

Analysis of the Strategic Plan 2011–2020 of the Convention on Biological Diversity (CBD) and first discussions of resulting recommendations for a post-2020 CBD framework

Extended summary



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Aichi targets

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Summary

The Convention on Biological Diversity (CBD) is the most comprehensive global treaty dealing with nature conservation and sustainable use. Its current Strategic Plan, which includes the 20 Aichi Targets, has a time frame until 2020. The Convention's Conference of the Parties is expected to update this Plan in 2020 – or to adopt a new post-2020 global biodiversity framework.

This report presents the extended summary of an analysis of the structure and the content of the current Strategic Plan of the CBD (2011–2020). This includes an analysis of the individual Aichi Targets with respect to their 'SMARTness' and their relationship towards other relevant policy processes. For each Aichi Target, the options to keep it or to modify it were assessed and respective recommendations were developed which were then discussed with national and international biodiversity experts at two stakeholder workshops. Special emphasis was put on potential approaches for fostering commitments and strengthening implementation.

Overall, it is recommended to maintain the current Strategic Plan to the highest degree possible beyond 2020. However, as a partial update seems unavoidable, the upcoming re-negotiations should be regarded as an opportunity for improving the framework with regard to its consistency, simplicity and – in particular – its coherency with other multilateral environmental agreements, while keeping the level of ambition.

Introduction

Background and context of this report

The Convention on Biological Diversity (CBD) is the most comprehensive global treaty dealing with nature conservation and sustainable use. Its current Strategic Plan, which includes the 20 Aichi Targets, is coming to an end in 2020 (CBD/COP/DEC/X/2, 2010). Therefore, the fifteenth meeting of the Conference of the Parties to the CBD (CBD COP-15), to be held in 2020 in Beijing, China, “is expected to update the Convention’s strategic plan. This would be done in the context of the 2050 Vision of the current Strategic Plan for Biodiversity 2011-2020 as well the 2030 Agenda for Sustainable Development and other relevant international processes, and in the light of an assessment of progress in achieving the goals and Aichi Biodiversity Targets of the current Plan as well as of future scenarios of change” (quote from the CBD webpage¹).

The CBD has initiated processes to facilitate the development of a post-2020 global biodiversity framework, collected first suggestions from governments and stakeholders for a timeline and a “comprehensive and participatory” approach (CBD/SBI/2/17, 2018) and discussed the development of the process toward a new framework at the twenty-second meeting of its Subsidiary Body on Scientific, Technical and Technological Advice (SBSTTA-22) and at the second meeting of its Subsidiary Body of Implementation (SBI-2) (see also CBD/COP/DEC/XIII/1, 2016, p. 5; CBD/COP/14/9, 2018; CITES, 2018). A new draft document for the process will be subject of discussion at CBD’s Conference of the Parties (CBD COP-14) in November 2018. The CBD Parties also decided at SBI-2 to invite the submission of views from governments and stakeholders on the scope and content of the post-2020 global biodiversity framework until 15 December 2018 (CBD/SBI/REC/2/19, 2018).

To support the involvement of various stakeholders in the development process of the post-2020 CBD framework, the German Federal Agency for Nature Conservation (BfN) issued the study presented here and two stakeholder workshops. The aims of the study were to analyse the content and the structure of the current Strategic Plan of the CBD in order to derive recommendations for the post-2020 CBD framework. The recommendations drafted by the author team were discussed with national biodiversity experts and other stakeholders during a workshop held in April 2018 in Berlin/Germany. During the year 2018, several other initiatives in Europe have also worked on inputs to the development of a post-2020 CBD framework from different angles, e.g. from a NGO perspective² or from a more scientific standpoint³. Their common feature was that they all aimed at enriching the upcoming discussions on the future global roadmap for the conservation and sustainable use of biodiversity. To share suggestions, views and ideas among these different projects and approaches as well as with additional stakeholders, a second workshop with international biodiversity experts (mostly from European countries) was organized by ibn and held in September 2018 in Bonn/Germany.

¹ <https://www.cbd.int/post2020/>; the 2050 Vision referred to reads: “The vision of this Strategic Plan 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” (CBD/COP/DEC/X/2, 2010)

² See e.g. <http://www.biodiv.de/en/projekte/aktuell/cbd-strategy.html>

³ See e.g. <http://www.cambridgeconservation.org/collaboration/ci-engagement-defining-post-2020-biodiversity-agenda> or <https://www.iddri.org/index.php/en/publications-and-events/workshop/what-ambition-cop15>

Note on the presented analysis and the post-2020 CBD framework's overall architecture

In the remainder of this document, 19 out of 20 Aichi Targets are analysed on an individual basis. Suggestions for alternative wordings are presented for many of the Targets, partly at a level of considerable detail. Taking the submissions summaries in CBD/SBI/2/17 (2018) into consideration, this approach assumes that the Aichi Targets will form one of the important bases of discussions during the upcoming negotiations on the post-2020 framework of the CBD and that it is worthwhile scrutinizing potential options for improvements. The recommendations given in the following sections for the individual Targets were therefore derived focusing on the respective Target text and neglecting to a certain extent some other very relevant considerations such as potential implications that changes in the wording will have, e. g. for the indicator framework of the CBD and for the chances that all CBD parties will agree to revised Target text. An assessment of the impact that changed wording for a single Target could have on the overall biodiversity framework was beyond the scope of this study. The authors of this report are aware of the fact that e.g. negotiation strategies of CBD Parties might limit the opportunities for changes.

Another important issue largely neglected in this analysis is the question which overall architecture might be desirable for the post-2020 CBD framework. One option – at which the following analysis largely builds – is that the post-2020 architecture resembles the one of the current Strategic Plan in which the individual Aichi Targets are grouped under Strategic Goals but without a clear hierarchy amongst each other or a clear differentiation of different Target types.

Alternatively, the post-2020 CBD framework could have a very different structural character than the current Strategic Plan. For example, it could be composed of different categories of Targets that are ordered hierarchically within the overall scheme. Such architecture was sketched by some of the participants of the international expert workshop in September 2018 who strongly argued for separating the Targets into the following two categories: a) Targets that aim at incremental societal change toward a desired future, achievable realistically only over several decades (also depicted as ‘more procedural’ Targets or as Targets that aim at creating ‘enabling conditions’, e.g. Aichi Targets 1, 2, 3, 4); and b) Targets that fairly clearly define a desired state of a particular entity and that allow measuring progress in a comparatively straightforward manner (also depicted as ‘Targets with a defined endpoint’ or as ‘clearly quantifiable’ or ‘conservation-focused’, e.g. Aichi Targets 5, 9, 11, 15). Separating these two categories of Targets could significantly increase the consistency, logic and therefore the overall persuasiveness of the global biodiversity framework. The proponents of such a new architecture further argued that the separation of the different categories of Targets and their appropriate arrangement in a hierarchical structure would stimulate the analysis and understanding of dependencies among the Targets as well as between the Targets and other important global processes (such as links to the Sustainability Agenda), create opportunities for scrapping redundancies and for re-focusing the post-2020 global biodiversity framework on issues that are actually under the mandate of the CBD and the other biodiversity-related conventions. This view was contentious among the participants of the September workshop and spurred vivid discussions. Some of the participants argued further that discussing the overall architecture of the post-2020 global biodiversity framework and finding some common understanding on its set up and / or main building blocks would constitute a prerequisite for scrutinizing the text of the individual Aichi Targets in a meaningful way.

Acknowledging the value of these architecture-related considerations, the authors of this study took a different approach. They chose to scrutinize the individual Target texts and believe that this has merit by inspiring thinking and possibly guiding toward some improvements of the Targets.

However, when looking at the bigger picture, the authors overall conclude that the drawbacks linked to strongly modifying the overall structure of the framework or several of the individual Targets – namely the risk of losing important driver-orientated elements of the framework altogether, a significant decrease of the level of its ambition and a further indefensible delay of the implementation – largely outweigh the potential benefits (see the overall conclusions of this study).

Bearing this in mind, the draft recommendations in the following sections of this document should be understood as suggestions intended to foster creative thinking on the significance and appropriateness of the individual Aichi Targets and on options for modifications.

The Annex to this document provides an overview over how the Targets might be modified and proposals for Target texts. For many Targets the authors of the study as well as the participants of the national expert workshop proposed to keep but modify the Target. For the Targets 2, 3, 9, 12, 13, 14 and 18, they proposed to keep the Target as it stands or nearly as it stands (but additional sub-Targets and milestones are also proposed for these Targets, see below). The participants of the international workshop discussed the post-2020 CBD framework and many of the Aichi Targets at a more general level, providing different views on how to restructure the framework and which elements of the Targets are of specific importance to reach CBD's vision. Target 16 was not subject of this study.



Aichi 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.

Introduction

“Awareness” is often regarded as a prerequisite for taking action: only if people know what biodiversity is and what it is good for, they will value and care about it. Thus, “awareness” has been incorporated into the CBD Strategic Plan 2011-20, and the prominent place of the respective Target (#1) reflects the key role that the CBD Parties attribute to it. However, there are a number of challenges linked to Aichi Target 1 that are particularly related to its vagueness and the unclear relationship between awareness and action (i.e. related to the Target’s 2nd element: “the steps”).

Recommended options and further suggestions for Aichi Target 1

Suggestion by ibn: accentuate crisis and actions

Recommended option (ibn): Keep but modify Target 1.

By **2030**, at the latest, **all** people are aware of the **irreversibility and gravity of biodiversity loss** ~~values of biodiversity~~, and ~~the steps they can~~ take **actions** to conserve and **sustainably** use ~~biodiversity~~ ~~it sustainably~~.

Rationale:

The Target as it stands is too unspecific; its focus is more on awareness and less on actions. In 2010 in Nagoya, it was discussed if the qualifier 'all' should be included before 'people' or if the word 'people' is sufficient because it is anyway meant as a synonym for 'everybody'. This remains unclear from the current formulation. Furthermore, all biodiversity-related MEAs and the SDGs aim at and simultaneously compete for awareness; joined efforts could help using resources and outreach channels more efficiently. Furthermore, it should be considered whether IPBES language such as “Nature’s contributions to people” and “quality of life” should be included in the Target to acknowledge recent developments and (scientific) discourses around the terms “biodiversity values”, “ecosystem services” and “nature’s benefits”.

Suggestions by participants of the national expert workshop

Recommended option 1 (participants): Keep Target 1 as it stands.

Explanatory comments⁴:

- Aichi Target 1 is of critical importance and should be kept.

⁴The explanatory comments support the recommended option stated directly above. They were mentioned during the discussions at the respective expert workshop but the opinions they convey were not necessarily shared by all workshop participants. The purpose of listing them here is to offer some plausible arguments for the presented options. When issues were discussed intensively, this is reported to a high degree (marked by the insertion “Objection” or “Note”). If there was no agreement within the break-out group about which option to recommend or how the Target text should be re-phrased, two alternatives are presented in this report (marked as “Option 1, Option 2” if they refer to whether the Target text should be changed or maintained and as “Option A, Option B” if they refer to alternative wording of Target text).

- Target 1 should convey a positive message by accentuating the values of biodiversity instead of only focussing on the *loss* of biodiversity (as it was proposed by ibn).
- Whether the inclusion of the word “all” before “people” is appropriate, would need more reflection (this issue was raised but not further discussed by the group).
- It seems too early to include terminology coined by IPBES, such as “Nature’s contributions to people”. This term is still highly debated and only time will tell whether it becomes widely accepted. The term “quality of life” may be regarded as highly problematic, especially in the global south.

<p>Recommended option 2 (participants): Keep but modify Target 1.</p>
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Option A

By **2030**, at the latest, people are aware of the values of biodiversity and the steps they can take to conserve and use it ***fairly and*** sustainably.

Explanatory comments:

- The principle of “justice” should be enshrined in Target 1. – *Note:* The term “fair” was intensely discussed. While there was general agreement that a reference to “justice” was important, participants debated about how this could most appropriately be achieved. The word “just” refers more directly to “intergenerational justice” than the word “fair”. However, there seemed to be a tendency toward “fair” among the participants because it corresponds closely to the standard term “fair and equitable sharing of the benefits” and would result in Target 1 echoing the triad of the CBD objectives.

Option B

By **2030**, at the latest, people are aware of the values of biodiversity and ***of the irreversibility of biodiversity loss and the threat it poses to humanity and*** the steps they can take to conserve and use it ***fairly and*** sustainably.

Explanatory comments:

- It is also important to communicate the urgency of actions and that biodiversity loss poses a threat to humanity.
- Possible alternative terms to “threat to humanity” may be “risks to humanity”, “meaning of biodiversity for humanity” and “importance of biodiversity for humanity”.

Suggestions by participants of the international expert workshop

At the international expert workshop, there was a controversial discussion on whether Target 1 (and also Target 2, 3 and 4) should be maintained as stand-alone Targets in the post-2020 global biodiversity framework. Some participants argued that Target 1 (and 2, 3 and 4) aim(s) at creating ‘enabling conditions’ and that Targets of this type should be incorporated in a different way than Targets that are more conservation-focused (e.g. in a strategic section of the framework, see also the introductory ‘Note on the presented analysis and the overall architecture’ for a more detailed report on these considerations). Instead of proposing alternative Target text, participants made more general statements on the usefulness, specificity and complexity of Aichi Target 1 and reflected on ways how it could better be implemented. The following list summarizes some of the aspects that were raised:

- The level of ambition should potentially be raised, possibly by an addition referring to the need of reconnecting people to nature.

- The wording “values of biodiversity” should be kept. But a modification that stresses severity and urgency could indeed be an improvement.
- Inserting ‘all’ before ‘people’ aims too high: reaching ALL people by 2030 seems unrealistic.
- Affirmation of the notion that ‘awareness’ does not suffice and does not necessarily lead to the desired actions.
- Cautionary note on focusing too much on the ‘people’: this should not take off responsibility from the governments. The CBD is a country-level convention, committing individuals by the CBD seems very difficult – the CBD does not seem to be the right instrument for doing so. Instead, the governments are (and should be) the responsible actors addressed by the CBD in the first place and they should be reminded of their responsibility to raise the awareness of the ordinary people: Specifying particular steps and actions that are suitable for raising the levels of awareness and pointing out actions or behaviour that are needed for making progress toward the Target could help implementing it.
- Target 1 could have two streams: a) on the empowerment of people; b) on the responsibility of leaders/governments
- It is important to acknowledge that the concept and the valuation of biodiversity are not universal but culture-dependent.
- It is very important to define baselines for Aichi Target 1, there is not sufficient information on people’s awareness from most countries; this poses a severe problem for the development and use of indicators.
- The Target should ideally be more specific.
- Knowledge is needed on effective communication strategies, including different narratives for different target groups. Knowledge is also needed to define baselines (see above).

Further considerations

Below, considerations by ibn are printed in plain font (these were provided to the experts at the two workshops as a basis for the discussion), while suggestions that were derived by participants of the **national** expert workshop are printed in bold. There was no time during the international expert workshop to discuss these options and milestones in detail.

- **It could be worth considering a reference within Target 1 to the importance of the benefits of restoration (e.g. by adding text like “...and people are aware of the benefits of biodiversity restoration”).**

Options that could facilitate progress toward Aichi Biodiversity Target 1

- Underpin Target with quantitative milestones (revisit also the milestones and actions provided by the CBD for the period 2011–2020⁵).
- Clarify link between awareness and action.
- Join forces among CBD, other biodiversity-related MEAs and SDGs, align communication and education activities, strategies and plans as well as related indicators for evaluation.

⁵ For the milestones, see the Technical Rationales for the Aichi Targets: <https://www.cbd.int/sp/targets/rationale/default.shtml>, for the proposed actions, see <https://www.cbd.int/sp/actions.shtml>

Suggested milestones

- By 2025, biodiversity and nature's contributions to people, their conservation and sustainable use are included in (a) national education policies, (b) curricula, (c) teacher education and (d) student assessment (in line with UNESCO ESD and SDG 4.7/indicator 4.7.1).
- By 2025, biodiversity and nature's contributions to people, their conservation and sustainable use are fully included in aligned awareness campaigns, e.g. of UNEP, UNESCO and UNDP and the UN Education for Sustainable Development / SDG related campaigns, especially related to SDG 4.7.
- By 2025, actions identified to achieve Target 1 as well as the other Targets are compiled in an indicative list of "implementation action" (specifying different groups of actors) that feeds back into the process and is used, in turn, to enhance the implementation of the first element of Target 1.



Aichi 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.

Introduction

Aichi Target 2 is meant to address the fatal situation that the over-exploitation of natural resources is often a profitable strategy in economic terms – at least in the short run: Aichi Target 2 therefore demands a more adequate and significant consideration of the multiple values of biodiversity in decision-making processes, in particular in the context of economic development and poverty reduction. The CBD argues that “including the values of biodiversity in national accounts, strategies and plans would [...] give it greater visibility amongst policy-makers. The integration of biodiversity into national decision-making processes will enable Parties to appropriately assess the consequences of biodiversity loss, possible trade-offs and increase coordination among government ministries and levels of government” (CBD/COP/10/9, 2010).

Recommended options and further suggestions for Aichi Target 2

Suggestion by ibn: Aichi Target 2 with a modified timeline

Recommended option (ibn): Keep Target 2 as it stands.

By **2030**, 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.

Rationale:

Aichi Target 2 is based on a valid and important rationale but its implementation is hampered by various factors. IPBES recently concluded that with respect to the integration of biodiversity values, decision-makers still have difficulties to interpret and apply existing tools (IPBES/6/INF/6, 2018, p. 987). The aim and ambition of Target 2 should therefore be captured in a more accessible and less abstract way, which could be achieved with underpinning milestones and guidelines. Furthermore, some tools available to implement Target 2 (e.g. offsetting, payments for ecosystem services) are critically discussed in the scientific literature and by the IPBES regional assessments. Thus, more research and knowledge transfer is needed on the effectiveness and biodiversity-related impacts of tools that can be used implement Target 2.

Suggestions by participants of the national expert workshop

Recommended option (participants): Keep Target 2 nearly as it stands.

By **2030**, 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.

Explanatory comments:

- The formulation “are being” seems to imply that the processes of incorporation may just have started in 2030. “Are incorporated” seems more appropriate instead (and still allows that the incorporation happens continuously).
- Alternatively, to “values have been incorporated” the wording “values have been reflected” could be used; however this may actually lower the level of ambition. – *Note:* Participants also discussed whether there was sufficient evidence for positive effects of accounting on conservation. This issue remained unresolved in the group but several participants argued that accounting plays a very important role for the conservation of nature and should be kept as an element within Target 2.
- The insertion “as appropriate” weakens the level of ambition but since the conceptualization of the values of biodiversity is such a disputed and sensitive issue, the term “as appropriate” should be kept in this particular case.

Suggestions by participants of the international expert workshop

At the international expert workshop, Aichi Target 2 also triggered the discussion on the overall architecture of the global biodiversity framework (see also the introductory ‘Note on the presented analysis and the overall architecture’). Some participants argued that, by having Targets like Aichi Target 2, the CBD framework creates the impression that it could save the planet. This may ‘dilute’ the responsibility of other sectors. The CBD should therefore rather have Targets that address issues under its mandate (see also the introductory ‘Note on the presented analysis and the overall architecture’). On the contrary, some participants expressed the view that the issues addressed by Aichi Target 2 are very important and that they are in risk of getting less political attention if they are no longer included in a stand-alone target. It was further argued in favour of Target 2 by pointing out the need for a shared narrative with the development sector. In this respect, sending a signal that biodiversity is part of development (and thereby: stressing the importance of ‘mainstreaming’ biodiversity into development assistance) seems very significant. Accordingly, the link with the SDGs seems crucial.

Further points that were raised:

- Economic valuation of nature holds risks in terms of development. Some participants cautioned against the accounting of biodiversity in economic terms.
- When biodiversity values are being incorporated into national accounting and development strategies this should not be limited to monetary ways. Instead, alternative valuation methods should also be explored and used.
- It might be worth considering to incorporate the concept of the “rights of earth (e.g. applied to rivers, mountains, etc.)”, possibly also in laws and other regulations
- “Just measuring” is not sufficient. Instead, there is a need for “setting limits”, e.g. to activities of certain stakeholders that are harmful to biodiversity.
- Target 2 needs to be more specific to be achievable, e.g. with regard to land-use and decisions.
- It seems very easy to pay lip service to Aichi Target 2. Therefore, more focus is needed on operational questions and on means of implementation for specific actors, e.g. by specifying more tools and action plans and guidance on how the Target can be incorporated into the realities of the sectors.

- Environmental Impact Assessment is one major tool to consider biodiversity impacts – biodiversity considerations are still missing in a lot of environmental impact assessments in a number of countries. Making improvements in this regard could be a suitable milestone for Target 2.

Further considerations

Below, considerations by ibn are printed in plain font (these were provided to the experts at the two workshops as a basis for the discussion), while suggestions that were derived by participants of the **national** expert workshop are printed in bold. There was no time during the international expert workshop to discuss these options and milestones.

Options that could facilitate progress toward Aichi Target 2

- Underpin Target with quantitative milestones (revisit also the milestones and actions provided by the CBD for the period 2011–2020⁶).
- Milestones ~~could~~**should** include roadmaps **and strategies** for the consideration and incorporation of biodiversity values to be developed by different sectors.
- These roadmaps **and strategies** should make use of the insights of TEEB, the IPBES values assessment (IPBES Deliverable 3d) and other seminal processes in this field.
- **Some particularly relevant sectors may need to be mentioned explicitly to increase their readiness for action and the effectiveness of the milestone (such as agriculture, forestry, fisheries, infrastructure, trade, aquaculture, extractive industries, financial services, pharmaceutical industry, tourism, chemical industry).** – *Objection:* This list of particularly relevant sectors may possibly be better placed in an overall implementation guideline than in the particular Target(s).

Suggested milestones

- By 2025, all sectors (**possibly mentioning the particularly relevant sectors and the fact that the drivers operate directly and indirectly – but see objection above**) ~~that impact heavily on biodiversity~~ have developed a roadmap of how to incorporate the multiple values of biodiversity into decision-making, that include considerations about how to arrive at a prioritization, how to deal with trade-offs (among biodiversity conservation and other political goals) and guidelines on the choice of potential compensation measures.
- By 2025, ~~at least a fraction of ... per cent of all newly adopted~~ national and local poverty reduction strategies and planning processes have ~~showcased~~**implemented how** Target 2 ~~may be implemented~~ in the respective field. – *Objection:* By using the term “all newly adopted strategies” this milestone calls for the endpoint of a process – it therefore turns the milestone into a proper (sub)Target.
- By 2025, Parties have developed and adopted a common reporting standard for the incorporation of multiple biodiversity values into national reporting systems.
- By 2025, our understanding of the available tools for Target 2, and of their effects (including potential negative consequences of biodiversity) has increased significantly. – *Note:* “significantly” is not sufficiently strong and not measureable.

⁶ For the milestones, see the Technical Rationales for the Aichi Targets: <https://www.cbd.int/sp/targets/rationale/default.shtml>, for the proposed actions, see <https://www.cbd.int/sp/actions.shtml>

- By 2025, guidelines have been developed for particular tools that can be used to implement Target 2 (e.g. offsetting, natural capital accounting, habitat banking and payments for ecosystem services), highlighting options to overcome challenges and potential trade-offs.



Aichi 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.

Introduction

The elimination of incentives that foster environmentally harmful decisions is the core of Aichi Target 3. Specifically, subsidies that support activities detrimental to biodiversity are to be tackled. Such harmful subsidies play a huge role in agriculture and fisheries, where they are known to trigger biodiversity loss. But also in other sectors, e.g. those dealing with traffic, housing or regional development, subsidies often incentivize unsustainable behaviour. The implementation of Aichi Target 3 therefore demands changes in several political sectors, policies, regulations and programs, including trading and tax-schemes, with potentially drastic implications for national budgets and public spending. Furthermore, Aichi Target 3 asks for measures that reward decisions that are beneficial to biodiversity (positive incentives).

Recommended options and further suggestions for Aichi Target 3

Suggestion by ibn: Aichi Target 3 with modified timeline and minor changes

Recommended option (ibn): Keep Target nearly as it stands.

By **2030**, 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.

Rationale:

The IPBES regional assessments identify harmful subsidies as still being one of the important indirect drivers that trigger biodiversity loss and report that in most sectors harmful subsidies still exist and that little progress in phasing them out has been made (IPBES/6/15/Add.4, 2018, p. 28).

Suggestions by participants of the national expert workshop

Recommended option 1 (participants): Keep Target 3 as it stands.

Explanatory comments:

- Aichi Target 3 is regarded as a very important Target and it has been a huge achievement that the CBD adopted it in 2010 in its current form. To prevent that a re-negotiation results in weakening the Target (or in losing it altogether), it seems advisable to leave it untouched (except for the timeline).

Recommended option 2 (participants): Keep Target 3 nearly as it stands.

Option A

By **2030**, at the latest, incentives, including subsidies, harmful to biodiversity are eliminated, ~~phased out or reformed~~ ~~transformed into order to minimize or avoid negative impacts, and~~ positive incentives, **and new 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].

Explanatory comments:

- If a re-negotiation of Target 3 cannot be avoided, the term “phased out” should be deleted because it lowers the level of ambition substantially. – *Note:* Participants argued intensely about the formulation “reformed in order to avoid negative impacts”. They agreed that the Target should allow that subsidies harmful to biodiversity are turned into subsidies with positive effects for biodiversity but some raised the concern that the term “reformed” provides a backdoor for maintaining harmful subsidies in place. It was suggested that the wording “transformed into” may better convey the intension of the Target than “reformed”, i.e. that positive incentives may arise from existing schemes.
- The final part of the Target which refers to other relevant international obligations (and implicitly to the provisions of the World Trade Organization) and to national socio economic conditions could possibly be shifted to the introductory text or overall rationale of the framework (corresponding text is therefore bracketed above).

Option B

By **2030**, 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].

Explanatory comments:

- The most important issue is to eliminate incentives harmful to biodiversity. Therefore, the entire sub-phrase about the phasing-out or reformation of incentives that have negative impacts should be deleted. This would simplify the text without excluding different ways in which this could be achieved (such as the transformation of negative into positive incentives).

Suggestions by participants of the international expert workshop

At the international expert workshop, participants agreed that tackling subsidies harmful to biodiversity is crucial for combating biodiversity loss, but different views were expressed on the question whether Aichi Target 3 should be maintained as a stand-alone Target or be placed somewhere else together with other more strategic and process-oriented Targets (see also the introductory ‘Note on the presented analysis and the overall architecture’ and the sections about Targets 1 and 2). Alternative Target text was not discussed for Aichi Target 3.

Some participants saw a need for an active debate in the CBD on how Target 3 can be achieved and what means of implementation are at our disposal. Others, however, pointed out that CBD COP-12 already adopted milestones for Target 3 and welcomed modalities for its effective implementation

(CBD/COP/DEC/XII/3, 2014)⁷. The problem is that nobody reports against these milestones and the challenge remains that achievements toward Target 3 depend on other sectors not involved in the CBD and that largely accept the 'collateral damage' that harmful subsidies cause for biodiversity. Thus, the critical question is: how to engage and convince these sectors? The implementation of Target 3 seems to be a matter of political power.

Furthermore, the following aspects were raised:

- Breaking the Target down to more tangible subtargets/concrete actions could help to accelerate achievement toward the Target.
- Countries should produce lists of environmentally harmful subsidies so that we have an overview and can direct actions.
- The profile of CBD needs to be raised so that a shaming and naming system can help to produce positive change.

Further considerations

Below, considerations by ibn are printed in plain font (these were provided to the experts at the two workshops as a basis for the discussion), while suggestions that were derived by participants of the **national** expert workshop are printed in bold. There was no time during the international expert workshop to discuss these options and milestones.

Options that could facilitate progress toward Aichi Target 3

- Underpin Target with quantitative milestones and include responsibilities, where appropriate (revisit also the milestones and actions provided by the CBD for the period 2011–2020⁸).
- Milestones could include roadmaps and voluntary commitments.
- Voluntary commitments could be stirred by an open-access pledging system that could, e.g., include an online portal, which would allow citizens and NGOs to monitor the progress, and also ensure traceability of the pledges on the national or regional level (e.g. on EU level).
- Milestones could also address certain, particularly harmful subsidies, including levels of ambition and timelines. – **Note: The question was raised whether there should be a separate (sub)Target for the fishery sector (see below) or whether the Common Agricultural Policy (CAP) of the EU could be explicitly mentioned – or, alternatively, be implicitly addressed by a sentence about the influence of regional strategies.**

Suggested milestones

- By **2022–2025**, at the latest, Parties have [identified][**tackled**] harmful subsidies (using existing tools such as OECD guidelines) in key sectors (agriculture, fishery, forestry extraction, energy, production, transportation) and presented roadmaps to ~~phase them out~~ **eliminate these**, including levels of ambition and timelines. – **Note: Several participants favoured a more ambitious timeline than 2025 and argued that already eight years have passed since the adoption of the current Target. Since incentives harmful to biodiversity have nowhere been eliminated to a large extent, a high level of ambition seems appropriate.**

⁷ See also <https://www.cbd.int/incentives/perverse.shtml>, and the TEEB Implementation Guide for Aichi Target 3: http://www.teebweb.org/wp-content/uploads/2012/09/AICHI_Target_3.pdf

⁸ For the milestones, see the Technical Rationales for the Aichi Targets: <https://www.cbd.int/sp/targets/rationale/default.shtml>, for the proposed actions, see <https://www.cbd.int/sp/actions.shtml>

Furthermore, the term “identified” seems too weak, in particular in the European context (“tackled” may be an alternative, but this option was not further discussed by the group). – **Objection:** Some participants argued that 2022 seems too unrealistic and that “2025” should be maintained. However, they proposed to add a separate, (sub)Target for the fisheries sector with a more ambitious timeline (“2022”), because the detrimental effects of fishery-subsidies on biodiversity are well-known and very severe, threatening the food security of millions of people. Against such a specific (sub)Target for the fishery sector, the following cautionary note was raised: This would potentially lead to a bargaining of timelines by all other sectors, that could lead even to less ambitious timelines for some of them.

- By 2022, a subsidies forum has been established providing Parties with a platform to discuss the elimination of subsidies harmful to biodiversity and to come up with nationally determined commitments. A system has been installed by which pledges for reducing harmful subsidies are made public in a transparent and traceable way.
- By 2025, guidelines have been developed for particular measures that can be used to implement the second element of Target 3 (i.e., positive incentives), highlighting options to overcome challenges and potential trade-offs. Possible candidates for such measures are e.g. tax reductions for environmental friendly consumption of energy, products with a small ecological footprint, environmental friendly practices in agriculture etc.).
- By 2025, Parties have developed a roadmap how they intend to increase positive incentives.



Aichi 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.

Introduction

Production and consumption: these two terms are the core of Aichi Target 4 and they capture the vast majority of human activities that involve the use of substantial amounts of natural resources. Resource-use, in turn, drives many direct pressures on biodiversity such as habitat conversion, over-exploitation, pollution and climate change. The demand for resources also underlies some indirect drivers of biodiversity loss, such as ecologically unsustainable tax- and trading systems. Thus, patterns of production and consumption of goods and services determine to a large extent the human impact on the living environment, and they are key factors that trigger the overexploitation of natural resources and therefore biodiversity loss.

Recommended options and further suggestions for Aichi Target 4

Suggestion by ibn: accentuate role of consumers

Recommended option (ibn): Keep but modify Target 4.

By **2030**, 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.

By **2030**, *all consumers are aware of sustainable production standards and consider ecological sustainability when they make individual choices about products and services.*

Rationale:

Even with ongoing programmes such as the UNEP 10-year framework on sustainable consumption and production patterns⁹ and numerous public and private initiatives, not all target groups (Governments, business and stakeholders) have initiated steps or developed plans for sustainable production and consumption and natural resources are still exploited beyond safe ecological limits (see IPBES Regional Assessments), therefore the Target remains relevant. It could be considered to split Aichi Target 4 into two Targets, one focusing on production and with governments, public-private partnerships/stakeholders and business as the target groups and one focusing on consumption where everybody would be addressed.

Suggestions by participants or the national expert workshop

Recommended option (participants): Keep but modify Target 4.

By **2030**, 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~~ the limits **compatible with halting the loss of biodiversity.**

⁹ <http://web.unep.org/10yfp/about/what-10yfp>

Explanatory comments:

- Aichi Target 4 is key for achieving the goals of the CBD as it is the only one that explicitly refers to the impacts of resource-use. If a re-negotiation is unavoidable, it should be modified only slightly and efforts to implement it should be given high priority.
- The ibn-suggestion that “all consumers” should “be aware of sustainable production standards” misses the point as “awareness” is not the most pressing issue with regard to production standards but the availability of information; and, furthermore, awareness is covered by Aichi Target 1. Moreover, the request that “all consumers” should “consider ecological sustainability when they make individual choices about products and services”, as further suggested by ibn, seems unrealistic and also inappropriate with regard to the global south.
- The term “within safe ecological limits” should be replaced by more specific text that defines the “limits” with reference to the ultimate goal of the CBD, i.e., halting the loss of biodiversity. On the other hand it was argued that “within safe ecological limits” is more proactive and positive than “halting the loss of biodiversity” and that it is actually not sufficient to “halt the loss” as a loss marks the end point of a degradation process (which needs to be prevented earlier).

Suggestions by participants of the international expert workshop

At the international expert workshop, participants perceived Aichi Target 4 as a very broad – and maybe too broad – Target with numerous relations to other fora and MEAs. This triggered again the discussion on the overall architecture of the biodiversity framework (see also the introductory ‘Note on the presented analysis and the overall architecture’). In this context, it was argued that there are some Targets that are somehow “above the CBD” due to their breadth and importance, and Aichi Target 4 is an example for this. Accordingly, some participants suggested that the reference to “save ecological limits” that is currently made in Aichi Target 4 (or alternatively: to “planetary boundaries”) should be highlighted but better placed into the chapeau of the Strategic Goal B. Divergent views were expressed on whether the redundancy of Target 4 with other Targets and frameworks (e.g. SDGs) constitutes a problem or rather a plus (by fostering mutual reinforcement). Some participants saw a high value in having Aichi Target 4 as the one Target of the CBD that explicitly addresses production and consumption as driving forces for biodiversity loss. Alternative Target text was not proposed for Aichi Target 4, instead, the following more general aspects were raised:

- It is important that we also take into account how activities in one region affect biodiversity in other regions of the Earth. The underlying issue is also the question of promoting a production/export oriented policy vs. a policy of self-sufficiency.
- There is a need for a better understanding on how this Target can complement work of other conventions (while avoiding duplication of work), e.g. with regard to land-use.
- To avoid the perception that some of the Targets (such as Target 4) are unachievable, they should be underpinned by certain achievable steps, specified, e.g. for the agricultural sector.
- The CBD should provide guidelines for the operationalization of concepts such as “sustainability” and “within safe ecological limits”.

Further considerations

Below, considerations by ibn are printed in plain font (these were provided to the experts at the two workshops as a basis for the discussion), while suggestions that were derived by participants of the

national expert workshop are printed in bold. There was no time during the international expert workshop to discuss these options and milestones.

Options that could facilitate progress toward Aichi Target 4

- Underpin Target with quantitative milestones and include responsibilities, where appropriate (revisit also the milestones and actions provided by the CBD for the period 2011–2020¹⁰).
- Increase the consistency between the CBD and the SDG framework with regard to the aims of Target 4.
- **There is also a need to increase the coherence of national policy agendas and biodiversity aspects should be considered more thoroughly, e.g. in strategies related to development and sustainability (in line with and supporting the implementation of Target 2).**
- The term “within safe ecological limits” could be replaced by some better-defined level of ambition.
- **Use the ecological footprint as a measurable indicator, e.g. by defining goals for reducing it at the national level. This would correspond to a reduction of the average per capita consumption of natural resources.**

Suggested milestones

- **By 2022, sectors strongly affecting biodiversity (e.g., related to food, water, energy, health, rural, urban and industrial development) have specified resource use targets. – Note: Whether particular sectors should be mentioned was controversially discussed; a respective passage could also be included in an overall guidance document for the framework (see also general considerations on page 3).**
- By 2025, governments, business and stakeholders at all levels have developed and begun to implement plans for sustainable production and consumption and use natural resources within ~~safe ecological~~ **limits that ensure the conservation of biodiversity.**
- **By 2025, methodologies for measuring telecoupling effects, including indirect land-use change (ILUC), are in place.**
- **By 2025, the negative primary and secondary effects on biodiversity of imported biotic capacity of all Parties are reduced.**
- **By 2028, reliable, comparable and transparent information on the sustainability of a product (e.g. in terms of its biodiversity footprint) is available to all consumers. – Note: It seems questionable whether it should read “all consumers” here (see explanatory comment above).**
- By 2025, ... per cent of the consumers in developed countries and in countries in transition are aware of sustainable production standards and consider ecological sustainability when they make individual choices about products and services. – **Note: This milestone was not further discussed by the group but see explanatory comment above.**

¹⁰ For the milestones, see the Technical Rationales for the Aichi Targets: <https://www.cbd.int/sp/targets/rationale/default.shtml>, for the proposed actions, see <https://www.cbd.int/sp/actions.shtml>



Aichi 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.

Introduction

Aichi Target 5 addresses absolutely critical threats to biological diversity: the loss of habitat in terms of quantity (first and second Target element, see below) and the loss of habitat quality (by degradation and fragmentation, third Target element). Globally, “habitat loss, including degradation and fragmentation, is the most important cause of biodiversity loss” (CBD Quick Guide to Target 5). Responsible for this loss are other important direct and indirect drivers, most of them being also addressed by the current Strategic Plan of the CBD. Thus, “meeting Target 5 will require tackling direct pressures on natural habitats (e.g. expansion of the agricultural frontier, aquaculture, fisheries, forestry, logging, mining, oil & gas exploitation, infrastructure development, water development, human conflict, etc.) [...]” (IDLO, 2012, p. 15). Given persisting “economic, demographic and social pressures” (CBD Secretariat, 2014, p. 51) and the related increasing demand for natural resources (see previous section on Target 4) habitats loss and degradation are likely to continue. Acknowledging these circumstances, Target 5 does not call for a total avoidance of habitat loss and habitat conversion but for slowing down the processes that lead to the shrinkage, disappearance and devaluation of natural habitats.

Recommended options and further suggestions for Aichi Target 5

Suggestion by ibn: add the aspect of non-natural habitats

Recommended option (ibn): Keep but modify Target 5.

By **2030**, the rate of loss of all natural habitats, ~~including forests, is at least halved and where feasible brought as well as their degradation and fragmentation, are brought~~ close to zero, ~~and degradation and fragmentation is significantly reduced. Where this is not achieved, these rates are at least reduced by 75 per cent.~~

By 2030, the loss of biodiversity in non-natural habitats (such as urban or agricultural areas and managed forests) is halted.

Rationale:

Aichi Target 5 is very comprehensive and ambitious as it includes all natural habitats. As such, it is very important and should be kept. However, in a new Target, ambiguous or vague wording should be avoided to clarify, and potentially increase, the level of ambition. In addition, specificity could also be increased by underpinning milestones and it could be considered to address also biodiversity in non-natural habitats. If such habitats are included, the '*biodiversity in habitats*' should be addressed rather than the 'habitats' themselves because it would not make sense to call for halting the loss of non-natural habitats. Instead, it could make sense to call for not losing the biodiversity of such habitats, which would be in line with the aim for managing such systems sustainably expressed in Target 7.

Suggestions by participants of the national expert workshop

Recommended option (participants): Keep but modify Target 5.

By 2030, the ~~rate of~~ loss, degradation and fragmentation of ~~all~~ natural and semi-natural habitats, ~~including forests, is halted at least halved and where feasible brought close to zero, and degradation and fragmentation is significantly reduced.~~

Explanatory comments:

- Loss of habitats is a main driver of biodiversity loss and has to be addressed. Therefore the Target should be kept.
- Level of ambition should be kept high and the extension of the timeline until 2030 allows for calling for a complete halt of loss of habitats.
- Percentages, as proposed by the ibn, would constitute a loss of ambition and should not be introduced into the Target text.
- Not only the rate of loss should be reduced, but the loss as such should be halted. – *Note:* It was argued by some that not only the loss of habitats should be halted but that also the coverage of natural habitats should be increased. Others argued that this is too ambitious and unrealistic.
- Semi-natural habitats can also have a high biodiversity and should be included in the Target text.
- Although forests can hold a high biodiversity they should not be singled out in the Target text.
- Urban areas should not be mentioned explicitly (as it was suggested by ibn).

Suggestions by participants of the international expert workshop

The participants of the international workshop did not explicitly work on changing the Target text but discussed more freely to come up with the following aspects:

- Fragmentation, degradation and loss are steps in a process of decline. Formulate the Target following that process.
- Formulate a broad headline Target and name specific habitat types in sub-targets /milestones with urgent requirements: halt loss of primary forests, no conversion of natural grasslands, no net loss of wetlands.....
- Halving the loss of natural habitats is still ambitious with the current population growth in many world regions.
- Halting the loss is not possible as this would mean to stop economic growth. Therefore, concentration should be on Key Biodiversity Areas and EBSAs (link to Aichi Target 11).
- Reaching Aichi Target 5 needs close cooperation with stakeholders and other MEAs that care for specific habitat types, e.g. Ramsar for wetlands, the Arctic Council etc.
- The loss of semi-natural habitats has also to be halted as they harbour high biodiversity especially in old cultural landscapes (e.g. in Europe) and are highly threatened by modern agricultural production.
- The loss of soil is a growing problem and should explicitly be mentioned.
- Integrated land use planning is a valuable policy tool for the implementation of Target 5.

Further considerations

Below, considerations by ibn are printed in plain font (these were provided to the experts at the two workshops as a basis for the discussion), while suggestions that were derived by participants of the **national** expert workshop are printed in bold. There was no time during the international expert workshop to discuss these options and milestones.

Options that could facilitate progress toward Aichi Target 5

- Underpin Target with quantitative milestones (revisit also the milestones and actions provided by the CBD for the period 2011–2020¹¹).
- These milestones could, like the entire Target, demand certain levels of reduction.

Suggested milestones

- By 2025, the ~~rate of~~ loss, **degradation and fragmentation** of all natural **and semi-natural** habitats is at least reduced by ~~7560~~ per cent., ~~and degradation and fragmentation are reduced by 50 per cent.~~
- ~~By 2025, the rate of loss of biodiversity in non-natural habitats (like urban or agricultural areas) is reduced by 60 per cent.~~ – **Note: Participants recommended deleting that milestone completely.**

¹¹ For the milestones, see the Technical Rationales for the Aichi Targets: <https://www.cbd.int/sp/targets/rationale/default.shtml>, for the proposed actions, see <https://www.cbd.int/sp/actions.shtml>



Aichi 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.

Introduction

Aichi Target 6 addresses the overexploitation of the natural resources in marine and freshwater ecosystems. It is dedicated to the management and harvest of wild aquatic species, as the management and harvest of cultivated species is addressed elsewhere in the Strategic Plan of the CBD (in Target 7, see below). Target 6 stresses in particular the role of fisheries, which is currently in many cases detrimental. Target 6 further states that the use of marine resources should comply with legal rules, pinpointing at the fact that uncounted illegal, unreported and unregulated activities are going on in the oceans, which also pose serious risks to many marine species.

Recommended options and further suggestions for Aichi Target 6

Suggestion by ibn: accentuate freshwater biodiversity

Recommended option (ibn): Keep but modify Target 6.

By **2025, all fishery subsidies harmful to biodiversity have been eliminated and** all fish and invertebrate stocks and aquatic plants **in marine and freshwater ecosystems** 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.

Rationale:

Aichi Target 6 is commonly referred to as a 'marine' Target, although this word is not mentioned in the text and the Target also includes freshwater species. This focus could be emphasized explicitly in a modified Target. Underpinning the Target with milestones that specify certain quota for these organism groups would be a clear loss of ambition compared to the Target as it stands, because it currently addresses explicitly "all fish and invertebrate stocks and aquatic plants". Alternatively, the Target could be maintained as it is but postponed until e.g. 2025 (instead of 2030) to emphasize its urgency. As unsustainable harvesting is clearly linked to subsidies harmful to biodiversity (see also Target 3) a milestone could refer to such subsidies (e.g. by inviting pledges for their reduction). Finally, Aichi Target 6 contains some expressions that lack clear definitions.

Suggestions by participants of the national expert workshop

Recommended option (participants): Keep but modify Target 6.

By **2025, all fishery subsidies harmful to biodiversity have been eliminated and** all fish and invertebrate stocks and aquatic plants **in marine and freshwater ecosystems** are managed and harvested sustainably, legally and applying ecosystem based approaches, so that overfishing is **halted**

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.

Explanatory comments:

- The drivers of loss mentioned in Target 6 are still not under control and the Target is still valid.
- Freshwater ecosystems should be accentuated so that the Target is not only seen as a marine Target.
- The wording 'halted' sounds stricter than 'avoided'.
- A timeline until 2025 instead of 2030 would set the appropriate level of ambition.

Suggestions by participants of the international expert workshop

Instead of formulating concrete Target text the participants of the international workshop discussed with the following output:

- Target was seen as “the fisheries Target” that is harvest oriented (as opposed to Aichi Target 11 which is area based).
- A combination of both approaches might be useful: 70% of the oceans under sustainable management (under Aichi Target 6) and 30% under protection (under Aichi Target 11) as no-take zones.
- The Target would need defined standards for sustainable yields or stock reference limits. As well timeframes for the recovery of depleted species would have to be defined.
- Illegal, unreported and unregulated (IUU) fishery is a major problem.
- Insert after legally 'in a precautionary, transparent, inclusive and predictable manner'.
- Current marine protected areas have very little no-take zones (where no commercial fishery would be allowed). Such areas would be urgently needed for recovery and conservation.
- Concentrate Target 6 on fisheries and put other marine issues in another Targets (e.g. Aichi Targets 11, 12, 7, 8).
- Target 6 does not include water vertebrates like whales, turtles or amphibians. This might be good as there is no sustainable harvesting of such species. They should not be used at all.
- Deep sea fishing should be mentioned.
- Problem of by-catch should be mentioned and the other “side-effect” risks that fisheries have, e.g. birds or mammals dying in drifting nets.
- Keep in mind the role of Regional Fishery Management Organizations: on the one hand they are important stakeholders, on the other hand they are lobby organizations, which also contributed to the current over-exploitation.
- Link to Aichi Target 6 to Aichi Target 18: there are data needs for many stocks.

Further considerations

Below, considerations by ibn are printed in plain font (these were provided to the experts at the two workshops as a basis for the discussion), while suggestions that were derived by participants of the **national** expert workshop are printed in bold. There was no time during the international expert workshop to discuss these options and milestones.

- **Target 6 has direct links to Target 14 (e.g. small scale fisheries), to Target 4 (sustainable production and consumption) and to Target 8 (water pollution, plastic and micro-plastics).**

- For many regions there is a significant lack of data (e.g. on by-catch, on species composition, on non-fish species) and existing data is often not widely shared. So better data sharing between institutions and better monitoring is needed.

Options that could facilitate progress toward Aichi Target 6

- Underpin Target with quantitative milestones and include responsibilities, where appropriate (revisit also the milestones and actions provided by the CBD for the period 2011–2020¹²).
- Avoid ambiguities in the wording. If the formulations are maintained, an explanation could be added specifying “no significant adverse impacts” or “safe ecological limits”, using e.g.
 - the capacity of stocks and species to fully recover from harvesting
 - the avoidance of habitat destruction through fishing practices
 - the avoidance of releasing invasive alien species for fishing purposes
 -

Suggested milestones

- By 2022, ...per cent of the Parties have made pledges under Target 3 that relate to the elimination of harmful subsidies in the fisheries sector.
- By 2022, Parties have developed road maps on how to implement existing standards for sustainable fishing and how to stop illegal, unregulated fishing (e.g. FAO Code of Conduct for Responsible Fishing, FAO Agreement on Port State Measures to Prevent, Deter and Eliminate Illegal, Unreported and Unregulated Fishing).
- **By 2022, Parties have developed plans and mechanisms to support sustainability in small-scale fisheries. – Note: Some participants argued that small-scale fisheries can also have negative effects on biodiversity and that plans and mechanisms are needed to create or support the sustainability of such fisheries.**

¹² For the milestones, see the Technical Rationales for the Aichi Targets: <https://www.cbd.int/sp/targets/rationale/default.shtml>, for the proposed actions, see <https://www.cbd.int/sp/actions.shtml>



Aichi Target 7

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

Introduction

Agriculture, aquaculture and forestry are three of the four major ways in which biodiversity is used for subsistence or commercial purposes. Fisheries are missing here, because Aichi Target 6 is separately devoted to this type of use (see above). All of the three uses addressed by Aichi Target 7 are major drivers of biodiversity loss because unsustainable practices prevail. As the demand for food, fibre and fuel is steadily increasing worldwide, a transformation toward ecologically sustainable practices is pivotal. With regard to safeguarding biodiversity and ecosystem services, major challenges related to agriculture, aquaculture and forestry include the expansion of agricultural land into pristine areas, the intensification of land-use and management practices (including increased application of fertilizers, pesticides, pharmaceuticals and forage material) as well as the erosion of genetic diversity in cultivated species (decreasing inter- and intraspecific variation). The globally growing demand for fish is increasingly met by aquaculture, a food-producing sector which is currently growing rapidly (FAO, 2016, p. 3). The “significant growth in fish consumption has enhanced people’s diets around the world through diversified and nutritious food” (ibid., p. 4). However, expanding aquaculture goes along with strong pressures on ecosystems, in particular in coastal areas, and is a main driver for the loss of mangrove habitats.

Recommended options and further suggestions for Aichi Target 7

Suggestion by ibn: accentuate “area” as a key factor

Recommended option (ibn): Keep but modify Target 7.

By **2030, all** areas under agriculture, aquaculture and forestry are managed sustainably, ensuring **to halt the loss conservation of biodiversity in such areas and allowing recovery of natural biodiversity.**

By **2030, the rate at which areas are newly claimed for agriculture, aquaculture and forestry is drastically reduced (ensuring also progress toward Target 5).**

Rationale:

The formulation of Aichi Target 7 leaves room for interpretation: it could mean 'all' areas under agriculture etc. are managed sustainably or a certain but undefined percentage of areas are managed sustainably. Furthermore, there is no definition what 'sustainably' means, except the qualifier 'ensuring the conservation of biodiversity'. It is not clear to which baseline this refers. If it refers to a level of biodiversity that was still there before intensification of agriculture started it is probably impossible to reach this level again. If it refers to current levels in high intensified agriculture the Target loses its meaning. Therefore, sustainable management would need a definition. Furthermore, the claiming of new areas for agriculture, aquaculture and forestry poses serious threats to biodiversity. This should also be addressed in a modified Target (and cross-linked to Target 5).

Suggestions by participants of the national expert workshop

Recommended option (participants): Keep but modify Target 7.

Option A

By **2030** areas under agriculture, aquaculture and forestry are managed sustainably, ensuring **to halt the loss conservation** of biodiversity in such areas and encouraging recovery of biodiversity.

Explanatory comments:

- “Halt the loss” seems more appropriate because the wording “conservation of biodiversity” actually requires a baseline to be meaningful in the context of Target 7 (see rationale provided by ibn above).
- Furthermore, it seems important to also encourage explicitly measures for an increase of biodiversity because some areas under agriculture, aquaculture and forestry have lost a large number of species already.
- Whether the Target should address “all” areas under the specified types of management (as suggested by ibn) seems debatable: Consistent with a “land sharing” approach, it may be more feasible and effective to maintain high levels of production (or even to intensify the management and to accept low levels of biodiversity) on certain areas while fostering biodiversity at other, more extensively managed areas.
- The additional sentence suggested by ibn that refers to areas “newly claimed for agriculture, aquaculture and forestry” should be deleted, because this aspect is captured by Target 5. The dependency of the progress toward Target 7 on progress toward Target 5 and the importance that areas addressed under Target 7 do not encroach protected areas (addressed under Target 11) should however be highlighted somehow (see below under ‘Options that could facilitate the implementation).

Option B

By **2030 landscapes and seascapes dominated by** ~~areas under~~ agriculture, aquaculture and forestry are managed **to ensure sustainably, sustainable functioning of a healthy ecosystem and to halt the loss of biodiversity in such areas and encouraging recovery of natural** ~~conservation~~ of biodiversity.

Explanatory comments:

- It is very important to address the effects of agriculture, aquaculture and forestry on adjacent areas, i.e. the lateral effects caused e.g. by drift of pesticides, run-off of nutrients etc., which might be captured by the insertion “landscapes and seascapes”. – *Note:* While this point was generally well taken by the group, participants discussed the suggested wording controversially for three reasons: a) The term “landscape” may be associated with different meanings, dependent on the linguistic and cultural context; b) “seascapes” does not adequately capture all areas under aquaculture; c) referring to wider areas than the ones actually under management may lead to a decreased sense of responsibility among the managers.
- The wording “managed sustainably” seems too vague. One option to specify its meaning is to refer to “the functioning of healthy ecosystems”. Another option is to provide some criteria, such as “land degradation neutrality” or indicators such as a certain minimal area that is extensively managed. – *Note:* “Healthy” may also be interpreted in different ways. Furthermore, it was discussed whether or not to use the wording “the functioning *and services* of healthy ecosystems” but some participants cautioned against it because the word

“services” implies an anthropocentric view and holds the risk of being restrictively related to the *producing* services of managed areas.

Suggestions by participants of the international expert workshop

Due to time constraints Aichi Target 7 was only very briefly discussed during the international expert workshop. Issues that were raised during this limited amount of time were:

- The socio-economic dimensions of Target 7 could be addressed more explicitly.
- The terminology should be consistent, e.g. the wording “are managed sustainably” could be replaced by “keeping impacts within safe ecological limits” (to be consistent with Aichi Target 4). However, it was also noted that the wording is the result of negotiations, which sets limits to the consistency.
- A definition for “sustainably” is needed with a focus on biodiversity impacts. Current indicators are not sufficient (e.g. in the agricultural sector); operationalization needs to be improved.

Further considerations

Below, considerations by ibn are printed in plain font (these were provided to the experts at the two workshops as a basis for the discussion), while suggestions that were derived by participants of the **national** expert workshop are printed in bold. There was no time during the international expert workshop to discuss these options and milestones.

- **It is crucial to stress the currently often detrimental large-scale effects of consumption and production patterns (e.g. by telecoupling and/or globalization). This issue is addressed under Target 4 but should also be kept in mind in the context of Target 7 because many of these effects are intrinsically linked to agriculture, aquaculture or forestry.**

Options that could facilitate progress toward Aichi Target 7

- Underpin Target with quantitative milestones (revisit also the milestones and actions provided by the CBD for the period 2011–2020¹³), but ensure that they are linked to concrete levels of sustainability, e.g. expressed via certification standards. This would need a baseline stating how big the area already is that is sustainably managed today. Otherwise, there is the risk of decreasing the level of ambition from “areas” (in general, which could mean “all areas”) to specific areas.
- **Effective monitoring strategies, verification systems and adequate baseline data are needed.**
- **There are very intense cross-links between Target 7 and several other Targets (3, 5, 11, 14 and 15). These should be highlighted and taken into account when measures to implement Target 7 are designed and carried out.**

Suggested milestones

- **By 2022, the CBD has published guidelines for sustainable agriculture, aquaculture, fisheries and forestry that have been approved by all member states and that provide them with a framework for implementing Target 7.**

¹³ For the milestones, see the Technical Rationales for the Aichi Targets: <https://www.cbd.int/sp/targets/rationale/default.shtml>, for the proposed actions, see <https://www.cbd.int/sp/actions.shtml>

- By 2025, ... per cent of all areas under **and products derived from** agriculture, aquaculture and forestry are certified with standards for sustainable management **including lateral effects like pollution and pesticides.** – *Objection:* The timeline seems too ambitious given the difficulties that are linked to the implementation of certification schemes. Thus, the term “certification” may be better replaced by a reference to guidelines for sustainable management practices, e.g. provided by the CBD.
- ~~By 2025, all fish products consumed in developed countries comply with standards for sustainable management; ... per cent of all fish and invertebrates that are consumed by humans have been produced by aquaculture certified with standards for sustainable management (milestone also under Target 6).~~ – *Note:* Participants argued that this duplicates the previous milestone and that both should be integrated.
- By 2025, the loss of species caused by agricultural practices has been reduced by ... per cent.



Aichi Target 8

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

Introduction

Aichi Target 8 addresses pollution as a serious threat to biodiversity. Pollution may be caused by any (potentially) harmful substance (e.g. by chemicals or plastics) and may affect water, air or soil. Thus, Target 8 has a very wide scope. It puts, however, special emphasis on pollution through excess nutrients, which is also stressed in the “technical rationale” for this Target: “nutrient loading, primarily of nitrogen and phosphorus, is a major and increasing cause of biodiversity loss and ecosystem dysfunction, particularly in wetland, coastal and dryland areas, including through eutrophication and the creation of hypoxic “dead zones” associated with severe losses of valuable ecosystem services” (CBD/COP/10/INF/12/Rev.1, 2011). The strong negative impact of excess nutrients on biodiversity had already been highlighted by the Millennium Ecosystem Assessment (see e.g. MA, 2005, p. 69). Among other types of pollutions, plastics and other solid waste in marine ecosystems and air pollution are frequently mentioned as important drivers for the loss of biodiversity and ecosystem function (Derraik, 2002; MA, 2005; Costello et al., 2010; WWF, 2012, as cited in Talberth and Gray 2012, p. 13).

Recommended options and further suggestions for Aichi Target 8

Suggestion by ibn: accentuate different kinds of pollution

Recommended option (ibn): Keep but modify Target 8.

By **2030**, **air** pollution **by (name substances or sources particularly relevant for biodiversity), including from excess nutrients,** has been **halted brought to levels that are not detrimental to ecosystem function and biodiversity.**

By **2030**, **soil** pollution **by (name substances or sources particularly relevant for biodiversity), including from excess nutrients,** has been **halted brought to levels that are not detrimental to ecosystem function and biodiversity.**

By **2030**, **water** pollution **by (name substances or sources particularly relevant for biodiversity), including from excess nutrients,** has been **halted brought to levels that are not detrimental to ecosystem function and biodiversity.**

Rationale:

Aichi Target 8 calls for reducing pollution to levels that are not detrimental to ecosystem functions and biodiversity, without defining such levels any further. But even with this vague definition (and not calling for halting pollution) the Target has not been reached and in many areas pollution is still increasing, including the excess nutrients specifically mentioned in the Target text. Overall, the scope of Target 8 seems vast and splitting it up either in different Targets or by underpinning it with sub-Targets could be worth considering.

Suggestions by participants of the national expert workshop

- Due to time constraints, Target 8 was not discussed in a break-out group but in plenary. The Target was only discussed in general and the workshop participants proposed no alternative wording. The modified Target and milestones suggested by ibn were not discussed in detail.
- One participant highlighted, that a focus on excess nutrients is especially important for Europe. There might be a political window of opportunity to address this issue, since the next world nitrogen conference will be held in Germany in late 2019/early 2020 (8th Conference of the International Nitrogen Initiative – INI)¹⁴.
- Participants suggested that the Target needs concrete milestones as well as supporting guidance documents to ease the implementation.
- Participants proposed that the Target should include further causes for pollution/sources of substances, however it was not clarified whether this aspect should be incorporated in the Target text or addressed in a milestone.

Issues/substances that could/should be covered by a new Aichi Target 8:

- Plastic waste and microplastic;
- Insecticides (negative impacts on e.g. pollinators have been shown in the IPBES Assessment on Pollination and Pollinators)¹⁵;
- All substances with a negative impact on reproduction (endocrine disrupting substances) should be banned (a call for a ban could be included in an amendment to the current Target text).

Suggestions by participants of the international expert workshop

Recommended option (ibn): Keep Target as it stands.

By **2030, pollution [of air, water and soil]**, including from excess nutrients, has been brought to levels that are not detrimental to ecosystem function and biodiversity.

Explanatory comment:

Participants of the international expert workshop recommended keeping the Target text as it stands and just alter the timeline to 2030. If air, water and soil should be mentioned at all, the words 'of air, water and soil' could be inserted after pollution in the original text.

Further considerations

Below, considerations by ibn are printed in plain font (these were provided to the experts at the two workshops as a basis for the discussion), while suggestions that were derived by participants of the **international** expert workshop are printed in bold. There was no time during the national expert workshop to discuss these options and milestones.

¹⁴ Conference of the International Nitrogen Initiative – INI, <http://www.initrogen.org/content/international-nitrogen-conferences>

¹⁵ IPBES (2016): Summary for Policy Makers of the Assessment Report of the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES) on Pollinators, Pollination and Food Production.

Options that could facilitate progress toward Aichi Target 8

- Milestones could be set with respect to the different environmental compartments, defined levels of reduction, or in relation to specific sources of pollution (revisit also the milestones and actions provided by the CBD for the period 2011–2020¹⁶).
- Explanation could be added specifying the sources of pollution, e.g.:
 - Excess nutrients
 - Chemicals
 - Waste, including plastic waste
 - Oil spill
- Voluntary commitments: More specific (sub-)Targets or milestones would allow for pledges, e.g. for reducing the use of excess nutrients in agriculture or reducing the pollution caused by plastic waste in defined watersheds.

Suggested milestones

- By 2025, air pollution by (name substances or sources particularly relevant for biodiversity), has been brought to levels that are not detrimental to ecosystem function and biodiversity.
- By 2025, soil pollution by (name substances or sources particularly relevant for biodiversity), has been brought to levels that are not detrimental to ecosystem function and biodiversity.
- By 2025, water pollution by (name substances or sources particularly relevant for biodiversity), has been brought to levels that are not detrimental to ecosystem function and biodiversity.
- **By 2025, reduce the use of excess nutrients in agriculture.**

¹⁶ For the milestones, see the Technical Rationales for the Aichi Targets: <https://www.cbd.int/sp/targets/rationale/default.shtml>, for the proposed actions, see <https://www.cbd.int/sp/actions.shtml>



Aichi 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.

Introduction

The interaction and movement of people and goods has substantially increased all around the world. At the same time, more and more ecosystems become degraded and thus more vulnerable to disturbances. Both processes facilitate the introduction and distribution of alien species, of which some have the potential to be invasive. The fraction of introduced alien plant and animal species that actually become invasive is small, but once a species has become invasive, the harm to the native flora and fauna can be tremendous. Currently, biological invasions seem to become increasingly problematic in aquatic ecosystems and especially for ecosystems of smaller islands invasive alien species are a main driver of biodiversity loss.

Invasive processes are often described of including three different stages: introduction, colonisation and establishment. In non-island states, eradicating fully established invasive species has proven largely unsuccessful. Therefore, proactive and preventive measures such as controlling pathways and hindering introduction are of crucial importance for minimizing the detrimental effects of invasive alien species on native biodiversity.

Recommended options and further suggestions for Aichi Target 9

Suggestion by ibn: Aichi Target 9 with modified timeline

Recommended option (ibn): Keep Target as it stands.

By **2030**, 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.

Rationale:

Aichi Target 9 is formulated as a series of actions that have to be taken to deal with the problem of invasive alien species. This series of actions would make it quite easy to define milestones along the individual actions. Depending on the status of implementation it might be possible to extend the overall timeline, eliminate steps that have already been taken by a majority of countries (e.g. identification of pathways) and then assign milestones to the following steps of the series. As prevention is the most efficient and effective measure against the establishment and spread of invasive alien species, it should be prioritized.

Suggestions by participants of the national expert workshop

Recommended option (participants): Keep Target 9 as it stands.

Explanatory comment:

- Invasive alien species are still a driver of biodiversity loss, so the Target is still valid. It already mentions all important steps and there is no urgent need to amend the text.

Suggestions by participants of the international expert workshop

Due to time constraints, Aichi Target 9 was not discussed in detail during the international expert workshop.

Further considerations

Below, considerations by ibn are printed in plain font (these were provided to the experts at the two workshops as a basis for the discussion), while suggestions that were derived by participants of the **national** expert workshop are printed in bold. There was no time during the international expert workshop to discuss these options and milestones.

- **The identification of pathways can be complicated, especially when environmental conditions change, e.g. through climate change.**
- **Full eradication is often impossible and might only be feasible on islands.**
- **One problem is that the definition of a species being invasive includes that it does harm to other species. To prove invasiveness one has to wait until the damage becomes obvious which then might be too late to control or eradicate the invasive alien species.**
- **What are 'priority species'? The one with the highest adverse impacts or e.g. the ones that can be controlled most efficiently?**

Options that could facilitate progress toward Aichi Target 9

- Underpin Target with quantitative milestones (revisit also the milestones and actions provided by the CBD for the period 2011–2020¹⁷).
- Prioritize prevention and enhance respective co-operations (e.g. among MEAs and toward the trade, travel and tourism sectors).
- Consider and implement recommendations produced by IPBES Assessments, especially 3(b)(ii) on invasive alien species.

Suggested milestones

- By 2022, the co-operations among relevant agreements and / or sectors have been agreed on or have been enforced, where appropriate, to combat effectively and efficiently the introduction, establishment and spread of invasive alien species.
- By 2022, measures (including legislation) and resources are in place to manage pathways of invasive alien species as to prevent their introduction and establishment.
- By ~~2025~~ **2025** priority species **(those with the highest adverse impact on biodiversity)** are **identified and by 2030 controlled through effective management** or eradicated.
- **By 2025 intentional release of potentially invasive alien species into the wild is halted.**

¹⁷ For the milestones, see the Technical Rationales for the Aichi Targets: <https://www.cbd.int/sp/targets/rationale/default.shtml>, for the proposed actions, see <https://www.cbd.int/sp/actions.shtml>



Aichi 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.

Introduction

Aichi Target 10 is dedicated to the conservation of particularly vulnerable ecosystems that suffer from climate change impacts and ocean acidification. The assumption is that if these ecosystems are relieved from other pressures, they are more likely able to cope with stresses related to rising atmospheric CO₂ levels; and that many anthropogenic “drivers can be addressed more easily than climate change or ocean acidification” (CBD quick guide to Target 10)¹⁸. Target 10 puts emphasis on the conservation of coral reefs, probably due to their charismatic nature and the fact that they have already strongly suffered from rising ocean temperatures, pollution and acidification. In order to acknowledge the urgency with regard to coral reefs, Target 10 is the only Target (except the procedural Targets 16 and 17) that had a timeline until 2015 instead 2020.

Recommended options and further suggestions for Aichi Target 10

Suggestion by ibn: specify pressures and vulnerable ecosystems

Recommended option (ibn): Keep but modify Target 10.

By **2025**, the multiple anthropogenic pressures, **including climate change, ocean acidification, unsustainable fisheries and unsustainable tourism**, on coral reefs, and other vulnerable ecosystems ~~impacted by climate change or ocean acidification~~, are minimized, so as to maintain their integrity and functioning.

By **2030**, the multiple anthropogenic pressures on ~~coral reefs, and other~~ vulnerable ecosystems impacted by climate change, **including marine ecosystems, mountain ecosystems and ecosystems under permafrost**, are minimized, so as to maintain their integrity and functioning.

Rationale:

Aichi Target 10 does not only deal with coral reefs but generally with 'vulnerable ecosystems impacted by climate change or ocean acidification'. These would preferably be placed into a new and separate Target, which would emphasize that ecosystems other than coral reefs are also severely threatened by the anthropogenic pressures. Furthermore, the Target on coral reefs should be more specific about the relevant anthropogenic pressures.

Suggestions by participants of the national expert workshop

Recommended option (participants): Keep, but modify Target.

By **2030**, the multiple anthropogenic pressures **especially human-induced greenhouse gas emissions on biodiversity and ecosystem services (inter alia coral reefs) which are increasingly impacted by climate change through droughts, fires and ocean acidification, are strongly decreased (meeting the 1.5 degrees target) so as to** ~~on coral reefs, and other vulnerable ecosystems impacted by~~

¹⁸ <https://www.cbd.int/doc/strategic-plan/targets/T10-quick-guide-en.pdf>

~~climate change or ocean acidification are minimized, so as to~~ maintain their integrity and functioning.

Explanatory comments:

- The Target should not only highlight the impact of climate change on biodiversity but also the contributions of biodiversity to mitigate climate change, at the moment only the first aspect is covered by Target 10.
- Coral reefs being highly vulnerable ecosystems affected by anthropogenic pressures should be kept as an example.
- The Target should show the link between the CBD and UNFCCC and incorporate the climate Targets of the Paris Agreement.
- The need to meet the 1.5 degrees target of the Paris Agreement should be highlighted especially with regards to coral reefs (The Target should be supplemented by the latest scientific knowledge on tipping points. What is the maximum increase of ocean temperature that warm water coral reefs could adapt to? Temperature changes between 1 and 2 degrees are considered to have an impact(see also TEEB study: “New scientific evidence points to the fact that coral reef recovery is seriously hampered by CO2 concentrations above 350 ppm”)¹⁹.
- The Target should reflect the urgency with regard to coral reefs (max. 1 or 1.5 degrees ocean temperature increase).
- Anthropogenic pressures/drivers should be addressed.

Suggestions by participants of the international expert workshop

The participants of the international expert workshops discussed the options provided by ibn and by the participants of the national expert workshop (mentioned above) and found most merits in the second option:

By **2030**, the multiple anthropogenic pressures on ~~coral reefs, and other~~ vulnerable ecosystems impacted by climate change, **including marine ecosystems, mountain ecosystems and ecosystems under permafrost**, are minimized, so as to maintain their integrity and functioning. It was also discussed that redundancies with other targets should be avoided.

With respect to the suggested milestones (see below), participants argued that a 2022 timeline is too ambitious and unrealistic and should be shifted to 2025, and that further milestones could be set for specific ecosystems other than coral reefs.

Further considerations

Below, considerations by ibn are printed in plain font (these were provided to the experts at the two workshops as a basis for the discussion), while suggestions that were derived by participants of the **national** expert workshop are printed in bold. There was no time during the international expert workshop to discuss these options and milestones.

¹⁹ TEEB (2009): TEEB Climate Issues Update. September 2009.

Options that could facilitate progress toward Aichi Target 10

- Underpin Target with quantitative milestones (revisit also the milestones and actions provided by the CBD for the period 2011–2020²⁰).
- These milestones and respective timelines could relate to other multilateral agreements e.g. the Paris Agreement on climate and initiatives such as the “50 reefs”²¹, and possibly clarify the ambiguous term “minimized”.

Suggested milestones

- By 2022, coral reefs are safeguarded effectively (no further loss). Key reef areas are identified and conservation plans are in place.
- By 2025, multiple anthropogenic pressures on coral reefs are minimized, so as to maintain their integrity and functioning.
- By **2025**, 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, **taking under consideration that for warm water reefs (1.0/1.5) degrees are lethal.**

²⁰ For the milestones, see the Technical Rationales for the Aichi Targets: <https://www.cbd.int/sp/targets/rationale/default.shtml>, for the proposed actions, see <https://www.cbd.int/sp/actions.shtml>

²¹ <https://50reefs.org>



Aichi Target 11

By 2020, at least 17 per cent of terrestrial and inland water, 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.

Introduction

Aichi Target 11 is dedicated to one of the central elements of conservation of biodiversity: protected areas and so called other effective area-based conservation measures. “Well governed and effectively managed protected areas are a proven method for safeguarding both habitats and populations of species and for delivering important ecosystem services” (CBD/COP/10/INF/12/Rev.1, 2011). The Target gives clear percentages of terrestrial and inland water areas, as well as marine and coastal areas that should be under protection. The Target also takes into account that the pure percentage alone is not the only criterion to make protected areas useful for conservation, but that they should be placed in areas of particular importance for biodiversity and ecosystem services, that they should be ecologically representative and well connected. It also takes into account that protected areas are most effective if they are not just cut off from the surrounding seascape or landscape (e.g. fenced), but well integrated, e.g. by buffer zones. The percentages in Target 11 were heavily discussed at CBD COP-10 in Nagoya and are the result of a political compromise rather than a science-based optimum level.

Recommended options and further suggestions for Aichi Target 11

Suggestion by ibn: accentuate EBSAs in the open seas

Recommended option (ibn): Keep but modify Target 11.

By **2030**, at least **22** ~~17~~ per cent of terrestrial and inland water, **at least 15** ~~10~~ per cent of coastal and **at least 15 per cent of** marine areas, especially areas of particular importance for biodiversity and ecosystem services, are conserved through effectively and equitably managed, ecologically representative and well-connected system of protected areas and other effective area-based conservation measures, and integrated into the wider landscapes and seascapes.

Rationale:

The concrete percentages of protected land and sea cover at which Aichi Target 11 aims have actually been reached or nearly reached in many regions of the world, which is of course a success. However, this does not mean that the Target has been fully implemented. The Target has more components which are still not implemented: designation of new protected areas rarely followed the priority of protecting areas of high biodiversity value, pure designation does not guarantee effective management, connectivity is not automatically given and integration into the wider landscapes and seascapes is also often not the case. If milestones should be agreed upon they should not only concentrate on the pure percentages of protected areas but also relate to the other components of the Target, e.g. to management, placement in areas important for biodiversity, or connectivity.

Furthermore, Aichi Target 11 mentions marine areas as opposed to coastal areas but for the time being, most protected areas exist in coastal zones and not in Areas Beyond National Jurisdiction

(ABNJ). The CBD process of defining ‘Ecologically and Biologically Significant Marine Areas’ (EBSAs) could be helpful for the identification of areas “of particular importance for biodiversity and ecosystem services” in ABNJ. If the EBSA concept arrives at a legal status in due course, it would make sense to mention it in a milestone for the marine areas (see below).

Suggestions by participants of the national expert workshop

Recommended option (participants): Keep but modify Target 11.

By 2030, at least **30 [27]** per cent of terrestrial and inland water, **at least 30 [20]** per cent of coastal and **at least 30 [20] per cent of** marine areas, especially areas of particular importance for biodiversity and ecosystem services, are conserved through effectively and equitably managed, ecologically representative and well-connected system of protected areas and other effective area-based conservation measures, **especially community based conservation areas**, and integrated into the wider landscapes and seascapes.

Explanatory comments:

- Protected areas are a valuable measure to halt the loss of biodiversity and therefore the Target is still valid, especially as it does not only call for a certain percentage (which has been reached in parts of the world) but for effective management and for protecting areas of particular importance for biodiversity.
- The level of ambition should be kept high and IUCN lists arguments why 30 per cent would be needed. The option in brackets would mean a 10 per cent increase compared to the Target as it stands and could be used as a fall back option. The mentioning of a percentage for both, coastal AND marine areas, should help to accentuate the need for protected areas in ABNJ and not only in coastal waters under national jurisdiction. – **Note:** Participants discussed controversially whether it is strategically wise to call for the same percentage for terrestrial and coastal/marine areas or whether it would be wiser to go for different percentages, as they are different in the Target as it stands.

Suggestions by participants of the international expert workshop

Instead of formulating alternative Target text, the workshop participants came up with the following aspects:

- The naming of percentages did put a focus on figures while other elements of Aichi Target 11 were neglected, but at least it pushed for progress and therefore was a success. A percentage-Target should be retained while keeping also the other elements.
- A 30-by-30 solution seemed to have support (meaning 30% terrestrial/inland water and 30% marine). Scientific evidence on what would be the conservation results of such an approach would strengthen such a 30-by-30-Target.
- One element not yet implemented is connectivity of protected areas. Conservation networks need more attention in implementation.
- Use Key Biodiversity Areas as framework for new protected areas, close cooperation is needed with other area-based agreements like Ramsar, UNESCO’s Man and the Biosphere Programme, World Heritage Convention, ...
- Implementation of elements like effective management needs resources that have to be provided both nationally and internationally.

- CBD COP-14 might find a definition for 'other effective area-based conservation measures' (OECM). Based on this definition it should be investigated which difference there are in quality compared to formally protected areas and which potentials for the implementation of Aichi Target 11 OECMs have. If they are as effective as protected areas there should not be a separate Target on them but both concepts should be kept in the same Target.
- Keep in mind that protected areas are a top-down approach that does not work well everywhere. Community-based conservation areas as a bottom-up approach are also a valuable instrument.
- There is a close link to Aichi Target 6.
- There is also a close link to the concept of EBSAs.

Further considerations

Below, considerations by ibn are printed in plain font (these were provided to the experts at the two workshops as a basis for the discussion), while suggestions that were derived by participants of the **national** expert workshop are printed in bold. There was no time during the international expert workshop to discuss these options and milestones.

Options that could facilitate progress toward Aichi Target 11

- Underpin Target with quantitative milestones (revisit also the milestones and actions provided by the CBD for the period 2011–2020²²).
- **Percentages called for in a modified Target should be backed by scientific evidence and not just be presented as political claims.**
- **To assess the effectiveness of protected areas it is important to consider the intensity of biodiversity threats caused by human activities regulated by governing systems, therefore, important aspects to assess are political output, social outcome and ecological impacts.**

Suggested milestones

- By 2025, at least ... per cent of terrestrial areas are conserved through protected areas.
- By 2025, at least ... per cent of inland water areas are conserved through protected areas.
- By 2025, at least ... per cent of marine areas, especially areas of particular importance for biodiversity and ecosystem services, [including EBSAs in ABNJ,] are conserved through protected areas.
- By 2025, it is ensured that protected areas are effectively and equitably managed, in line with standardized guidelines.

²² For the milestones, see the Technical Rationales for the Aichi Targets: <https://www.cbd.int/sp/targets/rationale/default.shtml>, for the proposed actions, see <https://www.cbd.int/sp/actions.shtml>



Aichi 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.

Introduction

Aichi Target 12 addresses the core problem that the CBD is responsible for: the extinction of species. To halt or at least reduce this loss of biodiversity is the main reason why the CBD was formed. In order to make the Target more specific it concentrates on the prevention of the extinction of known threatened species and particularly of those most in decline. Therefore, this Target tries to tackle the most urgent cases first. Furthermore, it aims at not just preventing the extinction (which could be done by safeguarding some individuals in captivity) but also at improving and sustaining the conservation status. It is very broad in the sense that it encompasses *all* threatened species, not only some charismatic animals. The Target does not explicitly mention through which measures it could be implemented as this would be very case specific depending on the species.

Recommended options and further suggestions for Aichi Target 12

Suggestion by ibn: Aichi Target 12 with modified timeline

Recommended option (ibn): Keep Target as it stands.

By **2025**, the extinction of known threatened species has been prevented and their conservation status, particularly of those most in decline, has been improved and sustained.

Rationale:

Aichi Target 12 is at the very heart of the CBD and is a direct follow-up of the 2010 biodiversity Target, which was to 'significantly reduce the rate of loss of biodiversity until 2010'. Missing this Target by far in 2010 was a main cause for the formulation of a much more detailed Strategic Plan until 2020, including the 20 Targets. Nevertheless, Target 12 will be as widely missed as the 2010 Target was, as the drivers of biodiversity loss have not diminished since then. Any milestone like defining reduction levels or mentioning percentages of threatened species to be conserved would express a major reduction of the level of ambition that the CBD had even more than 10 years ago. To keep up the urgency the timeline should not be extended until 2030, but only to 2025.

Suggestions by participants of the national expert workshop

Recommended option (participants): Keep Target 12 as it stands.

By 2030, the extinction of known threatened species has been prevented and their conservation status, particularly of those most in decline, has been improved and sustained.

Explanatory comments:

- Halting extinction is at the core of the CBD and the Target is still needed.
- The suggestion by ibn to extend the timeline only to 2025 might be too ambitious.

Suggestions by participants of the international expert workshop

Participants discussed the following aspects:

- Aichi Target 12 contains the overall goal of the whole Strategic Plan. Could be mentioned in a more prominent place, not only in a single Target.
- Reaching Aichi Target 12 needs the tackling of all drivers mentioned in other Aichi Targets. This provides links to agreements that deal with specific drivers, e.g. to CITES that deals with trade.
- Don't look at extinction only as this is only the final step of a decreasing trend. Look also at abundance and necessary genetic diversity to keep a species alive.
- Milestones or commitments could be built around qualifiers as e.g. to bring x% of threatened species into a better IUCN category by (year).
- There are huge knowledge and data gaps for many species in many regions. Thus, there is a direct link to Aichi Target 18 and strong needs for capacity building, data infrastructure, monitoring, teaching of taxonomists, ... all these needs include financial needs.
- As many threatened species are restricted to small territories national or sub-national action plans are crucially important.
- There are also other species (e.g. pollinators) not yet threatened but vital for ecosystem services. Their decline should also be halted before they run the risk of extinction.
- Use this Aichi Target for communication of the whole Strategic Plan as this is the best communicable Target.

Further considerations

Below, considerations by ibn are printed in plain font (these were provided to the experts at the two workshops as a basis for the discussion), while suggestions that were derived by participants of the **national** expert workshop are printed in bold. There was no time during the international expert workshop to discuss these options and milestones.

Options that could facilitate progress toward Aichi Target 12

- Underpin Target with quantitative milestones (revisit also the milestones and actions provided by the CBD for the period 2011–2020²³).
- Prioritise conservation efforts and resources for Alliance for Zero Extinction (AZE) sites and Key Biodiversity Areas (KBA)²⁴. **Possible alternative: Prioritize the conservation of habitats of known threatened species.**
- Integrate all relevant sectors into conservation measures.
- Implementation of the other Targets – this is of course a circular argumentation.....
- **In order to fill knowledge gaps, funding agencies are encouraged to engage in biodiversity exploration and governments are encouraged to set up monitoring programmes.**

Suggested milestones

- By 2025, the conservation status of at least ... per cent of known threatened species has been improved.

²³ For the milestones, see the Technical Rationales for the Aichi Targets: <https://www.cbd.int/sp/targets/rationale/default.shtml>, for the proposed actions, see <https://www.cbd.int/sp/actions.shtml>

²⁴ AZE - Alliance for Zero Extinction sites (<http://www.zeroextinction.org>) / KBA - Key Biodiversity Areas (<http://www.keybiodiversityareas.org>)

- **By 2025, the conservation status of threatened species and of at least 10 per cent of known critically endangered species has been improved.**



Aichi 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.

Introduction

Aichi Target 13 is addressing in situ and ex situ conservation of crop plants and farm animals and their wild relatives, as well as selected species e.g. with specific socio-economical or cultural value. Furthermore, it aims at minimizing the genetic erosion, and through this, the Target addresses the third level of diversity that the CBD aims to conserve: the genetic diversity within species (as opposed to the diversity of species and the diversity of ecosystems). Intraspecific variability is maintaining the evolutionary potential of species because it is the prerequisite for an adaptation to changing environmental conditions. Intraspecific variability in domesticated/cultivated species is also important as an “insurance” against pests or diseases (to which certain varieties are usually more susceptible than others). Genetic pauperization, on the contrary, increases the extinction risks for populations.

Recommended options and further suggestions for Aichi Target 13

Suggestion by ibn: Aichi Target 13 with modified timeline

Recommended option (ibn): Keep Target as it stands.

By **2025**, 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.

Rationale:

Aichi Target 13 consists of several components and progress can only be claimed for a part of it. Seed banks and plant banks have been growing so that a larger part of the genetic diversity is at least documented and stored, but the wild relatives of cultivated plants and domesticated animals are still declining and strategies for minimizing the genetic erosion have not been fully developed and are far from implementation. Milestones could relate e.g. to certain species groups or to certain percentages of genetic varieties. Pledges could be done e.g. for certain regions or a group of countries as the wild relatives of cultivated plants often are restricted to comparatively small areas.

Suggestions by participants of the national expert workshop

Recommended option (participants): No particular wording was suggested.

General comments:

- Target 13 was not very intensely discussed by the break-out group.
- It was mentioned, that in-situ conservation should be addressed more clearly in the Target.
- One participant raised the question, to what extent species used for forestry are included in the Target and stated, that if not, they should be included or they could be highlighted or specifically addressed in a milestone.

- One participant raised the question, if a link to the Nagoya protocol could or should be included in the Target or in a milestone. Other participants said, that this issue is already covered in Target 16 and it could be counter-productive to mix these two issues and debates.
- The question was raised, if the issue of synthetic biology should be addressed in Target 13. One participant stated, synthetic biology should be better dealt with in the context of the Nagoya protocol e.g. as part of Target 16.

Suggestions by participants of the international expert workshop

<p>Recommended option (participants): Keep Target as it stands.</p>
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By **2030**, 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.

Explanatory comments:

Participants of the international expert workshop proposed to keep the Target as it stands with a 2030 timeline. The milestones proposed by ibn were largely supported (see below).

Further considerations

Below, considerations by ibn are printed in plain font (these were provided to the experts at the two workshops as a basis for the discussion), while suggestions that were derived by participants of the **international** expert workshop are printed in bold. There was no time during the national expert workshop to discuss these options and milestones.

Options that could facilitate progress toward Aichi Target 13

- Underpin Target with quantitative milestones (revisit also the milestones and actions provided by the CBD for the period 2011–2020²⁵).
- With regard to commercially used species, highlight the responsibility of the private sector and the consumers.
- Additional efforts / resources are needed to ensure the diversity of wild relatives of cultivated plants and domesticated animals.

Suggested milestones

- By 2025, Parties have developed and ~~implemented~~ **started implementing** roadmaps for minimizing genetic erosion and safeguarding their genetic diversity.
- By 2025, the numbers of **traditional** varieties that are used commercially in significant proportions have increased by ~~... per cent.~~
- By 2025, the share of consumers that value and request variation in food crops and bred animals has increased by ... per cent.
- By 2025, the share of wild relatives saved in gene banks and seed vaults has increased / has increased by ... per cent.

²⁵ For the milestones, see the Technical Rationales for the Aichi Targets: <https://www.cbd.int/sp/targets/rationale/default.shtml>, for the proposed actions, see <https://www.cbd.int/sp/actions.shtml>



Aichi 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.

Introduction

Aichi Target 14 is the most anthropocentric Target, as it gives a reason why certain ecosystems should be safeguarded: for human benefits. Such systems should be restored and safeguarded, whereby – depending on the local circumstances – restoring may be even more ambitious than halting further degradation. The Target is very broad and also calls for the consideration of specific needs of certain under-privileged parts of the human population.

Recommended options and further suggestions for Aichi Target 14

Suggestion by ibn: Aichi Target 14 with modified timeline (and without reference to the under-privileged)

Recommended option (ibn): Keep Target nearly as it stands.

By **2030, all** ecosystems that provide essential services, including services related to water, and contribute to health, livelihoods and well-being, are **fully** restored and safeguarded, ~~taking into account the needs of women, indigenous and local communities, and the poor and vulnerable.~~

Rationale:

It is undoubted that women, indigenous peoples and local communities (IPLCs) and the poor and vulnerable have specific needs that should be taken into account. But this is not only true for Aichi Target 14 and could be added to other Targets as well (e.g. in Target 7, that aims at sustainability of agriculture which should also take into account specific needs, or in Target 19 which talks about sharing of knowledge). Instead of mentioning this necessity in a single Target, a preamble text could state that the implementation of the whole Strategic Plan/biodiversity framework has to take into account such specific needs of certain groups.

Moreover, the formulation 'restored and safeguarded' is not very specific and does not define any concrete levels of ambition. Therefore, milestones, which refer to certain levels of restoration or criteria for safeguarding, could help to foster implementation of this Target.

Suggestions by participants of the national expert workshop

Recommended option (participants): Keep but modify Target 14.

By **2030**, ecosystems that provide essential services, including services related to water, **including a just access to water and other natural ecosystem services that contribute** ~~and contribute~~ to health, livelihoods and well-being, **and Disaster Risk Reduction**, are restored and safeguarded, taking into account the needs of women, indigenous and local communities, and the **(poor and) vulnerable**.

Explanatory comments:

- Healthy and intact ecosystems are a precondition to provide ecosystem services for humans (see element 2 of the Target).

- The question of access to ecosystem services is also a question of environmental justice and the access can be limited through the monetisation of such services.
- It was proposed to switch the order of Target 14 and 15, since 15 should include and explain necessary definitions and the current Target 14 could address social issues such as health and access to ecosystem services.
- It was common ground, that it is important to name and address affected groups and to keep this element of the Target. It was suggested, that the “poor” are included in the “vulnerable” and would not need to be addressed in particular. Other participants said, that the poor should be addressed as individual group, since they are specifically affected by the loss of ecosystem services.
- It was questioned, if and how rural communities could be addressed and highlighted in the Target or in a milestone.
- A milestone should be formulated that addresses the rights to ecosystem services and the intrinsic value of nature and that takes into account the discussions currently taking place in IPBES expert groups on that issues.
- The term „essential services“ is too broad, key services should be identified to clarify which services should be mapped (Annex 1 of the CBD could be extended). A milestone should address the need for mapping (the latest Mapping and Assessment of Ecosystems and their Services report (MAES) for the European Union was just published and could be used as case/best practice for such an exercise, see Maes et al., 2018). The contribution of ecosystem services to climate change mitigation and Disaster Risk Reduction (DDR) should be addressed in the Target (UNISDR, 2015).
- The question was raised, how the concept of resilience could be included in the Target or a sub-Target. However, it was not discussed in detail how that could be done.

Suggestions by participants of the international expert workshop

Recommended option (participants): Keep Target as it stands.

By **2030**, 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.

Explanatory comments:

The participants of the international expert workshop preferred to keep Aichi Target 14 as it stands with a 2030 timeline. They argued that the insertion of the words 'all' (ecosystems) and 'fully' (restored) lead to a level of ambition that cannot be met because it would mean to undo all changes to ecosystems done so far.

The participants also argued in favour of keeping the mentioning of vulnerable groups in the Target text as this Target has a specifically strong link to the needs of such groups. Nevertheless, mentioning the needs of such groups in an overarching manner or chapeau text was also supported but without deleting the phrase in the text of Target 14.

The discussed option to insert 'just access to water' was seen as going beyond the mandate of the CBD and should therefore not be proposed.

Further considerations

Below, considerations by ibn are printed in plain font (these were provided to the experts at the two workshops as a basis for the discussion), while suggestions that were derived by participants of the **two expert workshops** are printed in bold.

Options that could facilitate progress toward Aichi Target 14

- Underpin Target with quantitative milestones (revisit also the milestones and actions provided by the CBD for the period 2011–2020²⁶).

Suggested milestones

- By 2022, Parties have mapped their ecosystems, identified those with impaired capacities to provide essential services and prioritized them for restoration efforts.
*Remark and suggestion by participants of the national expert workshop: **This milestone should be more specific, e.g. what are key ecosystem services for different ecosystems / habitats that should be mapped. The CBD Annex for species and habitats could be used and modified to support the Target (CBD, 1992, Annex 1).***
- *Suggestion by participants of the international expert workshop: By **2025**, Parties have mapped their ecosystems **for informing decision-making, with input provided by women, indigenous and local communities, and the poor and vulnerable identifying those with impaired capacities to provide essential services. The CBD Annex for species and habitats could be used and modified to support the target (CBD 1992, Annex I. Identification and Monitoring).** – Rationale: participation of indigenous and local communities (etc.) needs to be explicitly anchored.*
- By 2025, ... per cent of ecosystems with impaired capacities to provide essential services have been fully restored. – *Remark by participants of the national expert workshop: **This milestone is not specific enough: what does “capacities to provide essential services have been fully restored” mean? What does “fully” restored mean? What is the reference point? Also: “fully” remains unclear.***
- *Suggestion by participants of the national expert workshop: **By, the Convention is taking into consideration the results of the IPBES Assessment of Diverse Conceptualization of Values of Biodiversity and Nature’s Benefits to People (IPBES/6/INF/9, 2018) for the implementation of Target 14.***
- *Modification by participants of the international expert workshop: By **2025**, Parties **have prioritized their restoration efforts and set percentage goals for restoring ecosystems with impaired capacities to provide essential services, taking into consideration the results of the IPBES assessment of diverse conceptualization of values of biodiversity and nature’s benefits to people (IPBES deliverable 3 (d) for the implementation of Target 14.** – Rationale: Level of implementation varies nationally; retain flexibility.*

²⁶ For the milestones, see the Technical Rationales for the Aichi Targets: <https://www.cbd.int/sp/targets/rationale/default.shtml>, for the proposed actions, see <https://www.cbd.int/sp/actions.shtml>



Aichi 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.

Introduction

Aichi Target 15 addresses links between biodiversity and climate change by highlighting the contribution of biodiversity to carbon stocks and calling for restoration of degraded ecosystems as a contribution to climate change mitigation and adaptation. It acknowledges that the degradation of ecosystems can on the one hand contribute to climate change (e.g. deforestation) and on the other hand increase the vulnerability of these ecosystems to climate change effects or other disturbances. The Target therefore demands to conserve ecosystems and to restore a substantial amount of those that have been degraded.

Recommended options and further suggestions for Aichi Target 15

Suggestion by ibn: clarify terms, separate Target elements

Recommended option (ibn): Keep but modify Target 15.

By **2030**, ecosystem resilience ***against multiple anthropogenic pressures, including climate change, and the contribution of biodiversity to carbon stocks*** has been enhanced, through ***conservation and restoration***, including restoration of at least ***1520*** per cent of degraded ecosystems, ***and the contribution of biodiversity to carbon stocks has been enhanced, through conservation***, thereby contributing to climate change mitigation and adaptation and to combating desertification.

Rationale:

Aichi Target 15 is on the one hand very specific as it mentions the margin of at least 15 per cent of degraded ecosystems to be restored. On the other hand, “degradation” is not defined and it is a serious challenge to identify baselines against which a “level of degradation or restoration” may be determined. Especially in ecosystems that have been used by humans for centuries, several potential baselines are plausible, e.g. the (presumed) pre-human condition, a certain degree of human influence or the loss or gain of some ecological function.

Furthermore, the Target gives no guidance on the question which 15 per cent of degraded ecosystems should be restored, options could include the most valuable share, the easiest to restore, the rarest, or the most threatened. Similarly, more specification is needed with regard to the term “resilience”: against which pressures should the ecosystems be resilient, which measures could effectively enhance it?

Suggestions by participants of the national expert workshop

Recommended option (participants): Keep but modify Target 15.

By **2030**, ecosystem resilience and the contribution of biodiversity to carbon stocks ***and(carbon sinks) [include ecological and social safeguards]*** has been enhanced, through conservation and restoration, ***including restoration and rehabilitation as defined in IPBES Assessment on Land Degradation and Restoration***, including restoration ***of at least 15 per cent*** of at least ***350 mha*** of degraded

ecosystems [see **New York Declaration on Forests**], thereby contributing to climate change mitigation and adaptation and to combating **land degradation and desertification**.

Explanatory comments:

- The percentage within the Target (at least 15 per cent of degraded ecosystems) is not clear and it is difficult to implement. Alternatively, the 350 mha reforestation Target of the Bonn Challenge/UN Declaration on Forests could be included²⁷.
- The used terms and definitions should be in line with the thematic IPBES Assessment on Land Degradation and Restoration. IPBES definitions could be included e.g. “avoid, reduce and reverse land degradation” (IPBES/6/15/Add.5, 2018, p. 3).
- There should be one Target element for restoration and one Target element for rehabilitation to be able to have an honest debate about these issues. The difference of the terms “restoration” and “rehabilitation” should be clear. Rehabilitation is a step towards ecosystem restoration, “restoration” is defined as any intentional activity that initiates or accelerates the recovery of an ecosystem from a degraded state. “Rehabilitation” is used to refer to restoration activities that may fall short of fully restoring the biotic community to its pre-degradation state” (IPBES/6/15/Add.5, 2018, p. 7-8).

Suggestions by participants of the international expert workshop

Participants of the international expert workshop supported rather the option suggested by ibn (see above) than the one suggested by the national experts, which was seen as too technical and hard to communicate.

Further considerations

Below, considerations by ibn are printed in plain font (these were provided to the experts at the two workshops as a basis for the discussion), while suggestions that were derived by participants of the **two expert workshops**.

Options that could facilitate progress toward Aichi Target 15

- Underpin Target with quantitative milestones (revisit also the milestones and actions provided by the CBD for the period 2011–2020²⁸).
- These milestones could address particular types of ecosystems.
- Such milestones would also allow for concrete pledges, e.g. for the restoration of a certain ecosystem type in a given region (like e.g. the coral reefs in the Caribbean, or the bogs in Western Europe as identified carbon sinks, etc.).
- Give guidance on which 20 per cent of degraded ecosystem should be given priority when taking restoration measures.
- Give guidance on the interpretation of “resilience” (**see explanatory comments above**), whether it should be primarily related to climate change effects and how it may be enhanced by restoration efforts.

²⁷ “Restore 150 million hectares of degraded landscapes and forestlands by 2020 and significantly increase the rate of global restoration thereafter, which would restore at least an additional 200 million hectares by 2030.” UN-NYDF (2014): New York Declaration on Forests in FORESTS - Action Statements and Action Plans - UN Climate Summit 2014, New York.

²⁸ For the milestones, see the Technical Rationales for the Aichi Targets: <https://www.cbd.int/sp/targets/rationale/default.shtml>, for the proposed actions, see <https://www.cbd.int/sp/actions.shtml>

- The three indicators for SDG 15.3 should be considered for Target 15.
- The time line of the Target should go beyond 2030 and it should be more ambitious. SDG 15.3 includes the goal element "to strive to achieve a land degradation-neutral world". A new CBD Target should include this goal, but also strive to maintain a degradation-neutral world. An ambitious addition to the current Target text could therefore be "...strive to achieve and maintain a land degradation-neutral world.
- The question was raised, if carbon sinks should be addressed in particular, to make sure that the contributions to climate change mitigation are more prominent in the Targets and to have clear link to the UNFCCC and its terms. The term carbon sinks has a positive connotation in the climate change debates. However, other participants said, that carbon sinks are already included in the term carbon stocks. It was pointed out that one should be careful, since there could be a risk to mix the CBD process and goals too much with the climate process and that the mitigation aspect could be seen as more important than the role of biodiversity.
- The role of ecosystems as carbon stocks should be better explained. How do they contribute to reach the 1.5 degrees target of the UNFCCC Paris Agreement? What are the limits from a biodiversity perspective? Which ecological and social aspects should be considered?
- Social aspects such as displacement and land tenure should be reflected in the Target or milestones.
- Establish a link between rehabilitation and Aichi Target 7 (sustainable agriculture, forestry, aquaculture) (it was not clarified by the group how this could be done).

Suggested milestones

- *Suggestion by participants of the international expert workshop: With respect to the milestones suggested below, the respective percentages would have to be based on expert knowledge.*
- By 2025, ... per cent of degraded savanna ecosystems have been restored and their resilience to climate change effects, invasive species and other disturbances has been enhanced.
Suggestion by participants of the international expert workshop: Mention 'dryland ecosystems' instead of 'savannas' to be more general.
- By 2025, ... per cent of degraded forest ecosystems have been restored and their resilience to climate change effects, invasive species and other disturbances has been enhanced.
- By 2025, ... per cent of degraded wetland ecosystems (**including peatland ecosystems**) have been restored and their resilience to climate change effects, invasive species and other disturbances has been enhanced.
- By 2025, ... per cent of degraded agro-ecosystems have been restored and their resilience to climate change effects, invasive species and other disturbances has been enhanced.
- By 2025, ... per cent of degraded marine ecosystems have been restored and their resilience to climate change effects, invasive species and other disturbances has been enhanced.
- By 2025, ecosystem-based approaches are included in all relevant climate change adaptation measures to enhance ecosystem resilience²⁹.
- *Suggestion by participants of the national expert workshop: A milestone with a specific focus on wetlands should be included e.g.: By 2025, ... per cent of degraded wetland ecosystems*

²⁹ <https://www.cbd.int/sbstta/sbstta-22-sbi-2/EbA-Eco-DRR-Guidelines-en.pdf>

(including degraded peatlands [see Ramsar Convention]) have been restored and their resilience [...] has been enhanced.



Aichi 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.

Note

Aichi Target 16 was reached in 2014 when the Nagoya Protocol entered into force³⁰. Aichi Target 16 therefore clearly needs to be either updated in 2020, or removed from the future strategic framework of the CBD. Whether targets related to the implementation of the Nagoya Protocol will be included into the post-2020 CBD framework is an important fundamental structural question that is still under discussion among the CBD member states. However, this question was beyond the scope of the project of which this report resulted from. A detailed analysis of Aichi Target 16 is therefore missing here.

³⁰ <https://www.cbd.int/abs/>



Aichi 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.

Introduction

Aichi Target 17 is a procedural Target and needs to be put in the historic context of the negotiations in 2010: On the one hand, the obligation to develop National Biodiversity Strategies and Action Plans (NBSAPs) had already existed and many Parties had followed it, whereas on the other hand, the CBD formulated a detailed and specific Strategic Plan for the first time. Therefore, it was necessary to have a Target that pointed at the necessity to transform the global Targets of the newly agreed framework into national policy instruments to allow implementation. The timeline for this transformation process was set to 2015 and the foreseen policy instruments were the NBSAPs. The implementation of such NBSAPs was then regarded as an ongoing process, which was expected to have at least commenced by 2015. In spring 2018, 190 of 196 CBD Parties (97%) had developed NBSAPs (see also below). Out of these, 155 NBSAPs (82 % of 190) were submitted after CBD COP-10 and the adoption of the Aichi Targets³¹. Parties are also requested to report on the progress towards the implementation of the Strategic Plan for Biodiversity 2011-2020 on a voluntary basis in national reports. At CBD COP-12, it was decided to use an online reporting tool for the upcoming sixth national reports due by 31 December 2018. The new reporting tool should make national progress more comparable on a global level and the results of the sixth national reports will be used for the preparation of the fifth edition of the Global Biodiversity Outlook (GBO-5) (CBD CHM, 2018).

Recommended options and further suggestions for Aichi Target 17

Suggestion by ibn: replace or re-formulate Aichi Target 17 (accentuate EBSAs in the open seas)

Recommended option 1 (ibn): Target 17 no longer needed.

Rationale:

Aichi Target 17 was to a large extent procedural and its first element has clearly been reached. NBSAPs continue to be a major policy instrument for reaching the 2050 Vision, but the Target as it stands does not put sufficient emphasis on their implementation. Experience shows that the process of developing NBSAPs according to the current Strategic Plan has taken many years and that they have highly variable timelines, partly well beyond 2020. It could be argued that the post-2020 CBD framework should not differ to such extent from the current one that many of the still quite new NBSAPs become directly outdated again. The need for transforming the global CBD Targets into national strategies could be stated in a preamble text to the new biodiversity framework. This would make a specific Target on this process obsolete.

³¹<http://www.cbd.int/nbsap/>

Recommended option 2 (ibn): Keep but modify Target 17.

~~By 2015 e~~ Each Party continues and does not decrease its efforts to develop and implement ~~has developed, adopted as a~~ policy instruments such as, ~~and has commenced implementing an effective, participatory and updated~~ national biodiversity strategy and action plans in close coordination with the implementation processes of the other Rio Conventions, the Sendai Framework for Disaster Risk Reduction and the SDGs.

Rationale:

The reasoning behind Aichi Target 17 was that the current Strategic Plan adopted in 2010 should be taken up into national action plans as soon as possible to enhance its implementation by the member states. If CBD COP-15 decides upon a post-2020 framework for biodiversity which differs significantly from the current one, it might be necessary to again formulate a Target aiming at the transformation of the new framework into national policy instruments. If such a Target is planned, it could be more general, since most countries have developed their NBSAPs or haven even updated them to reflect the Aichi Targets during the past years. A “new Target 17” could encourage CBD Parties to continue their efforts for implementing global biodiversity Targets across different sectors. It could furthermore refer to links to other agreements e.g. on climate change, wetlands, land use and desertification (including the LDN concept) or risk disaster reduction and their respective national implementation processes. The CBD is already collaborating with these conventions in joined work programmes and in the Joint Liaison Group of the Rio Conventions (JLG, see above).



Aichi 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.

Introduction

The respect for indigenous and local knowledge (ILK), innovations and practices is fundamental for the CBD and dealt with already in the basic articles leading to the founding of the CBD, specifically in Article 8j, and a working group on this sub-article has met already ten times over the last 20 years. Therefore, Aichi Target 18 mainly reiterates a basic principle of the Convention but uses stronger language compared to Article 8j, e.g. "fully integrated and respected", with "the full and effective participation" and "at all relevant levels". Nevertheless, all such steps are "subject to national legislation", which lowers the level of this Target's ambition.

Recommended options and further suggestions for Aichi Target 18

Suggestion by ibn: Aichi Target 18 with modified timeline

Recommended option (ibn): Keep Target 18 as it stands.

By **2025, at the latest**, 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.

Rationale:

Although ILK is now better respected and reflected in international biodiversity governance processes than in 2010, e.g. in IPBES and the CBD, the 'full and effective participation of indigenous and local communities at all relevant levels' is far from being achieved in many countries. The Target could potentially become stronger by being underpinned with milestones related to certain steps of integration or reflection, e.g. with respect to policy instruments like NBSAPs or other planning instruments.



Aichi 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.

Introduction

Aichi Target 19 is based on the assumption that a better understanding of all aspects of biodiversity is helpful for reaching the overall goals of the CBD and the Targets. Article 12 of the Convention deals with research and training, and there is also a specific CBD work programme on technology transfer. Thus, Target 19 deals with an issue with a long tradition in the CBD. The most ambitious component of the Target is expressed by the word “apply”: the knowledge base shall not just be improved and shared but also applied. This means in other words that political decision-making should make use of the (improved and shared) knowledge base. Target 19 is therefore a fundamental element of the Strategic Plan, however, it is often – mistakenly – referred to as the Target “just” calling for more research and technology transfer.

Recommended options and further suggestions for Aichi Target 19

Suggestion by ibn: put more emphasis on the application of knowledge and its consideration in political decision making

Recommended option (ibn): Keep but modify Target 19.

By **2030**, 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, **taken up and thoroughly considered in political decision making.**

Rationale:

Aichi Target 19 has been reached in parts while in other parts it has not: Since 2010 the knowledge and the science base have certainly improved, as it is the normal way in science and this progress has not necessarily been influenced by Target 19. The Target element addressing the sharing and transfer of the knowledge base took a major step forward through the founding of IPBES and the completion of its assessments, which were partly asked for by the CBD. It can be expected that the cooperation between CBD and IPBES will go on and that IPBES will take up requests from the CBD also into its second work programme starting in 2019/2020. Nevertheless, the Target 19 element addressing the application of knowledge has not sufficiently been reached and is still a valid Target on the way to the 2050 Vision. And of course it will remain important to further improve the knowledge base and to share it widely.



Aichi Target 20

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.

Introduction

Aichi Target 20 has to be seen in the historical context of the negotiations in 2010: The Strategic Plan, the Nagoya Protocol and the Strategy on Resource Mobilization were negotiated as a package deal and many Parties would not have accepted the Strategic Plan without a clear commitment of other Parties for increasing the mobilization of financial resources. As during the negotiation process no specific levels of increase for the financing could be agreed upon, the compromise was to have Target 20 with the addition that this Target will be subject to changes according to the progress under the Resource Mobilization Strategy. The issue was taken up by CBD COP-11 again and the processes of resource mobilization and developing a new biodiversity framework are followed in parallel now.

Recommended options and further suggestions for Aichi Target 20

Suggestion by ibn: replace Aichi Target 20

Recommended option (ibn): Target 20 no longer needed.
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Rationale:

Aichi Target 20 was formulated to parallel processes within the CBD which took place in the meantime. Funding has improved compared to former levels. Nevertheless, funding and in many places increased funding will still be needed in the future. However, instead of formulating a specific Target on funding and relating it to ongoing processes like the resource mobilization strategy, this link and the need for financial resources could be expressed in a preamble text for the whole post-2020 biodiversity framework and detailed in the resource mobilization strategy as such. A preamble paragraph on financial resources could also call for more coordination between the Rio Conventions and other cross-issue projects.

Conclusions

Keep the level of ambition

It can be expected that a stocktaking of how far the Aichi Targets will presumably be reached by 2020 (e.g. through GBO 5 or the IPBES Global Assessment on Biodiversity and Ecosystem Services) will reveal that most Targets are not sufficiently implemented and that for some Targets there is very little progress. Nevertheless, there are strong arguments in favour of maintaining as much as possible of the current Strategic Plan of the CBD for the post-2020 period and to keep the level of ambition. Failures with regard to the implementation of the Strategic Plan are in many cases not rooted in the Plan itself but in strong forces and power relations that exist independently of the CBD. Under the assumption that the 2050 Vision to 'live in harmony with nature' remains valid, most of the 20 Targets also stay valid as they describe necessary steps to get closer to that Vision and their full implementation would help to reach that long-term aim. Strongly reforming the Strategic Plan of the CBD would entail the risk of decreasing the level of ambition substantially for the post-2020 period. Changing the content or the overall structure of the Strategic Plan very significantly, as proposed in several current debates, could heavily delay its implementation by cumbersome modifications of indicator frameworks and the National Biodiversity Strategies and Action Plans (NBSAPs) for national uptake. Thus, there are good reasons to keep the overall structure of the current Plan for the post-2020 CBD framework that should also consist of about 20 Targets.

It needs thorough consideration whether Targets explicitly related to the two Protocols under the CBD (Cartagena Protocol and Nagoya Protocol) should be directly included into the post-2020 CBD framework or dealt with under the Protocols only. The fact that the memberships of the three agreements differ is a strong argument against the inclusion of specific Protocol-related Targets within the general post-2020 CBD framework. In this respect, SBI-2 recommended that the Conference of the Parties serving as the Meeting of the Parties to the Cartagena Protocol on Biosafety at its ninth meeting decides 'to develop a specific follow-up to the Strategic Plan for the Cartagena Protocol on Biosafety for the period 2011-2020 that is complementary to the post-2020 global biodiversity framework'. The same SBI-2 meeting could not agree whether to recommend or not that the Conference of the Parties serving as the Meeting of the Parties of the Nagoya Protocol at its third meeting should decide 'to develop a specific plan for the Nagoya Protocol as part of the post-2020 global biodiversity framework'.

Focus on implementation

Given the above mentioned considerations it seems most crucial to push towards a better implementation of the current and the next strategic framework of the CBD and this effort should have priority over the question whether a Target meets the "SMART" criteria or not ("SMART" standing for "specific, measurable, ambitious, realistic, time-bound"). To facilitate such implementation it could be useful to underpin each Target with milestones defining steps to be reached at certain points in time. This would also counter the impression that the level of ambition is generally and tremendously decreased by 'postponing' the timelines, e.g. by ten years or more. Meeting this communication challenge seems particularly crucial for the scenario in which the post-2020 CBD framework much resembles the current Strategic Plan.

Further discussion would be needed to clarify whether underpinning milestones equal sub-Targets, how specific they should be and whether they can (or should) incorporate additional topics into the

post-2020 framework. If the concept of voluntary contributions is taken up in the new framework, milestones could specify orientation points for such commitments.

To avoid an 'over-loading' of Targets the formulation of 'general guidance' would be useful that could include all issues that are important for the implementation of several Targets, such as intergenerational justice, gender equality, the need to respect the rights of indigenous and other vulnerable communities and the references to obligations from other international agreements. Respective specifications that are found in some of the current Targets might in that case no longer be necessary, which would increase the consistency and simplicity of the framework. The suggested guidance could also explain certain terms used in the Targets, with reference to agreed definitions and approaches. It could further explain the interrelationship between different Targets and how steps to implement one Target would help to implement others. Furthermore, such guidance could highlight the interdependencies between a post-2020 biodiversity framework and other global agreements e.g. relations to the Sustainable Development Goals (SDG) or the Paris Agreement. It could also point out synergies and indicate where joined efforts can help to reach multiple global environmental goals.

Set strategic timelines

No decision has yet been taken on the time span a post-2020 biodiversity framework should cover and it is not automatically settled that the aiming point will be the year 2030. As said before, time frames of beyond 2020 may automatically be perceived as a lowering of the ambition level which would call for a post-2020 period as short as possible (presumably 10 years). On the other hand, a longer timeframe (e.g. until 2035) would have the advantage to avoid too many re-negotiations of the framework on the path towards the 2050 Vision of the CBD. Furthermore, a 10-year timeframe would imply that the new CBD Targets would 'expire' in the same year as the SDG framework. This would hold the disadvantage that no biodiversity Targets are in place when the Agenda for Sustainable Development needs updating after 2030. If the timeline was set until 2035, underpinning the Targets with specific and time-bound milestones seems indeed very reasonable. If this was decided, it would probably make sense for practical reasons to negotiate only the Targets at CBD COP-15 (in 2020) and to decide at the same time whether they should be supplemented by underpinning milestones or sub-Targets; the latter could then be specified at CBD COP-16 (in 2022).

Overall conclusion

The Strategic Plan of the CBD and the Aichi-Targets remain relevant, and this framework should be maintained to the highest degree possible beyond 2020. However, as a partial update seems unavoidable, the upcoming re-negotiations should be regarded as an opportunity for improving the framework with regard to its consistency, simplicity and – in particular – its coherency with other multilateral environmental agreements, while keeping the level of ambition. Additional guidance could help to show how the conservation as well as just and sustainable use of biodiversity can contribute to overcome other related social and environmental challenges. Specific and time-bound milestones or sub-Targets could help fostering the urgently required implementation of the framework and could address relevant actors more specifically. These modifications could be important contributions to paving the way towards 'living in harmony with nature'.

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Annex

Overview over recommendations developed during the course of this study and in consultation with national and international biodiversity experts. Abbreviations: **ibn**: Recommendations drafted by the authors of the study, also presented at the expert workshops; **NWS**: Recommendations derived from the discussions at the national expert workshop in April 2018; **IWS**: Recommendations derived from the discussions at the international expert workshop in September 2018. Target 16-20 were not discussed during the workshops.

Aichi Target	Recommendation	Text proposal
	ibn: Keep but modify Target (accentuate crisis and actions)	<i>By 2030, at the latest, all people are aware of the irreversibility and gravity of biodiversity loss values of biodiversity, and the steps they can take actions to conserve and sustainably use biodiversity it sustainably.</i>
	NWS: Option 1 - Keep Target as it stands Option 2 - Keep but modify Target	Option A <i>By 2030, at the latest, people are aware of the values of biodiversity and the steps they can take to conserve and use it fairly and sustainably.</i> Option B <i>By 2030, at the latest, people are aware of the values of biodiversity and of the irreversibility of biodiversity loss and the threat it poses to humanity and the steps they can take to conserve and use it fairly and sustainably.</i>
	IWS: No particular wording was suggested	No suggestions on the Target text. Affirmation of the importance of the issues addressed in Aichi Target 1. Intense discussion on the different categories of Targets and on the desired overall architecture of the framework.
	ibn: Keep Target as it stands - with modified timeline	<i>By 2030, 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.</i>
	NWS: Keep Target nearly as it stands	<i>By 2030, 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.</i>
	IWS: No particular wording was suggested	No suggestions on the Target text. Affirmation of the importance of the issues addressed in Aichi Target 2. Intense discussion on the different categories of Targets and on the desired overall architecture of the framework.
	ibn: Keep Target nearly as it stands - with modified timeline	<i>By 2030, 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.</i>
	NWS: Option 1 - Keep Target as it stands Option 2 - Keep Target nearly as it stands	Option A <i>By 2030, at the latest, incentives, including subsidies, harmful to biodiversity are eliminated, phased out or reformed transformed into order to minimize or avoid negative impacts, and positive incentives, and new 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].</i> Option B <i>By 2030, 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].</i>
	IWS: No particular wording was suggested	No suggestions on the Target text. Affirmation of the importance of the issues addressed in Aichi Target 3. Intense discussion on the different categories of Targets and on the desired overall architecture of the framework.
	ibn: Keep but modify Target (accentuate role of consumers)	<i>By 2030, 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. By 2030, all consumers are aware of sustainable production standards and consider ecological sustainability when they make individual choices about products and services.</i>
	NWS: Keep but modify Target	<i>By 2030, 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 the limits compatible with halting the loss of biodiversity.</i>

	IWS: No particular wording was suggested	No suggestions on the Target text. Affirmation of the importance of the issues addressed in Aichi Target 4. Intense discussion on the different categories of Targets and on the desired overall architecture of the framework.
	ibn: Keep but modify Target (add the aspect of non-natural habitats)	<i>By 2030, the rate of loss of all natural habitats, including forests, is at least halved and where feasible brought as well as their degradation and fragmentation, are brought close to zero, and degradation and fragmentation is significantly reduced. Where this is not achieved, these rates are at least reduced by 75 per cent. By 2030, the loss of biodiversity in non-natural habitats (such as urban or agricultural areas and managed forests) is halted.</i>
	NWS: Keep but modify Target	<i>By 2030, the rate of loss, degradation and fragmentation of all natural and semi-natural habitats, including forests, is halted at least halved and where feasible brought close to zero, and degradation and fragmentation is significantly reduced.</i>
	IWS: No particular wording was suggested	No suggestions on the Target text. Affirmation of the importance of the issues addressed in Aichi Target 5 and of semi-natural habitats (see suggestion by ibn). Cautionary note against unrealistic ambitions (halting the loss seems unrealistic, halving the loss already ambitious). Loss of soils should be mentioned explicitly.
	ibn: Keep but modify Target (accentuate freshwater biodiversity)	<i>By 2025, all fishery subsidies harmful to biodiversity have been eliminated and all fish and invertebrate stocks and aquatic plants in marine and freshwater ecosystems 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.</i>
	NWS: Keep but modify Target	<i>By 2025, all fishery subsidies harmful to biodiversity have been eliminated and all fish and invertebrate stocks and aquatic plants in marine and freshwater ecosystems are managed and harvested sustainably, legally and applying ecosystem based approaches, so that overfishing is halted-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.</i>
	IWS: No particular wording was suggested	No suggestions on the Target text. Affirmation of the importance of the issues addressed in Aichi Target 6. Need for defined standards and reference limits highlighted. Discussion on additional aspects of high significance (e.g. IUU fishery, no-take zones, by-catch, deep sea fishing, ...). Severe gaps in knowledge and data highlighted, e.g. with regard to many fish-stocks.
	ibn: Keep but modify Target (accentuate "area" as a key factor)	<i>By 2030, all areas under agriculture, aquaculture and forestry are managed sustainably, ensuring to halt the loss conservation of biodiversity in such areas and allowing recovery of natural biodiversity. By 2030, the rate at which areas are newly claimed for agriculture, aquaculture and forestry is drastically reduced (ensuring also progress toward Target 5).</i>
	NWS: Keep but modify Target	<i>Option A</i> <i>By 2030 areas under agriculture, aquaculture and forestry are managed sustainably, ensuring to halt the loss conservation of biodiversity in such areas and encouraging recovery of biodiversity.</i> <i>Option B</i> <i>By 2030 landscapes and seascapes dominated by areas under agriculture, aquaculture and forestry are managed to ensure sustainably, sustainable functioning of a healthy ecosystem and to halt the loss of biodiversity in such areas and encouraging recovery of natural conservation of biodiversity.</i>
	IWS: No particular wording was suggested	No suggestions on the Target text. Affirmation of the importance of the issues addressed in Aichi Target 7 but only brief discussion due to time constraints. Socio-economic dimension highlighted. Need for consistent terminology and for definitions of terms identified.
	ibn: Keep but modify Target (accentuate different kinds of pollution)	<i>By 2030, air pollution by (name substances or sources particularly relevant for biodiversity), including from excess nutrients, has been halted brought to levels that are not detrimental to ecosystem function and biodiversity. By 2030, soil pollution by (name substances or sources particularly relevant for biodiversity), including from excess nutrients, has been halted brought to levels that are not detrimental to ecosystem function and biodiversity. By 2030, water pollution by (name substances or sources particularly relevant for biodiversity), including from excess nutrients, has been halted brought to levels that are not detrimental to ecosystem function and biodiversity.</i>
	NWS: Target 8 was not discussed in detail in a break-out group at the workshop but general in plenary	Participants suggested that the Target needs concrete milestones as well as supporting guidance documents to ease the implementation. Participants proposed that the Target should include further causes for pollution/sources of substances, however it was not clarified whether this aspect should be incorporated in the Target text or addressed in a milestone.
	IWS: Keep Target as it stands - with modified timeline	<i>By 2030, pollution [of air, water and soil], including from excess nutrients, has been brought to levels that are not detrimental to ecosystem function and biodiversity.</i>

	ibn: Keep Target as it stands - with modified timeline	<i>By 2030, 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.</i>
	NWS: Keep Target as it stands	See above.
	IWS: No particular wording was suggested	Target was not discussed due to time constraints.
	ibn: Keep but modify Target (specify pressures and vulnerable ecosystems)	<i>By 2025, the multiple anthropogenic pressures, including climate change, ocean acidification, unsustainable fisheries and unsustainable tourism, on coral reefs, and other vulnerable ecosystems impacted by climate change or ocean acidification, are minimized, so as to maintain their integrity and functioning.</i> <i>By 2030, the multiple anthropogenic pressures on coral reefs, and other vulnerable ecosystems impacted by climate change, including marine ecosystems, mountain ecosystems and ecosystems under permafrost, are minimized, so as to maintain their integrity and functioning.</i>
	NWS: Keep, but modify Target	<i>By 2030, the multiple anthropogenic pressures especially human-induced greenhouse gas emissions on biodiversity and ecosystem services (inter alia coral reefs) which are increasingly impacted by climate change through droughts, fires and ocean acidification, are strongly decreased (meeting the 1.5 degrees target) so as to on coral reefs, and other vulnerable ecosystems impacted by climate change or ocean acidification are minimized, so as to maintain their integrity and functioning.</i>
	IWS: Keep but modify Target (specify vulnerable ecosystems)	Support for the second part of the ibn-suggestion: <i>By 2030, the multiple anthropogenic pressures on coral reefs, and other vulnerable ecosystems impacted by climate change, including marine ecosystems, mountain ecosystems and ecosystems under permafrost, are minimized, so as to maintain their integrity and functioning.</i>
	ibn: Keep but modify Target (accentuate EBSAs in the open seas)	<i>By 2030, at least 22 17 per cent of terrestrial and inland water, at least 15 10 per cent of coastal and at least 15 per cent of marine areas, especially areas of particular importance for biodiversity and ecosystem services, are conserved through effectively and equitably managed, ecologically representative and well-connected system of protected areas and other effective area-based conservation measures, and integrated into the wider landscapes and seascapes.</i>
	NWS: Keep but modify Target	<i>By 2030, at least 30 [27] per cent of terrestrial and inland water, at least 30 [20] per cent of coastal and at least 30 [20] per cent of marine areas, especially areas of particular importance for biodiversity and ecosystem services, are conserved through effectively and equitably managed, ecologically representative and well-connected system of protected areas and other effective area-based conservation measures, especially community based conservation areas, and integrated into the wider landscapes and seascapes.</i>
	IWS: No particular wording was suggested	No suggestions on the Target text. Affirmation of the importance of the issues addressed in Aichi Target 11. Focus needs to shift towards neglected Target elements, the achievements in terms of % still a success. Intense discussion that highlighted several aspects, e.g. the importance of connectivity, the concept of Key Biodiversity Areas, finance and knowledge needs, importance of community based (bottom-up) approaches.
	ibn: Keep Target as it stands - with modified timeline	<i>By 2025, the extinction of known threatened species has been prevented and their conservation status, particularly of those most in decline, has been improved and sustained.</i>
	NWS: Keep Target as it stands - with modified timeline	<i>By 2030, the extinction of known threatened species has been prevented and their conservation status, particularly of those most in decline, has been improved and sustained.</i>
	IWS: No particular wording was suggested	No suggestions on the Target text. Affirmation of the importance of Aichi Target 12 as capturing 'the goal of the whole Strategic Plan' – Target may deserve a more prominent position in the framework. Discussion highlighted several additional aspects, e.g. not extinction (= end point) but the decline of species needs to be prevented, finance and knowledge needs, importance of national or sub-national action plans.
	ibn: Keep Target as it stands - with modified timeline	<i>By 2025, 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.</i>
	NWS: No particular wording was suggested	Only brief discussion due to time constraints.
	IWS: Keep Target as it stands - with modified timeline	<i>By 2030, 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.</i>

	ibn: Keep Target nearly as it stands - with modified timeline	<i>By 2030, all ecosystems that provide essential services, including services related to water, and contribute to health, livelihoods and well-being, are fully restored and safeguarded, taking into account the needs of women, indigenous and local communities, and the poor and vulnerable.</i>
	NWS: Keep but modify Target	<i>By 2030, ecosystems that provide essential services, including services related to water, including a just access to water and other natural ecosystem services that contribute and contribute to health, livelihoods and well-being, and Disaster Risk Reduction, are restored and safeguarded, taking into account the needs of women, indigenous and local communities, and the (poor and) vulnerable.</i>
	IWS: Keep Target as it stands - with modified timeline	<i>By 2030, 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.</i>
	ibn: Keep but modify Target (clarify terms, separating Target elements)	<i>By 2030, ecosystem resilience against multiple anthropogenic pressures, including climate change, and the contribution of biodiversity to carbon stocks has been enhanced, through conservation and restoration, including restoration of at least 15 20 per cent of degraded ecosystems, and the contribution of biodiversity to carbon stocks has been enhanced, through conservation, thereby contributing to climate change mitigation and adaptation and to combating desertification.</i>
	NWS: Keep but modify Target (include 350 mha goal of the New York Declaration on Forests)	<i>By 2030, ecosystem resilience and the contribution of biodiversity to carbon stocks and (carbon sinks) [include ecological and social safeguards] has been enhanced, through conservation and restoration, including restoration and rehabilitation as defined in IPBES Assessment on Land Degradation and Restoration, including restoration of at least 15 per cent of at least 350 mha of degraded ecosystems [see New York Declaration on Forests], thereby contributing to climate change mitigation and adaptation and to combating land degradation and desertification.</i>
	IWS: Keep but modify Target	Participants of the international expert workshop supported rather the option suggested by ibn (see above) than the one suggested by the national experts, which was seen as too technical and hard to communicate.
	Target 16 was not subject of the analysis	-
	ibn: Option A) Target no longer needed	<i>Option B By 2015 e Each Party continues and does not decrease its efforts to develop and implement has developed, adopted as a policy instruments such as, and has commenced implementing an effective, participatory and updated national biodiversity strategy and action plans in close coordination with the implementation processes of the other Rio Conventions, the Sendai Framework for Disaster Risk Reduction and the SDGs.</i>
	ibn: Option B) Keep but modify Target	
	ibn: Keep Target as it stands - with modified timeline	<i>By 2025, at the latest, 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.</i>
	ibn: Keep but modify Target	<i>By 2030, 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, taken up and thoroughly considered in political decision making.</i>
	ibn: Target no longer needed	-