

Hi Till,

I did get your paper to review, they were slow assigning it – or I wasn't in their first round of offers.

I learned a lot. I was particularly interested in the problem of systematically discounting for the sake of conservativeness for each program. Should we be aiming as a planet to accurately sum up emission reductions and pay for them? Bias is a worse problem than poor precision!

You say that you are not addressing bias, but bias is important and I think you should at least discuss the fact that bias may be a more important source of overcrediting than uncertainties associated with imprecision.

Your English is perfectly understandable, but not fluent. I am attaching images of pages with my scribble where I think you could use attention from an English language editor.

This paper describes the current state of uncertainty reporting in REDD+ programs, focusing on the SCPF Carbon Fund, because it has the most explicit reporting requirements.

I appreciated the introduction to project- and country-level carbon accounting. I am relatively new to this field and I wish this paper had been available to me when I first needed to get the lay of the land.

The topic that interested me the most is the reduced risk of overestimation presented by multiple projects compared to that of individual projects. This point could be made more clearly. It would be very compelling to scale this up to an estimate for the globe. If discounts were made to avoid overestimating carbon emissions reductions at 90% confidence, what fraction of total emission reductions would go unrewarded? And taken together, what would be the combined risk of over estimation?

This issue brings me to the question you pose in your title, "what to do about it?" I'm not sure you answer it. I'm left wondering whether we should stop discounting for random errors. Bias is a much more important risk when it comes to making payments for claimed deductions that did not occur. You state early on that this paper is less concerned with accuracy than precision, but isn't accuracy more important than precision? If there are other papers that address accuracy, you could describe them here, but if there are not, you shouldn't ignore it. I have heard of problems associated with choosing the most favorable possible reference level, for example. Should countries be paid for reducing deforestation from an anomalously high rate that would not have continued? Omitting outliers is another source of bias that could be very important.

Specific comments

Page, line (please, continuous line numbers would be easier!)

12, 13 It's important here whether the magnitude you are referring to is in units of carbon or is a percentage of emissions. I think it's in units of carbon emissions, but your examples have been presented in %, so it's easy to be confused.

Figures 2, 3, and 4 : I think you should stack these bars, they will add to 100%, and no one will think that the percentages currently on your y axis, which we might expect to be the response variable, are uncertainties, which are the topic of your paper.

I think the journal will tell you that these figures need to be reformatted, with the information in the caption, not in a header and a note.

Minor comments, more about presentation than content

2, 4 "solid" is not well defined, unless you are distinguishing these from liquid or gaseous phases (which is what I thought of when I read it).

5, 32 "minimize" means to make as low as possible, which is not consistent with the use of a probability threshold. On 6, 7 you say "a low risk" which is more accurate language.

6, 16 I am not sure this condition is relevant. Initial reductions that are not quantified very well may still be accompanied by a standard error, and those that are both accurate and precise may not be.

6, 20 do you mean equation 6?

7, 4. Do you mean bias here?

7, 12 - 13 10% is not higher than "below 20%". This is confusing in your abstract as well.

9, 5 and 10, 25 I don't know what "uncertainty of the trend" means. I don't think comparing two points in time is normally referred to as a trend. A trend should have time as an explanatory variable.

9, 14 - 15 I don't understand this point. If sample parts are badly located independently at two different time periods, these errors will not be correlated.

9, 16 - 19 I believe it is the correlation in the uncertainties that you want to address here, not correlations in the emissions.

10, 3 again, I think you mean to be discussing uncertainty here, not emissions

The English is not perfect but it is usually understandable. The scanned attachment shows where attention should be given by a copy editor; I hope editing will be provided by the journal.