Comment 1 for Informal comments on the rice and forest offset protocols (feb20-offsets-ws) - 1st Workshop.

First Name: Richard
Last Name: Saines
Email Address: richard.saines@bakermckenzie.com
Affiliation: Baker & McKenzie LLP

Subject: Climate Wedge Comments
Comment:

```
Please see attached comments of Climate Wedge LLC.
```

Attachment: www.arb.ca.gov/lists/com-attach/1-feb20-offsets-ws-VzQGbFI6AD4KbVMn.pdf

Original File Name: Climate Wedge Comments to Rice Protocol Workshop.pdf

Date and Time Comment Was Submitted: 2015-03-05 13:37:09

No Duplicates.

Comment 2 for Informal comments on the rice and forest offset protocols (feb20-offsets-ws) - 1st Workshop.

First Name: Joshua
Last Name: Strauss
Email Address: jstrauss@bluesource.com
Affiliation: Blue Source

Subject: Comments on Updates to the Forest Protocol
Comment:

Please see the attached memo.

Attachment: www.arb.ca.gov/lists/com-attach/2-feb20-offsets-ws-VTZSOwFtWWcAY1A+.pdf

Original File Name: Comments Following ARB Workshop.pdf

Date and Time Comment Was Submitted: 2015-03-05 17:20:27

No Duplicates.

Comment 3 for Informal comments on the rice and forest offset protocols (feb20-offsets-ws) - 1st Workshop.

First Name: Brian
Last Name: Nowicki
Email Address: bnowicki@biologicaldiversity.org
Affiliation: Center for Biological Diversity

Subject: Comments regarding the Forest Protocol
Comment:

Comments of the Center for Biological Diversity

Attachment: www.arb.ca.gov/lists/com-attach/3-feb20-offsets-ws-BWYGZVM8VXIEZ1Ig.pdf

Original File Name: Center for Biological Diversity comments Forest Prot (03 06 2015).pdf

Date and Time Comment Was Submitted: 2015-03-06 08:36:11

No Duplicates.

Comment 4 for Informal comments on the rice and forest offset protocols (feb20-offsets-ws) - 1st Workshop.

First Name: Brian
Last Name: Nowicki
Email Address: bnowicki@biologicaldiversity.org
Affiliation: Center for Biological Diversity

Subject: Comments re Rice Protocol
Comment:

Center for Biological Diversity comments re Rice Protocol.

Attachment: www.arb.ca.gov/lists/com-attach/4-feb20-offsets-ws-VDdcPwFuAyRWNQNx.pdf

Original File Name: Center for Biological Diversity re Rice Prot (03 06 2015).pdf

Date and Time Comment Was Submitted: 2015-03-06 10:18:52

No Duplicates.

Comment 5 for Informal comments on the rice and forest offset protocols (feb20-offsets-ws) - 1st Workshop.

First Name: Brian
Last Name: Shillinglaw
Email Address: bshillinglaw@newforests-us.com
Affiliation: New Forests' Forest Carbon Partners

Subject: Comments on Forest Protocol Changes
Comment:

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Thank you for the opportunity to comment on the proposed changes to
the Forest Offset Protocol.  The attached letter summarizes
comments we have made in a previous comment letters and at the
public workshop in February.
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Attachment: www.arb.ca.gov/lists/com-attach/5-feb20-offsets-ws-AmwFZgN1V1sFZQNs.pdf

Original File Name: New Forests public comments FOP changes March 2015.pdf

Date and Time Comment Was Submitted: 2015-03-06 12:04:21

No Duplicates.

Comment 6 for Informal comments on the rice and forest offset protocols (feb20-offsets-ws) - 1st Workshop.

First Name: Christopher, Green A
Last Name: Newton
Email Address: cnewton@green-assets.com
Affiliation:

Subject: Green Assets, Inc. Comment on Proposed Forest Protocol Amendments
Comment:

```
Please find the attached letter regarding proposed amendments to
the Compliance Offset Protocol for U.S. Forest Projects.

Respectfully,

Christopher Newton
Chief Executive Officer
Green Assets, Inc.
```

Attachment: www.arb.ca.gov/lists/com-attach/6-feb20-offsets-ws-VjEHc1QwV2FSOgdY.pdf

Original File Name: Green Assets, Inc. Comment on Proposed Forest Protocol Amendments.pdf

Date and Time Comment Was Submitted: 2015-03-06 13:42:46

No Duplicates.

Comment 7 for Informal comments on the rice and forest offset protocols (feb20-offsets-ws) - 1st Workshop.

First Name: Shahira
Last Name: Esmail
Email Address: shahira.esmail@terraglobalcapital.com
Affiliation: Terra Global Capital

Subject: Terra Global;s Comments on ARB Draft 15-day Modifications to the Rice Protocol
Comment:

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Please accept the attached comments on behalf of Terra Global
Capital.  Please contact us with any questions you have regarding
these comments.

Thank you,
Shahira Esmail
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Attachment: www.arb.ca.gov/lists/com-attach/7-feb20-offsets-ws-UCRcP10uVXQDZAdY.pdf

Original File Name: Terra Global Informal Comments on ARB draft 15-day modifications.pdf

Date and Time Comment Was Submitted: 2015-03-06 14:04:24

No Duplicates.

Comment 8 for Informal comments on the rice and forest offset protocols (feb20-offsets-ws) - 1st Workshop.

First Name: Sean
Last Name: Carney
Email Address: scarney@finitecarbon.com
Affiliation: Finite Carbon

Subject: Finite Carbon Public Comments
Comment:

Friday, March 6, 2015

Chairman Mary Nichols and ARB Staff
Air Resources Board, California Environmental Protection Agency
1001 I Street
Sacramento, CA 95812

RE: Workshop on Proposed Compliance Offset Protocol for Rice Cultivation Projects and Update to Existing U.S. Forest Protocol

Dear Chairman Nichols:

Finite Carbon is an active participant in the California compliance offset market. We are currently developing 15 improved forest management projects projected to deliver over 10 million offsets by 2020 – more than 5 percent of the anticipated offset supply needed by the program.

We have enclosed several comments which directly address the limited information provided to stakeholders at the February 20th workshop.

We thank you for your consideration and would be happy to answer any questions you may have.

Sincerely,

Sean Carney
President
Finite Carbon Corporation
484-586-3092

Attachment: www.arb.ca.gov/lists/com-attach/8-feb20-offsets-ws-UjRXOFY5U2kAcgNm.pdf

Original File Name: Finite Carbon Forest Compliance Protocol Public Comments 3-06-15.pdf

Date and Time Comment Was Submitted: 2015-03-06 16:33:32

No Duplicates.

Comment 9 for Informal comments on the rice and forest offset protocols (feb20-offsets-ws) - 1st Workshop.

First Name: Aaron
Last Name: Strong
Email Address: alstrong@stanford.edu
Affiliation: Stanford University

Subject: Comments on rice cultivation protocol (and protocol development process)
Comment:

Over the last year, we have continually requested the data used to validate the DNDC model and assess model uncertainty and bias. Thus far, Board staff have provided a list of publications and a single graph showing DNDC model-generated emissions vs. field measured emissions. In order for us, other researchers and the public to be able to review the model validation, a detailed description of the specific parameters used in the graphed model runs are needed. These data include the measured soil and environmental parameters that were used and the parameters that were taken from databases for the full set of 87 sites. All of these data must be available, since they would be needed to generate the summary graph and to support the assertions about bias made by Board staff. We have repeatedly, over the course of 2014, been assured that that this information would be made publically available, yet it has not yet been made available.

We recognize the heavily conservative decisions taken in the adjustments of the model runs using Monte Carlo simulations, and the small number of credits expected to be generated by this Protocol. Still, releasing these data in a form that can be reviewed is important for a number of reasons.

Firstly, this is the first time under the Compliance Offset Program that emissions reductions will be estimated using a process-based biogeochemical model. In the future, the acceptance of such a model hinges on the precedent established by the approach taken in this protocol. Fully transparent documentation of the DNDC model's validation is thus essential because it sets a precedent for future protocols.

Secondly, there may be very real and substantive questions that hinge on how DNDC was run in these calibrations. For example, in the rice project protocol developed by the Climate Action Reserve for the voluntary market, limits on the range of Soil Organic Carbon (SOC) percentages for rice fields were included because there were not enough data points and model runs from a full range of SOCs to know whether DNDC was accurate beyond a specific range. When used to estimate emissions, DNDC is calibrated to each field's growing conditions, and thus the model is tuned to those specific conditions. (It has been criticized for being overly tuned and thus hard to apply to new sets conditions where it has not yet been validated.) Thus, knowing all the environmental conditions (i.e., the ranges of parameters used in the model), and the source data for those parameters and outputs from the model runs is critical to assessing the model's validity for use in estimating emissions

reduction in the conditions under which it will be used in California's offset program.

Finally, we note that the October 2014 draft protocol included separate uncertainty deduction factors for the different rice growing regions, under the reasonable assumption that the model might perform differently in such different climatic and soil characteristic ranges as California and the mid-South. We have since seen that the proposed latest version of the protocol referred to on February 20th, 2015 will include a single factor for all regions. We have also heard that this change is supported by statistical analyses made available to us by Dr. Bill Salas from Applied GeoSolutions, who found that there are no significant region-specific terms in the regression model nor any statistically significant different residuals in the model between different regions, suggesting that no region-specific uncertainty deductions are warranted. Essentially, Dr. Salas's analysis showed that there is no statistical improvement in regressing the predicted vs. observed emissions on a region-by-region basis rather than doing it as a whole. Such detailed analysis is essential to understanding the bases on which decisions have been made. Dr. Salas' description was sent to us personally (and was not made publically available).

What we have not seen is whether there are any variations in model performance based on project-type. Specifically, has the DNDC model been validated separate and specifically for AWD projects? Do we know whether DNDC captures CH4 emissions from cycles of drying and wetting the same way that it captures such emissions from rice fields grown under baseline conditions? Assessments of model uncertainty and bias for specific project-types that support the assertion of model validity for those specific project types should be made available to the public.

What has been provided by Board staff to date – the list of the scientific publications that report the field measurements that were used to validate the model -- is only half the information. It's only one of the axes on the graph. We request that, before finalizing the protocol and sending it to the Board for adoption, the public be given a chance to assess the assertion of model validity in its entirety based on all the information ARB is using to make its own assessments.

Lastly, regarding N2O emissions, we believe that it is important to address the potential significant increases (spikes) in N2O emissions from AWD projects that dry fields too quickly after N fertilizer application. There appears to be a lack of consensus among experts about whether the DNDC model can accurately estimate N2O emissions under such conditions. This means that even though N2O emissions increases, modeled by DNDC, are included as debits in the calculation of emissions reductions the full extent of N2O emissions pulses may be underestimated. The current draft Protocol does not address this issue. We urge ARB to convene a discussion of the issue of post-fertilizer application spikes from rice cultivated under an AWD regime, and DNDC's performance at modeling such spikes, among scientists working on this issue. In particular, such a discussion should address the period of time after N fertilizer application during which high spikes might be anticipated and should seek potential solutions in the protocol to address this concern – such as required delays after fertilizer application before the first drying period in an AWD project. Finally, and in addition, because of the salience of the potential for N2O spikes in this period, we urge that guidance should be

provided to project proponents on ways to minimize the risk of N2O spikes when conducting an AWD project.

Attachment:

Original File Name:

Date and Time Comment Was Submitted: 2015-03-06 16:53:02

No Duplicates.

Comment 10 for Informal comments on the rice and forest offset protocols (feb20-offsets-ws) - 1st Workshop.

First Name: Barbara
Last Name: Haya
Email Address: bhaya@berkeley.edu
Affiliation:

Subject: Comments on draft Rice Cultivation offset protocol
Comment:

Comments attached.

Attachment: www.arb.ca.gov/lists/com-attach/10-feb20-offsets-ws-UDhRNgN7ADIHXgVm.docx

Original File Name: Haya Comments on Rice Cultivation protocol-March 6-2015.docx

Date and Time Comment Was Submitted: 2015-03-06 16:57:28

No Duplicates.

There are no comments posted to Informal comments on the rice and forest offset protocols (feb20-offsets-ws) that were presented during the Workshop at this time.