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November 6, 2020

Mr. Gavin McCabe

Chair, Compliance Offsets Protocol Task Force

California Air Resources Board

*Submitted via:* <https://www.arb.ca.gov/lispub/comm2/bcsubform.php?listname=ab398offsetreport-ws&comm_period=1>

Re: Recommendations from Subgroup C/D: Livestock, Agriculture and Rangelands

Dear Mr. McCabe,

EDF thanks the California Air and Resources Board’s Compliance Offsets Protocol Task Force for the opportunity to provide comments on its initial draft recommendations. The role of agriculture in mitigating climate change is important not only for its direct impact on climate gases but also indirectly through the development of resilience to climate change impacts predicted over the coming decades.

**Overarching EDF Philosophy –**

1. These new agricultural protocols (avoided conversion of grasslands; feed additives to reduce enteric emissions of methane from cattle; diversion of manure storage from anaerobic systems (“alternative manure management”)) are worth considering if they:
   * 1. generate more environmental benefits than programs already encouraging these activities (i.e., California Department of Food and Agriculture (CDFA)) or agricultural protocols already included in the compliance market (e.g., livestock biogas control projects), or
     2. provide unique, direct environmental benefits within California that other programs or protocols do not, or
     3. provide unique opportunity to address systemic inequality identified by CARB.
2. If CARB decides to introduce these new agricultural protocols (avoided conversion of grasslands; feed additives to reduce enteric emissions of methane from cattle; diversion of manure storage from anaerobic systems (“alternative manure management”)), they need to develop clear and stringent guidelines with California’s Department of Food and Agriculture (CDFA) to ensure additionality and avoid double counting of emission reductions. CDFA’s Healthy Soils and Alternative Manure Management Programs incentivize some of the same practices and we are concerned about additionality issues that these new protocols might incur.
3. EDF believes that offsets are an important tool for mitigating greenhouse gas emissions, but offsets cannot completely substitute for direct emission reductions at the capped source. By their very nature, offsets do not provide co-benefits in the form of reducing co-pollutants at the capped emissions source, and these co-pollutants can be a major source of local air and water pollution, with environmental justice implications. Due to these issues, and the reality that offset usage limits in California’s cap-and-trade program will be reduced beginning in 2021, and that the available offset supply is sufficient to meet demand during the program’s fourth compliance period (2021-2023), farmers and the environment could be better served if the recommended practices were instead embedded within CA’s Climate Smart Agriculture (CSA) programs. As the CSA programs invest in farmers’ ability to transition toward conservation practices without offering others the opportunity to offset their own continued emissions, we encourage CARB to consider supporting the CSA pathway vs. bringing these practices onto the cap and trade market. The total opportunity for new offsets may be minimal.
4. If CARB decides to pursue the generation of new agricultural offsets, we support them considering new and better protocols that adhere to the quality assurance principles stated throughout the recommendations report. We support examination and consideration of broader enrollment and participation from a variety of agricultural activities, as long as the total volume of offsets allowed does not increase, and the offsets follow the quality criteria and consideration of local impacts listed below. Given the risks associated with low-quality carbon credits, practical and trusted guidance is critical to help carbon credit generators, facilitators, and buyers navigate the complicated landscape. Environmental Defense Fund, World Wildlife Fund, and Oeko-Institut are therefore developing a “Carbon Credit Guidance for Buyers.” As Phase 1 of this project, EDF, WWF, and Oeko-Institut have authored a paper that identifies six “quality objectives” for any type of carbon credits, and elaborates specific criteria that can be used to evaluate credits against each of these quality objectives:
   * + 1. **Robust determination of the GHG emissions impact of the mitigation activity** (criteria: additionality, vulnerability, and robust quantification of emission reductions and removals)
       2. **Avoided double counting of emission reductions or removals** (criteria: avoiding double issuance, double use, double claiming with international mitigation targets, and double claiming with domestic mitigation targets or emission trading systems)
       3. **Addressing non-permanence** (criteria: significance of non-permanence risks and robustness of approaches for addressing non-permanence risks)
       4. **Facilitating transition towards net zero emissions** (criteria: enhancing adoption of low, zero or negative emissions technologies and demonstration of host country commitment to the global temperature goals)
       5. **Strong institutional arrangements and processes of the crediting program** (criteria: overall program governance, robust third-party auditing, and transparency and stakeholder consultation)
       6. **Enhancing positive and preventing negative environmental and social impacts** (criteria: assessment of environmental and social impacts, contribution to improving adaptation and resilience and supporting the poorest and most vulnerable and affected by climate change)

Objectives 4-6 and their criteria add the most value to the AB 32 Criteria.In advance of the guide’s release, details can be found [here](https://www.edf.org/sites/default/files/documents/what_makes_a_high_quality_carbon_credit.pdf) to serve as high-level guidance for current and potential carbon credit generators and buyers.

1. Insurance Buffers & Jurisdictional Governance: As members of the task force know well, selling GHG credits in an agricultural offset program requires a high level of certainty and a robust risk management accounting system, as offset sales result in GHG emissions to the atmosphere elsewhere and many credits are reversible. Regional project aggregation, and associated larger scale monitoring, reporting and verification (MRV) activities will be required to ensure that there are real net changes in carbon stocks and reductions in other GHG emissions. This approach relates to recommendations on page 25 and 112[[1]](#footnote-1) for aggregation of project participants, which discusses efficiencies of scale. However, it does not address what EDF also prefers about a jurisdictional approach, which is risk diversification in pursuit of EDF’s quality assurance objectives. We anticipate that this approach will also benefit enrollment by reducing barriers to entry and transaction costs for credit suppliers. As an example, subgroup C/D should incorporate buffer insurance mechanisms similar to the Forestry subgroup, discussed on page 90.

**Detailed Comments –**

**Page 24:** Air Quality and Environmental Justice Considerations AND   
**Page 35:** Disadvantaged communities, Native American or tribal lands, and rural and agricultural regions.

*Comment:   
In addition to air quality, issues with odor and water quality are also of great concern to communities with dairies and other highly concentrated animal operations as neighbors. The 2017 AB 32 Environmental Justice Advisory Committee recommendations include guidance that reductions associated with offset projects should be located in those communities in proximity to the emissions, and that investments related to the development of offset projects should occur in those communities. To expand on those recommendations, it is our position that for those crediting projects that do occur in proximity to communities experiencing the impacts listed, there must also be measurable improvement in odor, air quality, and water quality. Concerning large dairy operations in California, for example, local communities need to see these additional issues addressed in order to ensure equitable outcomes as dairy producers are rewarded for reducing their emissions. This relates to the recommendations on page 25 to prioritize offset projects with direct environmental benefits in the state while prioritizing disadvantaged communities, Native American or tribal lands, and rural and agricultural regions—but goes one step further to also address odor, air quality and water quality concerns. The use of offsets should never allow other environmental or health hazards to go unaddressed or worsen.*

*In addition, if the program does introduce an alternative manure management protocol, the program needs to ensure that all farmers can afford to install the necessary infrastructure. This should not become a compensatory mitigation pathway in which only the larger operators can afford to participate.*

*Finally, rather than only considering avoided conversion of grasslands to ag lands, CARB should consider exploring Native American tribes that may prefer that tribal lands currently leased by the federal government to non-tribal members for agricultural production be brought back under their control. CARB should consider a protocol that supports tribal lands restoration projects that would help them achieve that goal and preserve the reintroduce natural habitat that can provide many environmental benefits.*

**Page 106:** Chapter 4: Analysis and Recommendations on Livestock, Agriculture and Rangeland – An important threshold question for the Subgroup was what constitutes “agricultural lands”?   
We defined those lands as areas where ruminants graze, where irrigated and cultivated crops are grown, and confined livestock operations, including those that manage lands to grow forage crops for their animals.

*Comment: We suggest also including some buffer around the “field” or “pasture” where animals are raised and crops are grown, so that “agricultural lands” include the creeks running in between fields, edges of fields, and other non-productive lands in the same parcels that are also managed by the same landowner and/or farmer. These portions of the landscape that provide significant environmental benefit are often ignored in the agricultural context, and if not acknowledged by agricultural/working lands efforts, they may be forgotten when designing environmental solutions.*

**Page 107:** There were three chief findings that supported these conclusions. First, the scientific basis for quantification of emissions reductions or permanent carbon sequestration is strong in all three (3) cases.

*Comment: Recommend changing to “net GHG emissions reductions.” In avoided conversion, we are keeping the soil organic carbon in the ground, not sequestering new carbon. Therefore, it is not “carbon sequestration” in the way this term is generally understood.*

**Page 107:** For example, although the Subgroup identified significant potential climate benefits for addition of compost to grazed grasslands, the cost of implementing this practice is much higher than the climate or other benefits realized.

*Comment: Also, the net GHG benefits are uncertain due to lifecycle issues.*

**Page 109:** Based on interviews with scientists at UC Davis and carbon offset registries, the Subgroup identified three practices for potential inclusion in carbon offset protocols to be adopted by CARB:

• Avoided conversion of grasslands

• Feed additives to reduce enteric emissions of methane from cattle

• Diversion of manure storage from anaerobic systems (“alternative manure management”).

*Comment: We agree with the three prioritized practices and have the following feedback.*

* ***Avoided conversion of grasslands****: While a permanent Conservation Easement should be sufficient to protect those grasslands, pursuant to AB 32 criteria iv, “Permanent,” a buffer mechanism should be developed to offset any intentional or unintentional situations where grassland soil carbon is lost due to reversal. Support for this practice also depends on how additionality parameters are treated and implemented, as these have shown themselves to be critical in determining program outcomes[[2]](#footnote-2). If CARB considers introducing this practice as an offset protocol, it needs to ensure that the offset projects address imminent risk of conversion. Such considerations help reduce the cost of the emission reductions on a per tonne basis, otherwise individuals may be compensated without generating real environmental benefits. The conversion pressure for baselines needs to be periodically assessed on as local a basis as possible. In addition, the additionality threshold should be locally tailored to ensure desirable environmental outcomes.*
* ***Feed additives to reduce enteric CH4 from cattle****: While this practice would result in permanent emissions reductions, there are concerns among the human health community that no data are publicly available that provide evidence that cattle feed supplements are truly safe as they pass through the cow and into humans. We oppose corporates using existing loopholes allowing a voluntary mechanism to inform the US Food and Drug Administration (FDA) that feed additives have been determined to be “generally recognized as safe” circumventing FDA’s affirmative process to evaluate an additive’s safety. We are tracking this, as well as following research into the evaluation of impacts of feed supplements on cattle health and productivity.*
* ***Alternative manure management****: Assuming that the manure treatment currently being used creates and releases methane, alternatives that avoid methane emissions would result in permanent emissions reductions. However, if manure treatments were not currently creating and emitting methane, no GHG benefit would be gained by funding a switch in manure management. An exception to this could be an alternate manure management system that captures more of the resources in the manure to displace the use (and related production) of inorganic fertilizer.*

**Page 113:** Aggregation may provide transaction cost efficiencies for initial inventory, monitoring, and verification, and may also diversify risk.

*Comment: Aggregation that encompasses a commonly governed jurisdiction can also address other important issues, such as reducing risk of reversals, improving social acceptability, and “cherry-picking”.*

**Page 115:** AB 32 Criteria: i. Real – GHG reductions or GHG enhancements result from a demonstrable action or set of actions, and are quantified using appropriate, accurate, and conservative methodologies that account for all GHG emissions sources, GHG sinks, and GHG reservoirs within the offset project boundary and account for uncertainty and the potential for activity-shifting leakage and market-shifting leakage. The addition of compost to grasslands is a demonstrable action that increases the carbon sequestered in soils.

*Comment: However, it may just involve shifting the carbon from one location to another. This must be considered. even though these recommendations do not propose putting this practice forward for inclusion within a CARB protocol, the issues of net GHGs and lifecycle need to be addressed—not simply cost barriers.*

**Page 124:**vi. Recommendation The avoided conversion of grasslands to croplands has significant potential for improved carbon sequestration. Over decades, grasslands have stored significant amounts of carbon. Avoiding the conversion of these lands maintains the carbon in the ground. There may also be potential to avoid emissions through avoiding the conversion of croplands to urban uses.

*Comment: It is not improved carbon sequestration, rather avoided emissions. In addition, emissions from conversion to urban areas are minimal to non-existent. See the US national greenhouse gas inventory for EPA reasoning on this topic.*

**Page 125:**Published research has shown reductions of enteric methane of about 30 percent when 3NOP is fed at rates between 40 and 80 mg per kg of dry matter, with maximum mitigation taking place between 100 and 200 mg/kg dry matter.

*Comment: While the enteric methane emissions for lactating cows were reduced by 39% (meta-analysis, updated here from Dijkstra et al. 2018), net GHG reductions for the system were only 12%[[3]](#footnote-3).*

EDF appreciates the work of the Task Force, and especially the subgroup C/D for their thoughtful consideration of the role of offsets in addressing the climate crisis. We look forward to engaging in this ongoing process at CARB and are happy to discuss any of our comments further.

Sincerely,

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1. Page numbers referenced in this document correspond with the *COMPLIANCE OFFSETS PROTOCOL TASK FORCE INITIAL DRAFT RECOMMENDATIONS* report, dated October 7, 2020. [↑](#footnote-ref-1)
2. <https://www.sciencedirect.com/science/article/abs/pii/S1550742418301775?via%3Dihub> [↑](#footnote-ref-2)
3. Feng X, Kebreab E (2020) Net reductions in greenhouse gas emissions from feed additive use in California dairy cattle. PLoS ONE 15(9): e0234289. https://doi.org/10.1371/journal.pone.0234289 [↑](#footnote-ref-3)