

Subsidiary Body on Scientific and Technological Advice (SBSTA)

March 15, 2023

Supervisory Body (SB)

Article 6.4 Mechanism

United Nations Framework Convention on Climate Change (UNFCCC)

Transmitted electronically.

The Institute for Agriculture and Trade Policy (IATP),¹ a non-governmental organization accredited by the UNFCCC, appreciates the opportunity to submit this comment concerning three requests made by the Parties to the Paris Agreement (CMA) at the 27th Conference of the Parties (COP27) to the SBSTA in draft Decision CMA.4 “Guidance on the mechanism established by Article 6, paragraph 4 of the Paris Agreement.”²

Below we comment on three key requests of the CMA to the SBSTA:

- Paragraph 8: “recommendations, for consideration and adoption by the Conference of the Parties serving as the meeting of the Parties to the Paris Agreement at its sixth session (November 2024), **on further responsibilities of the Supervisory Body and of Parties that host Article 6, paragraph 4, activities in order for such host Parties to elaborate on and apply national arrangements** for the mechanism under the approval and supervision of the Supervisory Body;”
- Paragraph 9: “recommendations for consideration and adoption by the Conference of the Parties serving as the meeting of the Parties to the Paris Agreement at its fifth session (November–December 2023) on: (a) **Consideration of whether Article 6, paragraph 4, activities could include emission avoidance and conservation enhancement activities;**”
- Paragraphs 19-20:) the Supervisory Body should develop recommendations on “Activities involving removals, including appropriate monitoring, reporting, accounting for removals and crediting periods, addressing reversals, avoidance of leakage, and avoidance of other negative environmental and social impacts in addition to in addition to the activities referred to in chapter V of the rules, modalities and procedures”;[pp. 9-14 of CMA.3] The SB has been well advised by other Observers on many of the issues to consider for these recommendations. We will refer in passing to this advice but focus on “accounting for removals and crediting periods,” the juncture at which the scientific and technological issues of removals are converted into the accounting logic of the financial markets on which Internationally Transferred Mitigation Outcomes (ITMOs) will be sold to non-Parties under the 6.4 mechanism.

¹ To learn more about IATP’s climate change work, including our participation in COP27, please consult <https://www.iatp.org/climate-change>. Our most recent contributions to Article 6.4 related matters are a February 28 letter to the Supervisory Body (<https://www.iatp.org/letter-unfccc-supervisory-body-article-6-mechanism>) and a February 10 letter to the International Organization of Securities Commissions concerning its discussion paper on Voluntary Carbon Markets: <https://www.iatp.org/iatp-comment-iosco-vcvm>

² https://unfccc.int/sites/default/files/resource/cma4_auv_14_PA6.4.pdf

Context

In March, the International Energy Agency, as a contribution to the first UNFCCC Global Stocktake, reported, “Global energy-related CO₂ emissions grew by 0.9% or 321 Mt in 2022, reaching a new high of over 36.8 Gt. . . . Emissions from oil grew even more than emissions from coal, rising by 2.5% or 268 Mt to 11.2 Gt. Around half of the increase came from aviation, as air travel continued to rebound from pandemic lows, nearing 80% of 2019 levels.”³ The increase in aviation emissions is relevant to this submission because of the prevalence of emissions avoidance projects from which are derived CORSIA credits used to make carbon neutral claims by airline companies.⁴ The absolute increase in CO₂ emissions in 2022 exacerbates the climate crisis that UN Secretary General Antonio Guterres characterized as a “code red for humanity,” when commenting on the findings of the Intergovernmental Panel on Climate Change (IPCC) report on the 6th Assessment physical science report in 2021.⁵

Furthermore, Parties and non-Parties are planning to increase fossil fuel exploration and production.⁶ The fossil fuel industry is a main beneficiary of billions of dollars U.S. tax credits to build Carbon Capture and Storage (CCS),⁷ one of the main engineering-based removal technologies discussed in the Secretariat Information Note (henceforth “Information Note”) that is to inform SB deliberations.⁸ Since the advent of CCS fifty years ago, successive iterations of the technology have never managed to perform at a scale and for a cost promised by its promoters.⁹ Now the U.S. government and other Parties are subsidizing CCS development and facilities. A co-founder of the first private company dedicated to CCS research wrote recently, CCS “allow[s] for the continued production of oil and natural gas at a time when the world should be ending its dependence on fossil fuels. . . every dollar invested in renewable energy — instead of C.C.S. power — will eliminate far more carbon emissions.”¹⁰

It is widely acknowledged that the safest and most certain path to achieving the Paris Agreement Article 2.1a) goal of not exceeding a 1.5°C. global average temperature increase over an Industrial Revolution baseline is to reduce CO₂ and other greenhouse gas emissions rapidly and sharply. The Center for International Environmental Law (CIEL) emphasized in its 2022 submission to the SB: “The IPCC has found that it is still possible to limit warming to 1.5 with limited or no overshoot, through steep and immediate reductions in the production and use of fossil fuels, rapid replacement of fossil fuels with renewables and energy demand reduction.”¹¹ For economic and geo-political reasons,

³ “CO₂ Emissions in 2022,” International Energy Agency, March 2022, p. 3.

<https://iea.blob.core.windows.net/assets/3c8fa115-35c4-4474-b237-1b00424c8844/CO2Emissionsin2022.pdf>

⁴ Steve Suppan, “What underlies the underlying assets of CO₂ emissions offset futures contracts?” Institute for Agriculture and Trade Policy, March 31, 2021. <https://www.iatp.org/blog/202103/what-underlies-underlying-asset-co2-emissions-offset-futures-contracts>

⁵ “Secretary General Calls Latest IPCC Report ‘Code Red for Humanity, Stressing ‘Irrefutable’ Evidence of Human Influence,” Press Release, August 9, 2021. <https://press.un.org/en/2021/sgsm20847.doc.htm>

⁶ Justin Jacobs and Miles McCormick, “Oil industry struts Texas stage with its old swagger at energy jamboree,” *Financial Times*, March 11, 2023. <https://www.ft.com/content/f4fb6331-a194-446c-8907-cd817d36d1e4>

⁷ Jacobs, “Oil companies line up for billions in subsidies in new U.S. climate law,” *Financial Times*, March 6, 2023.

⁸ “Information note: Removal activities under the Article 6.4 mechanism,” Version 03.0. UN Framework Convention on Climate Change Secretariat. <https://unfccc.int/sites/default/files/resource/a64-sb004-aa-a04.pdf>

⁹ Jacobs, “‘Put up or shut up’: Can Big Oil prove the case for carbon capture,” *Financial Times*, October 19, 2022. <https://www.ft.com/content/b8d6848d-1e8a-4c57-b65b-52105b48b178>

¹⁰ Charles Harvey and Kurt House, “Every dollar spent on this climate technology is a waste,” *The New York Times*, August 16, 2022. <https://www.nytimes.com/2022/08/16/opinion/climate-inflation-reduction-act.html>

¹¹ “Submission from the Center for International Environmental Law (CIEL) on the “Call for Input 2022 – activities involving removals under the Article 6.4 Mechanism of the Paris Agreement””, p.4. <https://www.ciel.org/wp->

Parties and non-Parties have rejected these difficult but feasible decisions and investment making pathways to 1.5.¹² Instead they have sought to enable pathways that are dependent on technology-based and nature-based removals.

IATP advises the SBSTA and SB to follow CIEL’s advice from 2022: “The Supervisory Body must not do things quickly to just get them done. The urgency of the climate crisis does not justify expediency or eliminate the need for precaution in matters related to human rights and the environment.”¹³ Those matters include ensuring that the SB recommends to the CMA only those removals with a proven track record of reducing emissions on a pathway to realizing the 1.5° goal; that methodologies for monitoring, reporting, verifying and crediting removals contribute to reducing—not merely claiming to offset—emissions; and that removal definitions and methodologies include such safeguards as Free and Prior Informed Consent for use of natural resources in removal projects and a robust grievance mechanism in which evidence of removal project related land and human rights violations, as well as egregious misrepresentations of emissions reductions from removals, can be presented and adjudicated.

The argument for fast-tracking a SB recommendation that legitimizes ‘all of the above,’ so-called ‘technology neutral’ removals is very weak. In essence, the fast-track argument is that ‘climate science and climate economics denial have delayed climate action to the point where we must implement the solutions proffered by erstwhile deniers.’ Proponents of a ‘technology neutral’ recommendation ascribe to the technologies a higher degree of certainty about their technological success than the evidence warrants. The SB must not ignore the many knowledge gaps and uncertainties about engineering-based removal technologies characterized by the IPCC in its 1.5°C report. For example:

Evaluating the potential from BECCS [Bioenergy and Carbon on Capture and Storage] is problematic due to large uncertainties in future land projections due to differences in modelling approaches in current land-use models, and these differences are at least as great as the differences attributed to climate scenario variations. (Section 2.3) There is substantial uncertainty about the adverse effects of largescale CDR [Carbon Dioxide Removal] deployment on the environment and societal sustainable development goals. It is not fully understood how land-use and land-management choices for large-scale BECCS will affect various ecosystem services and sustainable development, and how they further translate into indirect impacts on climate, including GHG emissions other than CO₂. (Section 2.3, Section 2.5.3)¹⁴

<content/uploads/2022/10/CIEL-Submission-on-Article-6.4-Removals-1.pdf>

¹² To take one of myriad examples, Lisa Friedman, “Biden Administration Expected to Move Ahead on Major Oil Project in Alaska,” *The New York Times*, March 10, 2023. <https://www.nytimes.com/2023/03/10/climate/biden-willow-oil-alaska.html>

¹³ CIEL, *Op. cit.*, p. 12.

¹⁴ Rogelj, J., D. Shindell, K. Jiang, S. Fifita, P. Forster, V. Ginzburg, C. Handa, H. Kheshgi, S. Kobayashi, E. Kriegler, L. Mundaca, R. Séférian, and M.V. Vilariño, 2018: Mitigation Pathways Compatible with 1.5°C in the Context of Sustainable Development. 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 [Masson-Delmotte, V., P. Zhai, H.-O. Pörtner, D. Roberts, J. Skea, P.R. Shukla, A. Pirani, W. Moufouma-Okia, C. Péan, R. Pidcock, S. Connors, J.B.R. Matthews, Y. Chen, X. Zhou, M.I. Gomis, E. Lonnoy, T. Maycock, M. Tignor, and T. Waterfield (eds.)], p. 158. On BECCS also see, “Six problems with BECCS,” FERN, 2022. https://www.fern.org/fileadmin/uploads/fern/Documents/2022/Six_problems_with_BECCS_-_2022.pdf and Sara Shaw et al., “A Leap in the Dark: The Dangers of Bioenergy with Carbon Capture and Storage (BECCS),” Friends of the Earth International, April 2021. https://www.foei.org/wp-content/uploads/2021/04/Friends-of-the-Earth-International_BECCS_English.pdf

Because of these uncertainties and knowledge gaps, the Information Note states, “Land-based activities currently provide most of the removals and are expected to be the main driver of removal in the near-term (i.e., to 2030) and possibly even until 2050.” (p. 43)

The Governments and the private sector in wealthy countries have and will invest in engineering-based removal technologies to be sited mostly in those countries regardless of whether a SB recommendation on removals sends a policy signal that all engineering-based removal technologies are equally feasible for achieving the Article 2.1a) goals. According to a recent article, “Global public investment in CDR research was around \$4.1 billion between 2010 and 2022 and investment in new CDR technologies was \$200 million between 2020 and 2022.”¹⁵ A SB recommendation to validate “technology neutral” removals will not serve to increase these investments. However, a prudent SB recommendation in support of proven technologies and practices to reduce emissions on the 1.5 pathway might deter wasteful spending on speculative removal technologies with very long and expensive research and development timelines at a moment where these resources must be channeled into emissions reductions.

Similarly, the Integrity Council for Voluntary Carbon Markets (ICVMC) project for the trading of “high integrity” Verified Carbon Units (VCUs) will launch whether or not the SB fast tracks a so-called “technology neutral” recommendation on removals from which credits would be derived for trading from Parties to non-Parties and in Voluntary Carbon Markets (VCMs). Neither the SBSTA nor the SB should be pressured to send a policy signal to VCMs validating removal technologies operating with such a high degree of uncertainty and non-performance and non-performance at scale. VCMs are already characterized by a plethora of low to no environmental and social integrity land-based removal credits. IATP referenced ten reports on environmental integrity problems and seven on social integrity controversies in emissions offset and avoidance projects in our February 28 letter to the SB.¹⁶ There are many more reports of low to no integrity credits than we could cite. Even if the ICVMC project succeeds in labeling emissions offset projects as “high integrity” credits, the current prevailing carbon trading strategy of buying and holding low-cost credits without retiring those credits¹⁷ could impede realization of the 1.5 goal and the goals of the 6.4 mechanism to finance developing country mitigation and adaptation.

In the next three sections of this letter, IATP proposes elements of a prudent recommendation that are grounded in what the SBSTA and SB know with a high degree of confidence, rather than advise CMA on a speculative basis for implementing the Article 6.4 mechanism.

Paragraph 8: the future market structure of Article 6.4 in “national arrangements” for host Parties to be considered by the CMA at COP 29 in 2024

Although Paragraph 8 concerns a request from the CMA to the SBSTA for a recommendation that won’t be made at least until COP 29, IATP believe it is not too earlier to comment on the CMA request. The requested recommendation to the SB and to the host Parties concerns “activities in order for such host Parties to elaborate on and apply national arrangements for the mechanism under the approval and supervision of the Supervisory Body.” It is very likely that removal activities, methodologies and procedures relative to those activities will be included in the “national arrangements” for the implementation of the Article 6.4 mechanism. Here the CMA delegates to the SBSTA power to make

¹⁵ Miryam Naddaf, “Carbon capture nets 2 billion tonnes of CO₂ a year—but it’s not enough,” Nature, January 23, 2023. <https://www.nature.com/articles/d41586-023-00180-4#:~:text=Global%20public%20investment%20in%20CDR,million%20between%202020%20and%202022.>

¹⁶ <https://www.iatp.org/letter-unfccc-supervisory-body-article-6-mechanism>

¹⁷ “Voluntary Carbon Markets Discussion Paper,” International Organization of Securities Commissions, November 2022, pp. 10-11. <https://www.iosco.org/library/pubdocs/pdf/IOSCOPD718.pdf>

recommendations to the SB that would give the SB powers of “approval and supervision” over the “national arrangements” that host Parties of the removal activities would elaborate. This paragraph points a future SB with great powers to determine whether the “national arrangements” of host Parties were consistent with a decision of a future CMA on the elements for Article 6.4 implementation. These elements include recommendations on “emissions avoidance and conservation enhancement activities” in Paragraph 9 and all the requests for recommendations in Paragraphs 19 and 20.

As the SB deliberates what recommendations to make to the CMA for COP28, it should do so in light of how future SBs will use those recommendations in the approval and supervision of the “national arrangements” by host Parties for Article 6.4 implementation. Given everything that the SB must do to prepare recommendations for the CMA at COP28, it may seem inappropriate to also ask the SB and the SBSTA to think ahead to CMAs at future COPs that will grapple with the terms of Article 6.4 implementation by host Parties. IATP will not ask the SBSTA and SB to think about the future of Article 6.4 implementation without attempting to do so in this submission, at least regarding “emissions avoidance and conservation enhancement activities” and “on “accounting for removals and crediting periods.”

Paragraph 9: “emissions avoidance and conservation enhancement activities”

The SB should ask the Science Based Target Initiative (SBTi) why it does not allow emissions avoidance to be used by corporations setting net zero emissions targets under the SBTi general and sector specific standards. The first SBTi corporate net zero standard states, “Avoided emissions fall under a separate accounting system from corporate inventories and do not count toward near term or long-term science-based emission reduction targets.”¹⁸ This criterion for corporate net zero target setting was developed in cooperation with corporations whose fees for setting net zero targets and validating progress towards reaching those targets provided much of the SBTi budget. SBTi has a number of structural problems, not the least of which is an inadequate number of validators to review unaudited data from more than 2,000 net zero committing corporations for annual net zero progress reviews. A study of 25 SBTi net zero committing companies has documented a high degree of over-promising and under performance.¹⁹

Notwithstanding SBTi shortcomings, this private standards organizations and its cooperating corporation continue to agree that avoided emissions will not be counted towards setting and realizing net zero targets. Why don’t avoided emissions count in this science-based standard? In line with the recommendation of the Climate Land Ambition Rights Alliance (CLARA) – of which IATP is a member – IATP advises the SB to neither include emissions avoidance activities in the Article 6.4 mechanism nor in the SB recommendation on removals. There is no scientific basis for determining that emissions avoidance activities contribute to realizing the 1.5 goal. Whereas emissions reductions are measured from a baseline that can be objectively determined, the baseline for emissions avoidance project is set in relation to a hypothesis about how much additional CO₂ will be emitted in the absence of the emissions avoidance project. As summarized in the CLARA submission, “The carbon offsets to be included in the Article 6.4 mechanism must, *at a minimum*, be measurable and additional. ‘Avoided offsets’ fail on both these counts.”

Furthermore, avoidance emissions project developers have an economic incentive to set hypothetical baselines that greatly overestimate future deforestation and/or afforestation contributions to emissions

¹⁸ “SBTi Corporate Net Zero Criteria,” version 1.0, October 2021, p. 4.

<https://sciencebasedtargets.org/resources/files/Net-Zero-Standard-Criteria.pdf>

¹⁹ “Corporate Climate Responsibility Monitor 2022,” New Climate Institute and Carbon Market Watch, February 2022, p. 5 et passim. https://carbonmarketwatch.org/wp-content/uploads/2022/02/CMW_CCRM2022_v08_FinalStretch2.pdf

reductions. Emissions avoidance projects credits have the lowest environmental and social integrity, as a category, among investigations of projects and certification protocols.²⁰ Correspondingly, as SBSTA deliberates, per Paragraph 8 above, about how to advise the SB concerning the “national arrangements” for host Parties implementing the Article 6.4 mechanism, SBSTA also should not recommend the inclusion of emissions avoidance activities in removal definitions and crediting methodologies.

Recommending to the CMA that emissions avoidance activities not be included in the Article 6.4 mechanism is an easy decision on scientific grounds but can be a difficult decision on climate finance grounds. According to Bloomberg data, in 2021 deforestation avoidance projects accounted for about 32% of all project types.²¹ For CMA Parties who have watched in vain for more than a decade for promised public finance for direct mitigation and adaptation²², the possibility that governments and

²⁰ Regarding environmental integrity deficiency in avoided emissions crediting see, e. g., The Guardian, *Revealed: more than 90% of rainforest carbon offsets by biggest certifier are worthless, analysis shows* (Jan. 18, 2023), <https://www.theguardian.com/environment/2023/jan/18/revealed-forest-carbon-offsets-biggest-provider-worthless-verra-aoe>; Follow the Money, <https://www.ftm.eu/articles/south-pole-kariba-carbonemission?share=6RVuzdbosPV0PoeNbS%2BHo6JIAcYVhYtk%2F6WUHcx2K3WRT2THqLrTelruqj%2F6FG0%3D>; Investor Group Bans Carbon Removal CO2 reduction plans (Jan. 31, 2023), <https://www.reuters.com/business/sustainable-business/investor-group-bans-carbon-removal-co2-reduction-plans-2023-01-31/>; Tin Fischer and Hannah Knuth, “Phantom Offsets and Carbon Deceit,” Zeit Online, January 19, 2023, https://www.zeit.de/wirtschaft/2023-01/co2-certificates-fraud-emissions-trading-climate-protection-english?utm_referrer=https%3A%2F%2Fwww.google.com%2F; West, Thales A. P., Jan Börner, Erin O. Sills, and Andreas Kontoleon. 2020. “Overstated Carbon Emissions Reductions from Voluntary REDD+ Projects in the Brazilian Amazon. Proceedings of the National Academy of Sciences 117, no. 39 (September): 24188–194. <https://www.pnas.org/doi/full/10.1073/pnas.2004334117>; Bailis, Rob, Yiting Wang, Rudi Drigo, Adrian Ghilardi, and Omar Masera. 2017. “Getting the Numbers Right: Revisiting Woodfuel Sustainability in the Developing World.” *Environmental Research Letters* 12, no. 11 (October): 115002. <https://doi.org/10.1088/1748-9326/aa83ed>; Cames, M., Harthan, R. O., Füssler, J., Lazarus, M., Lee, C. M., Erickson, P., & Spalding-Fecher, R. (2016). *How additional is the Clean Development Mechanism?* Oeko Institut. https://ec.europa.eu/clima/system/files/2017-04/clean_dev_mechanism_en.pdf; Ben Elgin, “This Timber Company Sold Millions of Dollars of Useless Credits,” Bloomberg Green, March 17, 2022, <https://www.bloomberg.com/news/articles/2022-03-17/timber-ceo-wants-to-reform-flawed-carbon-offset-market#xj4y7vzkg>; “Verra Response to Guardian Article on Carbon Offsets,” <https://verra.org/verra-response-guardian-rainforest-carbon-offsets/>; “Carbon market stakeholders: Open Letter,” Sylvera, January 30, 2023. <https://www.sylvera.com/blog/carbon-markets-stakeholders-open-letter> Regarding social integrity decisions in emissions avoidance credits see, e.g. Forest Peoples Programme (FPP). (2021, July 1). *Press release: Indigenous Kichwa community take Peruvian State and National Park to Court*. Forest Peoples Programme (FPP). Retrieved July 12, 2022, from <https://www.forestpeoples.org/en/press-release/kichwa-take-Peru-state-PNAZ-court>; Amazon Watch, “The Amazon Rainforest-sized Loophole in Net Zero: How Net Zero Pledges Can Lead to False Solutions for Amazon Rainforest and Climate Protection,” 2021. <https://amazonwatch.org/assets/files/2021-the-amazon-rainforest-sized-loophole-in-net-zero.pdf>; *Evicted for carbon credits: Norway, Sweden, and Finland displace Ugandan farmers for Carbon Trading*. oaklandinstitute.org. (2020, October 14). Retrieved July 12, 2022, from <https://www.oaklandinstitute.org/evicted-carbon-credits-green-resources>; De Haldevang, M. (2022, June 27). *BP Paid Rural Mexicans a “Pittance” for Wall Street’s Favorite Climate Solution*. Bloomberg. Retrieved July 12, 2022, from <https://www.bloomberg.com/features/2022-carbon-offset-credits-mexico-forest-bp/>; Lang, C. (2022, April 2). *Indigenous Kichwa community takes the Peruvian State and Cordillera Azul National Park to court*. REDD-Monitor. Retrieved July 25, 2022, from <https://redd-monitor.org/2021/07/02/indigenous-kichwa-community-takes-the-peruvian-state-and-cordillera-azul-national-park-to-court/>; Dufresne, Gilles. “Two Shades of Green: How Hot Air “Forest Credits Are Being Used to Avoid Carbon Taxes in Colombia.” Carbon Market Watch, 30 June 2021, <https://carbonmarketwatch.org/publications/two-shades-of-green-how-hot-air-forest-credits-are-being-used-to-avoid-carbon-taxes-in-colombia/>

²¹ Doreen Stabinsky et al, “Fossil Futures Built on a House of Cards,” Friends of the Earth International, June 2022, p. 15, Figure 2. https://www.foei.org/wp-content/uploads/2022/06/Fossil-futures-built-on-a-house-of-cards_report-2022.pdf

²² Jocelyn Timperley, “The broken \$100 billion promise of climate finance—and how to fix it,” *Nature*, October 20,

private offset developers, particularly in developing countries, might get some proceeds from avoidance emission credit sales, however small and uncertain²³, is alluring and perhaps even persuasive. Further adding to the promise of climate finance by carbon trading are the econometric projections of carbon credit price increases of up to 3000% by 2029²⁴ as investors surge to buy Verified Carbon Units that now all meet the “high integrity” standards soon to be released by the Integrity Council for Voluntary Carbon Markets.²⁵ However, the idealistic policy scenarios of such price projections are unlikely to materialize. Even if the developing country governments of CMA delegates receive technical assistance to participate in VCMs and an eventually implemented Article 6.4 mechanism,²⁶ those governments will be price and rule takers, not market makers who influence prices and the share of proceeds from offset sales on trading platforms..

IATP urges the SB not to provide the CMA with a recommendation that would include avoided emissions activities, not just because avoided emissions do not reduce emissions but also because they do not provide reliable, predictable and adequate climate finance, particularly for the most climate vulnerable Parties. SBSTA and the SB should not become enablers of the ‘gold rush’ mentality that afflicts VCM proponents.²⁷

IATP does support conservation enhancement activities because their co-benefits support the restoration of ecosystems that is crucial to preventing and perhaps even reversing to a small extent biodiversity erosion and build climate resilience. However, conservation enhancement activities have measurement parameters more complex than those of a carbon metric and hence are a poor fit for crediting within the Article 6.4 mechanism. In line with CLARA, IATP recommends that SBSTA should advise the CMA how conservation enhancement activities could be measured and credited within the Article 6.8 non-market mechanism framework. Per the CLARA submission, “CLARA has also advocated that due to the challenges of permanence, and the profound rights and livelihood implications associated with land-based removals, the appropriate modality for supporting conservation enhancement activities is found in Article 6.8 of the Paris Agreement, the agreed-to ‘non-market mechanism’ that will be launched with further refinement at the upcoming SBSTA workshop in June of this year.” The Article 6.4 SB should discuss with SBSTA how to transfer a recommendation on conservation enhancement activities from Article 6.4 to the Article 6.8 implementation.

Paragraphs 19-20: “accounting for removals and crediting periods”

There has been for some time a general agreement that long cycle geological carbon emissions cannot be offset physically by short cycle biogenic removals on a one-to-one ratio. Furthermore, ecosystem restoration restores the land sink, but does not have additional capacity to compensate for fossil

2021. https://www.foei.org/wp-content/uploads/2022/06/Fossil-futures-built-on-a-house-of-cards_report-2022.pdf

²³ Gilles Dufrasne, “Secretive intermediaries: Are carbon markets really financing climate action?” Carbon Market Watch, February 2, 2023. <https://carbonmarketwatch.org/publications/secret-intermediaries-are-carbon-markets-really-financing-climate-action/>

²⁴ “Carbon offset prices may rise by 3,000% by 2029 under tighter rules,” Bloomberg Professional Services, March 2, 2022. <https://www.bloomberg.com/professional/blog/carbon-offsets-price-may-rise-3000-by-2029-under-tighter-rules/>

²⁵ “Integrity Council announces timetable to introduce high-integrity label to voluntary carbon markets in Q3,” January 19, 2023. <https://icvcm.org/integrity-council-unveils-timetable-to-introduce-high-integrity-label-to-voluntary-carbon-market-in-q3/>

²⁶ “Ecosystem Marketplace and U.S. Department of State to Assist Governments in Article 6 Carbon Market Strategies,” Ecosystem Marketplace, February 2023. <https://www.ecosystemmarketplace.com/articles/ecosystem-marketplace-and-us-department-of-state-to-assist-governments-in-formulating-article-6-carbon-markets-strategies/>

²⁷ E.g., Camilla Cavendish, “Carbon offset gold rush is distracting us from climate change, *Financial Times*, November 22, 2019.

emissions.²⁸ However, IPCC consensus and other scientific research to quantify the asymmetry is recent. Analysis of the consequence of that asymmetry for accounting for removals and crediting periods is likewise recent. The SB's recommendation to the CMA on accounting for removals and crediting periods should derive from the climate warming potential asymmetry between fossil fuel related emissions and land-based offsets.

In the IPCC Sixth Assessment report on the physical science of climate change, there is a medium confidence consensus that the physics of positive emissions are not offset by negative emissions on a one-to-one ratio. Instead, climate scientists describe an asymmetry between the positive emissions of greenhouse gases and the negative emissions of carbon sinks and offsets.²⁹ A short summary of that asymmetry is described in a *Nature Climate Change* article on climate modeling findings: ““Results indicate that a CO₂ emission into the atmosphere is more effective at raising atmospheric CO₂ than an equivalent CO₂ removal is at lowering it, with the **asymmetry increasing with the magnitude of the emission/removal.** (IATP emphasis) The findings of this study imply that offsetting positive CO₂ emissions with negative emissions of the same magnitude could result in a different climate outcome than avoiding the CO₂ emissions.”³⁰ As CO₂ emissions and equivalents CO₂ removals increase, the degree of asymmetry increases.

Carbon Market Watch's advice to the SB to separate the accounting of emissions reductions from the accounting of removals is rooted in recognition of the asymmetry between geological emissions and biogenic removals: “There is not only no equivalence between fossil and biogenic carbon, but also between various ‘types’ of biogenic carbon. There is a spectrum of natural removals, according to their quality, longevity and stability.”³¹ Ignoring the differences on the spectrum impedes accounting and crediting that not only reduces emissions but also restores natural ecosystem sinks in ways that are environmentally just, according to an important source of the Carbon Market Watch analysis.³² The application of economic decision-making theory to accounting for removals and offset crediting periods can conflate their differences to the point that temporary removals can be represented as absolute emissions reductions. Indeed, as the Information Note summarizes the application of economic theory to the accounting of temporary removals and their crediting for the purpose of offset emissions trading:

“there are two parameters involved in valuation of mitigation produced by removals: time horizon and time discount rate. The first is question of relevance of valuation, and the second is a question of economics of valuation. Mitigation, or avoided climate damage, is fundamentally an economic value, otherwise we would not care for this just as we don't care for the scientific fact that the Sun is gradually running out of hydrogen and will collapse in a few billion years, making the Earth uninhabitable.”³³

The application of the time horizon and time discount rate to account for and credit emissions reductions, as well as temporary removals is one of three false equivalencies identified by Carbon Market Watch:

²⁸ E.g., Mackey, B., Prentice, I., Steffen, W. *et al.* Untangling the confusion around land carbon science and climate change mitigation policy. *Nature Clim Change* 3, 552–557 (2013). <https://doi.org/10.1038/nclimate1804>

²⁹ *Climate Change: The Physical Science Basis*, Chapter 5, Executive Summary p. 9, lines 46-51 (p. 1161) August 2021, https://www.ipcc.ch/report/ar6/wg1/downloads/report/IPCC_AR6_WGI_Full_Report.pdf. Also, Chapter 5.6.2.1; Figure 5.35.

³⁰ K. Zickfeld et al, “Asymmetry in the climate carbon response to positive and negative CO₂ emissions,” *Nature Climate Change*, June 21, 2021. <https://www.nature.com/articles/s41558-021-01061-2>

³¹ “Respecting the laws of physics: Principles for carbon dioxide accounting,” Carbon Market Watch, December 2021, p. 22. <https://carbonmarketwatch.org/wp-content/uploads/2021/12/Respecting-the-laws-of-physics-Dec2021.pdf>

³² Carton W, Lund JF and Dooley K (2021) Undoing Equivalence: Rethinking Carbon Accounting for Just Carbon Removal. *Front. Clim.* 3:664130. doi: 10.3389/fclim.2021.664130

³³ “Information Note: Removal activities under the Article 6.4 mechanism,” version 3.0 p. 22. <https://unfccc.int/sites/default/files/resource/a64-sb004-aa-a04.pdf>

“The idea of temporal equivalence underpins many net-zero claims and targets. To those making the claims, it doesn’t seem to matter when emission reductions happen, only that at a certain arbitrary point in the future removals balance them out. This lies at the core of mitigation deterrence and incentivises delaying costly or difficult changes to behaviour, economic [footnote 69] sectors and societies instead of pushing for fast and deep emission cuts now.”³⁴ To use economic decision-making time discount methodology to delay balancing emissions and removals to a distant future will delay direct mitigation actions.

IATP is impressed by the analytic weight that Carbon Watch gives to this accounting and crediting issue: “We identify two main potential and interrelated drivers of the mitigation deterrence effect: a false equivalency between emissions reductions and carbon removal, and an overreliance on future CDR technologies that currently do not exist and may never exist, at least not at the required scale or cost.”³⁵ Some may find it surprising that the application of an economic methodology for measuring the value of mitigation in emissions reductions could have a similar mitigation deterrence effect as waiting for future carbon dioxide removal technologies to perform at the promised cost and scale. IATP is not among the surprised.

If we apply the critique of an accounting and crediting methodology that discounts when and when, where and how emissions reductions occur and where they are storage to the market conceptualization and definitions of legal contracts for trading VCUs and ITMOs, one mitigation deterrence effect comes into view: “A tonne is not a tonne - and the proposed straightforward equivalency between each tonne emitted and each tonne removed is false.”³⁶ To the extent that VCM contracts represent that a tonne of CO₂ emissions removed is a tonne of CO₂ emissions reduced for the period of the contract, a fissure between contract claims and the increase in emissions/removals asymmetry will grow. That misrepresentation could result in litigation by market participants, stranded offset credits with no buyers or sellers and delayed investment by Parties and non-Parties in direct mitigation and adaptation investment.

The Information Note lays out some of the pros and cons of applying temporal discounting in economic decisions about the valuation and tonne year crediting of temporary removals.³⁷ The sources cited by “cons” are extensive, where the sources for the “pros” are few. The Secretariat notes, “No sources contradict the benefits of tonne-year accounting listed in the first column. However, see table 6 for objections raised about use of tonne-year accounting, including the scientific validity of the value of temporary carbon storage. Regarding the details and design of tonne-year credit system the following views are found in the sources.”³⁸ IATP advises that the SB evaluate the sources that the Secretariat has usually compiled. We also advise the SB to analyze the CarbonPlan submission from 2022 on tonne-year crediting of removals before making a recommendation to the CMA on this issue.³⁹

Conclusion

IATP shares CLARA’s deep concern “about the inclusion of removals in the Article 6.4 mechanism, especially considering the expansive definition of removals included in the draft recommendations prepared by the 6.4 Supervisory Body and submitted to the CMA at COP27. Activities that could qualify as removals is a wide-ranging set of actions, which present numerous risks not only to communities on

³⁴ Respecting the laws of physics,” p. 24.

³⁵ Ibid., p. 20.

³⁶ Ibid. 28.

³⁷ Information Note, pp. 28-41.

³⁸ Ibid., pp. 41-42.

³⁹ Freya Chay et al, “Understanding tonne-year accounting,” CarbonPlan, January 31, 2022. <https://carbonplan.org/research/ton-year-explainer>

the ground and the environment, but to the global climate, and could also undermine the Paris Agreement as a whole.” Removals are not fungible with emissions reductions either on scientific grounds or on economic decision-making grounds. A SB recommendation on removals that tries to fit emissions reductions into the market accounting and legal definitions of offset contracts will contribute to mitigation deterrence that our planetary emergency cannot survive. As CLARA notes in its 2023 submission, “If removals fail, either immediately or later due to problems in permanent storage, this creates a major problem for the mechanism as it will be too late to undo the emissions that were allowed via an offset purchase.”

IATP appreciates that the SB has a great and divergent amount of evidence to evaluate as it prepares recommendations for the CMA at COP28. We thank the SB for its consideration of our evidence and opinions.