



Re: Terra's Public Comments on the "Compliance Offset Protocol Rice Cultivation Projects" made available on May 20, 2015

June 4, 2015

Dear Air Resources Board,

Thank you very much for the effort undertaken to provide the modified text for the "Compliance Offset Protocol Rice Cultivation Projects" and "Subchapter 10 Climate Change, Article 5, sections 95802, 95973, 95975, 95976, 95981, and 95985", made available on May 20, 2015. We appreciate the significant amount of work that went into drafting this protocol and we understand the importance of making sure that the protocol delivers real, permanent, quantifiable, verifiable, enforceable, and additional offsets to ensure that California's cap-and-trade program remains in place and is not subject to criticism and further law suits.

We are very much in support of market-based mechanisms for conservation and see the importance of offsets being in line with the state's interests of providing a cost effective cap and trade compliance system and encouraging improved agriculture, soil conservation, and lowering GHG emissions. As a significant amount of global GHG emissions originate from the agriculture sector, it is imperative that agriculture offsets should be the foremost interest to ARB. California is the largest agricultural state in the U.S. and it is important that its compliance markets do all they can to support farmers and rural livelihoods to produce food in the most sustainable manner.

As background to our responses, Terra Global Capital, LLC was founded in 2006 to facilitate market and results-based payment approaches for forest and land-use emission reductions. Terra is now the leader in forest and land-use GHG analytics and finance, providing technical expertise and investment capital to our global client base in a collaborative and innovative manner. Terra Global has been a leader in the development of new protocols for low emission rice as the author of the approved American Carbon Registry Protocol "Voluntary Emission Reductions in Rice Management Systems."

We are also working directly with the first group of rice growers who are adopting low emission practices in California and the Midsouth to prepare their project to produce verified emission reductions under voluntary and compliance markets. This work has provided us with a deep understanding of the issues that lead to farmer adoption and the economics of producing emission reductions under protocols. We are one of the first organizations to partner with extension agents, industry groups to actually help growers collect practice and baseline data, estimate the costs of applying protocols and performing the GHG emission calculations using DNDC model in accordance with the American Carbon Registry protocol.

As our previous public comments on the protocol have indicated, Terra is committed to supporting rice grower's participation in the compliance market and assist ARB develop the Rice Cultivation Protocol with integrity and efficacy.



Please accept Terra's following comments on the current draft of the protocol:

Early Adopters

We are encouraged by ARB's response to previous comments on ensuring the transition of voluntary credits generated through the application of the ACR rice protocol to those of Early Action offsets with the inclusion of the ACR rice protocol under section 95990 (c)(5)(H) of the Cap-and-Trade regulation amendments. At this time Terra is managing three projects under the ACR Rice Protocol, two from California and one from the Midsouth. In total this represents 21 producers with 253 fields on 22,213 acres who have been actively engaged in applying emission reducing practices on fields beyond the practices of most growers in their regions. They should be recognized as part of the "early voluntary reduction" intent under section 38562 of the AB32 legislation. By ensuring the transition of these voluntary projects into the compliance market, ARB is sending a strong message to farmers on their commitment and resolve to include and treat fairly the agricultural sector in the cap and trade program.

The ACR protocol was developed to ensure rigorous standards for quantification and additionality, but ensured that the early adopters (representing less than 5% of the growers) could participate in the program providing the critical information needed to test, fine tune and understand the environmental and economic impacts of producing these offsets. Thus, for three of the practices this was achieved through the use of a common practice baseline that represents the typical grower's practices as the business as usual case. This baseline methodology is the same as that which is used for the ARB Forestry Protocol. In order to include these early adopter ACR rice offset projects, a common practice baseline exemption must be made for ARB Early Action. Without the ability to use a common practice baseline (i.e. requiring the use of a field specific baseline), early adopters would either 1) not be able to get credit because their emission reduction practices would be captured in the baseline period since they were testing the practice, or 2) if the project start year was pushed back to when the first started the practice, they could not be able to produce the data required because it was not collected this far back in time. Some would say the growers who were already doing the practice should not get credit, but since these growers represent the forward thinking conservationist representing less than 5% of the growers, they are additional over the vast majority of growers (i.e. common practice). As stated before, this is the same treatment used under the ARB forestry protocol for improved forest management and thus it should be extended to rice.

Project Consolidation

Currently, the Rice Cultivation Protocol and the Cap-and-Trade Regulation are moving in the right direction by allowing Authorized Project Designees (APD) to consolidate projects from multiple Offset Project Operators (OPO) and submit a consolidated OPDR. However, the proposed process does not support the level of consolidation necessary to make the rice protocol economically viable for growers to adopt. The protocol and regulations must allow multiple growers to be registered under "one consolidated project" that is represented by one APD, listed as one unique project identification number and should be treated as such in verification. Each individual project/OPO would still be required to gather field data and complete emission reduction calculations on an individual basis.

With regards to the specified verification requirements, the deferred verification schedule within the proposed protocol provides improved flexibility for small projects and does represent some cost-savings for eligible projects. However, the protocol specifies that each project within a consolidated OPDR must be independently verified and that an offset verification statement must be issued for each project. This



undermines the potential cost-savings of consolidating projects as it increases the verifiers work particularly if a field visit is required for each project and possibly each of a farmers many fields.

Our suggestion is to allow a single verification to be performed on the consolidated project through the APD, with a desk review for all the fields/OPOs in the consolidate project, and then a sampling approach, based on type of practice data provided and a verifier's risk assessment, to be used to determine the required field visits.

In addition, specific rules and requirements must be specified for invalidation, such that invalidation could be applied to the consolidated project or to the emission reductions from an individual OPO within the group. It is imperative that partial invalidation in a consolidated OPDR can be supported.

Use of Accessible DNDC Model Version

We recognize that ARB has specified that quantifications performed must use the DNDC model posted on the ARB's Rice Protocol Resources site and that ARB has a contract with a developer to improve the model and it user facing front-end. We want to ensure that any version of the DNDC model used now or in the future can be accessed directly with the use of DND input files and output files, without the requirement to work through a user interface. A number of resources have been invested into the development a platform to facilitate efficient aggregation of projects and verification requirements and this system has the capacity to generate DND input files and emission reduction calculations using the output files. It would be highly desirable to provide users the flexibility to use external systems that link to the ARB approved DNDC model to meet the requirements under the ARB Rice Protocol, without requiring the user to re-enter field data into the DNDC user interface. There should be complete transparency on any requirements beyond the standard inputs and outputs for DNDC needed to produce emission reductions. We will continue to expect ARB to be fully transparent on any new developments in the use of the DNDC model and which models are approved and that they are publically available. For instance, the research and DNDC input files used to determine the structural uncertainty value has not yet been made publicly available. Transparency in how the DNDC model can be most effectively used specifically for rice production and for the approved rice growing regions will ensure greater understanding and trust in the resulting carbon credits generated.

Documentation and Data Requirements

This current protocol is much improved for providing flexibility in the general requirements and documentation requirements for each specific project activity. It should be extremely clear that the inclusion of new monitoring technologies to demonstrate project activities is allowable subject to verifier's review and support flexibility on sources of proof/evidence to help decrease the burden on growers and increase adoption.

Conclusion

Terra, along with other market leaders, innovative farmers, and conservation organizations have worked for years to build voluntary market programs that produce real, permanent, quantifiable, verifiable, and additional offsets as a way to build a foundation for future adoption into California's compliance market. The current momentum in the agriculture offsets market is only due to the fact that farmers can join a consolidated project to diversify costs and risk.

We encourage ARB to not go forward with the existing protocol without the ability for the 24 growers using ACR to convert to ARB under early action provisions for qualifying practices, as these are the very



growers that will lead the way into making this a viable offset type. The protocol should include a stronger and clearer consolidation option to allow for cost efficient yet highly creditable verification.. If growers currently engaged in approved methodologies cannot be included and the ARB protocol does not offer processes that reduce the costs across a group of projects; farmers will not have the economic incentive to participate and will become discouraged from entering the market thus dropping out of the active pilot programs, investors will lose interest in providing the financial resources needed to build a supply of compliance offsets, and service providers (project developers and verifiers) will stop making the investments need to facilitate an efficient market.

We would be happy to productively engage with ARB in any way possible to make the necessary changes to the protocol to have it be viable for producing offsets under California's compliance market.

Thank you,

A handwritten signature in dark ink, consisting of a series of loops and a long horizontal stroke extending to the right.

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