Submission to the UNFCCC on the approach to the consideration of outputs of the Global Stocktake

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Summary

The Global Stocktake (GST) Consideration of Outputs (CO) is the culmination of a 2-year process that should help to countries and other stakeholders to ramp up their ambition. Based on IDDRI's participation in the official GST and experience in international processes, this submission makes the following recommendations regarding its structure and content:

- The GST-CO should send signals to the countries and other stakeholders for their upward revision of ambition. It can also establish concrete processes to ensure continuity and structure international cooperation going forward.
- For it to be robust, credible, and give strong signals to the real world, the CO needs to be grounded in the best technical and scientific knowledge. The technical and CO phases should mutually feed each other, supporting a strong scientific basis for the final GST outcome. We propose a specific timeline to implement that, starting by the April CO meetings and the 3rd Technical Dialogue.
- The purpose of the CO should not be to reflect everything emerging from science and the Technical Dialogues, but rather focus on elements that can make the most changes in real-world processes, acknowledging how the concrete policy processes happen in country and globally.
- For the GST to identify areas where it can have a real-world impact, its outcome should spell out system transformations that countries and other stakeholders should be acting upon to increase their ambition, as highlighted by the IPCC. The final text could also detail how to enact these transformations, identifying enablers that would leverage them, as well as international cooperation initiatives to meet those conditions
- Basing the GST-CO messages in the best available science will also help identify priority action areas for stakeholders to collectively take in order to reach the 1.5ºC goal in tandem with halting and reversing the dual biodiversity loss crisis. Key priorities include: (i) prioritizing deep emission cuts to near zero CO2 emissions by 2050, implying deep transformations towards a clean energy system, (ii) in the land sector, prioritizing this decade halting deforestation of intact forests, and natural reforestation and ecosystem regeneration, (iii) not over-depending on land-based Carbon Dioxide Removal to reach net-zero goals

The Global Stocktake (GST) is a critical instrument of the Paris Agreement, that aims at taking stock of its implementation with the aim to assess the world's collective progress towards achieving the purpose of the agreement and its long-term goals and help identify opportunities for international cooperation. The period between 2022 and 2023 marks the first time the stocktake is being implemented, and its design will be very important to ensure useful outcomes, but also to set the path for the future rounds.

The first GST is being organized in three main phases: (1) information collection (2) the Technical Dialogues, where parties and other non-party stakeholders discuss on the basis of the synthesized information, and (3) the consideration of outputs, a political moment at COP28 that should give a clear signal to parties and other stakeholders to increase ambition and action.

The consideration of outputs (CO) is therefore the last part of the GST, and will be the culmination of a 2-year process, sending signals to the countries for their upward revision of ambition via the next round of NDCs and LTS, as well as deriving lessons learnt from the GST for global cooperation to effectively support ratchet-up of climate ambition. The CO can in particular set concrete processes to ensure continuity and structure to international cooperation. It will also send signals beyond the formal UNFCCC process to real-world actors, such as the private sector or other non-party stakeholders.

Based on IDDRI's participation in the official GST, ongoing research, in-country engagement and experience in international processes, this submission makes recommendations on the procedure (1) and potential content (2) of the CO.

1. Procedural recommendations

In this section, we briefly outline a proposal on how to structure the different moments that will happen during 2023 that will help prepare the Consideration of Outputs at COP28, so they promote the needed interaction between the technical and political phases of the GST.

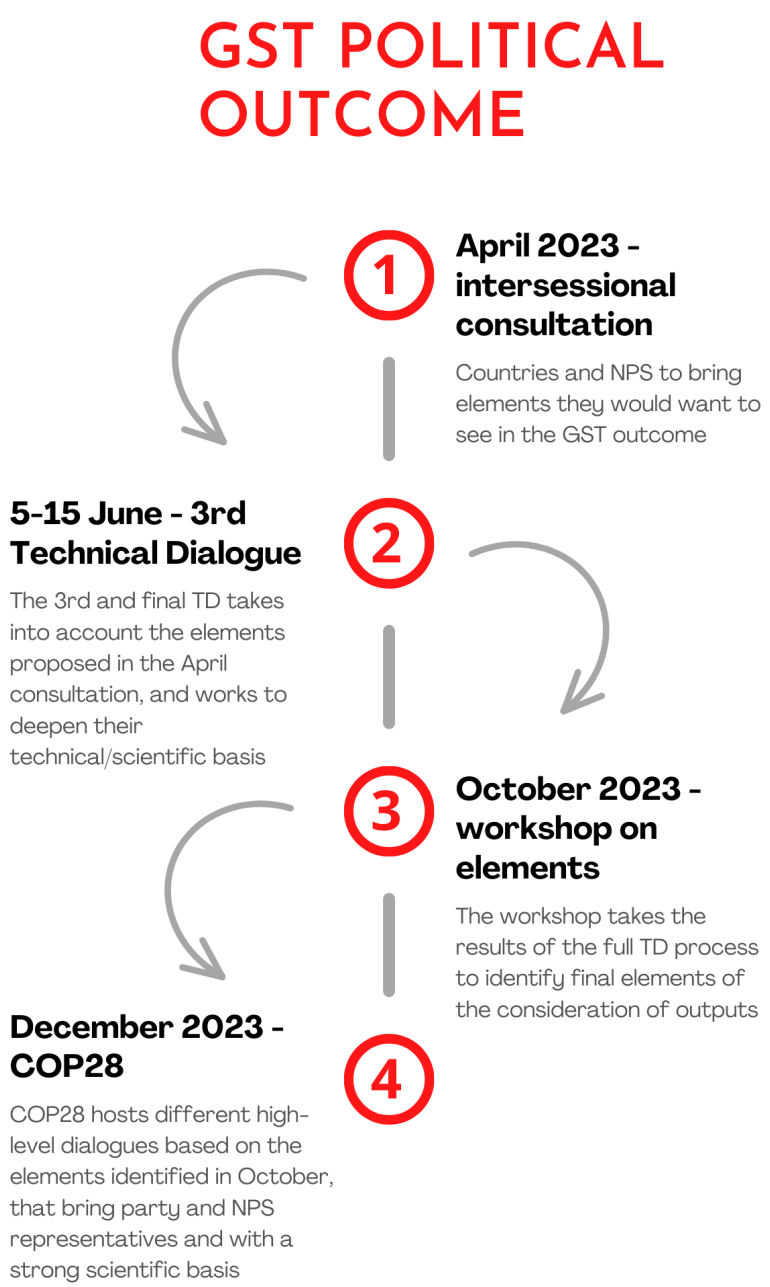
April 2023, intersessional consultation on preparations for the consideration of outputs component. This will be the first moment to discuss the Consideration of Outputs component among the different Parties and non-Party stakeholders. Actors should come prepared to the meeting by bringing concrete global evolutions which would be critical for them to be able to implement a transition compatible with the objectives of the Paris Agreement that, so commonalities and discrepancies start to emerge. The meeting will not aim to conclude on these elements, but will provide some space for discussion on what they would want to see reflected in the GST outcome, and to provide guidance on topics that need additional discussion at the coming session of the Technical Dialogue.

5-15th June, third Technical Dialogue. The 3rd and final Technical Dialogue should help identify the key messages coming out of the whole Technical Dialogue component, in the form of key actionable transformations that Parties would need to take into account when enhancing their ambition, as well as the required enablers. To do that, the Technical Dialogue in June should also take into account the elements proposed in the April

consultation, since they have stronger buy-in from stakeholders, and work to deepen their technical/scientific basis. This would mean that technical dialogue would not be based only on submission in the collection phase, but additionally it would have other inputs provided by Parties in the CO discussions. Since we have seen a very limited number of particles submitting to the Information collection phase, it could be a way to also a way to incorporate their perspectives.

October 2023, workshop to develop elements for the consideration of outputs component. The October workshop should take the results of the full Technical Dialogue, especially the elements synthesized in the June meeting, to design the final political outcome of the GST. The workshop could be as a discussion around these specific elements including Party and non-Party Stakeholders, so the results are grounded on science and a strong buy-in from actors.

30 November - 12 December, COP28. COP28 will have the task of closing the final outcome of the GST. The elements of the GST final document may have been emerging through the last interactions mentioned above, but they may need to be refined or get further political buy-in. Therefore, the High-Level Committee could organize a set of high-level dialogues at COP28, based on the elements identified in October. These dialogues should bring both Parties and Non-Party Stakeholders around the table, to ensure final buy in, and have a strong scientific grounding (for example, by inviting relevant technical experts on the topic).



Summary infographic of the interaction between TD and CO processes of the GST in 2023

Lessons for organizing the April consultation

To be grounded on a scientific approach of in-country transition realities and to ensure relevance and buy-in for a diversity of stakeholders, the CO component of the GST needs to have a clear interaction with the Technical Dialogue component. Therefore, the first step would be to ground the April CO intersessional consultation on the lessons of the 2nd Technical Dialogue, hosted at COP27. Here we share some of the learnings we extracted participating and observing it:

- **Establish system transformations as an organizing principle for the discussions**. At the last Technical Dialogue, the Word Café format of discussion included specific tables on system transformations and how to achieve them[1]. The CO could take systems transformations as its organizing principle, aiming to provide specific action on each of them.
- **Discussions should not aim at being comprehensive**. Discussions should not explore all possible ideas around a given systems' transition, but rather seek to answer a predefined set of specific issues related to it. Otherwise, they face the risk of being diluted and inconclusive.
- **Have a continued involvement of experts.** Continuing to involve scientists or technical exerts in the discussion will be key to identify emerging topics or issues that would help to raise ambition or establish international cooperation mechanisms. They should play a similar or enhanced role than in the Technical Dialogue discussions.
- **Ensure feasible schedules for participation.** The last Technical Dialogue had a very high number of meetings, and some parties, especially those with smaller delegations, raised that it was difficult for them to take active part in all sessions. For the CO component, participation should be ensured for all stakeholders, streamlining the number of parallel sessions.
- **Pay sufficient attention to international cooperation.** International cooperation issues have been more difficult to identify and discuss in the Technical Dialogues, but they could be key outcomes of the GST. Therefore, the CO component should dedicate sufficient time to identify cooperation initiatives for different systems.

2. Content recommendations

In this section, we outline a few general content recommendations to take into account for the final outcome of the GST.

2.1 The outcomes of the CO must be grounded in the best available science

For it to be robust, credible, give strong signals to the real world, and fulfil the mandate set out in the Paris Rulebook (19/CMA.1, paras 1, 2, and 13), the GST Consideration of Outputs needs to be grounded in the best technical and scientific knowledge. To date, the GST process has considered the best available science through the information collection and Technical Dialogue phases so far, by including the latest IPCC AR6 reports published in 2021-2022 and other relevant technical knowledge, and inviting relevant scientists and experts to help frame the discussions.

Going forward, the consideration of outputs needs to build off this and base its outcomes in (i) the best available science, including the IPCC AR6 Synthesis Report that will be adopted in March 2023, (ii) the rich interactions that took place in the information collection and Technical Dialogue phases, and (iii) ample participation of experts. As the Paris Rulebook[2] mandates, the consideration of outputs will "focus on discussing the implications of the

[1] https://unfccc.int/event/technical-dialogue-12-world-cafe
[2] https://unfccc.int/sites/default/files/resource/cma2018_3_add2_new_advance.pdf#page=53

findings of the technical assessment with a view to achieving the outcome of the global stocktake". Therefore, the GST-CO needs to be grounded in the results of the Technical Dialogue. The Paris Rulebook also explicitly mandates in 19/CMA.1 para 2 for the entire GST – therefore including the GST-CO – to be guided by best available science. This includes the findings of the IPCC AR6 Reports, the IPCC Synthesis Report to be released in March 2023, and also other relevant scientific reports such as the Scientific Outcome of the IPCC-IPBES Co-Sponsored Workshop Report on Climate Change and Biodiversity.[3]

The discussions under the CO will start before the Technical Dialogue phase have finished, therefore, it will be very important that the CO discussions inform the remainder of the Technical Dialogue phase but do not replace it. The technical and CO phases should mutually feed each other, supporting a strong scientific basis for the final GST outcome.

The purpose of the CO is not to reflect everything emerging from science and the Technical Dialogues, but rather focus on elements that can make the most changes in real-world processes, acknowledging how the concrete policy processes happen in country and globally. Selecting these issues that matter most is a political decision which needs to be based on, and fully aligned with, the best available science. Taking mitigation for example, the solutions highlighted in the CO and in the CMA Decision or political declaration that will come out of the CO, should consider the extensive findings of the IPCC across all mitigation options' emissions reduction potential, and cost, up to 2030 (See IPCC AR6 WGIII Technical Summary figure, in Annex). Basing the CO's key messages in the best available science helps ensure an objective basis for the outcome, and guard against the risk of Parties or CSO involved in the GST to for example over-emphasize solutions beyond their realistic potential.

2.2 Emphasize key systemic transformations and international enablers

As highlighted by the IPCC, Ambitious 1.5 °C pathways require rapid, far-reaching transformations across all systems and sectors, i.e. energy, land, urban and infrastructure (including transport and buildings), industry (IPCC, 2018). Their implementation requires gathering a broad set of conditions. We refer to these conditions as **enablers**, defined by the IPCC as "conditions that enhance the feasibility of adaptation and mitigation options" and including finance, technological innovation, strengthening policy instruments, institutional capacity, multi-level governance and changes in human behaviour and lifestyles (IPCC, 2022). Table 1 proposes examples of **key systemic transformations** and their related international enablers, inspired by the IPCC, as highlighted in a policy brief published by IDDRI last year.

[3] Scientific outcome of the IPBES-IPCC co-sponsored workshop on biodiversity and climate change, 2021

TABLE 1. Illustration of key mitigation and adaptation transformations and related international enablers (Pérez Català et al., 2022)

Systemic transformations	Examples of International enablers
Phasing out fossil fuel electricity generation and accelerate carbon-free generation through renewable energy sources (IPCC - Chap 6 Energy Systems, 2022)	Limiting access to and increasing the cost of international capital for fossil fuel energy investments Facilitating access to and reducing cost of international capital for renewable energy investments and power distribution and transmission investments Sharing planning capacities and good practices for the integration of a high-level of intermittent renewable energy sources in power grids
Reorganise the structure of business value chains to reduce long-distance transport and related energy demand (IPCC - Chap 10 Transport, 2022)	1. Increasing international labour standards to reduce international wage costs differential 2. Increasing international transport costs through environmental requirements for international transport and switch to zero-emission fuels 3. Developing international transparency standards on value chains' impacts on Sustainable Development Goals
Conserving forests from deforestation and degradation to conserve carbon stocks, biodiversity and resilient ecosystems (IPCC - Ch. 7 AFOLU, 2022)	1. An international system for the payment of environment and ecosystem services, compensating landowners for preserving carbon- and biodiversity rich ecosystems. 2. Preferential trade mechanisms to require traceability and proof of origin of agricultural and forestry products, in order to penalise or ban trade in products from illegally deforested areas.

For the GST to identify areas where it can have a real-world impact, its outcome should **spell out these system transformations** that countries and other stakeholders should be acting upon to increase their ambition, as highlighted by the IPCC. The final text could also detail how to enact these transformations, identifying enablers that would leverage them, as well as international cooperation initiatives to meet those conditions. These transformations can be identified by following a similar structure to the World Café tables that took place at COP27.

2.3. Teasing out key mitigation messages in the broader context of the dual climate and biodiversity loss crises, and sustainable development: an example of the need to use the best available science

Basing the GST-CO messages in the best available science – IPCC as well as other more recent scientific literature – will also help identify areas in which Parties are collectively making choices that are not most aligned with addressing climate change in tandem with the

biodiversity loss crisis. The science is clear that reaching the 1.5ºC goal will only be possible if biodiversity loss is halted, and vice versa (IPCC-IPBES Co-Sponsored Workshop Report), and Parties to the UNFCCC have repeatedly committed to address both crises in an integrated manner (1/CP.25, 1/CP.26, 1/CP.27).

Considering the IPCC AR6 Reports in tandem with the IPCC-IPBES CSWR and other recent reports input alongside other recent scientific literature helps tease out several key messages on mitigation priorities, and the role the land sector can play (and specifically forests and ecosystems):

1. **To reach the 1.5ºC goal with no to limited overshoot, we must collectively cut GHG emissions by about 43% by 2030, and 84% by 2050, which entails significant emissions reductions in the energy sector** (IPCC AR6 WGIII). This implies (i) scaling up renewables – the mitigation option with the highest potential for net emission reductions by 2030 is scaling up solar energy (4.3 Gt CO2/yr) and wind energy (3.9 Gt CO2/yr), while the role for CCS is much lesser (less than 1 Gt CO2/yr), (ii) and significantly phasing down fossil fuels – IEA Net Zero Pathway identifies there is no room for additional fossil fuel expansion, and calls for a phase-out of unabated coal and oil power plants by 2040 (IEA NZE).

2. **Halting deforestation of natural forests and other ecosystems, and protecting high integrity natural ecosystems offers the single largest contribution to net emission reductions by 2030 across land-based mitigation options (IPCC AR6 WGIII, Ch 7), and should therefore be a key collective priority in the land sector,** especially given extensive co-benefits to biodiversity and other nature's contributions to people (Scientific Outcome of the IPCC-IPBES Co-Sponsored Workshop on Climate Change and Biodiversity). Yet recent findings challenging the carbon offset model[4] underscore the key ***international enabler*** of developing a funding scheme for ecosystem services payments decoupled from carbon offsets.

3. **Natural restoration of ecosystems and reforestation and other ecosystem approaches – deployed with an emphasis on minimizing land-use change – provide real, yet limited Carbon Dioxide Removal opportunities, and can hence not offset fossil fuel emissions.** Halting land-use change is key to prevent food insecurity and biodiversity loss (IPCC Special Report on Land and Climate Change; IPCC-IPBES CSWR). One meta-study identified a realistic potential of 1.3 – 2.6 Gt CO2/yr (Nolan et al., 2021), while another identified a 'responsible' potential within social and environmental constraints at 1.2 Gt CO2/yr up to 2100 (Dooley et al., 2022). Carbon dioxide captured by restoration and reforestation (or even afforestation) takes decades to fully materialize, and cannot therefore compensate for on-going or increased fossil fuel emissions (Dooley et al., 2022).

4. **Sustainable potential of land-based Carbon Dioxide Removal from afforestation or Bioenergy with Carbon Capture and Storage (BECCS) is limited, and large-scale**

[4] The Guardian, Revealed: more than 90% of rainforest carbon offsets by biggest certifier are worthless, analysis shows https://amp-theguardian-com.cdn.ampproject.org/c/s/amp.theguardian.com/environment/2023/jan/18/revealed-forest-carbon-offsets-biggest-provider-worthless-verra-aoe

deployment would risk compromising food security and biodiversity – placing further onus on the priority of deep emission reductions to near zero emissions. For example, the IPCC-IPBES Co-Sponsored Workshop Report finds that the maximum sustainable deployment of bioenergy and BECCS is 1-2.5 Gt CO2/yr. A deployment of 5 Gt CO2/yr would lead to "jeopardizing SDG 15 (life on land) [and] seriously undermine the fight against hunger (SDG 2)" (IPCC-IPBES CSWR).

5. **Countries are banking in their current NDCs and LT-LEDS on arguably unrealistic amounts of land-based Carbon Dioxide Removal, instead of on deeper decarbonization.** The Land Gap Report found that by 2030 countries are collectively planning to deploy 451 million ha of land for carbon removals by 2030 – equivalent to about ½ of global agricultural land area – and by 2060 1.2 billion hectares (see Annex 2).

Resources

Dooley, K. et al. (2022). Carbon removals from nature restoration are no substitute for steep emission reductions. *One Earth* https://doi.org/10.1016/j.oneear.2022.06.002

Dooley, K. et al. (2022). The Land Gap Report
https://www.landgap.org/about-the-land-gap-report/

International Energy Agency (2021). Net Zero by 2050: A Roadmap for the Global Energy Sector https://www.iea.org/reports/net-zero-by-2050

IPCC (2018). Summary for Policymakers. In: Global Warming of 1.5°C. An IPCC Special Report on the impacts of global warming of 1.5°C above pre-industrial levels and related global greenhouse gas emission pathways, in the context of strengthening the global response to the threat of climate change, sustainable development, and efforts to eradicate poverty. Cambridge University Press, Cambridge, UK and New York, NY, USA, pp. 3-24. https://doi.org/10.1017/9781009157940.001.

IPCC (2022). Summary for Policymakers. In: Climate Change 2022: Mitigation of Climate Change. Contribution of Working Group III to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change. Cambridge University Press, Cambridge, UK and New York, NY, USA. doi: 10.1017/9781009157926.001

Nolan, C. J., et al. (2021). Constraints and enablers for increasing carbon storage in the terrestrial biosphere. *Nature Reviews Earth & Environment*
https://doi.org/10.1038/s43017-021-00166-8

Pérez Català, A., Svensson, J., Briand Y. (2022). How to organise a Global Stocktake that enhances national climate action and international cooperation. IDDRI, Policy Brief N°08/22.

Pörtner, Hans-Otto *et al.* (2021). *Scientific outcome of the IPBES-IPCC co-sponsored workshop on biodiversity and climate change*. https://zenodo.org/record/4659158

Annex 1: IPCC AR6 WGIII Report, Technical Summary Figure TS.23

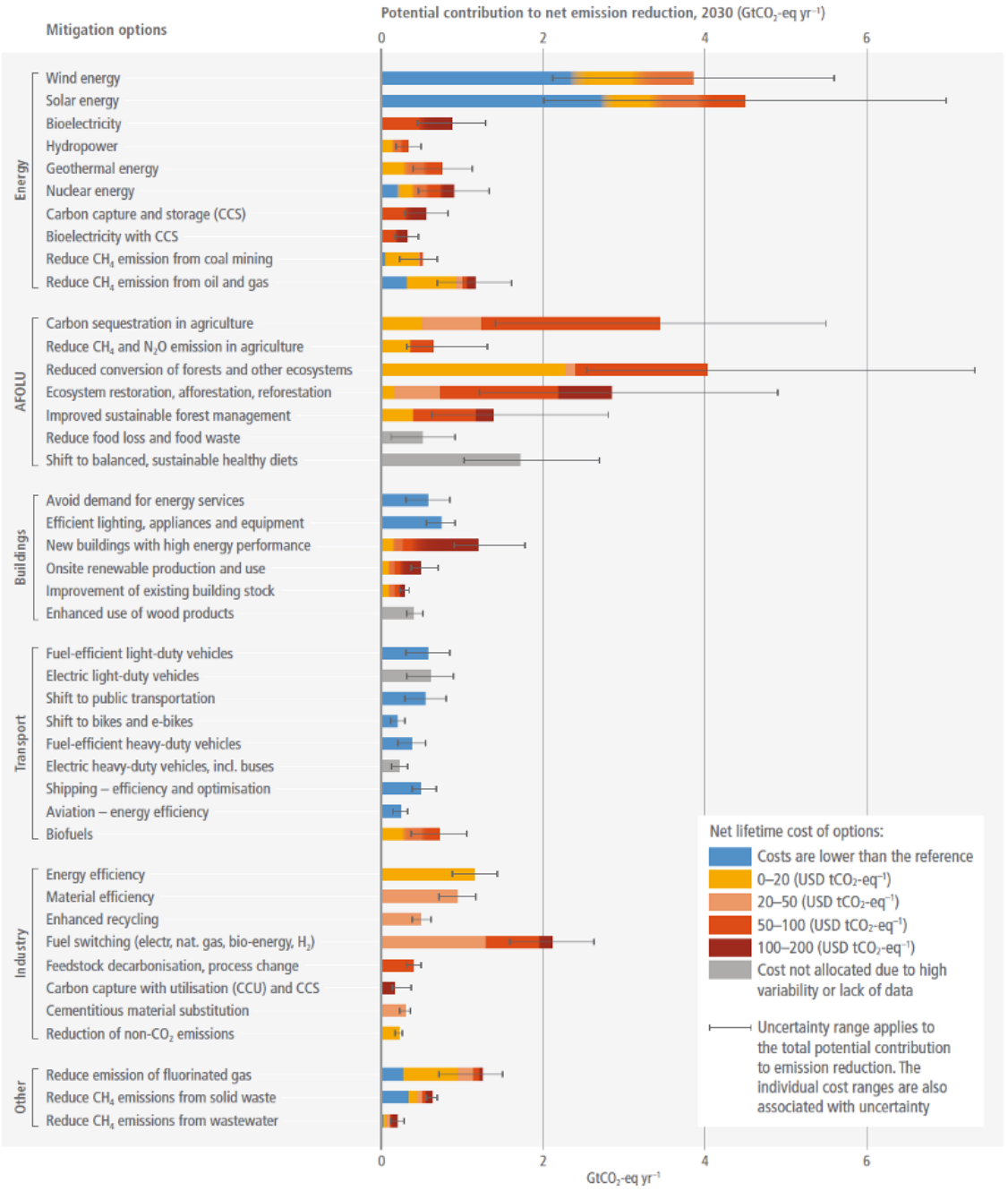
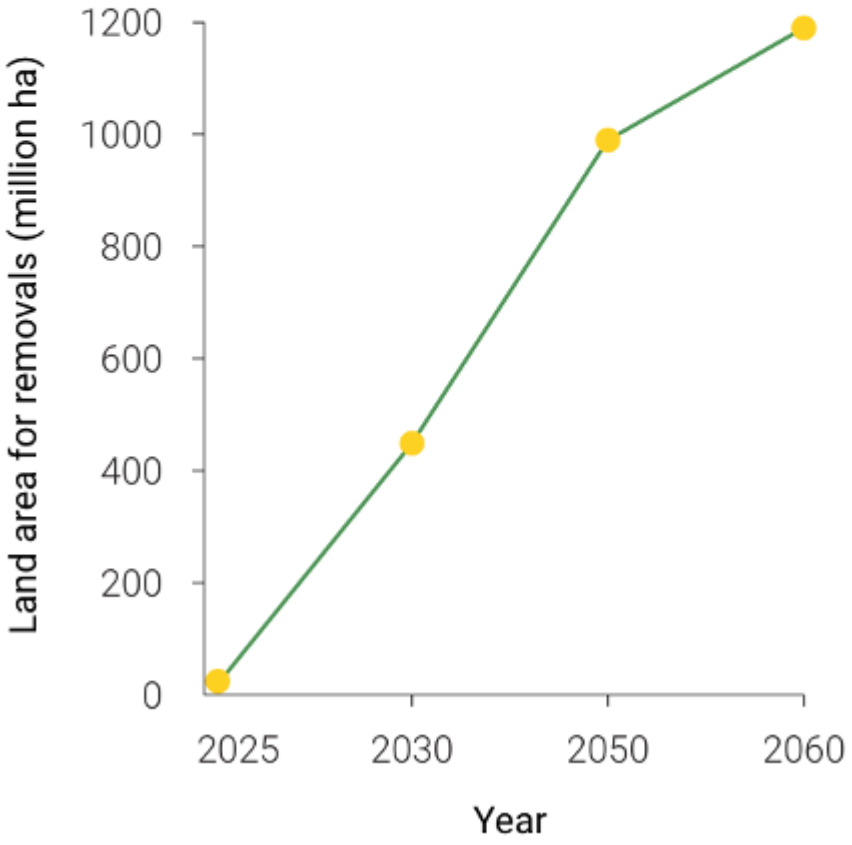


Figure TS.23 | Overview of emission mitigation options and their cost and potential for the year 2030. The mitigation potential of each option is the quantity of net greenhouse gas emission reductions that can be achieved by a given mitigation option relative to specified emission baselines that reflects what would be considered current policies in the period 2015–2019. Mitigation options may overlap or interact and cannot simply be summed together. The potential for each option is broken down into cost categories (see legend). Only monetary costs and revenues are considered. If costs are less than zero, lifetime monetary revenues are higher than lifetime monetary costs. For wind energy, for example, negative cost indicates that the cost is lower than that of fossil-based electricity production. The error bars refer to the total potential for each option. The breakdown into cost categories is subject to uncertainty. Where a smooth colour transition is shown, the breakdown of the potential into cost categories is not well researched, and the colours indicate only into which cost category the potential can predominantly be found in the literature. [Figure SPM.8, 6.4, Table 7.3, Supplementary Material Table 9.SM.2, Supplementary Material Table 9.SM.3, 10.6, 11.4, Figure 11.13, 12.2, Supplementary Material 12.SM.1.2.3]

Annex 2: Carbon Dioxide Removal in national climate pledges

Carbon dioxide removal in national climate pledges

Countries' climate pledges rely on 451 million ha of land for carbon removals by 2030, another 533 million hectares by 2050, and another 200 million ha is pledged from one country for 2060. This reliance on land can be expected to increase as more countries make longer-term pledges.



Source: Land Gap Report, 2022