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Ms. Rajinder Sahota, Branch Chief
Climate Change Program Evaluation Branch
California Air Resources Board
1001 I Street
Sacramento CA 95814

Submitted electronically at
https://www.arb.ca.gov/lispub/comm2/bccommlog.php?listname=sp2030scenarios-ws

Re: Comments on 2030 Scoping Plan Nov. 7 Public Workshops on GHG Scenarios and Natural and Working Lands Element

Esteemed Ms. Sahota:

On behalf of Friends of the Earth – United States (FOE-US) this letter is provided as comment on the *2030 Scoping Plan Nov. 7 Public Workshop* (Workshop). This letter will very briefly address a select variety of the items discussed in the presentations shared at the Workshop, as well as other relevant material that can inform the design of effective climate change mitigation policy in California. As with previous submissions, this letter is not comprehensive, but the comments we provide do go to the heart of our environmental and social justice concerns regarding California climate policy. There are some points reiterated in this letter that have been made in previous comment submissions.

There is a lot that California can do to reduce our state's climate impact, and public participation in the development of the Scoping Plan Update is the most promising process for insuring that climate policy in the state of California is scientifically defensible, economically equitable, and socially just. We commend the Air Resources Board (ARB) for all the steps taken that insure that the development of policy is transparent and inclusive. We offer our public support for the priority that the ARB has given to the processes and recommendations of the Environmental Justice Advisory Committee (EJAC) in the Scoping Plan Update process. The increase in material and institutional support of the EJAC has been instrumental in strengthening public participation in the Scoping Plan Update process. We hope and expect that the role of the EJAC will continue to be expanded. The EJAC is without question one of the most exciting vehicles for insuring that California climate policy is built from the bottom up, and not imposed from the top down.

Prioritizing Forests Is an Imperative

On repeated occasions the ARB and other relevant California natural resource management agencies have spoken of the importance of forests in understanding, mitigating and responding to climate change. As we have said before, and even if the ARB is not explicit in saying so, we strongly support establishing measurable and aggressive goals in reducing emissions from deforestation and forest degradation in the

forests of California. To that end we believe that there exists an imperative that a frank and science-based assessment of the climate impacts of industrial forestry and timber harvest in California is provided as soon as possible. The lack of data in the latest 2016 Edition of the Greenhouse Gas Emissions Inventory regarding Forestry and Wood Products is a red flag that the Inventory may be seriously deficient and will be subject to significant revisions when data confirming industrial forest management in California as a source of significant emissions is made available.[1] We are steadfast in our support for the ARB taking a key role in forging a just and equitable transition to a low emissions economic development path, most especially here at home in California. Having accurate data that informs a robust science-based evaluation of the climate impacts of forest management in California should be seen as crucial to California providing the global climate leadership that ARB is so eager to promote.

Our organization is greatly concerned about the absence of data for emissions from Forestry and Wood Products in the 2016 Edition of the Greenhouse Gas Emissions Inventory, and whether this lack of data will negatively affect the reliability of the forthcoming Natural Lands Inventory of carbon stocks in the state. The California Department of Forestry and Fire Protection maintains data on timber harvest plans in California, and from these figures we have worked with partners to estimate that approximately 35,000 acres of forest are cut down every year using intensive forest practices such as clearcutting. This timber harvest activity represents a very significant source of greenhouse gas emissions – but there is still no data available for the public to work with to understand the significance of these emissions. It is irresponsible for the ARB to make claims about emissions reductions progress while failing to provide robust and peer reviewed data regarding emissions from industrial timber harvest and management activities. We are concerned that the Natural Lands Inventory carbon stock assessment will not accurately identify and quantify the significant net greenhouse gas emissions resulting specifically from industrial forestry operations in the state, and most importantly from those industrial activities on the private timber lands that are under the regulatory control of state agencies.

The removal of trees, both live and dead, is not the only emissions and forest carbon depleting impact from industrial forestry. Industrial forest practices generate emissions from the soil disturbance that comes with intensive harvest, from the decay of slash and waste wood from the entire process of producing and consuming wood products, and from the high carbon content of the chemical herbicides, pesticides, and fertilizers that are used on reforested lands. What is more, industrial forest harvest generates emissions associated with foregone sequestration – which is an important component of emissions monitoring protocols developed by the IPCC and which should be a key part of any forestry emissions estimation methodology employed in California.

The issue of foregone sequestration is especially important in California because California is host to what is recognized as the most carbon dense forest type on the planet: the redwood temperate rainforest ecosystem. A recent paper has confirmed that the coast redwood is unmatched in both the amount and the type of carbon stored in old-growth forests (Van Pelt et al. 2016).

Yet, as extensive industrial logging continues to occur in the redwoods, and other globally relevant forest types in California, there is still no data available to even initiate an informed discussion regarding emissions from Forestry and Wood Products in California. It is absolutely impossible to make informed policy decisions without the necessary data, and the rush for California to move forward with the Scoping Plan Update without accurate and peer-reviewed data regarding the greenhouse gas emissions from industrial forestry activities promises to result in policy that is neither scientifically defensible nor socially just.

[1] See http://www.arb.ca.gov/cc/inventory/data/data.htm

We will state again: **we are confident from our looking at the available data that a robust scientifically defensible evaluation of the carbon emissions from industrial timber and other forest management in California, including but not limited to emissions from natural and anthropogenic caused fire disturbance that is exacerbated by industrial forestry practices, will reveal the sector to be a significant net-emitter of greenhouse gases.** It is incumbent upon the ARB to be forthcoming with this data, to insure that this data is included in the Natural Lands Inventory that workshop presentations suggested was imminent, and to make corrections to the Greenhouse Gas Emissions Inventory as soon as possible.

Fire Adapted Forests: Traditional Ecological Knowledge and Fire Ecology

The recent Nov 4 EJAC Community Meeting that was convened in Orleans, California was host to the most sophisticated and informed discussion regarding the ecological and cultural role of fire in California's forests that has yet occurred under the auspices of the ARB. The role of fire in California's forests, forests that have been adapted to and managed by fire since time immemorial, was discussed in great detail. A representative from the Karuk Tribe was explicit in expressing concerns that the ARB has, through actions and policy, demonstrated a serious degree of ecological illiteracy in terms of understanding the role of fire in California's forests. This was not the only interesting and ground breaking contributing made by indigenous people at this EJAC meeting. A representative of the Yurok Tribe raised the issue of the Yurok needing to request "management flexibility" in terms of the imperative to use fire as a management tool on those lands that are now the basis of the forest offset carbon credits project managed by the tribe. Of course, management that would include fire is strictly prohibited by the US Domestic Forest Protocol. The issue as raised by the representative from the Yurok was in the context of a discussion about wildfire in California in that *it is not a question of **IF** a forest will burn, but **WHEN**.*

The ARB, including in the presentations that were shared during the Nov. 7 Scoping Plan Workshop, has struggled immensely with the dynamic nature of fire and the fire adapted ecology of California's forests. The magical thinking regarding forests that dominates the policy discussion at the ARB is one in which forests will somehow magically scrub the atmosphere of the greenhouse gases emissions that result from the burning of fossil fuels. The ARB has wrestled with the ecology of forests and their carbon cycles, often trying to fit square policy in the round holes of science, or vice versa. The fact that forests, and California's forests in particular, are inherently dynamic and volatile living systems with dramatic pulses of carbon cycling that includes vibrant and uncontrollable natural disturbance regimes, has been strategically ignored and downplayed by the ARB. We contend that the lack of integration of the realities of fire ecology into ARB climate policy has been a result of the rush to promote carbon trading as a lynchpin for California climate policy. Essentially, and on repeated occasions, the ARB has falsely attempted to promote an ecologically inaccurate description of forests as a static and linear repository of carbon, when by their very nature forests are dynamic and constantly changing.

We encourage the ARB to integrate Traditional Ecological Knowledge, such as that described at the EJAC meeting on Nov 4 by representatives of the Karuk Tribe, into California climate policy as soon as possible. The role of fire as a management tool and as a natural disturbance regime in California's forests is not only important, it is indispensable. The management of forest carbon must be seen in this light in order that effective policy that nurtures the long term resiliency and carbon storage potential of our forests is developed in a way that benefits contemporary residents of California as well as the future generations.

The Net Carbon Stock Decrease in Wildland Ecosystems is an Emissions Challenge

The presentation on Natural and Working Lands during the Nov. 7 Scoping Plan Update Workshop included a description of methodology for assessing carbon stocks and carbon stock change in California's wildland ecosystems that is based on the work of Patrick Gonzalez and John Battles.

Specifically, reference was made to the Gonzalez et al. (2015) paper *Aboveground live carbon stock changes of California wildland ecosystems, 2001 – 2010*. Our organization believes that the ARB is failing to fully share the conclusions of this paper with the public, and therefore failing to inform the public about the real emissions challenge facing the state when it comes to the climate impacts from land use change, industrial activities, and natural disturbance regimes.

In particular, we are surprised that the ARB during the course of the workshop did not more directly share the conclusions from the paper upon which ostensibly much of the methodology for assessing carbon stocks in California ecosystems such as forests is based.

The paper includes in the conclusion this passage which was not shared during the workshop:

> "Our finding of a net carbon stock decrease runs opposite to the goal that the state programmed in its initial scoping plan for emissions reductions. The state initially estimated net sequestration of carbon in aboveground and belowground biomass in state ecosystems and set a minimum goal of no net emissions by 2020. Our results show that aboveground live carbon losses are as much as 5 – 7% of state carbon emissions from all sectors. This reversal suggests a new emissions challenge. A suite of forest management strategies, including conservation of high-biomass forests, fire management adapted to future climate change, and reforestation of areas cut for timber may be necessary for meeting goals for 2020 and beyond."

The work of Gonzalez and Battles has been instrumental in creating a scientific and quantified understanding of the ongoing and significant loss of biomass in California's ecosystems, including in forests. The ARB must be more forthcoming with the public regarding the loss of forest carbon in California's ecosystems, including quantifying in an accurate manner that loss of forest carbon which is and has been due to human industrial activities such as timber harvest and from related land use change. We encourage the ARB to insure that the forthcoming Natural Lands Inventory promised by presenters at the workshop includes a transparent and reality based analysis of carbon losses and their causes.

In regards the difficulty regarding accuracy in the statistical estimation of forests carbon, which can include a margin of error of as much as +/- 30%, this challenge has been identified by our organization on numerous occasions as a fundamental reason why the consideration of carbon storage in land based ecosystems such as forests as a means to "offset" the emissions from burning fossil fuels is a scientifically flawed concept.

The best available science is clear that <u>to adequately respond to the threats of global climate change we must reduce emissions from all sectors</u>. We strongly encourage the ARB to abandon the false solution of forest offsets as they are utilized in the market-based compliance mechanism, and to develop climate change mitigation policy that is scientifically defensible. The idea of offsets is popular, and has gained great favor with the ARB, but it is predicated upon a myth that is not justified by science and fully fails to adequately interpret how humans are disturbing global carbon cycles.

Develop Robust Scenarios for Consideration in the Scoping Plan Update

The need to provide robust alternative scenarios to inform the Scoping Plan Update should be crystal clear. This includes scenarios that contain a thorough and detailed exploration of a variety of options, including well developed scenarios that feature a carbon tax that generates substantial revenue for climate change mitigation projects that would be implemented across all of California as well as providing a financial incentive for greenhouse gas emitters to reduce their climate impact. The rudimentary scenarios as presented in the Scoping Plan Update Concept Paper were woefully inadequate. Legislation that was

passed this summer was explicit in setting ambitious emissions reductions goals and prioritizing direct emissions reductions at the source. This legislation was also explicit in not providing authorization for the Cap-and-Trade Program beyond that which was already provided in the 2006 Global Warming Solutions Act. It is incumbent upon the ARB to develop scenarios for the future of California climate policy that are not based upon predetermined outcomes, that do not favor polluting industry, and that are scientifically defensible, economically equitable, and socially just.

Thank you for your attention to this letter. Our organization will remain engaged with and attentive to ARB leadership in developing climate policy in our state that provides global and national leadership.

Respectfully,

Gary Graham Hughes
Senior California Advocacy Campaigner
ghughes@foe.org
510-900-8807

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