target 12 may not have been registered because of the necessarily high level of the target. Although unknown numbers of species extinctions have occurred since 2010, it is also true that many have been prevented due to diligent conservation efforts.
- It is useful to assess the counterfactual scenario to determine the likelihood that a species would have gone extinct in the absence of conservation efforts. IUCN is therefore currently developing a 'Green List' approach to species conservation which will offer a standardised framework for doing this. Our aim is to be able to indicate extinctions prevented and improvements in species status.
- The IUCN Red List reflects changes in the status of a species as a whole, so large improvements are needed before progress is registered. The 'Green List' approach aims to assesses changes in status across separate parts of the species range, and is therefore more fine-tuned to reflect positive changes which have resulted from local conservation efforts within shorter time frames. This will assist monitoring and reporting and be especially valuable to donors. The Green List counterfactual will also identify cases where conservation actions have prevented deteriorations in status.
- To most people species and extinctions have considerable public resonance, and a species conservation focus is a pivotal component of a future plan to address biodiversity loss.

Target 13: *By 2020, the genetic diversity of cultivated plants and farmed and domesticated animals and of wild relatives, including other socio-economically as well as culturally valuable species, is maintained, and strategies have been developed and implemented for minimizing genetic erosion and safeguarding their genetic diversity.*

- This is the only target to specifically address within-species genetic diversity and receives little attention despite its critical importance.
- The current wording of T13 places a strong emphasis on the conservation of genetic diversity in cultivated plants and domesticated animals, compared to wild species. Although some attention is directed towards 'wild relatives' and 'socio-economically' and 'culturally valuable species', the species description largely omits wild species that comprise the vast majority of genetic diversity on the planet. While conservation of genetic diversity within those species emphasised in the target is certainly important, IUCN urges that the target should be expanded significantly and refocused on the conservation of genetic diversity in wild species, living in natural populations.

- Many species are not currently recognised as socio-economically or culturally valuable, but their genetic health is of crucial importance to human prosperity. Wild species are the genetic ancestors of all cultivated crops and domestic animals. While the importance of wild relatives is acknowledged in the current wording, this does not allow for novel domestication or alternative use that exploits natural genetic diversity across wild species.
- By definition, the loss of genetic diversity within a species is almost complete prior to species extinction. Target 13 is therefore extremely important in not only the conservation of biodiversity but in enabling the level and trajectory of the status of biodiversity to be measured and managed.
- Methods for evaluating and monitoring genetic diversity in crops and domestic species are not applicable to natural populations.
- Recent work has started to address the implementation of T13 for wild species in two ways. First, a method to evaluate population genetic diversity across a wide range of wild taxa, including those of socio-economic and cultural value, has been developed in Scotland, for worldwide application. This approach does not require the production of molecular genetic data, but instead generates a report enabling a comparison of the status, threats, management and long-term risk to genetic diversity among species and countries, over time.
- A second longer-term approach would be to use genomic data that allows direct measurement and trend monitoring of comparable genetic diversity measures. Such methods are under active consideration within the global conservation genetics community and would be equally applicable under this target to livestock and crop populations.
- While advocating that wild species should be given much more prominence in T13, the importance of maintaining a common framework for T13 implementation is also clear. A more explicit framework for implementing T13 would enable the CBD to unite wild species, agricultural species and forest genetic resources, including *in situ* and *ex situ* populations, into a cohesive system for measurement, monitoring and future management of genetic diversity.

Target 14: *By 2020, ecosystems that provide essential services, including services related to water, and contribute to health, livelihoods and well-being, are restored and safeguarded, taking into account the needs of women, indigenous and local communities, and the poor and vulnerable.*

- Ecosystems safeguard biodiversity and provide societal services for food security, health, water security, disaster risk reduction, adapting to climate change. Post-2020 there is a need for improved quantification of the risks faced by ecosystems. The developing global typology of ecosystems, being developed as the backbone of the IUCN Red List of Ecosystems, will facilitate assessment of the risks linked to spatial distribution and the functionality of ecosystems. It will also identify the most appropriate conservation actions.
- It is fundamental to protect other areas that are not (as yet) subject to formal conservation measures for the maintenance of essential ecosystem services, such as carbon sequestration and storage and provision of water.

- The inheritor to Aichi Target 14 could also reflect a) the ecosystem services delivered by biodiversity to maintaining human health, and b) the ecosystem services delivered through the maintenance of soil biodiversity.
- Investing in the conservation, restoration and sustainable use of ecosystems needs to be recognised and included within economic growth strategies of Governments.

Target 15: *By 2020, ecosystem resilience and the contribution of biodiversity to carbon stocks has been enhanced, through conservation and restoration, including restoration of at least 15 per cent of degraded ecosystems, thereby contributing to climate change mitigation and adaptation and to combating desertification.*

- There is an urgent need to massively scale up restoration of all ecosystems: forests, grasslands, croplands, wetlands, peatlands, savannahs and other terrestrial and inland water ecosystems, marine and coastal ecosystems and, as appropriate, urban environments.
- Restoration can bring about the recovery of degraded, fragmented, damaged and destroyed ecosystems resulting in improved ecological functionality. Ecosystem restoration generates outcomes directed to reverse species decline and prevent extinction of species.
- Restoration is currently a poorly defined term, and within a forestry context can be interpreted along a spectrum - from the implementation of simple monoculture plantations of non-native species, to the practice of regenerating forest to its former pre-degraded natural condition.
- The potential for biodiversity gains from landscape and ecosystem restoration is vast, including enhancements of biodiversity in productive landscapes through activities such as agroforestry, forest management and enrichment planting, coupled with actions to restore degraded areas that are critical for threatened species.
- Post-2020 there is a need to recognize the strong and positive opportunities associated with accelerating Forest Landscape Restoration, but focus must be shifted from quick fixes (possibly in response to global targets) by simply (and temporarily) capturing carbon in plantation monocultures and associated systems, to more holistic forestry practices, that better integrate human development and biodiversity needs.
- To date, 56 countries have pledged to restore over 168 million hectares. These pledges have created momentum that now needs to be followed through with action.
- The Bonn Challenge Barometer of Progress, a tracking protocol developed by IUCN in consultation with Bonn Challenge members, tracks how pledges are being converted into implementation.
- The opportunities for 'blue carbon'/biodiversity linkages through maintenance and/or restoration % of mangroves, seagrasses, kelp beds should be highlighted.

Target 16: *By 2015, the Nagoya Protocol on Access to Genetic Resources and the Fair and Equitable Sharing of Benefits Arising from their Utilization is in force and operational, consistent with national legislation.*

- See section 16 above.

Target 17: *By 2015 each Party has developed, adopted as a policy instrument, and has commenced implementing an effective, participatory and updated national biodiversity strategy and action plan.*

A new target will be needed to reflect the need to update NBSAPs with targets based on NDCs, global target mapping and contributions to other relevant conventions.

Target 18: *By 2020, the traditional knowledge, innovations and practices of indigenous and local communities relevant for the conservation and sustainable use of biodiversity, and their customary use of biological resources, are respected, subject to national legislation and relevant international obligations, and fully integrated and reflected in the implementation of the Convention with the full and effective participation of indigenous and local communities, at all relevant levels.*

- The knowledge, innovations and practices of indigenous and local communities are an essential consideration for the structure of the post-2020 global biodiversity framework. This should include ensuring representative decision-making and advocating for wider application of traditional knowledge toward biological conservation, with consent from, involvement of and equitable benefit sharing for holders of this knowledge.

Target 19: *By 2020, knowledge, the science base and technologies relating to biodiversity, its values, functioning, status and trends, and the consequences of its loss, are improved, widely shared and transferred, and applied.*

- This target is sound. Artificial Intelligence (AI) may need to be specifically addressed to encourage biodiversity positive applications and avoid some (unintended or otherwise) consequences of this rapidly evolving technology.

Target 20: The financial gap and resource mobilisation: *By 2020, at the latest, the mobilization of financial resources for effectively implementing the Strategic Plan for Biodiversity 2011 - 2020 from all sources, and in accordance with the consolidated and agreed process in the Strategy for Resource Mobilization, should increase substantially from the current levels. This target will be subject to changes contingent to resource needs assessments to be developed and reported by Parties.*

- The financing and mobilisation of resources should be an integral part of the development and implementation of the new post-2020 global biodiversity framework. A combination of both private and public finance will be essential to achievement the new global biodiversity targets, with a smart focus on how resources are deployed. In addition to calling for increasing public funding from Governments, a global call for voluntary financial contributions for the implementation of the framework to the private and philanthropy sector should be part of a resource mobilisation strategy for the post-2020 global biodiversity framework.
- Annual global conservation needs are estimated to be USD 300 - 400 billion, including approximately USD 80 billion to reduce extinction risk for threatened species and safeguard key biodiversity areas, very far from the current flows of funds to conservation estimated around USD 52 billion per year. Moreover, the greatest part of current funding is domestic government spending in developed countries, instead of developing countries where the greatest need for funding exists. Maintaining and increasing public sector finance is essential; one immediate need is to ramp up

biodiversity-related official development aid from its current global magnitude of about USD 10 billion.

- However, public sector finance and philanthropic capital alone are not sufficient to address the gap. Therefore, the mobilization and leveraging of private investment, as mandated for the 2030 Sustainable Development Agenda by the Addis Ababa Action Agenda on Financing for Development, must continue and be amplified.
- An assessment and removal of harmful incentives and regional and national roadmaps for their reform have to be established. Similarly, positive incentives to encourage and enable private investments must be strengthened, for example, by regulatory frameworks to reward private sector for safeguarding biodiversity. Appropriate indexes have to be defined to measure the impacts of investments on biodiversity in order to facilitate the choice of investors in favour of conservation and to unlock significant investment flows into biodiversity initiatives.

Annex II: Towards ‘No net loss by 2030’: A global mitigation or conservation hierarchy

- The “global mitigation or conservation hierarchy” expresses a new means of working to ‘no net loss’ by 2030. The conservation hierarchy draws from the well-established mitigation hierarchy approach to structure biodiversity targets, clearly illustrating how they collectively contribute to an overarching vision for nature.
- This approach is flexible; any action or target, such as protected area targets, or species-orientated targets, can be readily incorporated and set within a wider vision for nature. Multiple biodiversity targets can be arranged under headline goals, such as zero extinction of known species. The mitigation hierarchy is currently international best practice in the reactive management of environmental impacts; the conservation hierarchy would additionally allow for the proactive consideration of conservation actions, such as protected area expansion or habitat restoration.
- It is also inherently scalable and can be applied at national, local, sectoral, project and individual levels to translate international goals into locally relevant targets. Applying the same framework at multiple levels has the potential to streamline the reporting process, reduce the bureaucratic load and facilitate communication.
- Many nations already use the mitigation hierarchy to manage and report environmental impacts. This language is therefore already familiar to a wide range of organisations and sectors. In addition, its simplicity lends itself to a public facing campaign comparable to “reduce, reuse, recycle”. Finally, this approach would allow for the enormous range of efforts made by the international community to be globally tracked within a single framework, allowing the collective progress towards a global vision for nature to be calculated.

Annex III: ‘Three Global Conditions for Biodiversity Conservation’ proposed by the WCPA post-2020 taskforce:

1. (c.10% of land) Highly populated developed areas with significant agricultural and commercial forestry areas. Area-based conservation should focus on conservation (including connectivity) and restoration of remaining areas. Intensive agriculture and forestry should be managed in ways that support the ecosystem services essential to productivity (e.g. conservation of pollinators). This category includes urban areas, which require bespoke biodiversity conservation strategies.

2. (c. 60% of land) Open landscapes with low human population densities and grazing, fishing and some resource extraction and with large existing or potential protected and conserved areas: Here the objective is to develop protected "ecologically representative and well-connected systems of protected areas and OECMs, integrated into the wider landscape and seascape". Ecological representation and areas of particular importance for biodiversity should be a focus. Ecological restoration is particularly important, especially to ensure connectivity for large migratory species.

3. (c. 30% of land) Large areas with a high level of ecosystem integrity (wilderness), with very low population densities. Here the objective should be to protect (retain) and conserve the entire natural system (all wild native species and ecological processes) as it is now. Infrastructure such as roads should be minimized, and industrial development should be exceptional. Indigenous People and Local Communities play a significant role in the custodianship of such areas. In addition to *in situ* conservation, this condition protects global-scale ecological processes including carbon sequestration, regional hydrology, and large-scale meteorological patterns.