

Dear ARB (re: comments on December 2, 2016 discussion draft on 2030 Scoping Plan Update)

The 2030 Scoping Plan describing California's nine fold approach (integrated systems; promoting resilient economic growth; protecting, enhancing, innovating, and increasing sequestration in the natural environment and working lands,...) is a comprehensive strategy that covers many topics and actions. As noted, California proposes using the best science to generate the innovations needed for the deep carbonization of our economy. While the 2030 Scoping Plan does not have a lot of detail on the forest sector as the details will be coming in the future Forest Carbon Plan, there is a very significant difference in the accounting systems proposed by ARB and the most recent international standards for estimating carbon cycles related to managed forests. As laid out in the multi-author paper on carbon cycling concepts that came out of an NCEAS work group out of UC Santa Barbara (Chapin, Woodwell et al. 2006), and reaffirmed in the most recent guidance document from the IPCC (IPCC 2014), and in line with the reporting system used by the US EPA for reporting to the IPCC (U.S. Environmental Protection Agency 2015), wood products must also be included to get a correct carbon balance for the forest sector. While wood products can be included in some types of ARB approved forest offset projects (California Air Resources Board 2015), it would appear that wood products may not be included in this inventory approach as described in this document. Hopefully this will be clarified as the Forest Carbon Plan is developed and improved over the coming years. Given that the ultimate goal of California's deep carbonization strategy is to be an international leader, it is in our interest to be in sync with the most up to date international science on carbon cycling methods related to forests and forest products.

While not part of the 141 page scoping plan, the 2pp 'Supplemental Information on Natural and Working Lands' from the Air Resources Board (November 28, 2016) is also shown on the web sites and appears to define ARB's most current estimates of carbon fluxes related to natural and working lands. Based on the ARB's November 7, 2016 workshop presentation, these estimates seem to come from the satellite derived analyses described in a journal article (Gonzalez, Battles et al. 2015) as well as in consulting reports to ARB.

It is interesting that while the numbers for live tree carbon fluxes (a sink) agree with the analysis of the USFS FIA that remeasured thousands of forest plots that live trees are a carbon sink (Christensen, Waddell et al. 2016), the November 28, 2016 ARB estimates suggest extremely large carbon sources from dead carbon in forests, both from acres that have experienced wildfires and well as those that have not. It should be noted that the scale of the fluxes in dead tree carbon reported in the ARB document are two orders of magnitude larger than the fluxes in live tree carbon when compared to the FIA based estimates of live and dead tree carbon in (Stewart, Sharma et al. 2016). Since no one is removing dead tree carbon for useful products on lands that have not experienced wildfire, except possibly for small time firewood cutters, it is not that easy to understand the process by which dead wood would be releasing so much carbon. It is also unclear what new policies or regulations ARB would consider implementing to address this source of carbon pollution. The somewhat surprising assessment of dead wood carbon fluxes based on what would seem to be satellite data suggests that the use of more ground based remeasurements will be valuable for honing in on accurate estimates of carbon fluxes from dead wood. Again, this will be an arena where tapping into a broad range of expertise will be invaluable to guide California's policies with respect to forests and their related carbon fluxes.

On lands that have experienced wildfires, it is not surprising that considerable quantities of carbon have been estimated to have been released into the atmosphere. A simple review of the most recent large

fires (e.g. Chips, Rim, King, Sobranes) suggest that most of the carbon emissions related to wildfires have come from federal lands. How the State of California proposes to work with the federal agencies to reduce these carbon emissions will undoubtedly be an important institutional component of the upcoming Forest Carbon Plan.

As this scoping plan gets finalized and the linkage to the evolving Forest Carbon Plan becomes clearer, we look forward to providing the ARB with the up to date methods that will increase the international value of California's plan.

Sincerely,



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