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REPORT OF THE THEMATIC WORKSHOP ON ECOSYSTEM RESTORATION FOR THE POST-2020 GLOBAL BIODIVERSITY FRAMEWORK

Rio de Janeiro, 6 - 8 November 2019

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INTRODUCTION

1. The Thematic workshop on ecosystem restoration for the post-2020 global biodiversity framework was organized by the Co-Chairs of the Open-ended Working Group on the Post-2020 Global Biodiversity Framework and the Secretariat in collaboration with the Government of Brazil, the Food and Agriculture Organization of the United Nations, UN Environment Programme, and the International Institute for Sustainability (IIS). It was held in Rio de Janeiro from 6 to 8 November 2019.

2. This workshop was organized in order to facilitate an initial informal dialogue, based on scientific inputs and the experience of Parties, to, inter alia, develop suggestions regarding potential goals, targets and indicators, as well as thoughts on related monitoring and reporting for the post-2020 global biodiversity framework. The outputs of this workshop will be submitted to the second meeting of the Open-ended Working Group for its consideration.

3. The main workshop outcomes are presented in annex I. Outcomes presented in this and other annexes represent a summary of discussions, and do not necessarily reflect a group consensus.

4. The organization of work is available on the CBD website at https://www.cbd.int/meetings/POST2020-WS-2019-11 and the list of participants is presented in annex II. Presentations have been made available on the CBD website at https://www.cbd.int/meetings/POST2020-WS-2019-11 .

ITEM 1. OPENING

The meeting was opened at 9 a.m. on Wednesday 6 November 2019, by Ms. Nicola Breier and Ms. Eugenia Montezuma, co-leads of the theme of ecosystem restoration for the post-2020 global biodiversity framework and co-chairs of the workshop, who warmly welcomed the participants.

5. Mr. Eduardo Camerini, Secretary of Biodiversity at the Brazilian Ministry of Environment, also welcomed the participants to the event. Mr. Camerini mentioned that conservation was not enough – restoration was also needed, indicating that Brazil was a big country, making it challenging to manage the natural resources. He provided the example of the Brazilian Law 12,651 which confirmed the need for landowners to conserve and restore areas and the national plan to proactively address landscape

restoration (PLANAVEG). He elaborated by indicating that Brazil had at least 12 million ha under protected areas and low productive areas which contributed toward achieving the commitments, and that the national plan had eight strategies to improve restoration of native vegetation, but it would not be enough to restore all the vegetation needed and so they were engaged with other institutions to achieve it. He mentioned that Brazil was engaged in achieving their commitments and that the Brazilian Forest Code was evidence of this. He highlighted that the following three days, participants would be discussing the directions to the next decades regarding restoration, and he expressed his hopes that the key role of the Brazilian Government's efforts were considered in the context of the discussions.

6. Mr. Bernardo Strassburg, Executive Director of the International Institute for Sustainability (IIS), presented the IIS and the importance of this workshop to discuss how to support the day-to-day implementation of ecosystem restoration and how to approach restoration from the bottom up. He recalled the history of momentous events held in Rio de Janeiro, Brazil: the United Nations Conference on Environment and Development (UNCED, or "the Earth Summit"), and then 20 years later with the United Nations Conference on Sustainable Development (also known as "Rio+20") and mentioned that this workshop was another opportunity to be as bold as before in addressing environmental issues.

7. Mr. David Cooper, of the Secretariat of the Convention on Biological Diversity (SCBD), welcomed the participants to the workshop and spoke about the importance of restoration in the context of the post-2020 biodiversity framework and the expectations of the Convention for the workshop. He indicated that to achieve the ambitious 2050 vision, they would need to invest a lot in restoration. He added that useful information had been provided by the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES) and the Intergovernmental Panel on Climate Change (IPCC) assessments and that much effort was required to avoid dangerous tipping points. He mentioned that the workshop would consider all ecosystems and that it benefited from the participation of experts from countries, indigenous peoples and local communities, representatives of women and youth, and many organizations working on ecosystem restoration.

8. Ms. Sheila Wertz, of the Food and Agriculture Organization of the United Nations (FAO) welcomed the participants and emphasized the negative effects of ecosystem degradation on people, climate and biodiversity. Ms. Wertz mentioned that while 33 per cent of terrestrial land was degraded, they still had time to make corrections, but the next few years were critical. The UN Decade on Ecosystem Restoration 2021-2030 would be a useful platform for these efforts, and FAO, with UNEP, would support its implementation. She emphasized that we must address how to best restore marine and terrestrial ecosystems, while highlighting the post-2020 biodiversity framework as a policy platform, and the Bonn Challenge, to connect and support a multitude of initiatives on ecosystem restoration. Ms. Wertz hopes that this workshop provides a step forward toward addressing ecosystem restoration, indicating that there was a critical momentum now to do so.

9. Ms. Lera Miles, of UNEP-WCMC, and on behalf of UNEP, welcomed the participants and indicated that there was a connection between the UN Decade on Ecosystem Restoration (2021-2030) and the UN Decade of Ocean Science for Sustainable Development (2021-2030). Ms. Miles mentioned that in marine areas, there had been some initiatives on coral reefs, but this number was low when comparing with land restoration. She indicated that UNEP, as a co-implementer of the UN Decade on Ecosystem Restoration, with FAO, would engage with different stakeholders and hoped that this workshop would also serve to inform and boost this decade and its frameworks and goals.

10. Ms. Nicola Breier, co-lead of the ecosystem restoration theme, described the workshop expectations, outlining that the workshop was not a negotiation, that participants should feel free to be innovative in their interventions, and that they could make use of the concept note provided as a background document for the workshop. She highlighted the importance of the workshop and the expectations of having a document with some restoration targets under the post 2020.

11. Thereafter, the participants considered and adopted the agenda for the workshop.

12. Mr. Basile van Havre, Co-Chair of the Working Group on the Post-2020 Global Biodiversity Framework, made a presentation providing background on the process toward developing the post-2020 global biodiversity framework. He mentioned the organization of the Open-Ended Working on the Post-2020 Global Biodiversity Framework, presented the timeline for the process and described the related external processes and the thematic workshops.

13. Mr. van Havre continued with a presentation providing a review of relevant outcomes from previous thematic and regional consultations and the first meeting of the Working Group. The key messages from the consultations were:

(a) To write something that the ministry of economy can read and understand;

(b) To have clear links between mission, goals and vision – previous frameworks were somehow isolated by the mission. For example, if you are thinking about species recovery you are talking of at least 25 years;

(c) To be easy and realistic – SMART;

(d) Time length must be realistic in timeline – if less or more time is needed;

(e) It must be adapted to geography, and

(f) To consider synergies with other conventions.

Mr. van Havre closed by presenting an overarching framework on the theory of change, including details on the planning, reporting, and review. In the ensuing discussion, it was clarified that the primary role of IPBES was to provide assessments which enabled decision-making through information. It was discussed that the timeframe for the target on species recovery needed to take into account that it may not be possible to achieve species health in ten or twenty years.

ITEM 2. STATUS AND CURRENT AND FUTURE TRENDS

14. Mr. Stefan van der Esch, of PBL Netherlands made a presentation describing the main findings of the IPBES Global Assessment on land degradation, as well as the IPCC climate change report.

15. Mr. David Cooper made a presentation on the plans for the fifth edition of the *Global Biodiversity Outlook*, as well as the messages from past editions of the Outlook and relevant major reports such as the FAO Forest Resources Assessment. He also described scenarios and what is needed to bend the biodiversity curve of decline.

16. Mr. Bernardo Strassburg, of IIS, made a presentation on "Multi-criteria global areas for ecosystem restoration". He presented global-scale modelling and spoke about global restoration goals, how the multiple benefits of restoration varied in space, and how spatial prioritization with maximization of different co-benefits could be achieved. He highlighted how the use of scenarios and outcome-based targets could improve the benefits achieved from restoration.

17. Mr. Strassburg, then presented the report-back from the pre-workshop held on 5 November 2019 at the IIS. He presented the discussions on the PLANGEA1 tool as a flexible decision support platform for optimizing integrated land use planning for conservation, restoration and sustainable agriculture that generated prioritization maps and quantified impacts for diverse criteria and all types of ecosystems. PLANGEA was open-source and the code would soon be published in the journal Nature.

18. Ms. Karin Zaunberger, of the European Commission, presented the report back of the pre-workshop "Integrated Local Approaches to Ecosystems Restoration Governance"[2] held at the Museu do

[1] https://www.iis-rio.org/en/projects/plangea-2/

[2] Other information is available at https://4post2020bd.net/preparatory-workshop-integrated-local-approaches-to-ecosystems-restoration-governance-rio/

Meio Ambiente in the Botanical Garden of Rio de Janeiro, from 4-5 November 2019. She presented the key points of the discussions, including (a) the need to balance biodiversity conservation and ecosystem services, with a focus on recovering ecosystems functioning, (b) effective monitoring of the systems under restoration needs to be guaranteed, (c) indigenous peoples and local communities have to be included in the restoration process, and (d) the necessity to consider specific aspects of urban and rural restoration practices separately.

ITEM 3. TAKING STOCK OF LESSONS LEARNED AND CHALLENGES FOR GLOBAL ECOSYSTEM RESTORATION EFFORTS

19. Ms. Lisa Janishevski, of the CBD Secretariat, made a presentation on the "Key challenges and lessons learned from the design and implementation of the Aichi Biodiversity Targets, in particular Targets 5, 14 and 15". She explained the expected outcomes and how much progress was achieved for each of these targets, as well as some reasons for varying levels of progress. She also highlighted some recommendations for the future targets, such as the inclusion of more direct benefits for biodiversity (e.g. increased habitat for species), and appropriate baselines. She provided some lessons learned such as the use of spatial planning to maximize benefits.

20. Ms. Radhika Dave, of IUCN, made a presentation on "The Bonn Challenge and Forest Landscape Restoration". She presented an update on the Bonn Challenge outcomes, such as the extent of land under restoration, and the number of jobs created. She also presented some detailed information about different land uses that were being used for restoration in different countries, and some estimates of restoration taking place inside protected areas' buffer zones and ecological corridors. Among the lessons learned, she highlighted the need for multi-scale institution communication. Among the challenges, she highlighted the identification/inclusion of the synergies among restoration and biodiversity targets, and the strengthening of institutions' connexion not only to implement restoration but to monitor it.

21. Ms. Bethanie Walder, of SER, made a presentation on "Ecosystem restoration: standards and definitions". She presented the definitions of ecosystem restoration, ecological restoration, and the activities required to achieve them. She spoke about the release of the second edition of the *International Standards for the Practice of Ecological Restoration* and presented a brief view of each of these principles. She detailed the Principle 6 and showed how different countries were using the wheel model to tell their "story" of restoration. She highlighted that sometimes was not possible to return a degraded ecosystem to its original cover, but remediation was still valid and should be considered in restoration planning.

22. Thereafter, the participants separated into three groups to discuss challenges and lessons learned from the design and implementation of the Aichi Biodiversity Targets, in particular Targets 5, 14 and 15. Key elements of the report back included the importance to: also focus on non-forest ecosystems, include indigenous peoples and local communities, and improve communication among the different sectors and government levels. There was some discussion on emphasizing restoration, when avoiding degradation should be the first thing to do. The groups also felt there was a need to clarify how to prioritize the areas to be restored due to potential conflicts (i.e. should the most degraded areas or other areas be prioritized, and how do we rank these decisions?). Details of each of these group discussions are presented in annex III.

ITEM 4. RECAP OF DAY 1

23. Ms. Lisa Janishevski opened the day by providing a summary of the discussions from Day 1.

ITEM 5. ACHIEVING THE 2050 VISION, AND RELEVANT 2030 MILESTONES

24. Mr. Basile van Havre made a presentation on "The 2050 vision and relevant 2030 milestones", presenting some general ideas of the role of restoration in achieving the 2050 Vision. A post-2020

overarching framework theory of change was presented with three main steps: planning, report and review. He emphasized that the 2050 vision, "Living in harmony with nature", would not be changed and highlighted the need to incorporate species and ecosystems as indicators of what we wanted to have in 2050. He explained that the existing 2020 mission statement was lengthy with too many concepts, making it difficult to understand, while the Mission 2030 proposal was much shorter. When defining the 2030 mission, the following should be taken into consideration: it should be a stepping-stone towards the 2050 vision for biodiversity; should be an inspirational and motivational statement; and other short-medium-long term milestones should be included. Thoughts to consider beyond 2020 included:

(a) What are the barriers to achieving 2050 vision for restoration?

(b) How do we convince people and institutions to change their behaviours to contribute towards the 2050 vision?

(c) How could terrestrial, freshwater, marine and coastal ecosystems restoration be reflected in the post-2020 global biodiversity framework?

25. In the ensuing discussion, the question of whether it was possible to change the 2050 Vision was raised. It was also discussed how to consider new ecosystems and dynamic processes and how to incorporate resilience and climate change. There was a comment about the theory of change and the need to help people to understand it better so that they understand the threats and possible solutions. The challenge of the 2050 Vision lies in how to achieve this vision in a short time frame considering that humankind has been destroying nature for millennia.

26. Thereafter, the participants divided into three groups to discuss three questions:

(a) What is the role of ecosystem restoration in supporting the achievement of the 2050 vision (what do we want)?

(b) What does that mean as goal for 2050 (how much)?

(c) What do we need to get there?

Each facilitator presented the three guiding questions to their group and asked participants to write down responses. After all the three questions were addressed, a rapporteur was chosen to report back the conclusions of the group.

27. A summary of the discussion outcomes is provided in annex I on main outcomes. The details of the discussions are provided in annex IV.

ITEMS 6 TO 10. POTENTIAL SUBSTANTIVE ELEMENTS ON ECOSYSTEM RESTORATION FOR THE POST 2020 GLOBAL BIODIVERSITY FRAMEWORK

28. Mr. Carlos A. M. Scaramuzza, of the IIS, presented the methodology for the World Café format: participants were divided into four stations, each with a facilitator and two note-takers, to discuss specific potential elements of a global target on ecosystem restoration, based on Aichi Targets 5, 14 and 15, and linked to CBD decisions on ecosystem restoration as well as the existing targets under other international agreements and processes.

29. Mr. Renato Crouzeilles, of the IIS, presented the background document to the plenary, informing that the aim of the paper was to support discussions at this workshop. He outlined the elements of the document: introduction, current state of Aichi Biodiversity Targets and policy momentum, elements on ecosystem restoration for the post-2020 global biodiversity framework, and conclusion.

30. Mr. A. M. Scaramuzza and Mr. Crouzeilles then presented the topics and guiding questions for each station.

31. Participants stayed for one hour in each station and then moved to the next, until each participant had discussed the four station topics:

Station 1: **Principles to guide the goals and targets:** Scope and guiding principles of the goal and targets on ecosystem restoration (qualitative elements).

Station 2: **Global goals and targets:** Guiding metrics, baselines and indicators of the goal and targets on ecosystem restoration. The discussion considered the existing list of indicators for which data is already being collected, and new metrics and indicators that can be improved/incorporated to achieve the post-2020 targets.

Station 3: **Linkages to other potential thematic areas:** The relation of goals and targets on ecosystem restoration to other potential goals and targets under the post-2020 biodiversity framework.

Station 4: **Integrating existing goals/targets from other international instruments areas:** Integrating the goal and targets on ecosystem restoration with other international instruments and conventions (strengthening the potential for ecosystem restoration)

32. Discussions at each station were structured around guiding questions. Responses and discussion summaries are presented in annex I on main outcomes, with full details presented in annex V.

ITEM 11: REPORT BACK FROM DAY 2 STATIONS

33. For each of the four stations under Sessions 6-10, a rapporteur presented the main discussions under each Station. The discussion on the report back from this session is presented in annex I on main outcomes.

ITEM 12. CONSIDERATIONS AND NEEDS RELATED TO MONITORING AND REVIEW OF THE POST-2020 GLOBAL BIODIVERSITY FRAMEWORK

34. The agenda for the morning of Day 3 was amended slightly to incorporate emerging topics from the discussions of previous days with regard to means of implementation (e.g. resource mobilization, capacity-building). It was decided to split the break-out discussions to cover both that topic and the original topic envisioned for this session on monitoring review.

35. Ms. Lera Miles, of UNEP-WCMC, and Mr. Blaise Bodin, of SCBD, introduced the revised agenda and two topics for discussion under means of implementation and monitoring and review, taking into account the topics that were listed by participants as needing further discussion.

The guiding questions for this exercise were:

A. Means of Implementation:
   - Financing of restoration – why is it needed, where should it come from and how much is needed?
   - What forms of technical guidance and support are needed and why?
   - What are the capacity building needs?

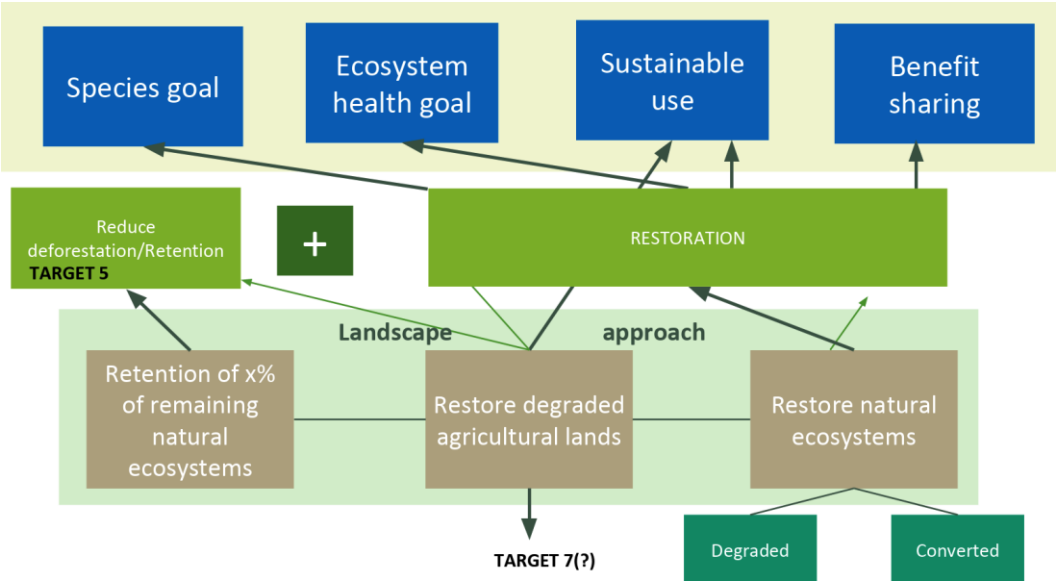
B. Monitoring and Review:
   - How to strengthen technical and scientific cooperation on restoration?

36. Key messages based on the report back are summarized in annex I on main outcomes and details are provided in annex VI.

ITEM 13: EXPLORING KEY ELEMENTS RELATING TO ECOSYSTEM RESTORATION FOR THE POST-2020 GLOBAL BIODIVERSITY FRAMEWORK.

37. Mr. Bernardo Strassburg, of IIS, facilitated a participative exercise where the participants responded in an online platform to elements of a target for ecosystem restoration. The tables and figures summarizing the results are presented in annex I on main outcomes. Further details of the qualitative responses received through the survey are included in annex VI and VII.

38. Mr. Strassburg then summarized some key desired outcomes of ecosystem restoration including for: species, ecosystems, sustainable use, and benefit sharing. He linked the achievement of these goals to Aichi Targets 5 and 7 within a landscape approach (see figure below) and proposed potential targets to be achieved during 2021-2030.



39. Mr Strassburg then put forth for discussion draft text for a target for the decade 2021-2030. Participants were invited to comment and provide feedback in groups. The details of the proposed target text can be found in annex I on main outcomes.

ITEM 14. PLENARY DISCUSSION AND SUMMARY OF KEY MESSAGES FROM THE WORKSHOP

40. Ms. Eugenia Montezuma presented key messages that arose from the workshop. The key messages including suggestions made during the plenary discussion are listed in annex I on the main outcomes.

ITEM 15. CONCLUSIONS, NEXT STEPS AND CLOSING OF THE WORKSHOP

41. Mr. Basile van Havre presented some conclusions from the workshop, including the need to work on the linkages between restoration and the other post-2020 targets, and with targets from other conventions. He also highlighted the issue of engaging local people at all stages of the restoration process and asked for the continuous engagement of all participants to keep the discussion on restoration going within their countries.

42. Ms. Eugenia Montezuma, on behalf of the two co-leads on ecosystem restoration, expressed her gratitude to all of the organizers and to the participants.

43. Mr. David Cooper, expressed gratitude to all workshop organizers, the Brazilian Government, the donors, and all participants.

44. The workshop was closed at 4 p.m. on 8 November 2019.

Annex I

MAIN OUTCOMES OF THE THEMATIC WORKSHOP ON ECOSYSTEM RESTORATION FOR THE POST-2020 GLOBAL BIODIVERSITY FRAMEWORK

Outcomes presented represent a summary of discussions, and do not necessarily reflect a group consensus.

Summary outcomes of Session 5. Achieving the 2050 Vision, and relevant 2030 milestones

(a) **Guiding question 1.** What is the role of ecosystem restoration in supporting the achievement of the 2050 vision (what do we want)?

- To raise awareness of the contribution of Nature to human well-being through active participation and involvement of people in the planning and doing of restoration.
- To achieve the climate change targets (Nature-based solutions agenda) and achieving the 2050 vision depends on achieving the climate change targets. Moreover, restoration can support ecosystem-based adaptation to climate change – in both cities and rural areas. Targeted restoration efforts can also make conservation outcomes more resilient.
- To contribute to biodiversity conservation by providing habitat for species and avoiding extinctions, by creating more effective and connected protected areas and by improving connectivity between landscapes and seascapes.
- Should be focused on ecosystem functionality and avoiding to organize it in function of one or a few specific ecosystem functions. Avoid counting monoculture tree plantations, having carbon benefits only, as ecosystem restoration.
- To improve the flow of ecosystem services and benefits by integrating people and ecosystems.

(b) **Guiding question 2.** What does that mean as goal for 2050 (how much)?

- Unify restoration and climate adaptation needs and goals, meaning that climate change is contained under 1.5 C. Nature-based solutions: green infrastructures are valued and invested in equal or greater than built/constructed solutions
- Adequate financial support for restoration and for research into how to improve it. Some were for, some against establishing a financial fund for restoration including from compensation for ecosystem degradation. Opponents to this concept indicated that financial compensation does not increase the amount of natural area and so should not be counted as "restoration finance"
- A restoration culture developed that implicitly understands the value of restoration
- Restoration has helped to increase protected areas surface in land and marine zones
- Restoration has helped to avoid extinctions: we bend the curve of biodiversity loss
- Sustainable use of resources in the long-term is assured

(c) **Guiding question 3.** What do we need to get there?

- Target restoration to avoid species loss
- Commitments by all stakeholders
- Effort, capacity building, finance and political will
- Address barriers in the supply chain of ecosystem restoration
- International burden sharing, looking at the planet as a whole when establishing priorities for restoration and ensuring that finance flows to these places
- Education and awareness of people (CEPA-Communication, education, public awareness). The demand for restoration should come from local people
- Ecosystem valuation, to let people know how much ecosystem restorations costs
- Consideration for local and indigenous knowledge on restoration
- Full involvement of IPLCs in the process of restoration, and in the management of the restored ecosystems.

- Empowerment of local communities, regard for gender and participatory approaches
- Ensuring that the benefits from conservation and ecosystem restoration are felt by the population
- Ecosystem restoration mainstreamed in other policies, for example climate change mitigation policies need to take into account ecosystem functionality.

Summary outcomes of World Café Station 1. Principles to guide the goals and targets

Question 1. Should specific targets distinguish among terrestrial, freshwater, marine and coastal ecosystems, and among spatial scales, levels of degradation and/or priorities for conservation?

1. The group put forth the following considerations:

(a) There should be an overarching/global scale restoration target. Specific targets for ecosystems should then be decided within the countries, leading to a hierarchical structure of national targets embedded within global targets. Global targets could also present minimum targets and countries are encouraged to go beyond these levels when possible.

(b) All ecosystems are not equal in terms of how restoration is conducted, how long recovery takes, and how much restoration costs. It is important that countries assess the distribution and extent of ecosystems so they can conduct restoration across ecosystems in relation to their overall importance in the country and the specific needs of each ecosystem. This should be an evidence-based process that also accounts for cost-effectiveness of restoration.

(c) The distribution of restoration targets across countries also varies, with some countries having a greater restoration "burden" or greater vulnerability than others. So, it may be necessary and desirable for countries to share this burden in some way. Ecosystems (and biomes) occur transnationally but have unique endemic biodiversity elements, emphasizing the importance of coordination in restoration efforts among countries when global prioritization approaches are used.

Question 2. Which types of restoration strategies should be considered to achieve cost-effective ecosystem and landscape restoration and maximize its benefits?

2. The group put forth the following considerations:

(a) Addressing degradation when planning restoration;
(b) Restoration should be focused on degraded areas as defined using specific criteria;
(c) There should be a safety net of what counts as restored;
(d) Improve restoration technology;
(e) Not imposing methods regarding strategies to countries;
(f) Do no harm principle: Being careful to restoration plans not to cause more harm than good; and
(g) Restoration processes and policies documents at the national level should be transparent and focus on natural processes.

Question 3. Which other qualitative criteria should be part of the future targets for ecosystem restoration?

3. The group put forth a number of 'principles' rather than criteria, that could be part of the target or the guidance on the target:

(i) **Adopt:** evidence-based approaches; cost-effective strategies.

(ii) **Prioritize:** critically endangered habitats; multiple criteria and national-scale analyses results; soil functions

(iii) **Focus:** quality outcomes instead of area-based targets; Bottom up approach

(iv) **Consider:** how CBD will help the countries to achieve the targets; diversity of species used in soil restoration; social ecological systems**;** integration between below and above ground restoration; technical and economical capacity of countries to implement restoration; planting native large-seeded and large structured trees in tropical forests and urban areas; the social dimensions and biodiversity values in analyses

(v) **Promote:** National level decision making; sustainable use and development; rural development; Change to sustainable agriculture practices and agroforestry

(vi) **Recognize**: contributions of individual and community actions; restoration as a means of rural development; potential of nature-based solutions to achieve climate, restoration, conservation, and sustainable-use goals.

(vii) **Take into account:** urban ecosystems; traditional knowledge; woman and youth; climate change vulnerability analysis and effects of climate change on both natural ecosystems and society.

(viii) **Use:** functional approach to describe ecosystem states; the recovery wheel (from SER); defined safeguards; non-timber forest products; multiple criteria analyses to reduce tradeoffs and competition between nature conservation and food production or human rights.

(ix) **Define:** How to set the previous/aimed state to which ecosystems should recover; safeguards; restoration should be hand-in-hand with halting habitat loss and ecosystem degradation.

(x) **Emphasize:** the emotional experience and perceptions people have from restoration and its outcomes

4. In the ensuing discussion, several points were raised:

- How to implement an over-arching goal, considering multiple sub targets. The facilitator responded indicating the possible role of countries to suggest national indicators to meet the overarching goal and to share the responsibility and burden among countries.
- There should be space in the guidelines to include prioritization of areas for restoration and protected areas within the goals.
- There was some discussion on priority areas for restoration, how to address the different drivers of human pressure and the need for a map of priority areas for restoration of productive areas.
- GBO-4/GBO-5 showed that agriculture is the biggest driver of degradation. It was discussed that restoring protected areas is important, but we have other priorities to improve productivity. There was a suggestion to incorporate restoration of productive lands as a target alongside restoration for nature, in the sense of improving the amount of biodiversity and improving ecosystem functionality in agricultural areas.

Summary outcomes of World Café Station 2. Global goals and targets

Question 1. What are the desired outcomes of ecosystem restoration and which indicators should represent them?

5. The groups described that there should be separated outcomes of ecosystem restoration for:

- nature and functioning ecosystems (indicators: soil quality, biodiversity indices…)
- culture (indicators: inclusion of traditional knowledge, engagement of local people, gender equality…)
- society (indicators: ecosystem services, climate change adaptation and mitigation…)

6. The group considered it important to consider tele-coupling; how one country impacts on the biodiversity/environment of another country.

7. The group listed possible outcomes of a restoration target and associated indicators under the following headings:

- Improve the conditions and functions of land/ecosystem in a holistic perspective
- Representation of different habitat/ecosystems
- Achieving a sustainable society/sustainable use of restored ecosystem (e.g. reduced natural disasters, increased ecosystem services)
- Biodiversity status

Question 2. Should there be targets, metrics, baselines (2020) and indicators at the global and regional level, or should these be exclusively at national level?

8. The group put forth that:

(a) There should be qualitative targets at the global level, and quantitative targets at the national level, with some flexibility for integration and increase ambitions if necessary/possible and an integration of targets and financial mechanisms;

(b) Restoration actors must work together internationally, considering the risk of leakage between national targets. To address this, countries should cooperate to define metrics and indicators for the biomes/regions they share; and use restoration to create transboundary corridors; and

(c) There should be a focus on multi-functionality and multiple ecosystems. It is important that ecological restoration under the CBD is really about biodiversity and functioning ecosystems, to counterbalance the outcomes of restoration that serve other global objectives (e.g. risk of focusing too much on carbon outcomes).

Question 3. How to distribute a potential target for 2050 in milestones for 2030 and 2040 (e.g. should it be constant in the 3 decades, higher earlier on or higher later on?)

9. The group put forth that:

(a) Higher targets should be set now considering the time lag to achieve the results of restoration, the urgency to achieve the outcomes (biodiversity and climate urgency), and the right momentum to invest on restoration;

(b) We need very ambitious targets for 2050 and very smart and precise targets for 2030, 2040, that follow the sequence of restoration. For example, by 2030, all degraded ecosystems are under restoration, and by 2050, restoration interventions in these ecosystems have been fully complete; and

(c) Targets for 2030, 2040 and 2050 should follow some logic: outcomes are not achieved without enabling conditions and capacity, so there is a sequence to achieve the benefits. The speed of this trajectory will work differently among different places depending on their current situation.

10. In the ensuing discussion, several points were raised:

- targets are at all levels but without indicators on social aspects and human well-being. Also, sustainable use is missing in the general recommendations.
- On soil health:
    - Include erosion control, soil health and ecosystem functions and services, not only carbon, as outcomes of restoration.
    - There is a need for soil health indicators.
    - it was suggested that CBD address the need for a definition of soil health.

- We need to be more ambitious in the targets and mission for the next decade.
- In the general framework presented of nature for nature, nature for society - nature for culture should also be used in the process of goals and targets decision.
- When discussing corridors, we need to include freshwater and marine connectivity.
- Comment that social and economic indicators and both positive and negative impacts of restoration need to be considered.
- Participant presented examples of agro-social indicators, questioning how many people/communities benefit from restoration
- Importance of sustainable land management to avoid the loss of natural habitats.
- Integration with other conventions and reports and the need to build on what already exists.
- importance to incorporate communities in the planning of restoration to ensure they will be allies and will not be harmed by the plans.
- 2050 vision should have a road map to achieve it because of its long timeframe. Question about if sustainable land management and restoration aren't the same thing and if they should be considered as different.
- Asked clarification about biodiversity and gender indicators and if the existing indicators from other conventions will be considered. A document on indicators was produced for SBSTTA 23.

Summary outcomes of World Café Station 3. Linkages to other potential thematic areas

Question 1. Should the post-2020 ecosystem restoration targets be explicitly linked to the other correlated ones (e.g. species conservation, protected areas)?

Question 2. Which other measures (e.g. capacity building, financing needs, technology transfer) to achieve the objectives of the CBD are linked to ecosystem restoration and how?

Question 3. How does ecosystem restoration contribute to the achievement of the objectives of the CBD and the 2030/2040/2050 visions?

11. The group decided to address the questions as a whole. As it is uncertain what the targets post-2020 are going to be, the five strategic goals of the Strategic Plan for Biodiversity 2011-2020, which orient the Aichi Biodiversity Targets, were used as a framework for this discussion. A detailed rationale for how ecosystem restoration supports each of these goals was developed, making the case for the relevance of ecosystem restoration as a central component of a post-2020 global biodiversity framework.

12. With regard Goal A of the Strategic Plan: "Addressing the underlying causes of biodiversity loss by mainstreaming biodiversity across government and society", the group noted that the rehabilitation of productive land diminishes pressure on natural ecosystems and increases local and global ecosystem services. With regard to Goal C "Improve status of biodiversity by safeguarding ecosystems, species & genetic biodiversity", it was noted that restoration can maintain and enhance habitat, including for migratory, endangered and wide-ranging species, as well as provide corridors and connectivity to maintain ecological function.

13. The group also listed overarching issues:

- Restoration should be linked into all CBD activities as it helps achieve all of the Strategic Aichi Goals and could support the delivery of nearly every Aichi target as well.
- Restoration is inspiring, solutions-oriented, builds empathy, and can help re-create a reciprocal relationship between people and nature.

- Restoration can help us achieve net global ecological improvement, while simultaneously improving the human condition.
- Restoration should be considered as a key driver to achieving transformative change.

Summary outcomes of World Café Station 4. Linkages to other international frameworks

Question 1: What are the synergies and the trade-offs between goals and targets on ecosystem restoration and other international instruments and conventions?

a. Carbon and biodiversity - United Nations Framework Convention on Climate Change (UNFCCC)

- UNFCCC is focused on carbon outcomes and positively limited by the safeguards *versus* CBD is focused on biodiversity and it hopefully should generate more ecosystem restoration outcomes.
- UNFCCC is likely to drive large-scale fast wood plantations that can help Forest Landscape Restoration (FLR), but this approach could not help too much in biodiverse hotspot regions, as they could lose focus on biodiversity
- As the climate change convention supports more forest ecosystem restoration, it is important to ensure they allocate funding for restoration of other vegetation types.
- Ecosystem restoration must be considered in the UNFCCC, especially the synergies with REDD+ mechanism, mitigation and adaptation aspects, including the ones related with agriculture. Particularly, REDD should reduce area requiring further restoration.
- Restoration is a cross-cutting topic that can help integration of different approaches across conventions. It should have synergies with the agriculture agenda (Koronivia Joint Work on Agriculture), and should be considered in the UNFCCC (synergies with the Strategic Plan on Forests)
- Many drivers of biodiversity loss and climate change are the same, hence the potential for synergies is great and currently underexplored.

b. United Nations Convention to Combat Desertification (UNCCD)

- There are clear complementarities between UNCCD with terrestrial ecosystem restoration efforts and needs, and there is a need to explore synergies with national UNCCD Land Degradation Neutrality targets (400 million hectares)
- Identification of area and baseline levels of degradation could be common between conventions, and there could be synergies with the National Land Degradation Monitoring Planning.

c. Nature Based Solutions (NBS)

- Restoration using NBS is an approach useful across conventions due to its synergies, and the momentum of the UN Global Compact Pact to address climate change should be used.
- Nature-Based Solutions and Ecosystem-Based Adaptation are important to promote disaster reduction and to protect communities and ecosystems (e.g. restoring coastal ecosystems)
- Restoration improves resilience and disaster risk reduction under the UNISDR
- There is a need to invest in environmentally friendly renewable energies to increase carbon sequestration and to control forest loss due to its role as carbon source and biodiversity loss driver (example: reduce use of coal for heat and cooking)

d. Other Synergies

- Promote integration of the restoration targets under the umbrella of the UN Decade on Ecosystem Restoration, by means of cross reference among them.
- Promote link with SDG targets, especially 14 and 15, and SDG 15.3 aspirations for land degradation.
- Ecosystem restoration will contribute to sustainable use of wild species by supporting species recovery. Sustainable use of the species should be encouraged, including through international trade

- The benefits are multifaceted and there are synergies with all conventions but mandates of each convention should be respected and specific.
- Synergies with: United Nations Forum on Forests (UNFF), IPBES restoration, SDG goals, Ramsar Convention, UN Disaster Risk Reduction (UNDRR), World Heritage areas, UNESCO Biosphere Reserve, Globally Important Agriculture heritage sites, Satoyama Initiative (landscape and seascape participatory approach), Escazú agreement (regional agreement on access to information, public participation and justice in Environmental matters in Latin America and the Caribbean).

Question 2: Should the Post 2020 set an alignment with the climate convention?

a. Yes, plans should be aligned

- Synergies between conventions can be improved through alignment.
- Potential alignments with REDD+:
    - REDD+ reference levels and monitoring systems in most countries are designed for first "D", but strategies do include restoration, agroforestry etc.
    - Important to remember that REDD+ is mainly focused on forests.
    - Need to implement the existing biodiversity safeguards in REDD+ and the REDD+ - Precautionary principle Rio 15.
- Bonn challenge is an opportunity for synergy with Forest Landscape Restoration principles, but might have a negative trade-off if it is a monoculture tree plantation.
- UNFCCC loss and damage mechanism also applies to biodiversity loss.
- Carbon credits could finance specific activities like seeds/seedling production and social engagement.

b. Maybe

- REDD is not working for protection, so it is unlikely it will work for restoration.

c. No, there should be no alignment

- REDD+ has shown several problems in finance and other issues.
- Market mechanisms for mitigating climate change are ineffective, do not contribute to a transition of fossil fuel-based energy matrixes, and don´t reflect Article 20 of CBD which indicates that Parties provide financial support and incentives for implementing the CBD in accordance with their capabilities.
- REDD+ can compete for funds with restoration.
- REDD+ is not restoration. It compensates for destruction and can have negative impacts on biodiversity due to deforestation displacement to low carbon areas but rich in biodiversity, or reforestation with non-native species.
- Burdens should be shared but each country (in global north and south) should take responsibilities to do what is needed.

Question 3: How to ensure alignment between restoration targets and international instruments?

a. Monitoring and Transparency

- There is a need to have joint, transparent long-term monitoring and reporting between conventions, with an established methodology that aligns the same inputs of data for producing the information needed for multiple assessments.
- Important to have better collaboration among focal points, established through the implementation of mechanisms.
- Open data is an opportunity to promote synergies for the development of indicators and is useful for different instruments.
- It is important to evaluate and monitor national environmental legislation related to ecosystem restoration.

- Other reports and conventions could be used as base, such as: John Knox report (right to a healthy environment principles); International Convention on Fisheries; Community Based Monitoring and Information Systems (CBMIS).

b. Guidelines

- Clear and specific and collaborative guidelines that incorporate the need for alignment between the CBD and other conventions are necessary, and they could be based on initiatives that are working, including other programs (e.g. FAO Sustainable Land Management guidelines).
- Guidelines could support the development of NBSAPs, and have a regional approach, including monitoring for all biogeographical regions and biomes.
- Flexibility could be addressed through voluntary guidelines.

c. Indicators

- Indicators for targets should consider long-term outcomes for biodiversity, include long-term data collection, and be developed based on ecosystem roles and functions.
- Indicators from other conventions could be synergistic and comparable to the CBD ones, as well as its results. Examples that could be in the same format are UNCCD and UNFCCC land based targets (Eg.: Global Core Set of Forest-related Indicators, Working Group Article 8j).

d. Planning and coordination

- Identify sustainable mechanisms to restore different ecosystems considering balance in priority areas and regional studies.
- Harmonize policy strategies and plans and actions according to priorities of the stakeholders.
- Set up a unique body tackling all conventions and instruments at national level.
- Improve communication between conventions and national authorities, for instance by using Dynamic Analysis and Reporting Tool (DART)[3] for joining restoration reporting under the conventions.
- There should be donor coordination that should be aligned with conventions
- Policy planning needs higher political support for the UN Decade on Ecosystem Restoration.
- Creation of a reforestation program initiative.
- Link CBD restoration targets with NDC/UNFCCC, UNFF and Voluntary National Contributions (VNC), SDG 15.3 and CBD Aichi Target 15.

f. Participation

- Adaptation should search for traditional knowledge about biodiversity use.
- Need to improve data sharing.
- Important to involve the community in deciding restoration actions and purpose.
- National consultation schemes and recognition of related commitments (UNFCCC, United Nations Commission on Sustainable Development - UNCSD, SDGs) that engage civil society (Indigenous Peoples and Local Communities - IPLC, women and youth representation, UN Convention on the Elimination of All forms of Discrimination against Women - CEDAW and Beijing Platform for Action)

Question 4: How to minimize risks for the restoration goals in their international instruments

a. Applying the already existing mechanisms

- Voluntary Guidance on Ecosystem based approaches for climate change adaptation and disaster risk reduction (CBD decision 14/5): includes principles and safeguards as basis for implementation.
- CBD decision XIII/5: short term action plan on ecosystem restoration, also includes biodiversity considerations

[3] http://www.dart.jips.org/

- Existing instruments that seek to limit risks (e.g. UN Global COMPACT, NBSAP, SDG national Plan, REDD+ safeguards, UNCCD LDN fund safeguards).
- Financial support to countries where restoration takes place should be directly delivered with no obligation, as climate change is happening very fast.

b. New Mechanisms

- Set up a warning mechanism from CBD (e.g. working with IPBES) on negative impact of decisions in different conventions.
- Assure similar definitions (ex. Ecosystem restoration or afforestation) in certain treaties.
- Establish mechanism to require consideration of CBD targets into restoration-related commitments to coordinate planning. Plans must evaluate impacts on biodiversity.
- Negotiate among conventions for new pledges.
- Research and development (e.g. Eco engineering, adaptative management).

c. Reducing risks

- Need to address conflict of interest.
- Restoration must be effective maintaining ecosystem ecological value.
- Limit the risks associated with the inconsistencies of restoration actions for non-forest areas.
- CBD strategies should engage and work together to address risks.
- Refer to document: CBD decision XIII/5 – short term action plan on ecosystem restoration including principles and biodiversity considerations

d. Avoid Afforestation

- Biding statements under CBD to avoid planting trees on non-forest biomes, as there is a trade-off related to non-forest ecosystem regarding afforestation.

Summary outcomes of the discussion on means of implementation: key messages to the thematic workshops on resource mobilization, capacity-building and monitoring, reporting and review

A. Regarding "Means of implementation" of restoration (questions 1 to 3 above), the main proposals that emerged were:

<u>With regards to resource mobilization</u>

- Restoration is key to transformational change and current funding is not enough. Restoration can be an investment and can recover the productivity of lands.
- There's a need to provide governments at the national level templates of how governments could shift the way they spend their taxpayer's money to promote a different approach of how restoration is perceived and implemented (examples from Korea, Japan and California/USA) – this also relates to Aichi Biodiversity Target 3.
- Governments need to put mechanisms in place to allocate funding from companies for restoration and prioritize restoration in their public spending. Polluters should compensate and contribute to restoration funding based on the level of degradation they create, and governments should create ensure that mechanisms/ecosystem banking and regulations are in place for compensation. However, it was also noted that offsetting is often an unsatisfactory replacement of one natural area with another (often of less quality) that does not contribute to the growth of natural areas.
- All the stages of restoration plans require financing not just the proper implementation of restoration. This also include the social costs of restoration planning, implementation and monitoring.
- We can build on existing funds, but they are likely not enough. The long timeframes needed for restoration also mean that existing project funding cycles are maladapted to the funding needs. Proposal of a global restoration fund.

- Bottom-up, community-based restoration movements need to be encouraged, it's not all about top-down funding through governments
- Investment should go not only towards implementation but also research and development for restoration, involving the private sector, research and academia
- Finally, restoration actors need to take a proactive approach to communication towards donors and governments on the needs for restoration finance.

With regards to capacity-building:

- Build the evidence base of restoration practices and outcomes, library of case studies
- Capacity building should also target foresters, nature reserve managers and agriculture specialists to ensure that they incorporate the dimensions of ecosystem restoration in their work.
- Knowledge products should be tailored to specific audiences e.g. restoration practitioners and stakeholders/communities have different needs. They should also be tailored to the local context and translated in local languages and engage the youth.
- Capacity building programs should promote the exchange of information between similar landscapes
- The CBD could consider setting a capacity building/support programme for national target setting. Capacity building should be better coordinated across Rio conventions/MEAs
- Regional capacity building workshops should be conducted with a small number of countries and bringing several representatives from across government agencies, not a single person working on restoration.
- Priority capacity building topics include:
  - strategic planning for national level restoration programmes
  - agroforestry
  - ecotourism planning and development

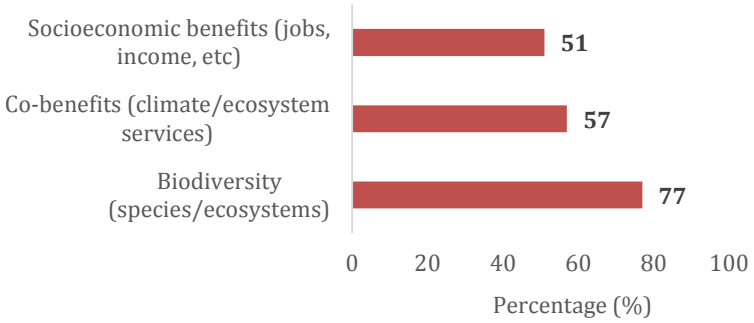
B. Regarding "Monitoring and review" (question 4):
   - Without a proper baseline the monitoring cannot work. There has to be a program of implementation and monitoring that considers this, clarifying the two potential meanings of the term: 1) The reference condition which is the state that the ecosystem would have been in if degradation had not occurred. 2) The degraded state immediately before restoration – called the "control" in monitoring science
   - Monitoring programs should have adequate meta-data documentation, so that anyone can understand the definition of each variable and how the data was collected.
   - Monitoring programs should involve a wide range of stakeholders and build on the opportunities to involve local communities, Indigenous peoples, women and other groups of civil society.
   - SCBD should support the definition of a pre-defined set of indicators applicable to all (Essential Biodiversity Variables) and draw on existing initiatives such as the Bonn Challenge Barometer
   - Development and operation of Regional or National Observation Networks, following the Beijing call for Biodiversity Observations
   - Indicators should include financial flows between countries, to measure not only what is being done on the ground but also levels of cooperation.
   - With regards to frequency of reporting, every 5 years was considered appropriate for outcomes given the timescale necessary for ecosystem restoration. There could be more frequent reports on actions (input or process-based reporting)

- Third party monitoring was also suggested as a safety net, together with clear standards for monitoring
- The following considerations should apply for monitoring to be effective: The monitoring program must be planned and funded before project & program implementation; it must include a plan for analysis, and a plan for the sharing of results.

Brain storming on key elements relating to ecosystem restoration for the post-2020 global biodiversity framework

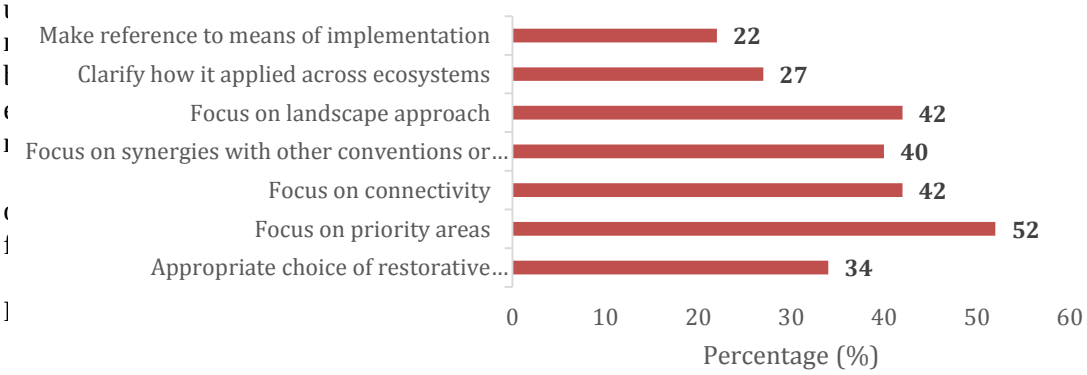
	Average response on a scale of 1-10, where 1 is 'strongly disagree' and 10 is 'strongly agree.'	Percentage of attendees who responded (number of respondents)
Should there be a quantitative element in the main restoration target?	7.55	92% (67)
Should there be an area-based quantitative element in the main restoration target?	6.75	92% (67)
Should the target be outcome-oriented?	8.7	90 (66)

What would be key outcomes for an outcome-oriented restoration target?
(The sum of the three categories does not add up to 100% as participants can choose more than one.)



Number of responses: 66
Percentage of attendees who responded: 90

What other important elements could be part of the target formulation?
N



esponses: 61
Percentage of attendees who responded: 84

	Minimum	Average	Maximum
Realistic target for the restoration of degraded natural ecosystems back into healthy natural ecosystems…			
…by 2050 in hectares 81% (59)	1 Mha	452.1 Mha	6000 Mha
…by 2050 in percentages 81% (59)	1%	52.2%	100%
…by 2030 in hectares 78% (57)	1 Mh	311.6 Mha	7500 Mha
…by 2030 in percentages 78% (57)	1%	24.2%	100%
…for the restoration of currently converted lands into healthy natural ecosystems			
…by 2050 in hectares 74% (54)	1 Mha	170 Mha	1000 Mha
…by 2050 in percentages 74% (54)	1%	24.4%	100%
…by 2030 in hectares 74% (54)	1 Mha	57.2 Mha	435 Mha
…by 2030 in percentages 73% (53)	1%	12.5%	45%
…for the restoration of currently degraded agricultural lands into sustainable agricultural lands			
… by 2050 in hectares 73% (53)	1Mha	959.8 Mha	10000 Mha
… by 2050 in percentages 71% (52)	5%	57%	100%
… by 2030 in hectares 71% (52)	1 Mha	499.9 Mha	3500 Mha
… by 2030 in percentages 71% (52)	1%	34%	100%

Suggestions for elements of a target on ecosystem restoration for the post-2020 global biodiversity framework

Presented below: (a) draft text for elements of a target on ecosystem restoration for the post-2020 global biodiversity framework put forth to stimulate discussion; (b) feedback from the groups on the text; (c) alternative ideas for elements of a target proposed by participants:

(a) draft text put forth to stimulate discussion:

During the 2021-2030 decade, for all ecosystems, restore 15% of degraded natural ecosystems and 15% of converted lands into healthy natural ecosystems, prioritising areas and restorative activities consistent with achieving the 2030 goals for species, ecosystems, sustainable use and benefit sharing;

(b) Feedback from the groups on the text put forward included:

- It was suggested that 15% restoration could be too ambitious to be achieved in 10 years based on the actual estimates (NBSAPs), especially for non-forest ecosystems. A more realistic target could

be 5% of all ecosystems together (not separating agricultural lands). Others felt that it was ambitious but felt that we can try to achieve it.

- There should be 2050 goals as well as functionality in the proposed target.
- Concern about the difference among the countries' capacities to achieve the target and proposed the use of a spatial prioritization approach to support setting national goals.
- The Aichi Target 15 to restore 15% of degraded ecosystems was more inclusive. Restoration of protected lands should come under this target.
- We should not separate natural from agricultural systems. They proposed a target: "all types of degraded ecosystems will be under restoration and showing measurable improvement (…) prioritizing areas and (…)". Another option for the ending is "(…) consistent with the objectives of CBD".
- One group suggested the target that "By 2030, all ecosystems are under restoration to achieve a total reduction of 20% of degradation".
- One group suggested to replace the term "converted lands" with "transformed areas".
- One group indicated that the target should include a long-term vision and ambition to restore all lands and supported the differentiation between natural and agricultural lands. They expressed concern about what countries can really do to optimize their contribution.
- One group indicated that the target should not be focused on agriculture, and they preferred outcome-based targets rather than area-based. In case of adopting a percentage target, they suggested to include "(…) following global prioritization modelling".

(c) alternative ideas for elements of a target proposed by participants:

- *By 2030, all ecosystems are under restoration to achieve a total reduction of 20% of degradation.*
- *During the 2021-2030 decade, all types of ecosystems will be under restoration and showing measurable improvement, including the restoration of protected land, prioritizing areas and restorative activities consistent with achieving the 2030 goals for species, ecosystems, sustainable use and benefit sharing.*
- *During the 2021-2030 decade a percentage of all degraded areas, determined through global prioritization modelling, will be under restoration, prioritizing areas and restorative activities consistent with achieving the objectives of the Convention, with national goals for restoration established in line with parties' respective capacities and global priorities for restoration.*
- *During the 2021-2030 decade, restore 15% of degraded natural ecosystems and 15% of converted lands into healthy natural ecosystems, including the restoration of protected land, prioritizing areas and restorative activities consistent with achieving the objectives of the Convention.*
- *During the 2021-2030 decade, for all ecosystems, restore 15% of degraded natural ecosystems and 15% of converted lands into healthy natural ecosystems, and restore X% of degraded productive lands into sustainable use/productive lands, prioritising areas and restorative activities consistent with achieving the 2030 goals for species, ecosystems, sustainable use and benefit sharing.*
- *By 2030 earth's ecosystems are under restoration to achieve a total reduction of 20% in the level of degradation, where level of degradation is defined by ecosystem condition, fragmentation, human appropriation of primary production, status of species, and other specific components.*

Key messages from the thematic workshop on ecosystem restoration for the post-2020 global biodiversity framework

The role of ecosystem restoration:

- Restoration generates outcomes for nature, culture and society
- Restoration supports sustainable development goals and climate objectives
- We need an ambitious, overarching and holistic global target on restoration
- The target needs to be outcomes-oriented (e.g. for biodiversity and other)
- A restoration target should consider synergies with existing international and national commitments (e.g. NDCs)
- Restoration should consider all ecosystems

Implementation of ecosystem restoration:

- It is critical to distinguish between initial states and restoration outcomes (along the restorative continuum)
- Effective restoration requires spatial planning, prioritization and large-scale implementation across ecosystems
- It needs to consider integrated landscape and seascape approaches
- It should be participatory and inclusive, with emphasis on traditional and indigenous knowledge, gender equity and youth engagement
- International cooperation is needed for net positive outcomes and sharing the restoration burden
- Proposal for a global restoration fund
- Monitoring, evaluation and assessment are continual processes and should be conducted based on a national plan that includes quantified baselines and participation of all actors
- Need to regularly assess the gap between national action an international ambition to ratchet up national commitments
- Mobilize financial and institutional resources and build capacity as appropriate at the proper scale

Annex II

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Annex III

DETAILED OUTCOMES UNDER ITEM 3 – LESSONS LEARNED FROM THE AICHI TARGETS

Group discussion on challenges and lessons learned from the design and implementation of the Aichi Biodiversity Targets, in particular Targets 5, 14 and 15.

Break-out group 1
Facilitator: Mr. Manuel Guariguata (CIFOR)
Flipchart note-taker: Mr. Rubens Benini (TNC)
Laptop note-taker: Ms. Camila Islas (IIS)

Summary of the flip-chart notes

- Area-based x effectiveness/ area x quality of the restoration
- Macro plan to define areas to restore x occupation (use of the land)
- Unclear targets
- Lack in mapping plan or implementation
- Lack of financial $$
- Well communication with locals, awareness
- Lack in monitoring (national level)
- Less engage of decision makers/ short term ecosystem services
- Listen/consider local knowledge
- Discontinued action/ policy from government (government change)
- Change the target at this time is risky
- Alien species
- Lack/ or consider scientific local knowledge
- Lack in supply chain (seeds, seedlings, nurseries, capacity building)
- Different ministries or different technicians have conflicts
- How to make parties to commit to global targets – from global to national targets

Specific discussion about each phase/dimension

1. **Planning**
    - Major concern is every Aichi targets. We need to figure out what is the key point. We must consider management plans and how governments can integrate targets to their plans. Example: a problem regarding the use of water in a river – private sector and community. How do we solve this problem?
    - Knowledge and capacity exist on the planet. I think this is about capacity building. The knowledge is there. Somehow, we have to make the knowledge achieve the government.
    - This is business as usual. We must find new answers. Because is it always the same.
    - In a particular case, the community and local resources were poorly informed about the restoration project. They did not understand about why they should stop using the mangroves. You have to understand first how they receive the project and the resources. We did not do that. Then, even though the project gave all the resources, it did not work.

2. **Implementing**
    - The focus on area treaded – focusing on measuring the amount of areas being restored and not on the outcome. It's not outcome oriented. It means a number in hectares. But it doesn't count the quality. We should look to two things: one is the area, but the other is the condition of the hectares.

- I think the knowledge exists, but we don't know how to integrate international with national goals.
- We have to involve local communities
- In projects in Croatia technicians didn't have the knowledge about what species to use, what caused a lot of problems because they used invasive species just to say that they had a forest.
- In my country (Finland) I have been involved with the implementation of the Aichi targets since the beginning. In 2012 Finland adopted the document. 2014 we started a group to develop what the target meant to us. It took 2 years to decide what were the national targets. Then it took 2 years for the government to allocate money to do this… Or we are not succeeding, or we are not planning well. This is challenge. Are we moving too slow? Because it took us 10 years to get somewhere, we are just beginning. We should be way further then this? This is also dangerous, because many countries are just beginning to implement many things. If you take a drastic change now, we will lost the momentum.

3. **Monitoring/ adaptive monitoring**
    - Lack of monitoring at the national level
    - Community-based monitoring is an opportunity for monitoring. Traditional knowledge and new technology should be together. But many times, the government doesn't recognize us. Many times, our technology is better, because we live at the place.

4. **Effectiveness**
    - Ecosystem services are long term, so this approach doesn't motivate governments.
    - Limited funding to developing countries
    - Participatory land planning – communities should decide where agriculture will be implemented and the other uses.
    - Documents are not available in the language of many countries.
    - A conflict between polices and between governments that change over time. You don't need to go far. Now the Brazilian government has an agricultural-developmental point of view.
    - We are working with global targets. I have faced in Finland, some organizations say that is not actually what we agreed on. How can we make parties to sign better agreements? How can we make them to commit with the targets?
    - Business as usual being labelled as restoration.

Break-out group 2
Facilitator: Ms. Bethanie Walden (Society of Ecological Restoration)
Flipchart note-taker: Mr. Pedro Brancalion (ESALQ/USP)
Laptop note-taker: Ms. Juliana Almeida-Rocha (IIS)

The participants decided to focus the discussion on the challenges for the implementation of targets 5, 14 and 15. The group decided to divide the challenges into the following categories:

1. Measures
    - To have data about where restoration is happening
    - To find the right metrics to address
    - Lack of knowledge: where to restore, which are the baselines, how to restore
    - To have simple indicators for the targets and how to measure them
    - Cost-effectively and strategically monitoring
    - Optimization of restoration (technological innovations)
    - Seed supply
    - Monitoring supported GIS for restoration

2. Resources
    - Improve the focus on public funds for restoration, not only private sector investment
    - Government subsidizing development *versus* not subsidizing nature: promotion of green infrastructure
    - Private sector investments tend to be focused on having return, so monoculture is being considered as restoration
    - Lack of investment especially for non-forest biomes

3. Policy/Governance
    - Political influence on where restoration happens
    - Lack of communication among different sectors and integration of restoration activities with Aichi's targets
    - Dissemination of information about restoration
    - The private sector is not totally aware about what is restoration
    - Lack of coordination
    - Reconciling top down with bottom up approaches
    - Policy enforcement
    - Lack of people power

4. Process/interventions
    - Restoration for sustainable development
    - Incorporating the objectives of the landowners
    - Accessing the linkages between the targets
    - Align the international commitments with the national commitments to have a common approach to restoration
    - Focus more on the degree of recovery rather than the extent of recovered area
    - Missing coverage of non-forest biomes, and especially aquatic ecosystems
    - We are more focused on plants and not giving the same attention to the animals in the restoration
    - Lack of focus on belowground restoration: soil biodiversity is not being considered in restoration targets
    - How much of each type of land we want to restore and what is the purpose of the restoration
    - Special attention to dry and marine ecosystems
    - The focus on climate is a challenge for biodiversity
    - The role of protected areas as places that could be restored or benefit the restoration
    - Distinction between mandatory and voluntary restoration
    - Peace building into restoration
    - More involvement of indigenous people

There was no time to discuss the lessons learned in depth, but the group was able to identify at least two important issues:

- Ecosystem degradation may arise from social conflicts.
- Baselines are valuable but they are also a challenge because having a baseline doesn't necessarily mean we know how to use them.

Break-out group 3
Facilitator: Ms. Radhika Dave (IUCN)
Flipchart note-taker: Mr. Rafael Chaves (Brazilian Society for Ecosystem Restoration)

Laptop note-taker: Ms. Raísa Vieira (IIS)

The group decided to start the discussion about target 15 and go to targets 5 and 14 if there was enough time. There was the assignment of Mister Néstor Fernández (GEO BON) as the rapporteur of the group. The group divided the main conclusions in two categories, as follows:

Challenges:

- Definitions and concepts on target 15 are not clear, what makes it hard to pinpoint the real target and implement it. For example, within the countries interpreting the target, there is a misunderstanding of what degraded is, so it is hard to make progress. Need for a target that is simple and easy to be understood, balancing clearness and explicit outcomes.
- Define strong and integrative indicators
- Should the targets be at global or national level?
- Integration among targets, specially 5, 14 and 15.
- Address social and cultural dimensions. The targets miss out the social dynamics of the actions, what makes it hard to translate the commitments to real action and to have the support of the communities that will be affected and be that will rally make the changes. Need to push on how to translate this challenge.
- Address climate change and points of no return - connectivity might be a solution
- Tell the full story (not only net-gain)
- Different views on net-gain were presented. Challenge on how to consider it and how to address net-gain and the balances between biodiversity/ecosystem loss and restoration
- Role of biodiversity must be central to the definition of the targets
- Report schemes must better incorporate regional governance and civil society. There's a need for better reports to have a clear vision of the progress made so far.
- Definition and safeguards: restoration, ecosystems.
- There are multiple restoration drivers to be considered, such as climate change, and they act differently in terrestrial, freshwater and marine ecosystems. We need to include connectivity and increase the level of ambition of the goals.
- Need of clear baselines
- CBD in not the only driver for ecosystem restoration. UNFCCC and SDG drive in different direction. How to integrate the different goals?
- Ecosystem restoration is complex and may not suit a single SMART objective. May need qualitative overarching target, with measurable components.
- Biodiversity is complex and full of layers; try to define the elements of biodiversity we want to work with (e.g. genes, species, ecosystems).
- Lack of priority given to ecosystem integrity (i.e. it's not just hectares). Restore species composition and their functions as much as possible.

Lessons learned:

- More specific targets
- We need clarity on how restoration will be spatially distributed
- Even if we have a specific % target, the outcome might change. Need for outcome-oriented targets.
- There is no conclusion about the feasibility of targeting the efforts of restoration. Need to incorporate feasibility in the decision on targets and implementation
- Importance of qualifiers for targets (ABT 11)
- Mitigation hierarchy – restoration last action to be done

- We need to integrate long-term and short-term targets – agenda aiming 2050 and inclusion of milestones
- The mechanisms to direct efforts are not in place

Annex IV

DETAILED OUTCOMES UNDER ITEM 5 - GROUP DISCUSSIONS ON THE 2050 VISION, AND 2030 AND OTHER MILESTONES REQUIRED IN ORDER TO REACH THE 2050 VISION

Break-out group 1
Facilitator: Ms. Lera Miles (UNEP-WCMC)
Flipchart note-taker: Ms. Robin Chazdon (University of Connecticut)
Laptop note-taker: Ms. Raísa Vieira (IIS)

General points raised by the participants:

- Clarification about the question to be answered.
- Ecosystems provides many services. How to maximize the use of ecosystem services?
- Social inclusion is important. Reconcile the restoration and sustainable development agendas.

Guiding question 1. What is the role of ecosystem restoration in supporting the achievement of the 2050 vision (what do we want)?

- The main role is to secure essential benefits from natural and converted ecosystems, such as climate change, food provision, disaster reduction.
- To raise awareness of contribution of nature through active participation. Involve people in the planning and doing of restoration.
- Restoration is a holistic approach based on solving multiple problems/issues. Restoration can connect all the targets and incorporate all ecosystems.
- Restoration is crucial for achieving the climate change targets and therefore for achieving 2050 vision. Achieving the 2050 vision depends on achieving the climate change targets.
- Restoration has a role in addressing social needs and poverty alleviation.
- Restoration should be integrated with social national development plans and policies.
- The role of restoration in enhancing species conservation was highlighted
- To promote sustainable use through participatory action and capacity building and generating long-term income opportunities and improving livelihoods
- Separate but integrated roles of traditional communities and urban communities as actors in restoration
- Restoration is crucial to ensure resilience of ecosystems and public health

Guiding question 2. What does that mean as goal for 2050 (how much)?

- Unify restoration and climate adaptation needs and goals
- Restore all ecosystems that are degraded or converted to provide ecosystem services in 2050
- Adequate financial support
- Sufficient restoration to make a significant contribution to goals on budget for climate mitigation, poverty alleviation, prevent species loss, health promotion

Guiding question 3. What do we need to get there?

- Participants expressed that for this exercise setting percentage values/quantitative targets is not possible. Instead of creating new numbers, the group should answer based on existing ones from other commitments. Align restoration goal with SDG goals.
- Ecosystem restoration is a long-term project and should be included in a long-term commitment and financial plans.
- Implement restoration to achieve multiple benefits simultaneously
- Assessment of critical thresholds for species loss/gain

- Specify how every day and individual actions contribute to the 2050 vision
- Communicate clearly the consequences of failure of achieving goals/targets
- Need of ambitious targets
- Mainstream the practice of restoration
- Proactive industrial sector to improve environmental performance
- Address barrier in the supply chain of restoration
- Target restoration to avoid species loss

Break-out group 2
Facilitator: Mr. Rafael Chagas (Brazilian Society for Ecosystem Restoration)
Flipchart note-taker: Mr. Pedro Brancalion (ESALQ/USP)
Laptop note-taker: Ms. Juliana Almeida-Rocha (IIS)

This group answered questions 1 and 2. The participants decided to group their ideas into categories based on the 2050 vision.

Guiding question 1. What is the role of ecosystem restoration in supporting the achievement of the 2050 vision (what do we want)?

Valuation
- Bringing biodiversity to all areas that need to be restored (including agricultural lands and cities) instead of having a goal that covers one area and leaves another one without efforts.
- Holistic approach of restoration beyond carbon stocks.
- A tool to value processes to have healthy ecosystems.

Conservation
- To contribute to biodiversity conservation by providing habitat for species and avoiding extinctions
- To create more effective and connected protected areas

Widely used
- To improve the flow of benefits and ecosystem services by integrating people and ecosystem restoration
- To apply payments for pollution to all degradative activities and uses of nature

Ecosystem services
- To create a real market for ecosystem services where people can pay real prices for it.
- To have an ecosystem restoration approach as a complementary process with multiple stakeholders participation to achieve multiple ecosystem services
- To assure human long-term benefits from ecosystem restoration
- To focus on ecosystem functioning and landscape restoration
- To increase the value of water resources
- To achieve consumer sustainable use
- To alleviate poverty by introducing other means of income generating activities reducing the pressure on natural resources

Multiple
- To intensify scientific research to support restoration improvement
- Rights-based approaches to restoration

Guiding question 2. What does that mean as goal for 2050 (how much)?

Valuation

- Different goals for different levels/types of restoration/ecosystems.
- Spatial prioritization to identify the best areas for restoration and focus on these areas.
- A restoration culture developed that implicitly understands the value of restoration

Conservation and Species

- Restoration has helped to increase protected areas surface in land and marine zones
- We don't go beyond the current level of species exploitation and we reduce it by 50%
- Restoration has helped to achieve a net gain globally
- Sustainable agriculture contributing to conservation
- Restoration has helped to avoid extinctions: we bend the curve of biodiversity loss

Climate Change

- Restoration has helped to mitigate climate change: we don't go above 1.5^{o}C

Ecosystem services

- Nature-based solutions: green infrastructures are valued and invested in equal or greater than built/constructed solutions
- At least 50% of business based on ecosystem services comes from restored areas
- Sustainable use of resources in the long-term is assured
- Restoration improves the protection of water sources

Widely used

- All levels of decision making are involved
- Innovation financial fund for restoration coming from compensation for damages

Multiple

- Using technology to spread the restoration efforts and engage people
- Traditional knowledge monitoring tools.
- Financial support for restoration and for scientific research to improve it

Break-out group 3

Facilitator: Ms. Sheila Wertz (FAO)
Flipchart note-taker: Mr. Jeronimo Sansevero (UFRRJ)
Laptop note-taker: Ms. Camila Islas (IIS)

Guiding question 1. What is the role of ecosystem restoration in supporting the achievement of the 2050 vision (what do we want)?

Summary

- At species level – species richness/ increasing protection of threatened species/ potential to adaptation/ genetic/ conservation/ reduce species loss
- At the ecosystem level – area threatened ecosystem (pollution, agriculture)/ increase functioning and resilience of ecosystem
- At the seascapes and landscape level – connectivity, landscape sustainability
- Culture and people – natural disturbances and resilience/ direct economic inputs – restoration has the possibility to input money into the economy/ improve social development/ increases indigenous and local knowledge in relation to the use of species
- Reducing threats
- Nature-based solutions. For example: to adapt to climate change – for cities and rural areas

- Strengthening conservation to resist climate change

Comments in full

- Nexus between ecosystem restoration and the reduction of species decline/ increasing genetic diversity
- Improve of ecosystem services/ increasing ecosystem functions and services complexity
- Human well-being
- Enabling species richness/ species conservation
- Healthy ecosystems to provide ecosystem services like clean water
- Increasing the value of ecosystem services to the people
- Deforestation, destruction of ecosystem. We are eco-centric people, we use ecosystem services and we pay for this use. Future generations should be consulted about this. Stop deforestation, address the social needs of the population
- Institutional culture, we should involve people in restoration
- Restoration is well-being, is being in harmony with nature. It gives you the stake in something longer-term. Currently there are festivals and parks where people can go to learn about restoration. Restore yourself at the same time you restore nature. Is a powerful way of linking people towards restoration
- Changing business as usual. our attitudes toward nature
- Takin ownership it allows you and other people to actively change
- Is reconnecting people and nature
- Good and services, intergenerational equity, food security
- Ecosystem restoration can improve social justice, equal rights for everyone
- Restoration if to restore ecosystems in its natural conditions using native species. Having a scientific proposal about what species to use. We should have fiscal instruments to support restoration with native species
- The profitable project dominates the conservation projects – oil palm issue related

Guiding question 2. What does that mean as goal for 2050 (how much)?

- 100% sustainable use of land and seascape
- To keep what we have today and improve it till 2050
- Hold net decline by ecosystem/ net improvement by ecosystem
- Choose those areas you don't want to lose. Even if we don't want to, big changes are still coming. Is uncomfortable to lose, but we are going to have to choose based in criteria
    - Prioritize
    - Protect the most important ones
    - Use sustainably the other ones
    - Restore the abandoned areas

Guiding question 3. What do we need to get there?

- Commitments by all stakeholders
- Effort, finance and political will
- International burdening sharing. Land use is so inequal what we have to restore where it is needed. We are not going to achieve our goals if we don't share the burden between countries
- Responsibility sharing. There is a rationale to look at the planet as a whole. Something about the global prioritizing has to account for that
- Education and awareness of people (CEPA- Communication, public awareness, capacity building). The demand for restoration should come from people
- We need ecosystem valuation. To let people know how much ecosystem restorations costs

- We need gender support
- To consider local and indigenous knowledge
- Local participation and empowerment of the communities. To enhance participatory approaches
- We have to share the benefits from conservation and ecosystem restoration with the population
- We should have a Global Compensation System. For example, if there is an interest in a mine business, if I don't mine, I have to have compensation.
- Ecosystem restoration should be prioritized. Ecosystem restoration should be included in all projects, for example climate change mitigation.
- We should have an ecosystem specific target. A target that is equivalent to target 12, but at the ecosystem level
- Interprotocol synergies in actions for ecosystem restoration: CBD, IPBES, etc.
- A better relationship between scientists and policymakers. Policymakers should be willing to hear and accept scientific data/advices

Annex V

DETAILS OF DISCUSSIONS UNDER ITEM 6 TO 11 - POTENTIAL ELEMENTS ON ECOSYSTEM RESTORATION FOR THE POST 2020 GLOBAL BIODIVERSITY FRAMEWORK

Station 1 - Principles to guide the goals and targets
Facilitator: Ms. Robin Chazdon (University of Connecticut)
Flipchart note-taker: Ms. Nathalia Dreyer (IIS)
Laptop note-taker: Raísa Vieira (IIS)

This station discussed the scope and guiding principles of the goal and targets on ecosystem restoration (qualitative elements). The group answered to three guiding questions.

Guiding question 1. Should specific targets distinguish among terrestrial, freshwater, marine and coastal ecosystems, and among spatial scales, levels of degradation and/or priorities for conservation?

- The groups reached a consensus that there should be an overarching/global scale restoration target. They did not discuss precisely what this quantitative target should be, but expressed that it should be comprehensive, holistic, and apply to every major ecosystem type in terrestrial, freshwater, marine and coastal ecosystems. (leave no ecosystem unrestored)
- At national scales, there are likely to be challenges in applying one target uniformly across all ecosystem types due to variation in the overall distribution, extent, and state of different ecosystems and to specific country needs and objectives for restoration. All ecosystems are not equal in terms of how restoration is conducted, how long recovery takes, and how much restoration costs, so the targets need to be adjusted to reflect this reality. Specific targets for ecosystems should be decided within the countries, leading to a hierarchical structure of national targets embedded within global targets. The countries should be engaged in an assessment process of the extent and condition of ecosystems. To do this effectively will require guidance and capacity building in some cases. Assistance and tools will be needed considering the capacity of countries to identify their targets and meet the goals. Global targets can also present minimum targets and countries are encouraged to go beyond these levels when possible.
- National sovereignty (countries decide their priorities). Countries have the responsibility (and need to become empowered) to conduct strategic planning and spatial prioritization analyses to

make decisions regarding implementation and country-level targets. Countries to discuss where spatially they want to maintain current uses and do not want to restore. Prioritize productive/economic activities, prioritize endangered ecosystems or prioritize ecosystem service production.

- Representativeness of different ecosystems is another reason why national targets must be adapted to the unique distribution of ecosystems within countries. It is important that countries assess the distribution and extent of ecosystems so they can conduct restoration across ecosystems in relation to their overall importance in the country.
- A challenge for countries is that there is also a need to focus on restoration among related ecosystems within geological or geographic units such as basins and watersheds. Isolating ecosystems reduces the effectiveness of spatially integrated restoration objectives. Spatial integration is particularly important for the land-water interface. The need for spatial integration and connectivity across ecosystems may require that restoration targets deviate from the global targets. Flexibility is needed to ensure that spatial management is feasible, as restoration at larger spatial scales is a critically important objective. At the same time, flexibility needs to be accompanied by accountability and an explanation for deviations if these are required.
- State of ecosystems (a measure of the level of degradation), the value of ecosystems for conservation and ecosystem services, and the desired/potential outcomes of restoration and future uses of the landscape will ultimately determine their importance as restoration targets regardless of ecosystem type. Targets should differentiate between degraded, natural and converted ecosystems (and specify different end points for restoration: reference ecosystem, productive forestry, productive agriculture, partial recovery (modified natural ecosystem). Setting national restoration targets and priorities should be an evidence-based decision that should also account for cost-effectiveness of restoration.
- The distribution of restoration targets across countries also varies, with some countries having a greater restoration "burden" or greater vulnerability than others. So, it may be necessary and desirable for countries to share this burden in some way.
- Restoration also needs to account for levels of the biological hierarchy (including genetic diversity, species diversity, and ecosystem diversity).
- Ecosystems (and biomes) occur transnationally but have unique endemic biodiversity elements, emphasizing the importance of coordination in restoration efforts among countries when global prioritization approaches are used.

Guiding question 2. Which types of restoration strategies should be considered to achieve cost-effective ecosystem and landscape restoration and maximize its benefits?

Note: Some comments about what "restoration strategies" mean were raised by groups 1 and 2. Both groups preferred to use "intervention" instead of "strategy" to make things clear.

The groups answers could be divided into the following categories of restoration strategies:

Increasing production, food and fuel security, and sustainability

- Sustainable use and management
- Silviculture practices
- Agroforestry
- Agroecology systems

Biodiversity-focused restoration strategies

- Implementation of ecological/wildlife corridors
- Genetic improvement

- Prioritizing restoration to avoid species extinction
- Promote the use of native species in restoration
- Control the use and spread of exotic species
- Acknowledge importance of functional diversity
- Should take into consideration ecological connectivity across different ecosystems

Spatial planning

- Integrate landscapes
- Use of spatial cost-benefit analysis to identify potential priorities
- Support natural restoration and rewilding when conditions are favorable

Ecosystem management (including ecosystem services)

- Flood and erosion control
- Invasive species control
- Guarantee the services and functions ecosystems provide

Governance strategies and enabling conditions

- Participatory approaches, involving communities
- Community based strategies for natural restoration, focusing on cost-effectiveness
- Strategies that are flexible that allow countries to easily get on board even if few resources are available, e.g. capacity building for locals and employing simple techniques

General issues

- Addressing degradation when planning restoration. Restoration should be focused on degraded areas as defined using specific criteria.
- Safety net of what accounts as restored.
- Improve technology
- Not imposing to countries methods regarding strategies
- Do no harm principle: Being careful to restoration plans not to cause more harm than good
- Restoration processes and policies documents at the national level should be transparent and focus on natural processes.

Guiding question 3. Which other qualitative criteria should be part of the future targets for ecosystem restoration?

Note: The groups changed "criteria" for "principles"

- **Adopt:** evidence-based approaches; cost-effective strategies.
- **Prioritize:** critically endangered habitats; multiple criteria and national-scale analyses results; soil functions
- **Focus:** quality outcomes instead of area-based targets; Bottom up approach
- **Consider:** how CBD will help the countries to achieve the targets; diversity of species used in soil restoration; social ecological systems**;** integration between below and above ground restoration; technical and economical capacity of countries to implement restoration; planting native large-seeded and large structured trees in tropical forests and urban areas; the social dimensions and biodiversity values in analyses
- **Promote:** National level decision making; sustainable use and development; rural development; Change to sustainable agriculture practices and agroforestry
- **Recognize**: contributions of individual and community actions; restoration as a means of rural development; potential of nature-based solutions to achieve climate, restoration, conservation, and sustainable-use goals.
- **Take into account:** urban ecosystems; traditional knowledge; woman and youth; climate change vulnerability analysis and effects of climate change on both natural ecosystems and society.

- **Use:** functional approach to describe ecosystem states; the recovery wheel (from SER); defined safeguards; non-timber forest products; multiple criteria analyses to reduce tradeoffs and competition between nature conservation and food production or human rights.
- **Define:** How to set the previous/aimed state to which ecosystems should recover; safeguards; Net positive (not simply balancing gains and losses, restoration should be hand-in-hand with halting habitat loss and ecosystem degradation.)
- **Emphasize:** the emotional experience and perceptions people have from restoration and its outcomes

General comments about targets

- Need to think about the transformational changes we will make with the targets. Not necessarily to solve the problems, but to present alternatives
- Be careful to not set unrealistic goals, such as restore 100% of degraded land, because there are lands that can't or shouldn't be restored
- Question raised that having too many principles is out of the objective and that it doesn't make sense to have so many. "Criteria" would be a better term in this case.
- Targets should be cohesive and less fragmented, which is more practical for implementation.

Station 2 - Global goals and targets

Facilitator: Mr. Renato Crouzeilles (IIS)
Flipchart note-taker: Mr. Pedro Brancalion (ESALQ/USP)
Laptop note-taker: Ms. Juliana Almeida-Rocha (IIS)

In this station, the group discussed guiding metrics, baselines and indicators of the goal and targets on ecosystem restoration. The discussion considered the existing list of indicators for which data is already being collected, and new metrics and indicators that can be improved/incorporated to achieve the post-2020 targets.

Guiding question 1: What are the desired outcomes of ecosystem restoration and which indicators should represent them?

General recommendation

- There should be separated outcomes of nature for:
  - nature (indicators: soil quality, biodiversity indices…)
  - culture (indicators: inclusion of traditional knowledge, engagement of local people, gender equality…)
  - society (indicators: ecosystem services, climate change adaptation and mitigation…)
- Is necessary to consider telecoupling => one country impacts on the biodiversity/environment of another country
- There should be a coordination between different actors

Improve the conditions and functions of land/ecosystem in a holistic perspective

- *Outcome:* Improving the condition of the lands/ecosystems.
  Indicators: soil quality, carbon, nutrients, biodiversity, biomass, canopy connectivity.
- *Outcome*: Capacity to adapt to changes (climate change, ecosystem degradation, and resources uses) and be part of the solution (mitigate the negative effects).
  The group didn't discuss about potential indicators.
- *Outcome*: Restoration achieves positive gains (subnational, national, global) in ecosystem functions provided by biodiversity, including pollination, seed dispersal, primary productivity and other key functions of ecosystems

Indicator: Gain in ecosystem multifunctionality

- Outcome: Increase the protection of water resources
  The group didn't discuss about potential indicators.
- Outcome: Decrease the erosion of soil
  The group didn't discuss about potential indicators.

Representation of different habitat/ecosystems

- *Outcome*: Ecosystem area restored
  Indicator: number of hectares restored
- *Outcome*: Ensure the representation of all ecosystems including seascape as well
  Indicator: Proportion of the cover of each ecosystem type that is under good condition

Achieving a sustainable society/sustainable use of restored ecosystem (e.g. reduced natural disasters, increased ecosystem services)

- *Outcome*: Reduce/stop degradation, and then achieve a net gain
  Indicators: Area/condition of degraded area
- *Outcome*: By 2030, 15% of degraded land, freshwater, coastal and ocean areas are restored by releasing these from direct human pressures, allowing space for nature to recover
  Indicators: Reduction in human extractions in the areas designated for restoration, such as forestry, grazing and agriculture.
- *Outcome*: By 2030, the net fragmentation of habitats by human infrastructures and by degradative agriculture, forestry, and grazing activities have been reversed
  Indicators: Net reduction in fragmentation by the above-mentioned structures and land uses
- *Outcome*: Greenhouse gases emission and reducing global warming
  The group didn't discuss about potential indicators.
- *Outcome*: Improve the integration of the local communities with the ecosystems
  The group didn't discuss about potential indicators.

Biodiversity status

- *Output*: Species richness
  Indicators: Increased number of species, umbrella species
- *Output*: Reduction of threatened species
  Indicators: Number of threatened species, number of species with improved conservation status
- *Output*: Genetic diversity maintained
  Indicators: Number of species included in genetic conversation programs, number of individuals per species
- *Output*: Enhance the complexity of ecological networks ensuring that all trophic levels are restored and functional
  Indicators: number and abundance of species within functional groups, number of interactions between species
- *Output*: Protected areas are connected through the creation of ecological corridors among them
  Indicators: Increased connectivity of protected areas, number of ecological corridors created.
- *Output*: Consider transboundary connectivity
  Indicator: number of ecological corridors created

Guiding question 2: Should there be targets, metrics, baselines (2020) and indicators at the global and regional level, or should these be exclusively at national level?

Targets at different levels

- First, it is necessary to harmonize concepts and definitions among levels/activities.
- All levels are important because they are integrated, so we can have global, regional, national and local targets/indicators/baselines.
- Having global levels is important for the countries to understand how they contribute to a bigger change (the global targets).
- National targets should be weighted by the level of degradation of the territory.
- There could be qualitative targets at the global level, and quantitative targets at the national level.
- We should set targets for all levels, but providing some flexibility for integration and increase ambitions if necessary/possible. Cooperation is crucial to raise ambitious (bottom-up process).
- There should be more local targets such as ecosystem-specific targets.

Working together internationally

- Targets need to consider risks of leakage.
- There should be an integration of targets and financial mechanisms.
- Countries should be organized to define metrics and indicators for the biomes/regions they share.
- There should be a focus on creating transboundary corridors.

General considerations

- There should be outcome-oriented targets based on processes and going beyond carbon sequestration.
- There should be a focus on multi-functionality and multiple ecosystems.
- Local communities should be involved in the establishment of the baselines
- There should be social indicators of restoration success.
- An important aspect to be considered is how the benefits-sharing shall apply to restored ecosystems.
- The existing targets (WG8J) could be maintained but improved with better indicators.
- Lessons learned from other agreements: we should use information from other agreements/conventions – e.g. how they inform baselines and indicators, and how they track outcomes – to take advantage of what already exists and just complement/improve it.
- We should make sure that ecological restoration under the CBD is really about biodiversity and functioning ecosystems. Feed the need for biodiversity outcomes of restoration back to other conventions. (-> risk of focussing too much on carbon)

Guiding question 3: How to distribute a potential target for 2050 in milestones for 2030 and 2040 (e.g. should it be constant in the 3 decades, higher earlier on or higher later on?)

Initial discussion

- Higher targets should be set now considering the time lag to achieve the results of restoration, the urgency to achieve the outcomes (biodiversity and climate urgency), and the right momentum to invest on restoration.

Considerations about the process

- There is a strong dependency on financial mechanisms to invest on restoration, so maybe it is not possible to start with very ambitious targets.
- We need capacity building, engagement/integration of people, techniques development and it takes time (transition phase), so targets could be higher later.

Conclusions

- We have to work on enabling conditions in parallel with already implementing ambitious restoration now.

- We need very ambitious targets for 2050 and very smart and precise targets for 2030, 2040. Ex. By 2030, all degraded ecosystems are under restoration, and by 2050, restoration policies are implemented.
- The pressure should start higher but continuously increase until very ambitious targets for 2050. Ex. The first target could be stopping degradation and the final could be achieving 100% of degraded ecosystems restored.
- Targets for 2030, 2040 and 2050 should follow some logic: we don't have the outcomes before we have the enabling conditions and capacity, so there is a sequence of things to achieve the benefits. The velocity of this trajectory will work differently among different places depending on their current situation. This approach may apply better for the national planning.

Station 3 - Linkages to other potential thematic areas
Facilitator: Ms. Bethanie Walder (Society of Ecological Restoration)
Flipchart note-taker: Mr. Rafael Chaves (Brazilian Society for Ecosystem Restoration)
Laptop note-taker: Ms. Camila Islas (IIS)

In this station, the group discussed about the relation of goals and targets on ecosystem restoration to other potential goals and targets under the post-2020 biodiversity framework. Specifically, the following guiding questions were addressed: 1. Should the post-2020 ecosystem restoration targets be explicitly linked to the other correlated ones (e.g. species conservation, protected areas)? 2.Which other measures (e.g. capacity building, financing needs, technology transfer) to achieve the objectives of the CBD are linked to ecosystem restoration and how? 3. How does ecosystem restoration contribute to the achievement of the objectives of the CBD and the 2030/2040/2050 visions? As there is an uncertainty about what the targets post-2020 are going to be, the five strategic goals which orient the Aichi targets were used to support this discussion. To know: A. Addressing the underlying causes of biodiversity loss by mainstreaming biodiversity across government and society; B. Reduce direct pressures on biodiversity & promote sustainable development; C. Improve status of biodiversity by safeguarding ecosystems, species & genetic biodiversity; D. Enhance the benefits to all from biodiversity & Ecosystem services; E. Enhance implementation through participatory planning, knowledge management, & capacity building

Overarching issues

- Restoration should be linked into all CBD activities as it helps achieve all of the Strategic Aichi goals and could support the delivery of nearly every existing Aichi target as well.
- Restoration is inspiring, solutions-oriented, builds empathy, and can help re-create a reciprocal relationship between people and nature.
- Restoration can help us achieve net global ecological improvement, while simultaneously improving the human condition.
- Restoration should be considered as a key driver to achieving transformative change (and in the theory of change)

A. Addressing the underlying causes of biodiversity loss by mainstreaming biodiversity across government and society

- Reorient harmful subsidies to finance restoration
- Articulate how restoration mitigates climate change across all ecosystems
- Productive land rehabilitation diminishes pressure on natural ecosystems and increases local and global ecosystem services
- Government/society needs to engage in restoration efforts in all ecosystems including aquatic, boreal, artic, grassland, wetlands, etc.
- Essential contribution to climate change mitigation and halting biodiversity loss on land + sea

B. Reduce direct pressures on biodiversity & promote sustainable development

- Restoration converts from negative to positive feedback loop (including in the context of climate change)
- Restoration protects all types of resources – including soil, water – not only species, biodiversity
- Restoration can help us move from unsustainable to sustainable development
- We need to restore for sustainable use and production (e.g., fisheries, agriculture), as well as for nature
- First step in restoration is removing threats

C. Improve status of biodiversity by safeguarding ecosystems, species & genetic biodiversity

- Protected areas/OECM
  - Restoration can create opportunities for PA/OECM
  - Degraded PA need to be restored
  - Broadening range and scope of PA/OECM
- Wild species
  - Maintain and enhance habitat, including for migratory, endangered and wide-ranging species
  - Restore all species – from insects to charismatic
  - Species enrichment
  - Improve adaptation responses for species conservation
- Genetics
  - Address genetics in the context of climate change
  - Maintain genetic diversity
- Restore corridors and connectivity to maintain ecological function
- Recognize the connection between terrestrial and aquatic ecosystems
- Apply adaptive management to restoration projects
- Biodiversity is n-dimensional (from genes to landscapes); include a greater difference of dimensions in our targets (beyond species ecosystems)

D. Enhance the benefits to all from biodiversity & Ecosystem services

- Ecosystem restoration can contribute to conservation of biodiversity, to the sustainable use of its components and to benefit sharing by creating a virtuous circle of increasing number of species, generating jobs and income and fairly distributing the wealth it produces
- Apply restoration and restorative activities at all levels in developed, productive and natural ecosystems
- When allocating restoration consider livelihood importance
- Restoration of cultural heritage

E. Enhance implementation through participatory planning, knowledge management and capacity building

Capacity Building

- Provide tools for planning, implementing and monitoring (implementation and effectiveness) restoration at all governmental levels and in all ecosystems and land/seascapes
- Innovate new technologies

Indigenous and local participation

- Recognize and support engagement – restoration doesn't work without local engagement
- Promote a bottom-up approach
- Restoration can prevent out-migration and thus avoid the loss of traditional and local knowledge
- Improve quality of life for local communities

- Restoration builds on traditional knowledge to contribute to further livelihood of IPLCs

Policy

- Full involvement of policymakers (legislature) in restoration to create buy-in
- Restoration is, by default, a spatial planning process; need to recognize this and be deliberate about restoration priorities
- Create offset policy guidance

Finance/economics

- create economic opportunity
- Implementation consistent with article 20 of the convention
- Fund all levels of restorative activities
- Improve effectiveness & legal clarity on compensation mechanisms & restoration
- Create a dedicated global restoration fund (but be clear how it is separate from climate funding – e.g. to cover nonclimate prioritized restoration)
- Encourage national restoration funds, including through changes in tax structure to fund green infrastructure/restoration/nature-based solutions
- Promote private sector payment for services

Governance

- Scientifically based and governmentally assurance – mandate
- Implement ABS processes to foster human development
- Insert tenure + tenure rights into planning and or prioritizing (and livelihood issues)
- Increase interagency coordination to conservation and restoration at the national level
- Create legal structures that obligate restoration for all degrading activities (at a level higher than the level of degradation)

Participatory approaches

- Engage youth, women, local interest groups
- Support for participatory engagement at local/ national/ global level

Communication

- Raises awareness on the importance of biodiversity to human well-being
- Create a knowledge hub to share/communicate both lessons learned and successes
- Recognize and communicate the consequences of inaction
- Ensure communication about sustainable use doesn't promote overuse (we should be saying sustainability of use instead of sustainable use)

Relationship between people and nature

- Through participatory restoration approaches we can enhance conscience about the need to protect and restore nature, and create a reciprocal relationship with nature
- Restoration is inspiring and motivating + reconnect people to nature

Station 4 –Integrating existing goals/targets from other international instruments areas (facilitator: Carlos A. M. Scaramuzza, IIS)[4]

Integrating the goal and targets on ecosystem restoration with other international instruments and conventions (strengthening the potential for ecosystem restoration)

Guiding questions

1. What are the synergies and trade-offs between goals and targets on ecosystem restoration and other international instruments and conventions?

[4] The detailed summary for Station 4 is the same as the "Summary outcomes for the World Café Station 4" presented earlier.

2. In order to capture synergies, finance and foster integrated planning, monitoring and reporting on ecosystem restoration, should the Post-2020 framework seek a closer alignment with the Climate Change Convention REDD+ mechanism? If so, how should credits for efforts be shared between financing countries and countries where restoration implementation takes place?

3. How to ensure alignment, coherence and synergies between national targets for ecosystem restoration under the post-2020 global biodiversity framework and other international instruments and conventions that may contain ecosystem-based measures?

4. How to minimize risks for the goals of the CBD arising from ecosystem restoration-related actions in other international instruments (such as excessive tree planting in non-forest biomes)?

Annex VI

DETAILS OF DISCUSSION UNDER ITEM 12 - BREAK-OUT GROUPS ON MEANS OF IMPLEMENTATION

Group A1. Means of implementation

Facilitator: Ms. Sheila Wertz (FAO)
Flipchart note-taker: Mr. Rafael Chaves (Brazilian Society for Ecosystem Restoration)
Laptop note-taker: Ms. Raísa Vieira (IIS)

The group divided the conclusions in two main themes: Funding/Resource mobilization, and capacity building.

Resource mobilization

1) Rationale
    - Restoration is key to transformational change and current funding is not enough.
    - Restoration encompasses all aspects of biodiversity and objectives of the CBD; however very few people understand how this happens.
    - There's a need to provide governments at the national level templates of how governments could shift the way they spend their taxpayers money to promote a different approach of how restoration is perceived and implemented (examples from Korea, Japan and California/USA).
    - There is a need to finance all the stages of restoration plans not just the proper implementation of restoration. And also include the social costs.
    - Resource mobilization is not only about economic resources.
    - Restoration can be an investment and can recover the productivity of lands.

2) Who pays?
    - Distinction between international and national funds
    - Build on existing funds, although the existing funds are not enough. Proposal of a global restoration impact fund
    - Polluters should pay a higher value depending on the level of degradation they promote.
    - Companies and countries causing pollution and degradation should pay for the impact of it.
    - Allocation of funds is basically a governmental attribution. Governments need to put mechanisms in place to allocate money payed from companies to restoration and prioritize restoration in their public spending.

Capacity-building

1) What forms? Why?
    - To build capacity of the youth and develop partnership with youth initiatives
    - To use friendly materials to implement restoration

2) What are the needs?
    - Create a common communication channel to share experiences on restoration around the world, both failures and successes
    - Awareness raising
    - Institutional strengthening and cooperation
    - Capacity building for economic valuation of ecosystem services
    - Training for design implementation models of restoration

- CBD to consider having national target setting support programs

3) How to cooperate?
   - More regular and broader network of contributions and collaboration
   - Open data sources and sharing of patents
   - Dialogue, networking and agreements
   - Exchange of information between similar landscapes

Group A2. Means of implementation

Facilitator: Mr. Blaise Bodin (CBD)
Flipchart note-taker: Ms. Robin Chazdon (University of Connecticut)
Laptop note-taker: Ms. Juliana Almeida-Rocha (IIS)

Resource mobilization

- Bottom-up, community-based restoration movements need to be encouraged, it's not all about top-down funding through governments
- Donor funding project cycle not always adequate for long restoration timeframes
- Convince the governments about the need to finance restoration - Government needs to funnel donor funds rather than filter
- Investment should go towards research and development for restoration, involving the private sector, research and academia
- Public-private partnerships to finance science for implementation
- Transformative change is needed to move away from extractive economies
- Take a proactive approach to communication towards donors and governments on the needs for restoration finance
- Target all levels (global, national, local) for mobilization
- Role of Aichi target 3 – removal of perverse subsidies and putting in place the right incentives
- Offset mechanisms/ecosystem banking and regulations in place for compensation
- Taxes on industry that drive ecosystem degradation
- User tax on natural resources to fund restoration
- Need to educate the private sector on the business case for restoration, forge public-private partnerships
- Consider the idea of a global restoration fund

Capacity building

- Build the evidence base of restoration practices and outcomes, library of case studies
- Re-education of foresters, nature reserve managers and agriculture specialists
- Allocate share of restoration budgets to capacity-building
- Tailored knowledge products for restoration practitioners and stakeholders/communities
- Tailored knowledge products for local context and in local languages
- Capacity building better coordinated across Rio conventions/MEAs

- Set up multi-disciplinary and multi-sectoral teams to work on restoration
- Regional capacity building workshops with a small number of countries and bringing several reps across government
- Means of implementation need to be directed to the implementation of the STAPER, adopted 4 years ago
- Capacity building topics
    - strategic planning for national level restoration programmes
    - agroforestry
    - ecotourism planning and development

Group B. Monitoring and review of post-2020 framework - ecosystem restoration in the long term

Facilitator: Lera Miles
Laptop note-taker: Ms. Camila Islas (IIS)

- Process indicators/ Response indicators – How do CDB indicators fit into the DPSIR framework
    - Indicators are important, but before that we should have financial mechanisms
    - Monitoring is a challenge. We have financial limitations to monitor but this is the most crucial part.
- The challenge is to plan the monitoring before the implementation. Without a proper baseline the monitoring cannot work. There has to be a program of implementation and monitoring that considers this.
- For some questions you need a reference and for some questions you need the baseline/control: in modern literature this is described as "reference" (how successful has been your restoration) or "control" (see if what was done had an effect)
- Suggestion is that CBD revises and adopts the "Beijing call on biodiversity observations for the post-2020 decision making" where they say, for example: "we propose that the post-2020 targets explicitly include the development of sustainable operational National Observation Networks". This is not about drivers, it is about the state of biodiversity
- We already have monitoring systems implemented such as the Bonn challenge barometer, SIR (reports degradation to support restoration). There should be synergies between these efforts.
- One solution could be to use the model of the world index at the national level, with the information that you have at the local level. We need to fill this gap.
    - Some core indicators that everyone must use and them specific to countries/localities
    - This could be achieved. As options to the countries, having a system to integrate. Not with free options but with a determined amount.
- We should have indicators for financial flows. It would be good to have indicators, not only of what is being made on the ground, but for what is being done for cooperation: like financial flows between countries for restoration
    - This is very challenging, because the same money goes to different levels.
- It would be helpful to have measure for direct indirect contribution of restoration to the economy
- One benefit of having information about finance is that it also educates people about the fact that restoration is something worth doing
- Monitoring programs should have adequate meta-data documentation, so that anyone can understand the definition of each variable and how the data was collected
- Metadata documentation. We should have this behind the monitoring program. We may get better monitoring, but we would be able to put them together.

- We should have CBD support for developing these essential variables: Essential biodiversity variables (EBV)
- Involvement of the community in monitoring. It is important to educate the community about why to monitor. To have voluntary guidelines
- How often do we think parties should report/ review the progress on restoration?
  - After one year (because most threes die) we must monitor, then 5 years (if we don't re-seedling), every five years.
  - More frequent reporting
  - It is a burden for countries to report. In UK reports there is not much progress in short-term. You could have more often reports on actions, but not on progress.
- Ensure streams and feedbacks of information from local and national level to global level indicators
- CBD supports fair principles for data generation and sharing (findable, accessible, interogerable, reproducible)
- Suggestion: if we should include indicators not specifically/ or not only on biodiversity but on threats
- Third-party monitoring for safety net and standards
  - Third party or to be review?
  - I think is appropriate to have both
- Monitor what the private sector and local and indigenous communities have been doing to restore areas
  - Countries should be encouraged to incorporate these efforts into their reports
- Citizen initiative and them the government started to be integrated on the initiatives
- Advancement of urban sprawls (how much per year we are losing in areas for the growth of cities and within cities)
- Baselines. The world baseline is vague and includes 2 concepts: 1) The reference condition which is the state that the ecosystem would have been in if degradation had not occurred. 2) The degraded state immediately before restoration – called the "control" in monitoring science
- For monitoring to be effective:
  - 1) The monitoring program must be planned and funded before project & program implementation
  - 2) Must include a plan for analysis
  - 3) Must include a plan for sharing results
- Need for indicators of the direct economic effects of restoration:
  - Difference on jobs
  - Increased spending associated with project
  - Increase property value and taxes
  - Increased value of pasture, etc.
  - This may not be possible in all projects
- Involving local communities, IPs, women on monitoring, citizen movements + other non-government
- Identify success restoration projects and build on the experience (e.g., Costa Rica mangroves)

During the discussion, participants also made the following observations:

- As a general comment, means of implementation need to be directed towards the implementation of the STAPER, adopted 4 years ago in CBD decision XIII/5
- Offsetting as a source of finance is controversial because it implies that degradation happened before so it would just neutralize the effects and not really achieving net gain.
- Categorizing the opportunities according to the existing capital flows could optimize the resources mobilization for restoration.

- Public and private sectors have different roles on funding restoration: the private sector is more focused on financing commercially outcomes of restoration (ecosystem services provision such as timber and water), while public funding could be more focused on ecosystems resilience, biodiversity conservation and so on.
- There was a mention about the The Rewilding Europe Capital that gives loans for business associated to ecological restoration.
- There was an additional contribution for the inclusion of institutional capacity building at the regional level ecosystem restoration planning (link with the CEPA program).
- With regards to "Monitoring and Review", there was a suggestion to specify the expected actors on the list of monitoring activities created by the group. We have to know what kind of things are happening and who is involved.
- Beijing call was forgotten. In the last COP the national biodiversity observation network was presented, that relates a lot to what is being discussed here.

Annex VII

ADDITIONAL COMMENTS RECEIVED THROUGH THE SURVEY ON THE WORDING OF THE TARGET[5]

- The main global target should be very simple and biodiversity-outcome oriented
- Target of restoration must be estimated by the sum of country proposal, according to his own capacities and resources
- Keep the text of target 15, develop an indicator set for it and a breakdown by ecosystems
- Cultural benefits
- Socio-ecological links to ecosystem restoration
- The questions implied a rather narrow interpretation of restoration.
- I think that there may have been quite a number of '0', which will make the overall result marginally useful
- Simple language
- There is consideration of political will, budget, participation of local people, involvement of private sector, information exchange, collaboration, networking, baseline data, monitoring
- By 2030, national policies are in place to reduce, counterbalance and overcompensate ecosystem degradation.
- By 2030 prioritized restoration action plans are established and implemented to reduce 20 % of the degradation (=loss of condition) of already degraded ecosystems, including degradation that is exported through trade.
- Indicator should not be only area based but it is area (ha) and the condition of each location (%) and then the amount of degradation is the union of all the areas.
- Ask parties to make binding pledges towards the targets by end of 2021 whatever the quantitative targets are
- Inclusion of an element relating to ecosystem condition, alongside the area considerations.
- Establishment of global monitoring platform
- Maybe metrics could be built to be used globally

[5] Comments are presented as they were received

- Living in harmony with nature by 2050 means 100% of landscapes are functional social-ecological systems. The restoration aspect should be for restoration of whatever is appropriate in each landscape. The 2030 target should be for the proper amount of progress to be made towards 2050, according to the time scales needed for each restoration.
- The percentage of restored areas depend on the type of ecosystem. I think we cannot determine the same global target for all cases.
- Target should set both the 'what' and the 'why' even if all elements cannot be quantified
- Multicriteria global prioritization guidelines including Ecological, Social and Cultural outcomes
- Factor in population growth
- Baseline is needed
- Native seed
- Appropriate technology adopted
- National Political will
- It might have been clearer to ask about ecological restoration in terms of area and % targets, and then about restorative activities on converted and degraded lands.
- Restoration has to contribute to sustainable development
- Restoration should be based on scientific justification.
- The state should be the main guarantor.
- By 2050, seek to see all degraded land / coastal / marine systems under restoration or rehabilitation - with the exception of land so damaged that it can't be restored.
- The need of a clear definition of land degradation and ecosystem restoration and common understanding/ standard of the effectiveness of restoration activities.
- Focus more on the improvement of restoration effectiveness, rather than a higher simple number (area or percentage)
- Genetic Resources consideration.
- Agriculture lands may not be restoration to degraded lands. Yes, trees and crops are planted but many ecosystems will not come back when agricultural crop are planted. Empty forest. Preparing the land for agriculture damages soil ecosystems.
- When land is restored with agroforestry, and wildlife reenters these ecosystems, will end up in human wildlife conflicts and add to biodiversity loss.

Annex VIII

ADDITIONAL PROPOSED OUTCOMES FOR THE TARGET RECEIVED THROUGH THE SURVEY[6]

Biodiversity:

- Functional diversity and Ecological functions
- Prioritize ecosystem resilience
- Functional connectivity between ecosystems and ecosystem components
- Landscape approach so restoration supports production and vice versa
- What about the seas? All of these questions are about land area, but oceans also need restoration.
- Contribution to a functional social ecological system in the landscape

[6] ibid

- Get to net ecological improvement
- Functional connectivity of ecosystems is restored
- Rewilding
- Rights of nature
- Prioritize ecological rather than productive functions.
- Targets should include outcomes for diverse aspects of biodiversity, including outcomes at the landscape level.
- By 2050, seek to see all degraded land / coastal / marine systems under restoration or rehabilitation - with the exception of land so damaged that it can't be restored.
- Proposition of different ecosystems restored
- Restored ecosystems exceed degraded ecosystems (area, number, etc.)
- Sufficient habitat by 2050 for all species threatened by habitat loss

Management and governance:

- Exclude monoculture tree plantations
- Customary sustainable use (CSU)
- Permanence of the restored ecosystem and its sustainable management
- Governance mechanisms to enable restoration and share benefits

Socioeconomic:

- Include Indigenous peoples and local communities (IPLCs)
- Reconnect people with better preserved nature
  Cooperation among actors within and across countries
- Promote ecosystem governance
- Social and economic benefits are fundamental to trigger a virtuous circle with restoration projects
- Inclusiveness (all people/stakeholders participation in planning/implementing/reviewing)
- Focusing on indigenous people, women and youth
- Human well-being (livelihoods, improved food security, reduced poverty)
- Valued Ecosystem for People
- Participative approach
- Importance of IPLC is completely overlooked in these exercises
- Benefit sharing meeting people needs
- Costs of restoration and cost-effectiveness
- Increased productivity and food security
- Induce a virtuous circle of environmental improvement and poverty alleviation
- Avoid incentives for perverse outcomes
- Increased income
- Private sector role towards restoration

Co-benefits:

- Global prioritization taking into account ecological, social and cultural outcomes

Principles and guidance:

- "Degraded" land and converted land vary so much as a percentage across countries that a global target may be irrelevant for national implementation
- Area based targets without baselines, and reference levels of what we consider degraded, are useless
- Area based measures without clarity on the reference of what's the quality of restored areas (ecosystem functionality) doesn't say anything
- Using Ha as an indicator in restoration is best fit for National Target not Global target
- Simple language
- Simple language, realistic and contextualization

- Area target should not refer to the total amount of land and not to the amount of degraded land since this would require estimating the amount of degradation, which is extremely difficult to agree on. An exception to this would be the transformation of intensively used land (e.g. agriculture) into natural land. I meant "Area target should refer to the total amount of land" degraded or not and not to the amount of degraded land
- MUST avoid constant confusion about what is degradation in defining targets. It will be an excuse for inaction.
- Separate targets should be developed for ecological restoration and restotive activities.
- Are will be sub-Targets?
- Include ILK
- The target formulation should include a reference to sustainable development
- Target should address means to have long-term sustainability in ecosystem restoration
- It is useful for target to distinguish initial conditions and endpoints/outcomes of restoration
- Keep the text of target 15, develop an indicator set for it and a breakdown by ecosystems
- Areas and degraded land language are inadequate for ecosystems based on water and that are transitional environments (e.g. seasonally flooded areas). Using metrics such as the percentage of environmental flow reserved or released in rivers; the minimum water levels retained or sustained flooding in floodplain or wetlands systems are metrics that can be used.
- Restoration need to be on top of stopping degradation - this is not reflected in this questionnaire
- Account separately for restoration of natural ecosystems from productivity increase

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