

PUBLIC CONSULTATION INPUT

Verra VCS Version 5i

APRIL 2023

1. Our vision for the renewed VCS Program is to strengthen its credibility and integrity and to enable increased global climate action to support halving emissions by 2030 and achieving net-zero global emissions by mid-century. To help gauge which topics are most important, please provide a score (between 1-lowest and 5-highest priority) for each of the following based on your recommended overall priorities for the VCS Program renewal:

| Accelerate the adoption and integration of new approaches to VCS Program fundaments, (such as additionality, baselines, monitoring, verification, and permanence) to enhance integrity, transparency, and impact | 4 |
|--|---|
| Align the VCS Program with carbon market integrity initiatives | 4 |
| Expand the VCS Program Scope to include additional activities/sectors | 1 |
| Integrate the VCS program with government or jurisdictional programs and policies (including Article 6 of the Paris Agreement) to increase alignment and ambition | 2 |
| Adopt new technologies, such as digitization of project documents and methodologies, digital monitoring, reporting, and verification (MRV), and Web 3.0 opportunities | 2 |
| Simplify and enhance the usability of the VCS program documents, methodologies, and templates | 3 |
| Enhance protections and benefits for indigenous peoples and local communities, natural ecosystems, and sustainable development associated with VCS projects | 5 |
| Other (specify below) | 5 |

If you selected 'other,' please elaborate on your priority topic(s) for the future development of the VCS **Program:** Provide more guidance on the appropriate use of carbon credits and their associated claims.

INTEGRITY

2. What improvements do you recommend to strengthen the credibility and integrity of the VCS Program or better align with the VCS Principles (Relevance, Completeness, Consistency, Accuracy, Transparency, and Conservativeness)?

First of all, we would like to express our appreciation for the opportunity to provide input for the VCS Program review. As you are well aware, Verra - and the VCS in particular - has been scrutinised and criticised for the integrity of several projects and methodologies, and the role that its VCUs are playing in corporate greenwashing at a global scale. This raises complicated questions around the future of the voluntary carbon market. As the leading market standard for carbon credits, Verra carries a large responsibility in improving its own integrity, and hence integrity of the market as a whole. Issuing low quality carbon credits that are used by companies to greenwash their high-carbon activities is counterproductive to Verra's stated mission. Verra might aim to contribute to positive change, but unfortunately, intentions alone are not enough. Part of upholding integrity is taking difficult decisions that are needed when discovering the shortcomings of actions, instead of justifying those shortcomings.

Placing integrity front and centre means only issuing credits that represent real and commensurate emissions reductions without causing harm to stakeholders and local environments. The issuance and use of VCUs currently leads, in part, to lowering climate action rather than increasing it, by offering large polluters an easy way of greening their image. This is not only a marketing issue, it is also a public policy issue as companies' claims, and associated lobbying efforts, influence policymakers' willingness to adopt politically difficult regulations to tackle the climate crisis. Verra can, and should, be a force for good, by stamping out these low quality credits from its standard, but also by taking a more proactive stance on how their credits should be used.

This means re-evaluating the methodologies by which all credits are generated, and putting on hold any crediting based on potentially unsound methodologies. It also means taking uncertainty seriously and crediting more conservatively. More conservative issuance of credits is urgently needed, because the market should not be scaled for the sake of scaling. It needs to serve a purpose, and its purpose is to drive climate finance towards impactful activities. Placing the emphasis on scale rather than integrity actually goes counter to this. More credits mean lower prices, and hence less revenues for those activities that are actually not gaming the system. Reducing the overall volume of credit issuance could therefore have a positive impact on finance

flows, by raising the price of credits and hence enabling more transformational activities (that are typically more expensive) to participate in the market. It will have the added benefit of better enforcing the polluter-pays principle by making it more expensive to offset emissions.

Verra must step up to address not only the supply side challenges it is facing, but also the need to guide buyers of VCUs towards higher-integrity uses of these credits.

Another crucial element of VCS's credibility and integrity is financial transparency. Currently, the amount of finance that reaches projects on the ground and delivers climate action is obscured through the many layers of intermediaries, and thus the price of a credit says little to nothing about the climate finance delivered, as we have illustrated in a recent report on intermediaries on the VCM. 90% of the intermediaries investigated in a study by AlliedOffsets on behalf of Carbon Market Watch do not disclose the exact fees they charged, let alone the profit margins they made during the sale of carbon credits on the VCM. Verra must take responsibility to ensure that buyers know where their money ends up, and hold intermediaries accountable. While Verra does not directly regulate the secondary VCM market, there are many ways in which it could improve upon current practice. One possibility is to require activity owners to disclose basic financial reports, including (average) price received per credit. Another is to make financial transparency an attribute of credits: this could work similarly to an SD benefit tag, but in this case the tag would be to confirm that project owners are transparently communicating the extent and use of their revenues. Other ways of increasing transparency in this field exist (e.g. collaboration with developers to promote more transparency on a voluntary basis), but doing nothing at all is not acceptable. By doing nothing to address this issue, Verra is helping this obscuring of financial information and hampering transparency. In the long-term, this is detrimental to the market, and hence to Verra's own reputation and activities, as buyers grow sceptical about the real use of the money they pay to purchase VCUs.

Lastly, there is a lot of project documentation (VVB reports, kml files, maps, etc.) missing on the registry, which is detrimental to the transparency and completeness of Verra's work. A proper management strategy should be set up, including a clear timeline and process that is transparent for all stakeholders, by which Verra will make clear how they will address the systemic issue of missing documentation. In this strategy, measures to improve transparency overall should also be included, such as mandatory registration of account ownership and holdings (as done by other registries such as the UK Woodland Carbon Code or the Global Carbon Council), as well as registration of retirement beneficiaries and purpose for individual credits (as now required by the ICVCM criteria).

3. How could Verra improve the VCS Program approach to additionality, permanence, baseline setting, or avoiding double counting or double claiming of emission reductions and removals?

Permanence

AFOLU projects, the most represented project type under VCS, can provide crucial and wide-ranging benefits for local communities, biodiversity and the climate. However, they are inherently unsuitable for offsetting purposes due to the unstable nature of the carbon sequestration they provide. As the IPCC states: "Mitigation within AFOLU is occasionally and wrongly perceived as an opportunity for in-action within other sectors. AFOLU simply cannot compensate for mitigation shortfalls in other sectors." (IPCC AR6 WGIII, p. 755) Verra should therefore phase out all AFOLU projects, including REDD+, from any offsetting scheme. In order to harness the potential benefits of AFOLU projects without the risk of increasing net emissions, the concept of a contribution model can provide a solution. As once proposed by Verra, DCCs could replace VCUs, at least where credits do not meet the environmental integrity requirements. As such, finance flows to AFOLU and other projects could continue, but no offsetting claims could be made based on these financial contributions.

Afforestation or avoided deforestation, as well as other nature-based solutions, do not generate permanent climate benefits and can be undone by many intentional or unintentional events, especially in the light of increasing extreme weather events due to climate change. Such projects can simply not guarantee the permanence of their impacts on a time frame of at least 2-3 centuries, and not even for 100 years. When these projects are used to justify ongoing emissions elsewhere through offsetting, the result could therefore even be a net increase in emissions in the medium to long-term, rather than a decrease.

While Verra recognizes these risks associated with AFOLU carbon sequestration, it does little to address these, only providing the solution of a buffer pool. However, buffer pools are not sufficient to address reversal risks. Ravaging forest fires in California have already shown how fast the carbon stored in AFOLU projects can be made undone. Such events have already depleted at least 95 percent of the buffer pool contributions set aside to protect against all fire risks, which are supposed to last for a century, in a matter of years (Badgley et al., 2022). It is becoming increasingly clear that we cannot rely on buffer pools to provide adequate compensation for the droughts, fires, pests and other threats that will only continue to grow in scale and frequency. Moreover, these reversals could occur decades after the end of a project's crediting period on a

scale eclipsing the share of cancelled buffer credits, but would never be detected because the projects would not be monitored anymore. The composition of the buffer pool is hence not the sole problem, and there is a broader governance issue with this approach. The same applies to alternative models, such as insurance policies or legal attestations requiring project owners to monitor and compensate for reversals over many decades or century/ies.

It is simply not credible for any entity, and certainly not a non-profit organisation, to claim to provide guarantees that extend over several decades. Extending the monitoring period for reversals is therefore not a solution. Even large and established companies do not enter contracts on such a timescale.

Permanence can therefore not be demonstrated. This is why addressing this concern through an evolution in claims is crucial. As long as short-term carbon storage is used to "offset" emissions that will stay in the atmosphere for centuries, the use of VCUs will be subject to a lack of credibility.

Baselines

Setting a realistic baseline is essential in determining what a project actually contributes, if anything. However, baseline setting should go beyond that, and aim to be conservative in order to avoid overcrediting. The setting of baselines is a murky process as the counterfactual, the situation without the project taking place, often cannot be known once the project has taken place. This leaves room for adverse selection and gaming. Several VCS projects have come under scrutiny for their baseline setting, choosing unrealistically pessimistic counterfactuals as their baseline, such as using the regional average deforestation rate in areas with particularly low deforestation. This is troubling, because baseline setting is literally at the base of creating a carbon credit that actually represents anything. Over-credited projects used to offset emissions will increase overall emissions. VCS must do all it can to ensure no adverse selection or gaming takes place in baseline setting, which requires close, project-to-project, monitoring. Baselines must be as conservative as possible, while keeping in mind that "(...) more conservative baselines can substantially reduce, but not resolve, over-crediting risk from multiple factors" (Haya et al., 2023, p. 1)

Double counting and double claiming

As once proposed by Verra, a contribution model for using carbon credits would solve some of the issues inherent to carbon offsets (e.g. the impossibility of guaranteeing permanence over a credible timeframe). It would also tackle the risk of double claiming

emissions between a host country and any entity that purchases carbon credits to meet a (voluntary or mandatory) climate target. Verra currently does not have rules in place to avoid the double claiming of emission reductions, which will increasingly become a major shortcoming as activities are issued credits for post-2020 vintages.

There will be no risk of missing corresponding adjustments because the emissions reductions cannot be counted towards anything else aside from the host country's climate target.

Increasingly, scepticism of offsetting logic is permeating the strategies of actors in the VCM. Organisations such as South Pole, myclimate and ClimatePartner are no longer offering to help offset companies' emissions; instead, they have adopted a contribution model by which companies can use their financial contributions to show their support for climate action rather than claiming climate neutrality. They follow a trend that was set by other organisations, including the likes of Gold Standard and Atmosfair, which continues to pick up speed. Verra risks becoming a laggard in the climate claims space if it does not rapidly take a more rigorous stance on the issue of double claiming and greenwashing through offsetting.

Arguments related to a contribution model becoming less attractive as a corporate strategy than offsetting are unfounded in light of current developments on the VCM. Current dwindling investment is caused by the inability of Verra and other market actors to address concerns about the VCM's integrity, and hanging on to the impossible promise of delivering tonne for tonne compensation. By moving away from this model, it becomes more acceptable if the impacts associated with credits carry some uncertainty in their measurement and durability. As the contribution model shifts the focus from exact quantification to financing of impact, some of the market's credibility will be restored, which can actually be a boost for investment. Of course, this should be a complement to integrity improvements for specific credits, rather than a substitute. The focus should be on financing the highest quality projects rather than maximising the volume of credits purchased.

4. What enhancements do you recommend to the VCS requirements and processes related to project consultation and safeguards to protect and benefit indigenous peoples and local communities, avoid environmental harm, and promote sustainable development?

An essential component of safeguarding stakeholders, especially IPLC, is a strong grievance mechanism. While such a mechanism is currently in place for the VCS Program, it is not sufficient to protect the rights of stakeholders. Based on <u>a report by researchers from Perspectives</u>, commissioned by Carbon Market Watch, we strongly advise incorporating the following recommendations on procedural matters as well as on six core criteria: accessibility, transparency, predictability, independence, adequacy, and safeguards, taken from our own briefing on the report.

Procedural

Key findings: Verra cannot be considered to have properly institutionalised the grievance process from the perspective of a potential complainant, since the information about its mechanism is neither easily accessible nor sufficiently detailed. There is a two-page description of its grievance process with basic information, accessible via a paragraph-long webpage. Verra does not appear to publicly provide any further information about their mechanisms elsewhere, which is clearly inadequate. Grievances can be filed on a range of issues and are open to stakeholders, which is positive, but further clarity is missing regarding possible outcomes of the grievance process (such as invalidating a violating project).

Recommendations: Verra should provide more details. It is insufficient to only have a web page paragraph linking to a two-page document without any additional information or visibility.

Accessibility

Key findings: Verra was found to have very poor accessibility. There is no public information available, except for basic details that are not easy to find (as detailed above) and are exclusively in English. There is no promotion for the direct access point web page to the grievance mechanism. It is thus difficult for stakeholders to find out how to file a grievance and what the steps will entail. This lack of transparency also means that some communities may not even be aware of the fact that they have the right to air their grievances. Verra unacceptably requires complainants to cover all expenses associated with Verra's handling of a grievance (and potential subsequent appeal). These costs are only paid back if the grievance is decided in favour of the complainant, which is a clear deterrent to filing grievances.

Recommendations: Verra should ensure the web section about their mechanism is clearly visible to external stakeholders and promoted more generally to raise awareness about its existence. Verra must proactively raise awareness about the existence of their grievance mechanism (see GCF's IRM for good practice). This also includes requiring

project developers to provide adequate offline information, translated when necessary, to indigenous peoples and local communities alerting them to their rights, which must be verified by auditors, if not already done. Verra must stop requiring those who file a grievance to cover expenses related to Verra's handling of it, since this is a clear deterrent.

Transparency

Key findings: Verra does not have a public grievance repository documenting the type and number of grievances received, including details and outcomes of past cases when the complainant has not requested confidentiality. Perhaps Verra has not yet received grievances via their formal mechanism. If this is the case, it suggests a lack of due diligence and may be tied to the lack of accessibility and visibility of the grievance mechanism. Some information is provided regarding the type of staff reviewing the grievance, but there is no detailed description of the process they follow (e.g. review followed by development of investigative team and plan, timeline for resolution).

Recommendations: Verra should develop a public grievance repository (however, confidentiality must be upheld when it has been requested by complainants). It should also include summary statistics including the number of total grievances filed, whether these are project-specific or methodology-specific, the country of complainants and specific activities/ methodologies on which grievances have been filed (when not confidential), number of decisions/resolutions in favour or against complainants. Verra should provide transparent information about the staff assigned to working on grievances as well as more on the steps of the grievance process.

Predictability

Key findings: Verra does provide a general description of internal steps, but does not give indicative timelines for each step from start to finish. The documentation does not indicate how regularly complainants are updated throughout the grievance process. Lack of clarity on the predictability of the process may discourage some complainants from filing a grievance and can cause misunderstanding and frustration for those who have but are not sufficiently informed as it progresses.

Recommendations: Verra should publish detailed step-by-step descriptions of how grievances are addressed in a clear and reader-friendly manner with indicative time frames.

Independence

Key findings: Verra does not appear to have adequate provisions for an independent and dedicated team or person to handle grievances: Verra appoints an "appropriate person", who may convene external experts, but no details are provided on their or the overall process' independence and on avoidance of conflicts of interest; Verra does allow complainants to appeal decisions if they are not satisfied with the outcome, which is good practice.

Recommendations: Verra, should take more steps to ensure the independence and impartiality of their process, including through assigning independent staff specifically dedicated to grievances. Verra should also draw up, or make public, conflict of interest provisions regarding grievances.

Adequacy

Key findings: Verra does not provide detailed information on the potential remedies they provide as outcomes to the grievance process. Verra indicates an earlier decision can be overturned, but it is not clear what scope this covers (i.e. project registration, issuance, a methodological rule, other issues?). Verra allows grievances to be filed at any time, which is positive. In addition, senior management is made aware of grievances. No mention is made however about whether projects that are the subject of a grievance are flagged on the standard's registry and project page.

Recommendations: Verra should provide more specific examples of possible remedies a complainant can seek when filing a grievance. These should include but not be limited to: deregistration of a project, revision to a methodology or programme rule, cancellation of credits to account for over-crediting, monetary or other compensation. Verra should also flag projects that are the subject of a grievance on the registry and project page (this flag serves to transparently showcase that an investigation is underway and can note that fault should not be presumed).

Safeguards

Key findings: Verra gives the option of confidentiality to those who file grievances, which is good practice. It is not detailed whether and how it aims to use past experience to improve the grievance processes, such as by: analysing past complaints and appeals to identify improvements in their review process and to address underlying root causes leading to grievances in the first place.

Recommendations: Verra should formalise an approach to continually improve the grievance process based on past experiences (or should communicate about it in the grievance documentation if this approach exists but isn't public).

5. What guidance or requirements should the VCS Program provide regarding the use of VCUs to support global climate outcomes (e.g., how to use VCUs to raise corporate climate ambition and complement direct actions within their operations and supply chains)?

Verra should, as a market standard, not only concern itself with the quality of the credits themselves (supply side) but also focus its efforts on ensuring credits are used with integrity (demand side). A contribution model is essential to raise corporate climate ambition. To meet climate goals, corporations would have to actually reduce emissions within their own supply chain. The contribution model will thus foster a transition to a low-carbon economy, and avoid the high carbon lock-in risks that come with offsetting strategies.

Verra should provide claims guidance that ensures claims correspond accurately to impacts. This requires a shift from offsetting and compensation claims, across the entire VCU portfolio, but in particular for activities that involve a certain degree of permanence risk, because there is no credible way of addressing this risk. This guidance can be accompanied by a notice that Verra reserves the right to hold parties liable for any wrongful claims that are not in line with their claims guidance.

Some positive lessons can be drawn from Verra's <u>guidelines for the Plastic Waste Reduction Standard</u>, in particular the focus away from neutrality by emphasising that companies should not seek to compensate their plastic pollution or claim "plastic neutrality".; Buying credits should be clearly seen as supplementary to emission reductions, and not as a starting point for any corporate strategy. Stating this is not sufficient, and a clear position against all forms of "neutrality" claims should be adopted by Verra. Verra can further develop recommendations for buyers of carbon credits to have a feasible and credible reduction strategy focused on their own value chain. This will encourage responsible buyer behaviour, rather than enabling greenwashing, as is currently the case.

SCOPE

7. Are there any ERR activities or VCS methodologies that should be avoided, reviewed, or phased out of the scope of the VCS Program (please list and explain why)?

In order to further incentivise the uptake of the contribution claims model, and to address the severe reputational issues that are weighing on Verra, the VCS should exclude certain activity types from eligibility, and move these to a new framework - or a subsection of the VCS framework - that is specifically designed for a contribution approach. This includes all activities where there is a significant risk of non-permanence, as well as activities with a high level of uncertainty in impact measurement. For these activity types, it is not credible to issue carbon credits that are supposedly equivalent to the reduction of one tonne of CO2 from a fossil source. Continuing to treat these as such will significantly harm not only Verra's credibility, but also the overall development of the VCM which is increasingly suffering from a reputational problem. On the contrary, creating a new "contribution" segment under the VCS will clearly show that Verra is serious about addressing the quality issues of VCUs, but also the broader shortcomings of the offsetting logic.

Aside from AFOLU methodologies, which should be transitioned to a "contribution" framework and clearly advertised as such, the VCS program should also ban specific methodologies altogether. This includes for example, methodologies that support fossil fuel use and infrastructure, such as fossil fuel-powered energy generation, or fossil fuel transport infrastructure. Short-term gains in more efficient use or production of fossil fuels cannot justify the long-term consequences of these carbon lock-in investments. In fact, the ability to sell credits generates profits for companies that are active in this business, and might hence delay the transition away from such energy sources. Any methodology that promotes or maintains fossil fuels only serves to prolong our dependence on these obsolete technologies and is completely incompatible with a 1.5°C future.

Further to the re-categorisation of some methodologies to a "contribution" framework, Verra should also review the technical underpinnings of these to ensure that the measurement of impacts comes as close as possible to 1tCO2e. For example, Verra should review its cookstove methodologies. It has been shown that these methodologies, including the CDM methodologies that Verra bases their own methodology on, are extremely prone to over-crediting: the average cookstove project is 6.3 times over-credited, as found in a recent study pre-print by Gill-Wiehl, Kammen &

Haya (2023). This has severe implications for the environmental integrity and credibility of these methodologies, and Verra needs to take responsibility to implement serious methodology improvements if it wants to continue to certify these types of projects.

11. How can the VCS Program support and align with improvements in scientific knowledge necessary for achieving global climate ambitions?

Aligning with improvements in scientific knowledge means taking seriously all recommendations based on scientific findings; not cherry-picking those recommendations that are already in line with your strategy. For example, Verra would do well to take all findings and recommendations of the IPCC to heart, especially in light of the recently published AR6 Synthesis Report. This report again puts emissions reductions front and centre: "All global modelled pathways that limit warming to 1.5°C (>50%) with no or limited overshoot, and those that limit warming to 2°C (>67%), involve rapid and deep and, in most cases, immediate greenhouse gas emissions reductions in all sectors this decade." (IPCC AR6, 2023, p.21; emphasis added). This translates directly to the problem with using carbon credits for offsetting: we cannot rely on offsets, any finance towards such projects must be additional to actual reductions and decarbonization. Therefore, once again, we strongly advise Verra to consider a contribution model, and also to strengthen its methodologies in light of scientific evidence (e.g. related to emission factors).

There is clear scientific consensus on the difference between emissions reductions and emission removals. These cannot and must not be equated. The WG I contribution to the IPCC AR6 (IPCC, 2021) stresses the difference between the effects of CO2 being emitted and CO2 being removed: these are not the same processes, and they do not have the same (reversed) effect on the climate, either. Not emitting is always better and preferable to removing. In the context of offsetting, therefore, removals cannot be translated one-to-one to an emission reduction.

Another reason removals cannot be equated to an emission reduction is that the permanence of removals, especially in the context of AFOLU projects, is not equal to the permanence of CO2 emissions. This is valid also for many reduction projects that rely on high-risk storage of CO2. CO2, once emitted, will stay in the atmosphere for at least 300 years and possibly much longer (Archer, 2005). On the other hand, carbon sequestration by means of AFOLU projects is typically insured by Verra through its buffer pool approach for a period of up to 30 years. Offsetting with AFOLU therefore means equating a removal (or reduction with storage) with very uncertain and

temporary benefits to an emission that causes known and rather permanent harm, a completely incongruous equation (Kaupa, 2022). According to scientific literature, therefore, permanence of carbon sequestration is an important issue that has to be addressed. Ramirez et al. (2020) suggest that permanent storage means at the very least five centuries (and preferably longer).

OTHER

17. Do you have any other general comments or feedback on the VCS Program that are not covered in your responses above?

In light of the market mechanism established under Article 6.4 of the Paris Agreement, Verra should reflect the rules of this mechanism and require a mandatory contribution to share of proceeds for adaptation, as well as automatic cancellation of credits to deliver overall mitigation in global emissions. Otherwise, Verra will place itself at a disadvantage compared to Article 6.4.

18. Do you have additional feedback on how Verra could better support the growth, integrity, and evolution of the voluntary carbon market and climate action more broadly?

By embracing an alternative claims model, Verra could solve many of the elements that are currently weighing down the market. It needs to continuously improve the integrity of its methodologies, but some of the shortcomings highlighted by civil society and media reports simply cannot be overcome. This is the case for example of the lack of permanence of some activity types.

Yet it is clear that one of the most problematic aspects of the VCM is its potential to slow down companies' own mitigation efforts, by providing them with an easy way to communicate that they have no net impact on the climate. The problem with the VCM, and Verra as the major certifier in this market, is its function as a tool to sell an impossible promise of tonne-for-tonne compensation.

By switching to an alternative claims model, Verra will not solve all issues overnight. But it will significantly shift its role in the global climate action landscape, and this is likely to also significantly reduce the amount of criticism that Verra is currently receiving. It will clarify to the market what the expected model for the VCM is, and will reduce the

reputational risks involved in purchasing VCUs. This increased clarity will make it much safer for companies to invest in credits, and likely will spur more growth in the market.

Switching the current claims model is not a silver bullet, but it is an easy fix to a major problem, and will allow many actors to be more supportive of the VCM and, by extension, Verra's activities.

References

- 1. Badgley, G., Chay, F., Chegwidden, O. S., Hamman, J. J., Freeman, J., & Cullenward, D. (2022). California's forest carbon offsets buffer pool is severely undercapitalized. Frontiers in Forests and Global Change, 5, 154.
- 2. Gill-Wiehl, A., Kammen, D., & Haya, B. (2023). Cooking the books: Pervasive over-crediting from cookstoves offset methodologies.
- 3. Haya, B. K., Evans, S., Brown, L., Bukoski, J., Butsic, V., Cabiyo, B., ... & Sanchez, D. L. (2023). Comprehensive review of carbon quantification by improved forest management offset protocols. Frontiers in Forests and Global Change, 6, 12.
- 4. IPCC, 2021: Climate Change 2021: The Physical Science Basis. Contribution of Working Group I to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change[Masson-Delmotte, V., P. Zhai, A. Pirani, S.L. Connors, C. Péan, S. Berger, N. Caud, Y. Chen, L. Goldfarb, M.I. Gomis, M. Huang, K. Leitzell, E. Lonnoy, J.B.R. Matthews, T.K. Maycock, T. Waterfield, O. Yelekçi, R. Yu, and B. Zhou (eds.)]. Cambridge University Press, Cambridge, United Kingdom and New York, NY, USA, In press, doi:10.1017/9781009157896.
- 5. IPCC, 2022: Climate Change 2022: Mitigation of Climate Change. Contribution of Working Group III to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change [P.R. Shukla, J. Skea, R. Slade, A. Al Khourdajie, R. van Diemen, D. McCollum, M. Pathak, S. Some, P. Vyas, R. Fradera, M. Belkacemi, A. Hasija, G. Lisboa, S. Luz, J. Malley, (eds.)]. Cambridge University Press, Cambridge, UK and New York, NY, USA. doi: 10.1017/9781009157926
- 6. IPCC, 2023: Climate Change 2022: Synthesis Report. Contribution of Working Groups I, II and III to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change.
- 7. Kaupa, C. (2022). Scrutinising net zero: The legal problems of counting greenhouse gas emissions, removals and offsets together. Review of European, Comparative & International Environmental Law, 31(3), 447-457.
- 8. Ramirez, A., A. El Khamlichi, G. Markowz, N. Rettenmaier, M. Baitz, G. Jungmeier and T. Bradley (2020); 'Guidelines for Life Cycle Assessment of Carbon Capture and Utilisation', consultancy for DG ENER of the European Commission

Contact

Isa Mulder

Policy intern

isa.mulder@carbonmarketwatch.org

Gilles Dufrasne

Policy Lead, Global Carbon Markets gilles.dufrasne@carbonmarketwatch.org