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AUGUST 25 2020

Sami Osman
Policy Director
Climate Action Reserve

Dear Mr. Osman,

Thank you for the opportunity to provide public comment on the August 11 draft of the Soil Enrichment Protocol (the “protocol”). We are submitting our comments today, along with our prior written correspondence, in the hope that you will take seriously the issues we raised with you earlier this spring and to which you promised to give careful consideration.

Unfortunately, neither the Reserve’s response to comments from July [1] nor the updated protocol from August addresses the multiple, technical concerns we raised in our May 18 comment letter and again in a follow-up conversation on June 11 with you and the Reserve’s President, Craig Ebert. Any of these concerns would be enough individually to question the scientific integrity of the protocol. Together, they paint a troubling picture of an opaque protocol development process rife with conflicts of interest and corner-cutting on critical technical issues.

In our view, the draft protocol does not adequately satisfy basic standards for additionality, the accurate quantification of credited climate benefits, or carbon storage permanence. In the face of scientific challenges and uncertainties, the protocol creates complex loopholes that invite the risk of over-crediting non-additional and temporary carbon management practices, rather than generating new information that can be used as the basis for a comprehensive soil carbon management regime that improves over time.

There are many good reasons to support and invest in agricultural practices that improve soil health. But we cannot launch a crediting scheme so disconnected from the science. Doing so risks causing more harm to the climate than good, and is the wrong way to address a tough but important area of carbon management.

Below, we address the same five topics we raised in our May comment letter: (1) Conflicts of Interest, (2) Additionality, (3) Model Selection, (4) Sampling and Verification, and (5) Permanence.

[1] Climate Action Reserve, Summary of Comments & Responses, Draft Soil Enhancement Protocol Version 1.0 (July 2020), <https://www.climateactionreserve.org/how/protocols/soil-enrichment/>



Conflicts of Interest

Although we appreciate that the Reserve has clearly disclosed that its protocol development process is sponsored by Indigo Ag, which intends to earn third-party certified credits under the protocol's final version, we have struggled to get a clear answer from the Reserve about the role Indigo Ag has played in drafting the protocol text and guiding the protocol development process. We ask again because the August draft of the protocol indicates that Indigo Ag has played an even bigger role than the Reserve has so far acknowledged, in apparent contradiction of statements the Reserve made to us earlier this summer.

We asked in our May comment letter whether the Reserve had asked members of the protocol's expert workgroup whether they have any financial conflicts of interest with Indigo Ag, and if so, which members disclosed conflicts. It took a journalist asking you for this information and a follow-up letter from us on June 11 before you surveyed the expert workgroup and disclosed that six of its 22 members had conflicts of interest with Indigo Ag.

This disclosure is critically important to the integrity of the protocol development process because the workgroup forms the entire basis of soil science expertise for the protocol, as the Reserve does not itself have any in-house soil science expertise.

To try and clarify the role of Indigo Ag employees in the protocol drafting process, we asked the following question in a June 11 letter:

3. What role did staff members or consultants working for Indigo Ag play in the drafting of Version 1.0 of the Soil Enhancement Protocol? Out of 100 percent, about what share of the drafting was performed by Reserve staff, the Reserve's expert workgroup, and any staff or consultants working for Indigo Ag, respectively?

Your response in a June 24 letter reads as follows in full:

With respect to your third question, the Reserve has taken the lead on drafting the protocol from the outset. We have borrowed/ adapted a number of concepts from our Forestry protocol and other working land protocols. We have also utilized many other sources, including some information provided by Indigo Ag. It represents only a relatively modest portion of the current draft protocol and it remains to be seen how that may change as we address the comments we have received from the public comment process. Protocol development always depends on constructive inputs from a wide variety of stakeholders and this effort is no different.

This response downplays Indigo Ag's role, describing the Reserve as "tak[ing] the lead" and Indigo Ag providing only "some information" that constitutes "only a relatively modest portion of the current draft

protocol” to complement the Reserve’s expertise. That position appears inconsistent with the situation today, however, as the August draft protocol now recognizes “a financial contribution, research and drafting support” from Indigo Ag and acknowledges eight additional employees of Indigo Ag and two employees from the consultancy Terracarbon LLC.

Given that your June 24 response carefully indicated that the “modest” role from Indigo Ag staff only applied to the April draft protocol and that “it remains to be seen how that [role] may change” in response to public comments, we ask the Reserve to clarify what role Indigo Ag and Terracarbon LLC played in drafting any of the text in the August protocol and in responding to public comments over the summer.

Additionality

Our May comment letter expressed concern and surprise that the Reserve was preparing a protocol that would market carbon credits that had not been screened for additionality.

On our June 11 call, you and Mr. Ebert indicated that financial additionality concerns are not particularly significant in the context of a complex agricultural system in which incentives for individual soil management practices are unlikely to change farmer behavior. You and Mr. Ebert specifically indicated your expectation that no single practice was likely to make financial sense on its own, and that the more likely outcome would be that participating projects would need to “stack” multiple soil management practices together — that is, a project would likely need to adopt multiple, parallel practice changes to make the offsets income large enough to make a difference to decision-making in the agricultural industry. As a result, you indicated that a financial additionality screening test would not be particularly useful in the context of individual soil carbon management practices, but you indicated that you would consider a common practice evaluation to screen out management techniques that are already in regular use.

The updated protocol implements a common practice evaluation. Unfortunately, this approach is easily circumvented by the practices you and Mr. Ebert indicated you expect most projects to use going forward.

Under the protocol’s common practice evaluation, the Reserve will draft a “negative list” of practices that are excluded from eligibility to earn credits (Section 3.4.1.1). If a practice is already employed by at least 50% of the applicable cropland or pasture land in an individual county, then it will be placed on the negative list for that specific county and made ineligible for crediting in that same county — reflecting the logic that commonly implemented practices are not additional. We note that the Reserve provides no justification for its selection of a county-specific 50% threshold and has also not disclosed what the initial list (the “Additionality Tool”) would look like.

We question the sincerity of an additionality screening tool that was

apparently not ready to be shared publicly with this latest protocol revision. Although the current draft describes a process for producing the negative list, neither the protocol nor the Reserve website provides the list. Without a list, it was not possible to review the quality of the common practice assessment from primary data within the two-week window provided for public comment. With a list in hand, we would want to evaluate whether there are any practices that, for example, are commonplace in many applications but not quite at the 50% threshold in some locations — a type of evaluation is required to provide confidence in a common practice evaluation, [2] but not included in the protocol's technical appendix.

The protocol's opacity on common practice may not matter in application because the concept of the "negative list" is unlikely to be used by large projects as a result of a major and explicit loophole. The protocol proposes to render eligible any practice on the negative list when it is combined with any other practice — including another practice on the negative list (Section 3.4.1.2). The protocol also enables projects to point to as few as three other fields in a county to justify an exception for a practice that is otherwise on that county's negative list. These loopholes are so big as to overwhelm the common practice assessment for any project that "stacks" practice changes — as you and Mr. Ebert specifically indicated to us you expect to be common among credited projects under the final protocol.

We do not believe that this additionality standard is credible and therefore we recommend that the Reserve acknowledge instead that the protocol is not testing for additionality. As we have discussed previously, protocols that do not screen for additionality may have important applications in supporting public and private expenditure programs — but they are critically flawed in the context of carbon offsets meant to justify a buyer's greenhouse gas emissions.

Model Selection

Our May comment letter raised concerns about the kinds of soil carbon models used to calculate projects' carbon credits in between physical soil carbon sampling at five-year intervals. The earlier draft of the protocol from April provided few constraints on the type of model or modeling framework that could be used.

In contrast, the updated August draft and the accompanying Model Calibration, Validation, and Verification Guidance document contain additional safeguards to ensure that model calibration is based on peer-reviewed evidence and that model calibration reports will be made publicly available. We believe that open access to the basis for crediting methods is essential and sincerely appreciate the Reserve's willingness to rise to this important standard. Thank you.

[2] Barbara Haya et al., *Managing uncertainty in carbon offsets: insights from California's standardized approach*, *Climate Policy* (2020), doi: 10.1080 / 14693062.2020.1781035v

Sampling and Verification

Our May comment letter raised a number of concerns about the proposed sampling and verification practices in the draft protocol. Chief among them was our concern that the April draft protocol indicated that project verifiers would not conduct independent soil sampling. This is a significant problem because soil carbon cannot be inferred remotely. The only way to reliably calculate soil carbon content is to physically measure it, and we have concerns about the potential for biased or inaccurate measurement if there is no independent verification.

The biggest change the Reserve made to verification standards in the August draft is to indicate that the question of independent soil sampling is to be left to the determination of the verifier, rather than simply not required. As we noted in our previous comment, placing the burden of choosing rigorous independent sampling on verifiers encourages a “race to the bottom.” With this new optionality, project developers seeking minimal oversight could screen project verifiers by asking whether those verifiers are willing to accept the developers’ soil samples.

Similarly, there is no actual requirement that verifiers physically visit any project sites. All in-person verification visits can be explicitly waived at the Reserve’s discretion, if replaced by third-party attestations or remote visits instead. The August draft retains the loopholes and special permissions by which the Reserve can waive physical site visits on a case-by-case basis in the future, including for the protocol’s sponsor, Indigo Ag.

Finally, we note that the August draft protocol continues to provide that the verification team does not need any expertise in the modeling software a project employs to calculate its carbon credits, so long as the project hires its own expert to do that modeling in the first place. By definition, this is not a reliable means of independently verifying model calculations. It is a system for creating the appearance of third-party verification, when in fact there is none.

Given the lack of independent soil sampling in the verification process, the ability of participating projects to avoid in-person verification site visits at the discretion of the Reserve, and the lack of third-party expert review of model calculations, we believe the protocol fails to function effectively as a third-party standard.

Permanence

Our May comment letter concerned two issues related to the permanence of credited soil carbon benefits — the duration of project-level contracts and the construction of a protocol-level buffer pool to insure against carbon reversals. Under the protocol, the Reserve offers credit buyers a 100-year permanence standard in which credited climate benefits are guaranteed for 100 years, with any project-level failures protected by a protocol-level buffer pool of extra offset credits held by the Reserve for

this exclusive purpose. Thus, understanding the details of project-level contracts and protocol-level buffer pools is essential to evaluating this critical performance standard and marketing claim. We review each issue here in turn.

First, we pointed out in our May comment letter that the Reserve's promised 100-year permanence standard for carbon credits was not implemented in the text of the draft protocol. This is because implementation occurs via the terms of the private contract signed between the Reserve and project developer, which is known as the Project Implementation Agreement (PIA). We pointed out that the PIA could be signed for terms of less than 100 years, which means that projects could end up without contractual obligations to protect their credited climate benefits over the Reserve's stated 100-year permanence horizon. For example, a PIA could be signed with a term of 30 years, not 100 years, in which case the contract wouldn't apply to anything that happens to the credited soil carbon benefits in years 31 through 100. We questioned whether the public would ever be able to learn about shorter PIA terms because the protocol specifically indicated that PIA project terms are private, not public. We also questioned various exceptions for as-of-yet-uninvented remote soil carbon monitoring systems that could, under the protocol terms at the Reserve's discretion, could obviate the need for projects to operate under PIAs in the future.

The August draft protocol retains the same structure, with confidential PIA terms that are explicitly not required to last for the claimed 100-year duration of credited climate benefits. Worse, the Reserve's response to public comments erroneously and misleadingly suggests that protocol implementation will rely primarily on 100-year PIA contracts (see ¶ 37), while the protocol text explicitly retains the option for shorter PIA contract terms (Section 3.5.3).

We believe the risk of misleading prospective buyers is extreme if the Reserve purports to offer 100-year permanence protections while only requiring projects to sign project contracts with shorter and potentially confidential durations. The Reserve must clarify its practices here and ensure those statements are consistent with the protocol text.

Second, we raised concerns about a complex set of calculations that describe what share of a project's credited climate benefits must be set aside for the protocol-level buffer pool, in order to insure against the risk of reversal. We noted that the Reserve's calculations included a series of loopholes that render the vast majority of the calculations irrelevant, including the option for a company to provide a surety bond to a wholly owned subsidiary or parent company — a sign of potential fraud in securities and insurance regulation because closely-held corporate entities can fail together under financial duress. We noted that the choices of parameters for capitalizing the buffer pool contributions were not justified by an evidence, but rather asserted as stated. By taking advantage of the loopholes we identified, a project would only need to set aside 5% of its offset credits for the common buffer pool — a level offered

as sufficient to cover the risk of all reversals over the coming 100 years, from floods to fires to bankruptcies.

In our May comment letter, we recommended:

The Reserve should justify the choice of parameters used to calculate the contribution of its buffer pool and eliminate loopholes that allow private parties to avoid contributing to the buffer pool to mitigate the risk that they might default on their long-term contracts.

Your response to our comments (¶ 37) provided in full:

With respect to how we set buffer pool contributions, it has long been our approach to consider a wide-range of factors that contribute to reversal risk, including social and financial drivers. Unfortunately, the exact level of risk for a given project type is largely unknown, particularly when developing a new protocol and particularly when considering the range of potential risks that may arise over 100 years. Thus, these parameters, and the means for reducing risk-based contributions, must largely be policy decisions. The approach taken for [the Soil Enhancement Protocol] is consistent with our approaches taken for buffer pool contributions under the forest and grassland protocols.

These so-called “policy decisions” appear to mean picking numbers without justification or evidence. Despite our extensive technical comments, the new draft protocol makes no changes to the protocol buffer pool structure, retaining both the loopholes we identified and the unjustified parameters. It may well be that this approach is consistent with the approach the Reserve has taken in its forest [3] and grassland protocols, but that consistency would be more revealing about the Reserve’s past practices than comforting about its current approach.

We believe the Reserve needs to explain how a 5% buffer pool would adequately capitalize a buffer pool in the face of 100 years of physical, social, and economic risk.

[3] William R.L. Anderegg et al., Climate-driven risks to the climate mitigation potential of forests, *Science* (2020), doi: 10.1126/science.aaz7005

Thank you for the opportunity to provide comments on the Draft Protocol.

A handwritten signature in black ink, appearing to read "D. Cullenward".

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