29 August 2019

California Air Resources Board

1001 I Street

Sacramento, CA 95814

**REDD+ addresses climate stability and sustainable development objectives**

Dear California Air Resources Board and Staff,

This letter is a follow-up to earlier letters to you dated 29 October 2018 and 13 November 2018 and, respectively, entitled “Support for the California Tropical Forest Standard” and “Evidence on REDD+ impacts from a long-term global comparative study.”

As researchers who, for many years, have been analyzing policies and programs to reduce emissions from deforestation and forest degradation, and promote conservation, sustainable management and enhancement of forest carbon stocks (REDD+), we write to express our continued support for inclusion of the California Tropical Forest Standard in the state’s regulatory cap-and-trade program.

Tropical deforestation and land use change are leading contributors to global carbon emissions, second only to fossil fuels, and tropical forests serve as important natural sinks for removing CO2 from the atmosphere.[[1]](#footnote-1) Tropical forests also harbor significant biodiversity, and support the well-being of millions of people who directly depend on forests for their livelihoods.[[2]](#footnote-2) Reducing deforestation is therefore a key strategy in climate change mitigation, biodiversity conservation, and sustainable development.

The California Tropical Forest Standard applies to subnational jurisdictions that are implementing jurisdiction-wide, sector-based crediting programs for REDD+. The potential benefits derived from this standard would support the efforts of subnational jurisdictions across the tropics, which have made impressive progress towards jurisdictional sustainability.[[3]](#footnote-3)

The Center for International Forestry Research (CIFOR) has conducted the most comprehensive global assessment of the effectiveness, efficiency and equity of REDD+ initiatives at national, subnational and local levels[[4]](#footnote-4). Although the California Tropical Forest Standard goes beyond REDD+, as scientists involved in rigorous research on the impacts of REDD+ initiatives on the ground for nearly a decade, we are well-poised to comment on the outcomes of such initiatives on tropical forests and communities[[5]](#footnote-5).

One component of this study is a long-term systematic evaluation of the impacts of 17 local REDD+ projects and 5 subnational jurisdictional programs in Brazil, Cameroon, Indonesia, Peru, Tanzania and Vietnam. This research combines socioeconomic surveys in 150 communities and nearly 4,000 households (including control groups) with forest cover change data to measure the effects of REDD+ interventions on forests and people. So far, two rounds of panel data have been collected, at baseline in 2010-11 and again in 2013-14. A third round of data collection was performed in 2018 to assess longer-term impacts.

Findings to date highlight some important impacts: First, more than half of the REDD+ initiatives reduced deforestation at the community level, although with small effect sizes[[6]](#footnote-6). Second, we observed no systematic negative impacts of REDD+ on local welfare at these sites[[7]](#footnote-7), with some site-level evidence of significant livelihood benefits[[8]](#footnote-8). Third, it is clear that sensitive and systemic issues such as land tenure insecurity cannot be fully addressed at the project scale. For instance, while REDD+ interventions did not worsen smallholder tenure insecurity, there is little evidence that project level efforts to address tenure security produced positive results[[9]](#footnote-9). Fourth, while there are examples of REDD+ projects enhancing women’s participation in village decision-making, there is also evidence that implementers could do more to promote gender equality and safeguard women’s rights[[10]](#footnote-10). Finally, incentives for smallholders and communities (e.g. payments or infrastructure) significantly alleviated the burdens of land use restrictions (e.g. through law enforcement, protected areas) associated with some REDD+ initiatives[[11]](#footnote-11).

A robust review of the recent scientific literature on REDD+ project impacts reflects these findings[[12]](#footnote-12). The few studies published on carbon/land use outcomes show moderately encouraging results, while the more numerous studies on wellbeing highlight small, or mixed results that are more likely to be positive when incentives are part of the offered intervention.

Jurisdictional programs for reducing tropical deforestation are fundamentally different from local REDD+ projects. However, we believe that rigorous evaluations of early REDD+ interventions on the ground can help inform design and implementation of these broader programs. We emphasize that careful research design is critical for understanding which outcomes can be attributed to REDD+. We also recognize that any such initiative should constructively address the lessons learned – both positive and negative – from experience to date, towards achieving positive outcomes for forests and people.

We reiterate our support for the California Tropical Forest Standard, especially given updates that strengthen its focus on securing the rights and livelihoods of indigenous peoples and local communities. The approval of the California Tropical Forest Standard – and a flow of benefits to support efforts for sustainable development on the ground – will serve as a needed trigger to continue to motivate action by subnational governments across the tropics, especially during these times of national political upheaval.

We thank you for your continued leadership on this important issue.

Sincerely,

Dr. Amy Duchelle, Senior Scientist and Incoming Climate Change Team Leader, Center for International Forestry Research, Indonesia

Dr. Anne Larson, Principal Scientist and Equity, Gender and Tenure Team Leader, Center for International Forestry Research, Peru

Dr. Arild Angelsen, Professor, Norwegian University of Life Sciences, Norway

Dr. Ashwin Ravikumar, Assistant Professor, Amherst College, USA

Ms. Astrid Bos, PhD Candidate, Wageningen University, Netherlands

Dr. Christopher Martius, Principal Scientist and Managing Director, Center for International Forestry Research Germany gGmbH

Dr. Claudio De Sassi, Consultant, Center for International Forestry Research, Indonesia

Dr. Erin Sills, Professor, North Carolina State University, USA

Dr. Gabriela Simonet, Consultant, Center for International Forestry Research, Indonesia

Dr. Jan Börner, Professor, University of Bonn, Germany

Dr. Martin Herold, Professor, Wageningen University, Netherlands

Dr. Stibniati Atmadja, Scientist, Center for International Forestry Research, Ethiopia

Dr. Sven Wunder, Principal Economist, European Forest Institute, Spain

Dr. Veronique De Sy, Postdoctoral Research Fellow, Wageningen University, the Netherlands

Dr. William Sunderlin, Senior Associate, Center for International Forestry Research, Indonesia

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2. Angelsen et al. 2014. <https://www.sciencedirect.com/science/article/pii/S0305750X14000722> [↑](#footnote-ref-2)
3. Stickler et al. 2018. <https://earthinnovation.org/state-of-jurisdictional-sustainability/> [↑](#footnote-ref-3)
4. CIFOR’s Global Comparative Study on REDD+: <https://www.cifor.org/gcs/> [↑](#footnote-ref-4)
5. Angelsen, A., C. Martius, V. De Sy, A.E. Duchelle, A.M. Larson, T.T. Pham, eds. 2018. *Transforming REDD+: Lessons and new directions*. CIFOR, Bogor, Indonesia. <https://www.cifor.org/library/7045/> [↑](#footnote-ref-5)
6. Bos, AB, AE Duchelle, A Angelsen, V Avitabile, V De Sy, M Herold, S Joseph, C de Sassi, EO Sills, WD Sunderlin, S Wunder. 2017. Comparing methods for assessing the effectiveness of subnational REDD+ initiatives. Featured article in *Environmental Research Letters* 12, 074007: <http://iopscience.iop.org/article/10.1088/1748-9326/aa7032/meta> [↑](#footnote-ref-6)
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11. Duchelle AE, de Sassi C, Jagger P, Cromberg M, Larson AM, Sunderlin WD, Atmadja SS, Resosudarmo IAP and Pratama CD. 2017. Balancing

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